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Department  
of Health



Llywodraeth Cymru  
Welsh Government



The Scottish  
Government  
Riaghaltas na h-Alba



Department of  
Health, Social Services  
and Public Safety  
[www.dhssps.hi.gov.uk](http://www.dhssps.hi.gov.uk)

## Consultation on the introduction of regulations for standardised packaging of tobacco products – Response Form

**a. Are you responding (required):**

- As a member of the public (go to question b)
- As a health or social care professional (go to question b)
- On behalf of a business or as a sole trader (go to question c)
- On behalf of an organisation (go to question c)

**b. Please provide your details and contact information:**

Name of respondent (required)

Address of respondent (required):

Contact email address (required):

**Now go to question f**

**c. Please provide your organisation's details and contact information:**

Name of organisation (required):

British American Tobacco UK Limited

Name of person providing submission (required):



Job Title (required):

Head of Corporate and Regulatory Affairs, BAT UK Limited

Contact address of organisation (required):

One Eton Street  
Richmond upon Thames  
London TW9 1EF

Contact email address (required):



Is this the official response of your organisation? (required):

Yes

No

d. If you are responding on behalf of a business, what type is it?

Tobacco retailer (supermarket)

Tobacco retailer (convenience store)

Tobacco retailer (other type of shop or business)

Specialist tobacconist

- Duty free shop
- Wholesale tobacco seller
- Tobacco manufacturer
- Retailer not selling tobacco products
- Pharmaceutical industry
- Business involved in the design or manufacture of packaging
- Other (please provide details below)

If other, please tell us the type of business:

**e. If you are responding on behalf of an organisation, what type is it?**

- NHS organisation
- Health charity/NGO (working at national level)
- Local Authority
- Local Authority Trading Standards or Regulatory Services Department
- Local tobacco control alliance
- Retail representative organisation
- Industry representative organisation
- Other type of business representative organisation

University or research organisation

Other (please provide details below)

If other, please tell us the type of organisation:

**f. Does your response relate to (required):**

United Kingdom

England only

Scotland only

Wales only

Northern Ireland only

**g. Do you, or the business or organisation you represent, have any direct or indirect links to, or receive funding from the tobacco industry? (required)**

No

Yes (please describe below)

If yes, please describe:



- h. If you do not wish your details to be identified in the summary report of consultation responses, please tick this box**

**Consultation questions**

1. Do you have any observations about the report of the Chantler Review that you wish to bring to our attention?

Please refer to the attached consultation response and accompanying reports

2. Do you have any information, in particular any new or additional information since the 2012 consultation, relating to the wider aspects of standardised packaging that you wish to bring to our attention?

Please refer to the attached consultation response and accompanying reports

3. Do you have any comments on the draft regulations, including anything you want to draw to our attention on the practicalities of implementing the regulations as drafted?

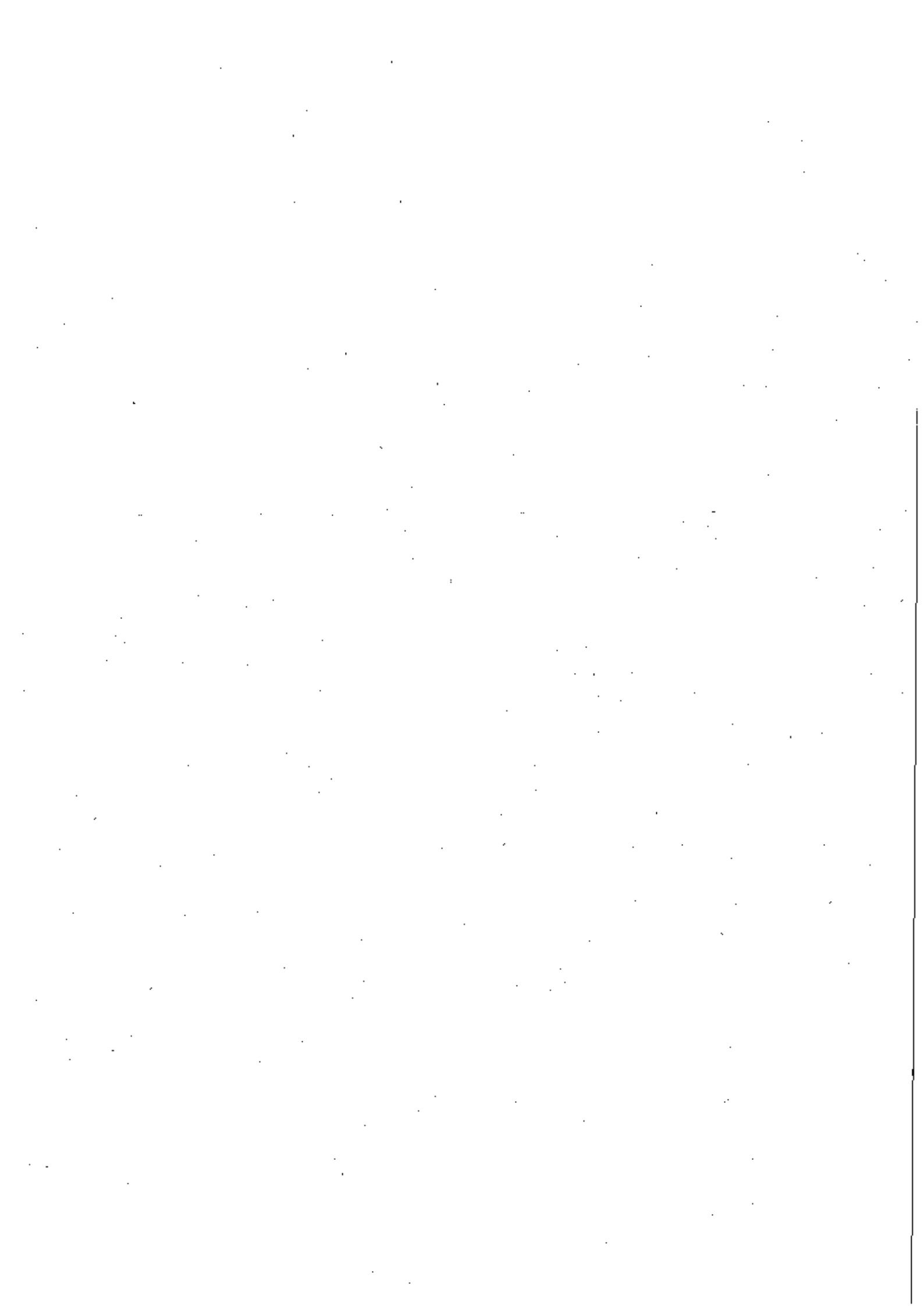
Please refer to the attached consultation response and accompanying reports

4. Are you aware of any further evidence or information which would improve the assumptions or estimates we have made in the consultation-stage impact assessment?

Please refer to the attached consultation response and accompanying reports

Thank you for participating in this consultation.

The Department of Health and Devolved Administrations will only contact you should we seek further information about your response.



## **How to get involved in the consultation**

The consultation will run for 6 weeks, from 26/08/14 to 07/08/14. Responses are invited from any interested group, company or person.

Respondents are encouraged to provide their views online, but responses can be made in any of the following ways:

### **Completing the online form on the Department of Health website at:**

<http://consultations.dh.gov.uk/tobacco/standardised-packaging-of-tobacco-products-1>

- **Filling in the response form by downloading it at:**

<https://www.gov.uk/government/consultations>

- **Emailing your response to:**

TobaccoPackaging@dh.gsi.gov.uk

- **Posting your response to**

Department of Health  
Standardised Packaging Tobacco Consultation  
PO Box 1126  
CANTERBURY  
CT1 9NB



# **BRITISH AMERICAN TOBACCO UNITED KINGDOM**

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**CONSULTATION ON THE INTRODUCTION OF REGULATIONS FOR THE  
STANDARDISED PACKAGING OF TOBACCO PRODUCTS**

**RESPONSE OF BRITISH AMERICAN TOBACCO UK  
LIMITED**

**7 AUGUST 2014**



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## 1. INTRODUCTION

- 1.1. This submission is made by British American Tobacco UK Limited<sup>1</sup> in response to the Government Consultation on the introduction of regulations for the standardised packaging of tobacco products, published on 26 June 2014.
- 1.2. British American Tobacco UK Limited is a member of the British American Tobacco group of companies and is responsible for the importation, distribution and sale of tobacco products in the United Kingdom (principally cigarettes, but also Roll-Your-Own tobacco (RYO)). British American Tobacco UK Limited has an approximate 8.9% share of the UK market in cigarettes, with brands such as LUCKY STRIKE, DUNHILL, PALL MALL, ROTHMANS, CONSULATE MENTHOL, ROYALS, ST MORITZ MENTHOL and VOGUE. British American Tobacco UK Limited also has a share of 12.9% of the UK Market in RYO with the brands CUTTERS CHOICE, PALL MALL and SAMSON.
- 1.3. British American Tobacco UK Limited responded to the Government's 2012 Consultation on standardised packaging of tobacco products, in its response dated 8 August 2012.<sup>2</sup> It also made submissions to the review into standardised tobacco packaging undertaken by Sir Cyril Chantler.<sup>3</sup>
- 1.4. As set forth in its prior submissions and as explained and updated in detail below, British American Tobacco UK Limited is strongly opposed to the introduction of standardised packaging. We believe the proposal is illegal. Furthermore, the proposal is fundamentally flawed in that it would not achieve its stated objectives. Indeed, standardised packaging has led in Australia, and will in the UK lead, to unintended consequences that would adversely impact the public, business and the Government. It should not be forgotten that Plain Packaging has failed to deliver any of the anticipated benefits in Australia, the only country in which it has been implemented to date. There is no reason to believe the result would be different in the UK.
- 1.5. A response to the specific Consultation questions is provided in section 7 of this Response. However, British American Tobacco UK Limited first sets out why the introduction of Plain Packaging would be unlawful and would not work, and therefore should not proceed.

<sup>1</sup> British American Tobacco UK Limited submits this Response on its behalf and on the behalf of other BAT group companies that would be adversely impacted by a Plain Packaging measure, including but not limited to the relevant BAT entities that own the trade marks used on cigarette packaging sold in the UK.

<sup>2</sup> Available at [http://www.bat.com/group/sites/uk\\_9d9kcy.nsf/vwPagesWebLive/DO8WZC5E/\\$FILE/medMD8WZC6J.pdf](http://www.bat.com/group/sites/uk_9d9kcy.nsf/vwPagesWebLive/DO8WZC5E/$FILE/medMD8WZC6J.pdf)

<sup>3</sup> Available at [http://www.bat.com/group/sites/uk\\_9d9kcy.nsf/vwPagesWebLive/DO9DKJEB/\\$FILE/medMD9G9H6R.pdf?op=element](http://www.bat.com/group/sites/uk_9d9kcy.nsf/vwPagesWebLive/DO9DKJEB/$FILE/medMD9G9H6R.pdf?op=element) (see Appendix 2)

## DEFINITIONS AND ABBREVIATIONS

<b>2012 Consultation</b>	The Government Consultation on standardised packaging of tobacco products, April 2012.
<b>2012 Impact Assessment</b>	The Government Impact Assessment on standardised packaging of tobacco products, April 2012.
<b>2014 Impact Assessment</b>	The Government Impact Assessment on standardised packaging of tobacco products, 17 June 2014.
<b>Alcopops case</b>	<i>E-9/00 EFTA Surveillance Authority v Norway.</i>
<b>ANDSHS</b>	Australian 2013 National Drug Strategy Household Survey.
<b>Anson Report</b>	The expert report of Mr Weston Anson, Chairman of CONSOR Intellectual Asset Management.
<b>Brand IP</b>	Trade marks, trade dress, packaging designs, copyright designs, goodwill and other intellectual property elements.
<b>British American Tobacco, BAT or We</b>	British American Tobacco UK Limited.
<b>CAGR</b>	Compound annual growth rate.
<b>Chantler Report</b>	Report of the independent review undertaken by Sir Cyril Chantler on standardised packaging of tobacco products, April 2014.
<b>CITTS</b>	The Cancer Institute NSW [New South Wales] Tobacco Tracking Survey.
<b>CJEU</b>	Court of Justice of the European Union.
<b>Commission</b>	The European Commission.
<b>Community</b>	The European Union.
<b>Consultation</b>	The Government Consultation on the Introduction of regulations for the standardised packaging of tobacco products, published on 26 June 2014, to which this is the Response.
<b>Crookshank Report</b>	The expert report of Mr Stuart Crookshank OBE, a recently retired former Her Majesty's Revenue and Customs officer.
<b>CTMR</b>	Community Trade Mark Regulation.



<b>Dryden Report</b>	The expert report of Mr Neil Dryden, Executive Vice President of Compass Lexecon.
<b>ECHR</b>	European Convention on Human Rights.
<b>EFTA Court</b>	European Free Trade Association Court.
<b>EOS</b>	InfoView Exchange of Industry Sales data.
<b>Faber Report</b>	The expert report of Professor Ronald J. Faber, a Professor of Mass Communication at the University of Minnesota.
<b>FCTC</b>	The World Health Organisation Framework Convention on Tobacco Control Treaty.
<b>FDA</b>	US Food and Drug Administration.
<b>FMC</b>	Factory Made Cigarettes.
<b>Gibson Report</b>	The expert report of Mr Stephen Gibson, an economist, consultant and founder of SLG Economics Ltd, and formerly Chief Economist and Director of Economic Policy at Postcomm.
<b>Government</b>	The government of the United Kingdom.
<b>HMRC</b>	Her Majesty's Revenue and Customs.
<b>IA Guidance</b>	HM Government: Impact Assessment Guidance.
<b>McKeganey Report</b>	The expert report of Dr. Neil McKeganey, Director, Centre for Drug Misuse Research, Glasgow.
<b>Member States</b>	Member States of the European Union.
<b>Method Statement</b>	The Method Statement of the Chantler Review dated 16 December 2013.
<b>Mitchell Report</b>	The expert report of Professor Gregory Mitchell, a psychologist and law professor at the University of Virginia.
<b>NAO</b>	The UK National Audit Office.
<b>PHRC Review</b>	The Government commissioned review of the evidence on Plain Packaging undertaken by the Public Health Research Consortium (PHRC), Moodie, <i>et al.</i> , "Plain



- Tobacco Packaging: A Systematic Review" PHRC (2012); and the 2013 update of this review, Moodie, *et al* (2013) "Plain Tobacco Packaging Research: An Update". Stirling, Scotland: Centre for Tobacco Control Research, Institute for Social Marketing, University of Stirling.
- Plain Packaging** Standardised packaging as described in the 2014 Consultation.
- Principles** Principles of Better Regulation forming part of the IA Guidance.
- QALY** Quality-adjusted life year.
- Response** This document.
- RYO** Roll-Your-Own tobacco.
- TMD** Trademarks Directive.
- TPD1** Directive 89/622/EEC.
- TPD2** Directive 2014/40/EU.
- TPSAC** Tobacco Products Advisory Committee.
- TRIPS Agreement** The WTO Agreement on Trade Related Aspects of Intellectual Property Rights.
- UK** The United Kingdom.
- Viscusi Report** The expert report of Professor Viscusi, Distinguished Professor of Law, Economics and Management, Vanderbilt University Law School, Nashville, United States.
- WHO** The World Health Organisation.
- WTO** The World Trade Organisation.

## 2. EXECUTIVE SUMMARY

**BAT is strongly opposed to Plain Packaging on a number of grounds, including:**

- 2.1. **The Government has followed a flawed process and appears to have already decided to introduce Plain Packaging.** The Government has spent a number of years looking into the issue of Plain Packaging. Despite this, the Government has not come any closer to discharging its public law duty to make policy on the basis of the best facts available. The Government appears instead to have decided to adopt a policy introducing Plain Packaging come what may. The Government has moved the goalposts on the policy by saying that it no longer needs to show that Plain Packaging will have any specifically identifiable health benefits. The Government has also disregarded the fact that the actual evidence from Australia shows that Plain Packaging has not achieved its objectives. Instead the Government has, since November 2013, embarked on a process of justifying a decision to proceed with Plain Packaging by cloaking the same evidence that it previously rejected as inadequate under the banner of an 'independent review'. The Chantler Review provides no new evidence and cannot be described as independent because it relies on expert opinions from avowedly conflicted tobacco-control advocates whose opinions are inconsistent with actual data from Australia.
- 2.2. **The Government attempts to justify the Consultation by saying it must now act without delay to introduce Plain Packaging to avoid future health consequences.** This is despite taking six years to consider a change in policy and claiming that no decision has yet been taken. This appears to be a new justification for introducing the policy without any credible evidence. There have been no changes identified by the Government suggesting worsening health consequences, or increasing health benefits, to justify this new sense of urgency.
- 2.3. **Plain Packaging is unlawful.** Plain Packaging would not only breach several UK, EU and international laws and agreements but would constitute a wholesale expropriation of BAT's valuable intellectual property, requiring payment by the Government of very significant compensation. The Government places great weight on its alleged obligations under the FCTC, which in any event do not mandate Plain Packaging at all, and yet ignores its obligations under the Human Rights Act 1998, EU law and the UK's other international agreements.
- 2.4. **Plain Packaging is irrational and disproportionate.** Plain Packaging is irrational because it is a violation of fundamental rights and international obligations that cannot be justified; the Government has not taken account of relevant considerations and evidence. In the circumstances it is a policy that no reasonable decision-maker could make. Plain Packaging would also fail any proportionality assessment because the Government has failed to demonstrate that Plain Packaging is a necessary, adequate and

proportionate measure when considered against the real world evidence from Australia highlighting the failures of the Plain Packaging policy, as well as existing legislation or any of the more effective alternative measures. Accordingly, any decision to implement Plain Packaging would be manifestly inappropriate. This is so because, among other things, Plain Packaging is likely to have serious adverse consequences, including:

- 2.4.1. exacerbating a serious illicit trade problem in the UK; and
  - 2.4.2. potentially stimulating price competition increasing consumption by stimulating price competition leading to down trading to cheaper products, and leading to an increase in down trading, which may in turn lead to an increase in consumption;
  - 2.4.3. raising barriers to entry;
  - 2.4.4. harming small retailers;
  - 2.4.5. stifling innovation; and
  - 2.4.6. reducing consumer choice.
- 2.5. The mere fact that Plain Packaging is presented as a health measure does not relieve the Government of its obligation to demonstrate that Plain Packaging is justified and proportionate.
- 2.6. BAT's responses to the questions in the Consultation are, in summary:
- 2.6.1. In response to Question 1, BAT observes that the Chantler Report does not and cannot support the introduction of Plain Packaging for a number of reasons, including that the Chantler Report fails to take account of the evidence from Australia's experience with Plain Packaging and does not provide a sufficient evidential basis upon which to introduce regulation.
  - 2.6.2. In response to Question 2, BAT wishes to bring to the Government's attention the objective evidence that has emerged since the 2012 Consultation on the impact of Plain Packaging in Australia, which the Government stated it was waiting for, which shows that more than 18 months after its introduction Plain Packaging has not reduced smoking behaviour and, in fact, has been counterproductive.
  - 2.6.3. BAT has not offered a response to Question 3 as it is its view that the regulations proposed are unlawful for the reasons contained in this Response. British American Tobacco reserves its rights in relation to the draft regulations.
  - 2.6.4. In response to Question 4, BAT maintains that the 2014 Impact Assessment is not a proper basis for decision making, that it fails

to comply with regulatory impact assessment guidelines, and that it fails to substantiate that Plain Packaging is necessary, appropriate and proportionate. Furthermore, the methodology pursued in the 2014 Impact Assessment and the process followed by the Government evidences a predisposition towards the implementation of Plain Packaging. In addition, the Government's own expert studies can be shown to be tainted by bias, to be unreliable and to ignore actual direct evidence.



### 3. **LEGAL PROBLEMS WITH PLAIN PACKAGING**

- 3.1. As a matter of fundamental public law the Government cannot introduce Plain Packaging insofar as the measure is unlawful *per se*, irrational and/or disproportionate and/or the Government has not acted with procedural propriety and fairness as it is obliged to do. The mere fact that Plain Packaging is presented as a health measure does not relieve the Government of its public law obligations.
- 3.2. As BAT highlights in this Response, the Plain Packaging measures proposed are:
  - 3.2.1. procedurally improper.
  - 3.2.2. unlawful *per se*; and
  - 3.2.3. irrational and disproportionate.
- 3.3. Each of these issues is considered in turn below.



#### **4. THE GOVERNMENT HAS NOT ACTED WITH PROCEDURAL PROPRIETY AND FAIRNESS**

**4.1. The procedure followed by the Government to date in respect of Plain Packaging is fundamentally flawed and unfair. A decision to proceed with Plain Packaging on this basis is liable to be struck down for procedural impropriety.**

**4.2. Contrary to its public statements, it is clear that the Government is acting as if it has decided to proceed with Plain Packaging. The Government appears to demonstrate an intention to proceed irrespective of stakeholder concerns and evidence that should have been considered as part of the Chantler Report, but was not. Furthermore the Chantler Report is contradicted by evidence subsequent to its publication on 3 April 2014. These concerns lead BAT to believe that the Government's Consultation process is not fair and genuine. This is demonstrated by the following:**

**4.2.1. The Government has moved the goalposts on its requirement for actual evidence demonstrating that Plain Packaging would work, now proposing that it is sufficient to show only that Plain Packaging may deliver health benefits in conjunction with other existing or soon to be introduced measures, including the full implementation of the retail display ban and TPD2.**

**4.2.2. Despite considering Plain Packaging for 6 years, the Government now says that it must act without delay to introduce Plain Packaging to avoid future health consequences. This appears to be a new justification for introducing the policy without any credible evidence. There have been no changes identified by the Government suggesting worsening health consequences justifying the new sense of urgency in relation to this policy;**

**4.2.3. The Government previously stated that it wanted to consider the evidence from the Australian experience on Plain Packaging before making a decision. Evidence is now available showing that Plain Packaging has not had any impact beneficial to public health, and in fact has been counterproductive. The Government has disregarded this evidence; and**

**4.2.4. The Government's quantification of the alleged impact of Plain Packaging is biased and fundamentally flawed, which renders the entire claimed health benefit of the measure invalid.**

## A. The Government's Flawed Consultation Process

- 4.3. The tobacco industry has been systematically regulated in the UK for many years, including requirements about ever larger health warnings on packs and advertising and promotion restrictions and bans, smoke constituents labelling requirements, ingredients disclosure requirements, restrictions on smoking in public places, the addition of large graphic health warnings to packs, and, most recently, bans on retail displays.
- 4.4. Tobacco has also been heavily regulated at the EU level since the 1980s. The first tobacco products directive, Directive 89/622/EEC ("TPD1") provided for, among other things, the strict regulation of the tar, nicotine and carbon monoxide yields for cigarettes, the regulation of the labelling of packaging including the requirement that they carry warnings and a ban on oral snus.
- 4.5. Most recently, the second tobacco products directive, Directive 2014/40/EU ("TPD2") was adopted by the European Parliament on 3 April 2014 and entered into force on 19 May 2014. This provides for, among other things, ingredient regulation, including a ban on menthol cigarettes; a ban on flavouring in components and other technical innovation; mandatory general health warnings to include text, a picture and to cover 65% of the front and the back of the pack; restrictions on product presentation and the use of non-misleading descriptors, for instance relating to taste and biodegradability; pack standardisation; tracking and security features; and a ban on cross-border sales. Member States are required to transpose TPD2 by 20 May 2016. BAT filed proceedings in the Administrative Court on 27 June 2014 challenging the validity of the Directive on the grounds of competence, proportionality, delegated and implementing powers and subsidiarity. By an Order of the Administrative Court of 31 July 2014, permission to bring the claim in the judicial review has already been granted. The UK government has, moreover, accepted that the questions relating to the interpretation and validity of TPD2 must indeed be referred to the Court of Justice of the European Union ("CJEU"). It is expected that a decision whether or not to refer questions to the CJEU in BAT's challenge will be made by the Court in November 2014.
- 4.6. BAT has commissioned an expert report of Stephen Gibson, formerly Chief Economist and Director of Economic Policy at Postcomm, who specialises in competition and regulatory economics. Mr Gibson's report (the "**Gibson Report**") is submitted with this Response (see Appendix 1). The Gibson Report concludes that the Government's current proposal for Plain Packaging would be layering yet more regulation on top of existing and prospective new measures which have not even been implemented, and the impact of which has not yet been seen or assessed by the Government. Given this, it is not possible for the Government to demonstrate, as it must, that the regulations are no more than is necessary in order to achieve the Government's stated public health objectives.

4.7. Furthermore, while not an argument related to illegality, Plain Packaging is effectively a "gold-plating" of TPD2. As noted by the RPC, "[b]y going beyond minimum EU requirements, the Department is gold-plating the measure". TPD2 itself contains no requirement to introduce Plain Packaging. Such burdensome additions to EU legislation were something the present Government explicitly committed itself to avoiding in its 2010 *Programme for Government* document.<sup>4</sup> The Government offers no compelling argument why this Government commitment should be ignored in the rush to introduce Plain Packaging.

4.8. A summary timeline of events leading up to this Consultation is set out below:

4.8.1. In May 2008, the Government examined Plain Packaging in connection with its 2008 consultation on the Future of Tobacco Control. It concluded that: "*the research evidence into this [Plain Packaging] Initiative is speculative, relying on asking people what they might do in a certain situation.*"

4.8.2. In March 2011, the Government released the publication entitled, "Healthy Lives, Healthy People: a tobacco control plan for England", which included a commitment to consider whether Plain Packaging of tobacco products could be an effective way to (a) reduce the number of young people smoking; and (b) support adult smokers who want to quit. However this was contingent on there being evidence. The Government stated (at paragraph 3.6) that it:

*"Will look at whether the Plain Packaging of tobacco products could be effective in reducing the number of young people who take up smoking and in supporting adult smokers who want to quit. The Government wants to make it easier for people to make healthy choices but wants to understand whether there is evidence to demonstrate that Plain Packaging would have an additional public health benefit. We will explore the competition, trade and legal implications, and the likely impact on the illicit tobacco market of options around tobacco packaging."* (emphasis added)

4.8.3. On 16 April 2012, the Government published the 2012 Consultation and 2012 Impact Assessment on standardised packaging of tobacco products. In particular the Government stated:

*"Any decisions to take further policy action on tobacco packaging will be taken **only after full consideration is given to consultation responses, evidence and other relevant***

<sup>4</sup> "We will end the so-called 'gold-plating' of EU rules, so that British businesses are not disadvantaged relative to their European competitors" The Coalition: our programme for government, HMSO, 2010, page 10.



**information**" (emphasis added) (at paragraph 1.3 of the 2012 Consultation);

**We seek feedback on whether there might be public health benefits from the introduction of standardised tobacco packaging in addition to policies currently in place, including legislation ending the permanent display of tobacco products by retailers"** (emphasis added) (at paragraph 3.3 of the 2012 Consultation); and

**A policy to introduce standardised tobacco packaging would need to be justified and be based on expected benefits over and above existing tobacco control measures."** (emphasis added) (at paragraph 13 of the 2012 Impact Assessment).

4.8.4. In August 2012, BAT's response to the Government's 2012 Consultation identified seven key reasons for opposing the introduction of Plain Packaging. These included, in brief, that:

4.8.4.1. Plain Packaging would not be effective in reducing smoking prevalence since tobacco packaging is not a relevant factor in people's decision to smoke or to quit smoking;

4.8.4.2. The Government had not considered the relevant research and relied on insufficient and unreliable evidence that failed to make the crucial link between packaging and any reduction in smoking;

4.8.4.3. Plain Packaging would exacerbate an already significant illicit trade problem in the UK;

4.8.4.4. Plain Packaging could have other significant adverse unintended consequences such as lowering average prices and thereby increasing smoking, reducing Government revenue and harming small businesses;

4.8.4.5. Plain Packaging is unlawful as it would not only breach several UK, EU and international laws and agreements but would constitute a wholesale expropriation of BAT's valuable intellectual property, requiring payment by the Government of very significant compensation;

4.8.4.6. Given the lack of evidence and acknowledged risks, the Government has not demonstrated that the benefits would outweigh the adverse consequences of Plain Packaging; and

4.8.4.7. There are a number of alternative evidence-based options that are proportionate, effective, workable and

can achieve public health objectives while respecting intellectual property rights.

4.8.5. On 12 July 2013, the Government published a report and a written Ministerial Statement stating that it was the Government's intention to await the outcome of Plain Packaging in Australia before going ahead with the implementation of Plain Packaging proposals. In particular the Government stated that, "[h]aving carefully considered these differing views, the Government has decided to wait until the emerging impact of the decision in Australia can be measured before making a final decision on this policy." In other words, the Government considered just 12 months ago that it had insufficient evidence to proceed.

4.8.6. Nevertheless, on 28 November 2013, the Government announced that Sir Cyril Chantler, a paediatrician, had been asked to conduct an independent review of the public health evidence for the introduction of Plain Packaging.

4.8.7. On the same day Jane Ellison MP, the Parliamentary Under-Secretary of State for Health, stated in response to questions in Parliament:

*"...we would need to be able to act quickly if, following the recommendation, we decided to proceed. The power to make regulations is being proposed in the other place exactly so that we may move quickly at the point we receive Sir Cyril's review. I have looked at the draft schedule, and if the Government were minded to go forward with this policy, I see no reason why it could not be put through before the end of this Parliament."<sup>5</sup>*

4.8.8. Sir Cyril published a Method Statement on 16 December 2013.

4.8.9. Shortly thereafter, on 20 December 2013, Herbert Smith Freehills LLP, on behalf of BAT, wrote to the Government and Sir Cyril explaining, among other things, how:

4.8.9.1. both the 28 November 2013 announcement and the Chantler review were misconceived and raised serious issues of legality in circumstances where any implementation by the UK of measures resulting in Plain Packaging would contravene EU law, significantly interfere with fundamental rights and be contrary to the UK Government's domestic law obligations;

4.8.9.2. the announcement signified a surprising about-turn in the Government's position that it would wait until the

<sup>5</sup> HC Deb 28 November 2013 c409 – 410.

Impact of the decision in Australia to implement Plain Packaging could properly be analysed, before it made its decision on such a policy in the UK;

4.8.9.3. the terms of the Chantler Review were exceedingly narrow; and

4.8.9.4. the approach taken by the Government is such that companies which will be adversely affected by any possible new measure have a legitimate expectation of being consulted in relation to the issues now being considered and that this consultation should be lawful.

4.8.10. BAT submitted its response to the Chantler Review on 9 January 2014, reiterating that Plain Packaging is illegal and the methodology of the review was flawed. This response is attached at Appendix 2.

4.8.11. The report following Sir Cyril Chantler's review was published on 3 April 2014. On the same day, Jane Ellison MP announced that she was "minded" to proceed with Plain Packaging following a short and limited consultation: *"Sir Cyril's report makes a compelling case that if standardised packaging were introduced it would be very likely to have a positive impact on public health and that these health benefits would include health benefits for children"*.

4.8.12. On 9 April 2014 the Government submitted an Impact Assessment to the Regulatory Policy Committee for review. This was only 6 days (including a weekend) after the Chantler Report was published on 3 April 2014, suggesting that the Government had made up its mind and prepared the Impact Assessment long before Sir Cyril Chantler published his report, of which the Government had only 48 hours' notice according to the Method Statement issued by Sir Cyril Chantler in December 2013.

4.8.13. On 26 June 2014, the Government published this Consultation on the introduction of regulations for Plain Packaging of tobacco products and a fresh Impact Assessment with a six week consultation period. The Government made it clear in its announcement of the same day that *"[i]t is vital that any decision is properly and fully informed"*.

4.9. The Government has spent a number of years looking into the issue of Plain Packaging. Despite this, the Government has not come any closer to having the necessary evidence or information (as it is its public law duty to have) to deprive BAT of its intellectual property rights based on speculation and without proper regard to data showing that Plain Packaging does not work.

- 4.10. The Government's attempts to gather evidence (the 2012 Consultation, the Chantler Report and this Consultation) have been inadequate in their scope, process and methodology, and at each stage BAT has been compelled to raise procedural objections. The Government has not yet taken the time to evaluate all of the evidence fairly and properly. We are concerned that the Government will now push forward with proposals that constitute a clear interference with the rights of BAT without knowing the real costs. In these circumstances, it is not possible for the Government to demonstrate, as it must, that the regulations are no more than is necessary to accomplish the objective or that it strikes a fair balance (*R (Aguilar Quila) v Secretary of State for the Home Department* [2011] UKSC 45).
- 4.11. At the heart of BAT's concerns is that this latest Consultation process, by its content, its timing and its duration, gives the impression that a decision has already been made to press ahead with these flawed proposals, and the Government will disregard any response – no matter how cogent, no matter how convincing – from those opposed to Plain Packaging, and the independent expert evidence presented in this Response.
- 4.12. It is a fundamental requirement of a fair and lawful consultation, enshrined in a number of Court judgments, that it takes place at a time when proposals are still at a formative stage, and that the product of the consultation is given conscientious consideration. These requirements, summarised in *R v North and East Devon HA, ex parte Coughlan* [2001] QB 213, are well known to the Government's legal advisers and do not need repetition here.<sup>6</sup>
- 4.13. But here, as the timeline set out at paragraph 4.8 above clearly shows, the Government as recently as mid-2013 was stating that it had decided to postpone any Plain Packaging decision "until the emerging impact of the decision in Australia can be measured before making a final decision on this policy". This fact is notably omitted from paragraph 2.3 of the background to the 2014 Consultation, and from the 2014 Impact Assessment. Further, the Government has made its position clear that a decision on Plain Packaging should not be delayed on the asserted basis "that the cost of delaying .... is too great in public health terms" (2014 Impact Assessment, para 28). In so doing, the Government is disregarding the actual evidence from Australia that shows that Plain Packaging has not had the intended impact, and also the impact of the changes to UK legislation required by TPD2 and the extension of the ban on retail sale displays in small shops commencing in April 2015, and dismissed the "do nothing" option (see 2014 Impact Assessment, Policy Option 1). This (and similar statements) indicates that, notwithstanding paragraph 1.1 of the Consultation, the Government seems determined that Plain Packaging should be introduced, whatever the response to this Consultation.

<sup>6</sup> For a recent re-iteration see *R (on the application of United Company Rusal plc) v London Metal Exchange* [2014] EWHC 890. (Admin), Phillips J.

- 4.14. Mr Gibson notes that the Government submitted the 2014 Impact Assessment to the Regulatory Policy Committee on 9 April 2014, the Chantler Report having only been published on 3 April 2014. Mr Gibson considers that this *"implies that [the Government] had drafted the [2014 Impact Assessment] and made up its mind on their preferred policy before they had received or considered the evidence in the Chantler Report. Again, this suggests that the policy development process has been rushed and that the [Government] had made up its mind before properly considering the evidence."*<sup>7</sup>
- 4.15. This is further reflected in the unreasonable time period provided to respond to the 2014 Consultation. The Consultation seeks *"new or additional information since the 2012 consultation"*, but sets an unfair time limit of only 6 weeks, ending on 7 August 2014. The Government will be very well aware of the time required for the preparation of detailed and useful expert responses to the lengthy, and heavily foot-noted, 2014 Impact Assessment. The period set is too short, and fails to take account of the Government's own recently amended Consultation Principles<sup>8</sup> - which state:
- "Timeframes for consultation should be proportionate and realistic to allow stakeholders sufficient time to provide a considered response and where the consultation spans all or part of a holiday period policy makers should consider what if any impact there may be and take appropriate mitigating action."*
- 4.16. The holiday period there referred includes *"Summer (August) = 22 Working Days."* There is no sensible reason for including any of these holiday days in the six week period applicable to the Consultation.
- 4.17. The Consultation is also predicated on preferring the option of further regulation (in the form of Plain Packaging) without giving adequate consideration to, for example, better enforcement of existing regulations. The National Audit Office ("NAO") published a report in June 2014 urging the Government to do more to consider non-statutory alternatives to regulatory interventions in the UK.<sup>9</sup> This does not appear to have happened in the case of Plain Packaging.
- 4.18. BAT requested an extension to the time limit for responding to the Consultation on 9 July 2014. This request was rejected by the Government on 18 July 2014.

<sup>7</sup> Paragraphs 4.1 and 4.4 of the Gibson Report.

<sup>8</sup> Available online at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/255180/Consultation-Principles-Oct-2013.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/255180/Consultation-Principles-Oct-2013.pdf) at page 2.

<sup>9</sup> The NAO: *Using alternatives to regulation to achieve policy objectives* (June 2014). Available at: <http://www.nao.org.uk/wp-content/uploads/2014/06/Using-alternatives-to-regulation-to-achieve-policy-objectives-summary.pdf>

- 4.19. The inadequacy of the Government's work is reflected in its 2014 Impact Assessment. As explained in more detail in the Response to Question 4 of the Consultation, the 2014 Impact Assessment is materially inadequate both in terms of its substance and its failure to meet the standards which the Government has set for itself (the "IA Guidance"<sup>10</sup>) in respect of impact assessments. The proposed Plain Packaging measure is highly controversial and represents an unprecedented expropriation of BAT's business and associated rights, including its intellectual property rights. Consistent with the Government's IA Guidance and associated toolkit, a detailed level of analysis is appropriate and necessary. The onus is on the Government to analyse the available options properly.
- 4.20. The 2014 Impact Assessment fails to provide the range of options and the level of analysis of the viability of those options that would be expected based upon the IA Guidance. Instead, it suggests a predisposition towards the Plain Packaging option, and fails to give full and proper consideration to alternative means of reducing tobacco consumption. It does not even analyse the Options 1 and 3 that it puts forward, beyond quantifying Option 1 as £0. Option 1 cannot have a zero cost because it includes measures that have yet to be implemented (such as TPD2 and the remainder of the retail display ban). The Government should include the costs and effectiveness of those measures in Option 1 if they are to be fully and frankly appraised as part of the Consultation. This is in stark contrast to the consideration given to the Plain Packaging option (Option 2). Accordingly, the 2014 Impact Assessment fails to demonstrate that Options 1 or 3 (or indeed any other alternative) cannot achieve the outcome the Government is seeking to achieve, namely a reduction in smoking prevalence, particularly among youths. This is contrary to the Government's own IA Guidance. No proper analysis of costs and benefits has been undertaken in order to select the most appropriate option in terms of the evidence and law.
- 4.21. The Department's pursuit of Plain Packaging is also contrary to the Principles of Regulation (the "Principles") annexed to the IA Guidance which require that the Government will regulate to achieve objectives only *"having demonstrated that satisfactory outcomes cannot be achieved by alternative, self-regulatory, or non-regulatory approaches"*<sup>11</sup> and that *"the regulatory approach is superior by a clear margin"*<sup>12</sup> to possible alternatives.
- 4.22. Further, those Principles state a general presumption that regulation should not impose costs and obligations on business, social enterprises, individuals and community groups unless a robust and compelling case has been made. The relevant test for Plain Packaging to pass in this case is

<sup>10</sup> The IA Guidance is available at:  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/211981/bls-13-1038-better-regulation-framework-manual-guidance-for-officials.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211981/bls-13-1038-better-regulation-framework-manual-guidance-for-officials.pdf)

<sup>11</sup> IA Guidance, pages 4 and 65.

<sup>12</sup> IA Guidance, page 4.

that no suitable alternative, non-regulatory or self-regulatory means of achieving the same outcome exists.

- 4.23. Further detail on the inadequacies in the Government's 2014 Impact Assessment is included in the response to Consultation Question 4 (at paragraph 7.51 below) and in the Gibson Report.

#### **B. Government's Failure to Consider Relevant Evidence**

- 4.24. The Government, having previously stated that it wanted to consider the evidence from the Australian experience on Plain Packaging before making any decision, has now ignored the evidence that does not support the introduction of Plain Packaging.

- 4.25. Objective data about actual smoking behaviour in Australia, available after the 2012 Consultation, shows that more than 18 months after its introduction in Australia, Plain Packaging has not had the intended impact and, indeed, has proved to be counterproductive.

- 4.26. The Government dismisses the need to wait for further evidence from Australia because it believes incorrectly that:

4.26.1. the information is likely to be of a limited class and is likely to be far outweighed by the health benefits the Government claims will flow from Plain Packaging (paragraph 81 of the 2014 Impact Assessment);

4.26.2. initial studies on Plain Packaging in Australia show positive results (paragraph 55 of the 2014 Impact Assessment); and

4.26.3. any data about the effect of Plain Packaging on illicit trade in Australia will be of no relevance to the UK because of the proximity of the EU and the free movement of goods (paragraph 175 of the 2014 Impact Assessment).

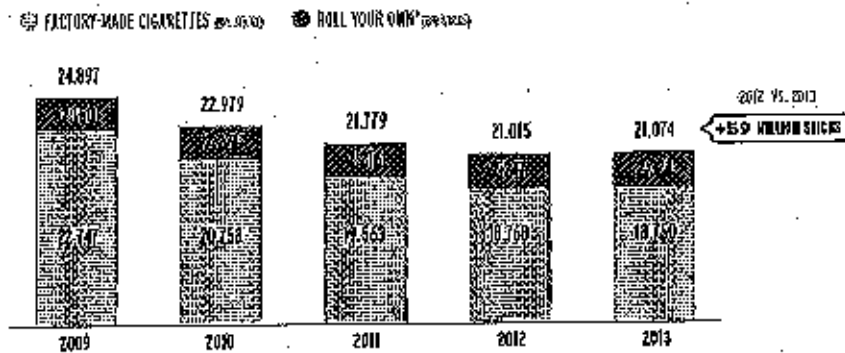
- 4.27. In fact, the Government's position on not waiting for further Australian evidence is misguided. The evidence from Australia showing this is misguided includes:

4.27.1. The InfoView Exchange<sup>13</sup> analysis of Industry Sales data which shows an increase in volumes of 0.3% since the introduction of Plain Packaging in Australia. According to these data, between 2008 and 2012 the volume of cigarettes (that is, Factory Made Cigarettes ("FMC") and RYO tobacco) sold in Australia had been declining at an average rate of 4.1% (2008-2012 CAGR). By contrast, total industry volumes actually increased over the course of 2013 by 59 million cigarettes (equating to a growth of 0.3%).

<sup>13</sup> InfoView Exchange of Industry Sales data ("EOS") tracks industry wholesale shipping figures from cigarette and tobacco factories.

This increase came about in spite of the fact that the Australian government increased tobacco taxes both before and after the introduction of Plain Packaging. The change can be seen in the chart below:

Australian legal tobacco sales volume trend



Source: Nielsen Technographics Pty Ltd.  
 \*Cigarette equivalent conversion for "Roll Your Own" is 0.85 cigarettes per stick

- 4.27.2. Data from The Cancer Institute NSW [New South Wales] Tobacco Tracking Survey ("**CITTS**"), which was not reviewed by the Chantler Report team, notwithstanding that the review team specifically travelled to Australia to "*see at first hand the implementation of Plain Packaging there*", and in fact met with the Cancer Institute NSW and were advised that the Cancer Institute NSW carries out several surveys.<sup>14</sup> It is extraordinary that the review team did not review this data in order to undertake their own analysis, or even refer to the existence of this data in the Chantler Report.
- 4.27.3. In order to obtain the CITTS data, related questionnaires and the data dictionary to be able to analyse the data, BAT was required to undertake a lengthy Freedom of Information request procedure. The Cancer Institute NSW refused to provide the raw data in electronic format making the analysis of that data substantially harder to undertake.
- 4.27.4. CITTS is a serial cross-sectional telephone survey of adult smokers and recent quitters (smokers who quit in the previous 12 months) that includes questions pertaining to smoking-related cognitions and behaviours, as well as responses to tobacco control media campaigns and policies. Data obtained from this survey was produced by Cancer Institute NSW in response to a Freedom of

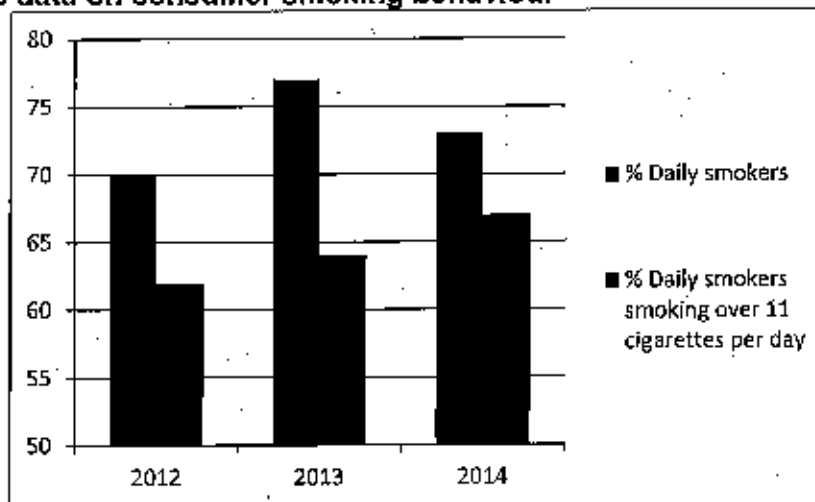
<sup>14</sup> Chantler Review at p29, paragraph 6.6; see also Notes of Australia-based meetings. Meeting with Cancer Institute New South Wales – Weds 12 Mar – Professor David Currow & Professor Jane Young. Present: Sir Cyril Chantler and Tabitha Jay. Independent Review Into Standardised Packaging of Tobacco, at p8 (available at <http://www.kcl.ac.uk/health/packaging-docs.aspx>).



Information request and has been analysed by Mr Gibson. This data shows that (see Gibson Report at sections 6.6 to 6.7):

- 4.27.4.1. the proportion of smokers surveyed who smoked on a daily basis actually increased from 70% in 2012 to 77% in 2013 (after the introduction of Plain Packaging in Australia) and remained at 73% into 2014, while the proportion of people smoking at least weekly (including those who smoked daily) increased from 79.5% to 80.5% between 2012 and 2013. In addition there was a rise in the number of daily smokers who smoked over 11 cigarettes a day from 62% in 2012 to 64% in 2013 and to 67% in 2014; and

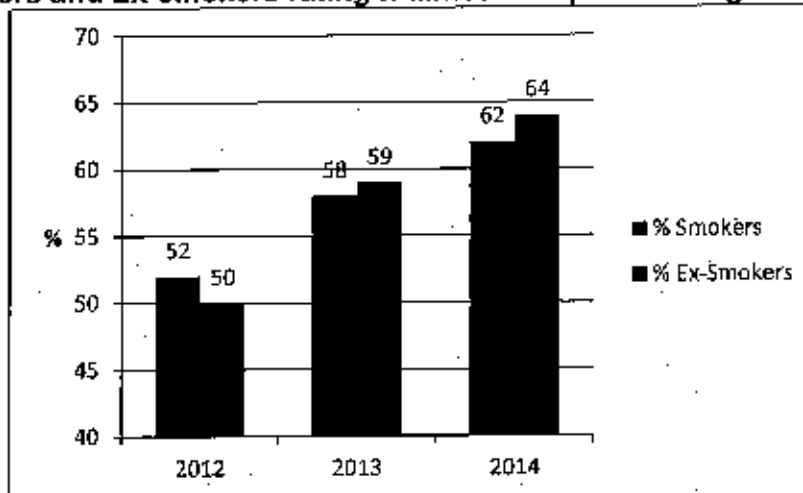
**CITTS data on consumer smoking behaviour**



Source: Gibson analysis of CITTS data (Figure 2, paragraph 6.6 of the Gibson Report)

- 4.27.4.2. for both smokers and ex-smokers it was perceived as more difficult to quit after Plain Packaging than before it (for smokers this increase was significant at the 95% level).

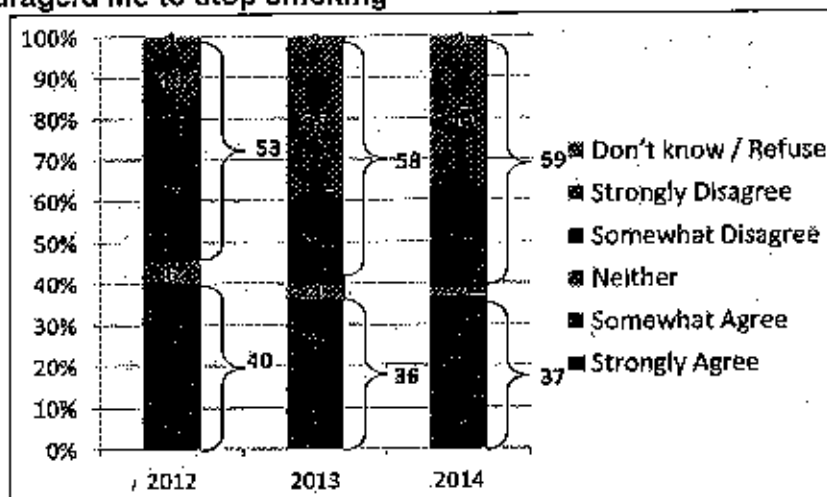
### Smokers and Ex-smokers rating it difficult to quit smoking



Source: Gibson analysis of CITTs data (Figure 3, paragraph 6.6 of the Gibson Report)

4.27.4.3. when asked whether graphic warnings encouraged smokers to quit, the number of respondents strongly agreeing or somewhat agreeing reduced from 40% in 2012 to 36% in 2013 – after the introduction of Plain Packaging in Australia in December 2012, remaining at 37% in 2014. The number of respondents somewhat or strongly disagreeing increased from 53% to 58% between 2012 and 2013 and increased further to 59% in 2014 (and the number of respondents strongly disagreeing doubled from 19% to 38% between 2012 and 2013).

### Do you agree with the following statement? The graphic warnings encourage/d me to stop smoking



Source: Gibson analysis of CITTs data (figure 1 of paragraph 6.6 of the Gibson Report)

4.27.5. The CITTS data also reveals that since Plain Packaging was introduced the proportion of smokers:

- 4.27.5.1. ignoring the health warning has increased;
- 4.27.5.2. thinking health warnings are exaggerated has increased;
- 4.27.5.3. thinking health warnings help them quit has decreased; and
- 4.27.5.4. seeking to hide their cigarettes from others due to the health warnings has not changed.

**Awareness of graphic warnings before and after Plain Packaging**

	2012	2013	2014
I don't look at warnings each time I get a cigarette	3.7%	3.8%	3.8%
The graphic health warnings are exaggerated	2.7%	3.2%	3.3%
The graphic warnings encouraged me to stop smoking	2.8%	2.5%	2.6%
They make me feel that I should hide my packet from the view of others	2.5%	2.6%	2.5%

Source: Gibson Report, Table 4, paragraph 6.6

4.27.6. The CITTS datasets supporting the analysis above have obviously not been analysed by the Government or in the Chantler Report. BAT will provide them upon request by the Government.

4.27.7. The Roy Morgan population survey data, which shows that there has been no change in the pre-existing trend in youth or adult smoking since the introduction of Plain Packaging. Analysis of this data by expert economists:

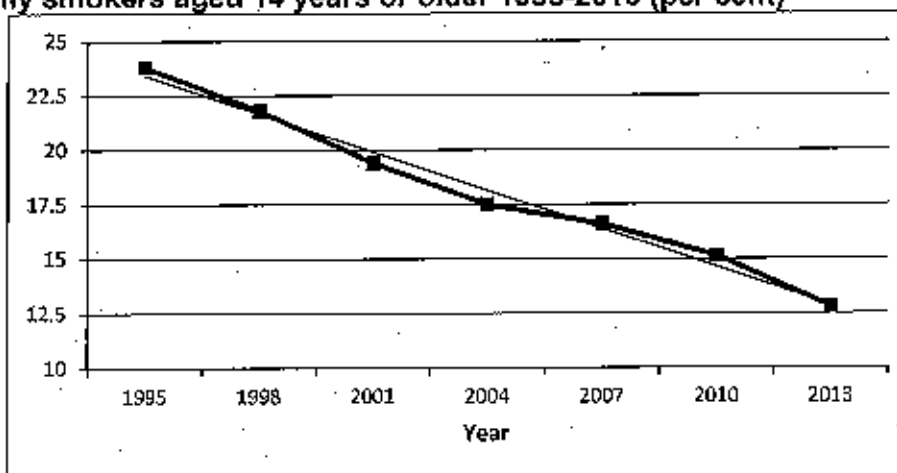
- 4.27.7.1. failed to find any evidence for an actual effect of Plain Packaging on Australians aged 14 to 17 years<sup>15</sup>; and
- 4.27.7.2. failed to find any sustained impact of Plain Packaging on existing smoking prevalence trends generally.<sup>16</sup>

<sup>15</sup> Ashok Kaul and Michael Wolf (2014), Working paper series / Department of Economics No. 149, The (Possible) Effect of Plain Packaging on the Smoking Prevalence of Minors in Australia: A Trend Analysis, available at <http://www.econ.uzh.ch/static/workingpapers.php?id=828>.

<sup>16</sup> Ashok Kaul and Michael Wolf (2014), The (Possible) Effect of Plain Packaging on Smoking Prevalence in Australia: A Trend Analysis, available at <http://www.econ.uzh.ch/static/wp/econwp149.pdf>.

- 4.27.8. Statistical analysis undertaken by Mr Gibson of this data for the 14 to 17 age group also found "no systematic relationship or significant association between the surveyed levels of FMC, RYO tobacco, pipe or cigar smoking and the introduction of plain packaging"<sup>17</sup>. None of the regression models show any statistically significant impact of the introduction of plain packaging on reported tobacco usage."<sup>18</sup>
- 4.27.9. Australian 2013 National Drug Strategy Household Survey ("ANDSHS") data, which shows that there has been no change in the pre-existing trend in daily smokers aged 14 and over since the introduction of Plain Packaging. Mr Gibson has reviewed this data and concluded that: "While there are not enough data points for detailed statistical analysis, it is clear that the proportion of daily smokers has been declining steadily over time and the proportion in 2013 is almost exactly on the trendline (despite a 25% tax increase on tobacco in 2010). This is consistent with and supports the findings from Roy Morgan Research and suggests that there has been no significant effect on daily smoking from the introduction of plain packaging in Australia."<sup>19</sup>

Daily smokers aged 14 years or older 1995-2013 (per cent)



Source: Gibson Report, Figure 4, page 22.

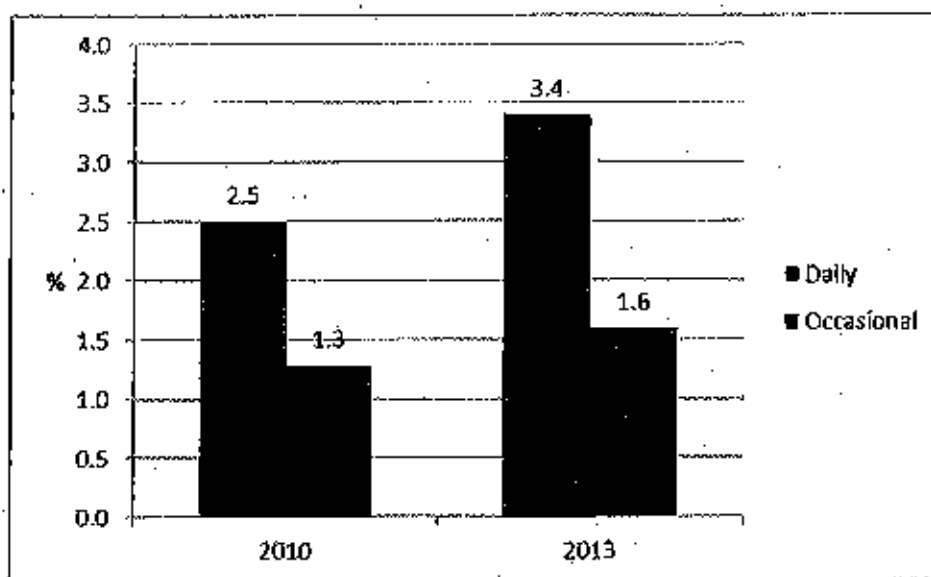
- 4.27.10. Mr Gibson also notes that: "[t]he ANDSHS also shows that the percentage of daily smokers aged 12-17 increased between 2010 and 2013 from 2.5% to 3.4% (the highest rate in the last 10 years) and the percentage of occasional smokers aged 12-17 also

<sup>17</sup> In fact using a quadratic time trend suggests that Plain Packaging is associated with a 0.5 percentage point increase in FMC, although this effect is not statistically significant.

<sup>18</sup> Gibson Report at section 6.4.

<sup>19</sup> Gibson Report at section 6.7.

increased from 1.3% to 1.6% over this period<sup>20</sup> as demonstrated by the chart below:



Source: Gibson Report, Figure 5, paragraph 6.7, page 22.

- 4.28. The Government must take this data into account in coming to its decision on Plain Packaging. Sir Cyril Chantler had access to this data as a result of his meetings in Australia. If the Chantler Report is to have any credence, this data should have been analysed and included in his report.
- 4.29. Moreover, the New South Wales CITTs data is the exact type of data that the Government instructed Sir Cyril to consider in his terms of reference.<sup>21</sup> The Government cannot turn a blind eye and reasonably expect to rely on a report that ignores highly pertinent data, which casts doubt on the efficacy of the very policy the Government prefers.
- C. The Government's quantification of the alleged impact of Plain Packaging is biased and fundamentally flawed, which renders the entire claimed health benefit of the measure invalid.**
- 4.30. The quantification of the alleged health benefits of Plain Packaging in the 2014 Impact Assessment is based on the elicited subjective assessments of "internationally-renowned experts" on tobacco control of what they believed to be the likely impact of standardised packaging on the prevalence of smoking in adults and the prevalence of children trying smoking (as

<sup>20</sup> *Ibid.*

<sup>21</sup> See letter dated 27 November 2013 from Jane Ellison MP to Sir Cyril Chantler setting out terms of reference for Sir Cyril Chantler including "taking into account any existing and fresh evidence" as to public health benefits. Available online at: <http://www.kcl.ac.uk/health/Packaging-review/packaging-review-docs/ellison-letter.pdf>

reported in Pechey et al., 2013<sup>22</sup>). Such subjective assessments have no predictive validity and the proposal to only select tobacco control advocates disregards the crucial requirements of impartiality and lack of conflict of interest.

- 4.31. The 2014 Impact Assessment purports to justify the selection of only tobacco control advocates simply on the basis of an assertion that impartiality and lack of an economic or personal stake in potential findings "are considered impractical in this area".<sup>23</sup> The disclosure of the interests of the experts clearly demonstrates their lack of independence and vested interest in the issue.<sup>24</sup> Yet, the Government says that those with interests in tobacco must declare these in their responses to the Consultation. Conflicts of interest cannot exist solely on one side of the argument.
- 4.32. The biased and flawed nature of the expert assessment is further exacerbated by the experts only being provided with the PHRC Review endorsement of the Plain Packaging literature, and the experts not being provided with any of the actual evidence from Australia which shows that Plain Packaging has not had any impact on smoking rates.
- 4.33. The Gibson Report, prepared by an economist and consultant, who has over 24 years of extensive experience in leading major economic and strategy projects across a broad range of industries and for Governments, concludes that: "*The IA ignores better quality and more direct evidence from Australia that directly challenges the effectiveness of plain packaging. It instead relies on weak, speculative and biased evidence from just one study (Pechey) to quantify the effects of plain packaging even though the paper's authors conclude that direct evidence would be superior and that their results are not quantified but purely directional.*"<sup>25</sup>
- 4.34. Reliance on this biased and flawed quantification of the alleged impacts of Plain Packaging renders the entire calculation of alleged health impacts of Plain Packaging, which are claimed to justify the measure, invalid.
- 4.35. In this respect, it is noted that the US District Court of Columbia recently barred the US Food and Drug Administration ("FDA") from using the work product of the Tobacco Products Advisory Committee ("TPSAC") (established by the FDA to provide advice and recommendations on scientific issues relating to tobacco products) on the basis of members of TPSAC having conflicts of interests. The Court wrote that "*the presence of conflicted members on the Committee irrevocably tainted its very composition and its work product. In turn, the Committee's finding and recommendations, including reports such as the [TPSAC] Menthol Report,*

<sup>22</sup> Pechey R, Spiegelhalter D, Marteau T M (2013). Impact of Plain Packaging of tobacco products on smoking in adults and children: an elicitation of international experts' estimates. *BMC Public Health* 13:18-24.

<sup>23</sup> 2014 Impact Assessment at paragraph 230.

<sup>24</sup> See Pechey et al., 2013, at pp8-9.

<sup>25</sup> Gibson Report, page 5, paragraph 2.



are at a minimum, suspect and, at worst, untrustworthy." On that basis, the Court remanded the matter to the FDA, ordering the FDA to reconstitute the TPSAC membership. Furthermore, the Court barred the FDA from using the 2011 TPSAC Menthol Report.<sup>26</sup> BAT's view is that any Court reviewing the Government's reliance on the subjective assessments of hopelessly conflicted tobacco control advocates would apply the same reasoning and reach the same result because the principles engaged are identical.

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<sup>26</sup> *Lorillard, Inc et al v United States Food and Drug Administration*, Civil case No. 11-400, US District Court of Columbia (Leon J), July 21 2014.

## **5. PLAIN PACKAGING IS UNLAWFUL, PER SE**

**Plain Packaging is per se unlawful because:**

- 5.1. The introduction of Plain Packaging is reliant on Article 24(2) of TPD2, which is unlawful and which is also currently subject to a legal challenge.**
- 5.2. Plain Packaging amounts to a complete deprivation of BAT's intellectual property without compensation contrary to Article 1 of Protocol 1 to the ECHR.**
- 5.3. Plain Packaging violates the UK's international obligations such as:
  - 5.3.1. the Community Trade Mark Regulation;**
  - 5.3.2. the WTO Agreement on Trade Related Aspects of Intellectual Property Rights (the "TRIPS Agreement"); and**
  - 5.3.3. Bilateral Investment Treaties.****
- A. The interpretation and validity of TPD2, which is currently subject to legal challenge, is relevant to whether the Government can introduce Plain Packaging.**
- 5.4. On 27 June 2014, BAT submitted an application to the English High Court challenging the validity of TPD2 requesting that the High Court refer the issue to the CJEU for a preliminary ruling.**
- 5.5. Permission to apply for judicial review was granted by Order of the Administrative Court dated 31 July 2014. The Government has acknowledged that the validity and interpretation of TPD2 is relevant to, among other things, whether it can introduce Plain Packaging and has agreed that it is appropriate for such questions to be referred to the CJEU for a preliminary ruling. Internal documents from the EU Institutions demonstrate that the Legal Services of the EU Institutions themselves had serious doubts regarding the lawfulness of the TPD2. For example, in the course of the legislative process, the Legal Service of the Commission complained that allowing Member States to impose stricter rules in the way that Article 24 does would "*totally undermine the internal market objective of the proposal*".**
- 5.6. In light of the circumstances set out above, we respectfully submit that the Government must in any event suspend its proposals to introduce Plain Packaging until the questions of the legality and interpretation of TPD2 have been resolved by the CJEU pursuant to the application referred to above.**
- 5.7. As set out in greater detail in Section 6, even if, contrary to the foregoing, TPD2 were ultimately to be upheld by the CJEU, Plain Packaging does not**



satisfy the requirements of Article 24(2) TPD2 that such measures be justified on grounds of public health, be proportionate and not constitute a means of arbitrary discrimination or a disguised restriction on trade between Member States.

**B. Plain Packaging is *per se* unlawful, since it amounts to a complete deprivation of the property in BAT's intellectual property without compensation.**

5.8. Plain Packaging is *per se* unlawful, since it amounts to a complete deprivation of property without compensation contrary to Article 1 of Protocol 1 to the ECHR. It is well understood that under section 6 of the Human Rights Act 1998 any acts of a public authority, including the Government, must be compatible with the guaranteed rights under the ECHR. The legal position was set out in Section 6.4 of BAT's response to the 2012 Consultation. BAT also agrees with the legal opinion of Lord Hoffmann (see Appendix 5 of Philip Morris International's response to the 2012 Consultation). In summary, the taking of property in the public interest without compensation is treated as justifiable only in exceptional circumstances, which do not apply here, and such payment of compensation should reasonably relate to the value of the property taken.

5.9. Plain Packaging would deprive BAT of its valuable property rights in its trade marks, as well as in copyright, patents and designs incorporated in the packaging, together with the goodwill arising in the brand. The 2014 Impact Assessment acknowledges that, under Plain Packaging, tobacco manufacturers would be deprived of the value of their brands and would be required to transform their current brand-led business model in the UK.<sup>27</sup>

5.10. Not only has the Government failed to offer compensation for the deprivation of BAT's valuable intellectual property, but the analysis of the value of the loss of brand equity to all UK tobacco manufacturers arising from Plain Packaging in the 2014 Impact Assessment is based on a flawed methodology and is hopelessly inadequate. BAT submits the expert report of Mr Weston Anson, an expert in intellectual property valuation. Mr Anson's report (the "Anson Report") is submitted with this Response (see Appendix 3).

5.11. The Anson Report concludes that an accurate calculation of lost brand equity value should include the value of trade marks, trade dress, packaging designs, copyright designs, goodwill and other intellectual property elements (together "Brand IP"). The actual loss in Brand IP value to UK tobacco companies using a market valuation approach, considering recent tobacco sector transactions, suggests that current tobacco Brand IP

<sup>27</sup> 2014 Impact assessment at paragraph 65.

valuations are in the order of several billions of pounds for UK tobacco brands.<sup>28</sup>

### **C. Plain Packaging violates the UK's international obligations**

#### *Community Trade Marks Regulation*

#### *The proposed measure violates Community trade mark law*

- 5.12. Plain Packaging would violate the Trade Marks Act 1994, the Community Trade Mark Regulation ("CTMR") and the Trademarks Directive ("TMD") which all protect the essential functions of valid trade marks. Article 5 of the TMD and Article 9 of the CTMR confer "exclusive rights" to trade mark owners under EU law. In addition, distinctive signs must be capable of "constituting trade marks", unless there is a ground for refusal or invalidity of the sign (Article 2 to 3 of the TMD; Articles 4 to 8 CTMR).
- 5.13. The CJEU has consistently held that the essential function of a trade mark is to guarantee the origin of a product vis-à-vis the consumer or end-user by enabling him to distinguish it without risk of confusion from products of different origin. The exclusive rights of the owner of registered trade marks relate inevitably to the essential functions of the trade mark. The most important and universally recognised of these functions is the function to distinguish products on the market. Plain Packaging prevents a vast number of tobacco trade marks from fulfilling their essential function. Plain Packaging at Member State level thereby violates the Community law right of the trade mark owner to have its trade marks meet their essential function. It also violates the Member States' obligation to ensure that signs can constitute trade marks. Signs cannot do that when they are prevented from fulfilling their essential function of distinguishing products vis-à-vis the end consumer.
- 5.14. Plain Packaging violates the right of the trade mark owner under Article 9 CTMR and Article 5 TMD to prevent the use of confusingly similar trade marks for similar goods. It does so by undermining the distinctiveness of those trade marks affected by Plain Packaging. A trade mark of greater distinctiveness has a broader scope of protection than one which is less distinctive. The distinctiveness of a trade mark is enhanced through use. This is particularly relevant for trade marks consisting of logos, colours and other device elements. With the prohibition of the use of such trade marks their distinctiveness and therefore their scope of protection will over time diminish.
- 5.15. In addition, Plain Packaging is incompatible with the obligation of the Member States to provide enhanced protection for well-known marks, under Article 9(1)(a) CTMR. Plain Packaging deprives a large number of trade marks of the possibility of maintaining the protection of well-known marks. It

<sup>28</sup> Anson Report at page 16.

deprives well-known marks of protection instead of providing enhanced protection.

*The proposed measures violate Community law on designs*

- 5.16. Article 19(1) of the Community Design Regulation and Article 12(1) of the Designs Directive provide that a registered (Community) design shall confer on its holder *"the exclusive right to use it ..."* Plain Packaging deprives the holder of a Community design of the right to use its design. This is incompatible with the Community rule.
- 5.17. According to Article 1(3) of the Community Design Regulation a Community design shall have a unitary character. It shall have equal effect throughout the Community. Its use shall not be prohibited, save in respect of the whole Community. Plain Packaging will prohibit the use of Community designs in one Member State only. This is incompatible with the unitary character of the Community design.

*WTO agreements*

- 5.18. WTO agreements concluded by the EU form an integral part of Community law, with which Member States are obliged to comply. Moreover, the principle of consistent or harmonious interpretation (see, for example, Case C-53/96 *Hermes*) requires that domestic legislation must be interpreted consistently with Member States' WTO obligations. Recent jurisprudence of the CJEU in Case C-414/11 *Daiichi Sankyo* EU:C:2013:520 and Case C-583/12 *Syntax Trading* EU:C:2014:244 suggests moreover that the CJEU may go so far as to apply the TRIPS agreement directly. Consistent with these obligations, Recital 53 of TPD2 envisages that Member States may introduce *"further standardisation of the packaging ... provided that those provisions are compatible with ... WTO obligations."* Accordingly, the empowering provision in section 94 of the Children and Families Act 2014 must be construed consistently with the United Kingdom's WTO obligations. In particular, regulations which are inconsistent with such obligations will be *ultra vires* and unlawful.
- 5.19. Plain Packaging would violate several WTO Agreements, including the TRIPS Agreement because it impermissibly infringes upon trade mark rights.
- 5.20. By removing or affecting BAT's right to use its trade marks, Plain Packaging would violate Article 20 of the TRIPS Agreement, Articles 15 and 16 of the TRIPS Agreement, and Articles 6*quinquies* and 10*bis* of the Paris Convention. The Government has failed to respond to these arguments.
- 5.21. Article 20 of the TRIPS Agreement provides that use of trade marks in the course of trade shall not be *"unjustifiably encumbered by special requirements ..."*. Article 20 continues by clarifying that requirements that the mark be used in a special form or that the trade mark is used in a

manner detrimental to the capability of the trade mark to distinguish products are examples of *prima facie* unjustifiable encumbrances on the use of trade marks. Plain Packaging is the "*ultimate encumbrance*" as it prohibits the use of trade marks in retail trade. In the absence of a general health exception in the TRIPS Agreement and in light of the text, context and structure of the TRIPS section on Trademarks, a measure that impairs the very substance of the functional and relational trade mark right and prevents it from performing its essential function of distinguishing products, is *ipso facto* an "*unjustifiable*" encumbrance.

- 5.22. Plain Packaging would also put the UK in breach of its obligations under Article 15.1 and 15.4 of the TRIPS Agreement. It would violate the UK's obligation to make all distinguishing signs "capable of constituting a trade mark". A distinctive sign only makes the trade mark what it is, and thus "constitutes" a trade mark, if it can be used on a product to distinguish products from one undertaking from those of another undertaking. The definition of a trade mark is that it is a sign used or to be used on a product or in relation to a service to distinguish and identify products or services. By denying the distinctive sign from being used on a product, Plain Packaging effectively denies any non-word mark from being capable of constituting a "trade mark", in violation of Article 15.1 of the TRIPS Agreement.
- 5.23. The reason for denying the sign from performing its communication function that is the essence of a trade mark is not one of the many that are provided for in Article 15.2 of the TRIPS Agreement or in the relevant provisions of the Paris Convention, like public order, or deception. The reason is the nature of the product. Article 15.4 of the TRIPS Agreement, like Article 7 of the Paris Convention, embodies the principle of product neutrality that is so typical of intellectual property law – the nature of the product is not what should determine the scope of protection. Plain Packaging would therefore violate the UK's obligations under Article 15.4 of TRIPS and Article 7 of the Paris Convention because it adversely affects only tobacco-related trade marks and prevents these from performing their essential functions, only because of the nature of the product.
- 5.24. Plain Packaging would also violate Article 16 of the TRIPS Agreement because it would reduce the scope of protection of the rights conferred by Article 16 below its minimum guaranteed level. Plain Packaging undermines the right of registered trade mark owners effectively to prevent others from using similar signs that are likely to cause confusion. Article 16 of the TRIPS Agreement confers exclusive rights to owners of registered trade marks and provides a guaranteed minimum level of protection of the distinctiveness and reputation of the mark. The scope of protection guaranteed under Article 16 of the TRIPS Agreement is determined by the use made of the mark and the resulting strength of the mark. The more intensive the use made of the mark, the stronger the mark; and the stronger the mark the greater its scope of protection. A measure that prevents the

use of trade marks therefore significantly reduces the scope of protection of the trade mark, in violation of Article 16.1.

- 5.25. The additional protection for well-known marks under Article 16.3 of the TRIPS Agreement is a confirmation and logical extension of this direct and intrinsic link between use of the trade mark and the scope of the trade mark owners' rights of protection against infringement. Article 16.3 of the TRIPS Agreement protects well known marks from dilution and allows the owner of a well-known mark to prevent the use of similar marks even on dissimilar products when that use would risk damaging the mark owner's interests and if it would suggest an association with the well-known mark. A Plain Packaging measure that prevents the use of all trade marks and requires the use of the brand name in a standardised form and font reduces the level of protection below that minimum level. A well-known mark that can no longer be used will soon lose its special status and its extended scope of protection. The Plain Packaging measure would therefore violate the UK's obligation to guarantee a minimum level of protection for well-known marks under Article 16.3 of the TRIPS Agreement.
- 5.26. Plain Packaging would also violate Article 10*bis* of the Paris Convention, which prohibits "*all acts of such a nature as to create confusion by any means whatever with the establishment, the goods, or the industrial or commercial activities, of a competitor.*" A standardised packaging rule would remove all distinctive elements of tobacco packaging with the exception of the brand name, which would also have to be printed in a prescribed font and font size. As a result, there is a very substantial risk that there will be confusion in the retail setting as to which brand of tobacco product consumers are purchasing. The UK would thus be requiring the kind of behaviour it is under an obligation to prevent, in violation of Article 10*bis* of the Paris Convention.
- 5.27. This is not to say that the UK cannot deal with trade marks that are misleading or deceptive or that are of such a nature to violate public morals; those are all well-established reasons for invalidating the registration and protection of a trade mark and can be the basis for preventing its use. However, that requires an analysis of the specific sign and its allegedly misleading nature. The blunt Plain Packaging measure does not examine the trade mark against a general criterion of deception but simply bans all trade marks. That is not permissible under the TRIPS Agreement.

#### *Challenge of Australia's Plain Packaging regime at the WTO*

- 5.28. Australia's measure to introduce Plain Packaging is being challenged in the WTO. Over the course of 2012 and 2013, Ukraine, Honduras, Dominican Republic, Cuba and Indonesia have sought consultations with Australia in relation to Australia's Tobacco Plain Packaging Act 2011 and the associated implementing regulations (the Tobacco Plain Packaging Regulations 2011); the Trade Marks Amendment (Tobacco Plain Packaging) Act 2011; and all further legislation, policies or practices that

have been adopted by Australia to implement these measures. The challenges have been raised on the basis that the measures are inconsistent with the TRIPS Agreement. A record number of countries have since joined the challenge, making it the largest in WTO disputes panel history in terms of the number of third parties.<sup>29</sup>

- 5.29. A panel for the disputes was composed on 5 May 2014. The Government should wait for the outcome of these WTO dispute settlement proceedings rather than rushing into a decision which only months later may be found to be in violation of international law.
- 5.30. The Indonesian government has also been reported as considering standardising the packaging of Australian wine in retaliation for the effect Australian Plain Packaging of tobacco products has had on Indonesia. An equivalent risk may apply to, for example, Scotch whisky in Indonesia if the UK were to proceed with Plain Packaging.<sup>30</sup>
- 5.31. In introducing Plain Packaging, the Government may also be starting down a slippery slope of further regulation that would harm other industries as well. For example, Mars has expressed concerns that its own valuable intellectual property could be damaged without good reason if Plain Packaging were applied to food.<sup>31</sup> This suggests heightened levels of concern in business generally about the Government's thinking on future regulation.

#### *Bilateral Investment Treaties*

- 5.32. As explained in BAT's response to the 2012 Consultation, Plain Packaging would also expose the UK Government to numerous claims from foreign investors under Bilateral Investment Treaties. Ironically, these treaties which were designed to protect investors from developed countries being subject to the same damaging effects the Government proposes through Plain Packaging that were anticipated to arise only through the actions of the governments of developing countries.

<sup>29</sup> As at 4 August 2014, the countries named as third parties (for, against and neutral/no position) were China, the European Union, Japan, the United States of America, Brazil, Chile, India, New Zealand, Singapore, South Korea, Argentina, Canada, Malaysia, Mexico, the Philippines, Ecuador, Egypt, Guatemala, Nicaragua, Nigeria, Peru, Turkey, Uruguay, Malawi, Moldova, Norway, Oman, Taiwan, Thailand, Zambia, Zimbabwe, Russia, South Africa, El Salvador and Panama.

<sup>30</sup> <http://www.scotsman.com/lifestyle/food-drink/features/cigarette-packs-could-see-whisky-in-trade-war-1-3407242>

<sup>31</sup> "Plain packaging pay out to Mars would 'certainly not be trivial' says Institute of Economic Affairs" (Confectionary News), see: <http://www.confectionarynews.com/Regulation-Safety/Mars-complaint-over-tobacco-plain-packaging-uneearthed>

**6. PLAIN PACKAGING IS DISPROPORTIONATE AND IRRATIONAL**

6.1. As set out in Section 5 of this Response above, Plain Packaging amounts to a *per se* violation of fundamental rights and international obligations. However, even if it were necessary to engage in a proportionality assessment, it is impossible on the evidence currently available for the Government to demonstrate that Plain Packaging is necessary, appropriate and proportionate to its aims. Moreover, for the reasons set out below, Plain Packaging is manifestly irrational.

6.2. Plain Packaging is an irrational measure on each of the following grounds:

6.3. Plain Packaging is not necessary because:

6.3.1. the risks of smoking have been universally known in the UK for decades. Branded packaging does not neutralise consumers' existing awareness of the risks of smoking;

6.3.2. it is clear from numerous Government-funded studies that factors other than branded packaging are the real drivers of smoking behaviours; and

6.3.3. existing regulation already prohibits the use of any misleading and deceptive terms on tobacco packaging.

6.4. Plain Packaging is not appropriate because the:

6.4.1. objective evidence to date about actual smoking behaviour in Australia shows that, as expected, Plain Packaging has not reduced smoking behaviour and, if anything, appears to have had unintended and undesirable consequences, such as increasing illicit trade;

6.4.2. Government's speculative quantification of the alleged health impacts of Plain Packaging is an inappropriate basis on which to base a policy decision to introduce Plain Packaging;

6.4.3. studies on which the Government relies are based entirely on the biased subjective assessments of tobacco control advocates, which have no predictive validity; and

6.4.4. expert evidence provided with this Response demonstrates that the studies relied on to promote Plain Packaging are flawed and unreliable, and Plain Packaging would not be expected to reduce smoking prevalence and, indeed, may be counterproductive.

6.4.5. evidence shows it would also have significant adverse unintended consequences that would undermine the public health objective, including:

- 6.4.5.1. potentially stimulating price competition and leading to an increase in downtrading which may in turn lead to an increase in consumption;
- 6.4.5.2. increasing illicit trade;
- 6.4.5.3. concentrating market power;
- 6.4.5.4. raising barriers to entry;
- 6.4.5.5. harming small retailers;
- 6.4.5.6. reducing the Government's tax revenues;
- 6.4.5.7. reducing consumer surplus;
- 6.4.5.8. stifling innovation; and
- 6.4.5.9. reducing consumer choice.

**6.5. Plain Packaging is disproportionate because:**

- 6.5.1. it is impossible on the evidence currently available to justify the measures, and the Chantler Report and the 2014 Impact Assessment rely on flawed and speculative analysis to support the Plain Packaging policy;
- 6.5.2. it is a wholesale expropriation of an industry's brands and trade marks, for which the Government does not propose to pay any compensation, and also represents an unprecedented assault on commercial expression, which cannot be justified;
- 6.5.3. a range of effective alternatives is available; and
- 6.5.4. the proposal unjustifiably discriminates between cigarettes and RYO tobacco, and other tobacco products such as cigars.

**A. Legal context for Requirement to Demonstrate Proportionality**

- 6.6. Article 24(2) TPD2 expressly requires that measures taken in relation to standardisation of the packaging of tobacco products must be proportionate and may not constitute a means of arbitrary discrimination or a disguised restriction on trade between Member States.
- 6.7. Further, Plain Packaging amounts to an interference with tobacco manufacturers' rights to property under Article 1 of Protocol 1 to the ECHR and Article 17 of the EU Charter; their freedom of communication under Article 10 of the ECHR and Article 11 of the EU Charter; and their freedom to conduct a business under Article 16 of the EU Charter. Any such interference must pursue a legitimate aim and respect the principle of



- proportionality. The freedom of communication extends to "commercial speech" and encompasses an entitlement to express and receive information and views in relation to goods marketed and purchased. While commercial speech can be regulated, effectively "silencing" speech about a lawful product, where there are no other opportunities to differentiate between one product and another, cannot be justified and is disproportionate. The interference of freedom of expression is exacerbated, rather than justified, by the fact that trade mark owners (if they are to sell their product at all): (i) must strip the packages in which their products are sold of any recognised markers of quality vis-à-vis competitor products; and (ii) undermine their own brands by requiring them to be conveyed in the most unattractive manner possible.
- 6.8. The Courts will rigorously scrutinise the proportionality of a measure which amounts to an unprecedented interference with fundamental rights: see *Joined Cases C-293/12 and C-594/12 Digital Rights Ireland*, judgment of 8 April 2014 at [47].
  - 6.9. Yet further, Plain Packaging will constitute a technical regulation which creates an unnecessary obstacle to international trade contrary to Article 2.2 of the Agreement on Technical Barriers to Trade unless it can be shown that it is not more trade-restrictive than necessary to fulfil a legitimate objective.
  - 6.10. Proportionality or justification requires (amongst other things) that a measure which interferes with a protected right "*must correspond to a pressing social need and go no further than strictly necessary in a pluralistic society to achieve its permitted purpose*" (*B v Secretary of State for the Home Department* [2000] UKHRR 498, 502C).
  - 6.11. It is for the Government to demonstrate that the interference with the rights of BAT is justified; the justification must be "*convincingly established*" (*R (BBC) v Secretary of State for Justice* [2012] EWHC 13 (Admin) [2012] 2 All ER 1089 (para 76)).
  - 6.12. Justifying a measure requires substantiating its intended impacts, or to put it another way, providing "*real and cogent evidence of a pressing need*" (*R. v Local Authority in the Midlands ex p. LM* [2000] 1 F.L.R. 612).
  - 6.13. Finally, it is axiomatic that a public authority may not take into account irrelevant matters, fail to take into account relevant matters or come to a conclusion so unreasonable that no reasonable public authority could have come to it: *Associated Provincial Picture Houses Limited v Wednesbury Corporation* [1948] 1 KB 223, 233-34. Equally, a public authority must equip itself with the information necessary to make an informed decision: *R (DF) v Chief Constable of Norfolk Police* [2002] EWHC 1738 (Admin) at [45].
  - 6.14. Plain Packaging would amount to a wholesale expropriation of an industry's brands and trade marks and also represents an unprecedented assault on

commercial expression. The Government's proposals are based on the flawed assumptions contained in the 2014 Impact Assessment, which in turn rely on the speculative Chantler Report and the PHRC Review, both of which do not seriously address the unintended consequences of Plain Packaging. The interference resulting from Plain Packaging goes to the very essence of the fundamental rights of property and freedom of expression, meaning that the requisite thresholds for justification and proportionality are at their highest. In this case, the proportionality of the interference must be judged against the background of the existing comprehensive ban on tobacco advertising and promotion as well as the full implementation of the ban on retail displays and, of course, the Government's proposed forthcoming implementation of TPD2. Packs, and the trade marks used on them, are for all practical purposes the only means by which manufacturers can differentiate their products from those of their competitors. It is manifestly inappropriate.

#### **B. Plain Packaging is unnecessary**

*The risks of smoking have been universally known in the UK for decades*

6.15. Public awareness in the UK about the risks of smoking cigarettes is effectively universal. Accordingly, there is no information purpose that justifies the Plain Packaging. Warnings on cigarette packs, which have also been in place since 1971, continue to reinforce the existing awareness of smoking risks.

6.16. The PHRC report on a study commissioned by the UK Government to review the effects of the implementation of graphic health warnings in England in 2008 (2010 PHRC Review), found that:

*"Among those aged 13-17, awareness of the health risks associated with smoking was high both pre and post 1st October 2008. For example, 100% of young people agreed that smoking causes lung cancer and virtually all young people named at least one health effect associated with smoking. No young people perceived smoking to carry no health risks."<sup>32</sup>*

6.17. The most recent NHS Statistics on Smoking: England, 2012, also reiterates that:

*"When asked about their beliefs about smoking, the majority of pupils reported strong agreement with the negative effects of smoking. Almost all the pupils thought smoking can cause lung cancer (99%), makes your clothes smell (97%), harms unborn babies (97%), can harm non-smokers health (96%) and can cause heart disease (93%)."<sup>33</sup>*

<sup>32</sup> Public Health Research Consortium, "Evaluating the Impact of Picture Health Warnings on Cigarette Packets", National Centre for Social Research, (2010) at 52.

<sup>33</sup> The NHS Information Centre, Lifestyles Statistics, "Statistics on Smoking: England", (2012), at 47.

- 6.18. As a statistical matter, it is virtually impossible for any poll or public opinion survey to reach a result of 100% awareness; to quote a report on smoking from the U.S. Surgeon General, it may be "unrealistic to set a goal above 90 percent of smokers for public knowledge."<sup>34</sup>
- 6.19. The PHRC Review for the UK Government, "Evaluating the Impact of Picture Health Warnings on Cigarette Packets", also demonstrates that the existing warnings are seen and assimilated by consumers on branded packs. The report states that:
- 6.19.1. For adults (aged 18 years and older) "Overall, recall of at least one health warning message was high, 93% of smokers pre 1st October 2008 and 100% post 1st October 2008 could name at least one warning message. Post 1st October 2008, awareness of the picture health warnings was high, only 6% of smokers did not name one of the new warnings messages when asked..."<sup>35</sup>
- 6.19.2. For youth (aged 13-17) "Awareness and recall of the picture health warnings was high. Post 1st October 2008, 85% of young people correctly described one of the health warning message, though for a majority of young people, the message most remembered was the front of packet message 'Smoking Kills'."<sup>36</sup>
- 6.20. Accordingly, there is no evidence that branded packaging in any way neutralises, impairs or impedes consumers' awareness of the risks or their ability to assimilate warnings. The Chantler Report and the 2014 Impact Assessment both fail to acknowledge the established state of knowledge regarding the risks of smoking and awareness of existing warnings on branded packs. Additionally, the Chantler Report fails to address or consider the well-researched field of smoking initiation mechanisms.
- 6.21. BAT is also submitting the expert report of Professor Viscusi, Distinguished Professor of Law, Economics and Management, Vanderbilt University Law School, Nashville United States, an expert on hazard warnings and how they affect consumer behaviour. Professor Viscusi's report (the "Viscusi Report") is submitted with this Response (see Appendix 4). Professor Viscusi notes that given that consumers are adequately informed, there is no beneficial role for additional warning efforts that do not provide any new information to consumers, which would be the case with Plain Packaging. Professor Viscusi, following "a critical review and assessment of the studies allegedly supporting the conclusion that plain packaging increases the effectiveness of health warnings," found "no evidence from these studies

<sup>34</sup> U.S. Public Health Service, "Reducing the Health Consequences of Smoking: 25 Years of Progress, A Report of the Surgeon General," at 221 (1989).

<sup>35</sup> Public Health Research Consortium, "Evaluating the Impact of Picture Health Warnings on Cigarette Packets", National Centre for Social Research, (2010) at 33.

<sup>36</sup> *Ibid.* at 65.

that plain packaging will increase the effectiveness of warnings.<sup>37</sup> Adding that:

*"The public is overwhelmingly aware of the dangers of smoking. In this environment, there is no beneficial role of plain packs for increasing the effectiveness of warnings or discouraging smoking initiation."<sup>38</sup>*

*Factors other than branded packaging are the real drivers of smoking behaviours*

6.22. It is clear from numerous government funded studies that factors other than branded packaging are the real drivers of smoking behaviour. BAT submits with this Response an expert report from Dr Neil McKeganey, Director, Centre for Drug Misuse Research, Glasgow who has undertaken research for a wide range of bodies including the WHO and the UK Department of Health (the "McKeganey Report") (see Appendix 5), who concludes:

*"The hypothesis, therefore, that plain tobacco packaging will reduce smoking prevalence and tobacco consumption has, to date, simply not been demonstrated or borne out by the evidence. Indeed, three decades and hundreds of studies of predictors/risk factors for smoking initiation, cessation and relapse have not identified packaging as a factor that influences people's decisions to start, stop, or re-start smoking."<sup>39</sup>*

6.23. The McKeganey Report explains further that:

*"The appeal of branded packaging is not empirically-supported as a factor that increases the likelihood of smoking initiation during adolescence; there is currently no empirical basis, therefore, from which the UK Government can confidently expect that reducing the appeal/attractiveness of tobacco packaging via standardised packaging will reduce the rate of smoking initiation by young people. More critically for public health, such action would not address the factors that do motivate young people to start smoking."<sup>40</sup>*

6.24. BAT also submits the expert report of Professor Gregory Mitchell, a psychologist and law professor at the University of Virginia, whose core research is in the fields of behavioural law and economics. This entails, among other things, the application of behavioural research to legal and economic policy and the empirical study of how people make judgments and decisions and how regulations may affect these judgments and decisions. Professor Mitchell's report (the "Mitchell Report") is submitted with this Response (see Appendix 6). Professor Mitchell concludes:

*"Factors associated with the initiation, continuation, and cessation of underage smoking have been the subject of a large amount of empirical*

<sup>37</sup> Viscusi Report at paragraph 14.

<sup>38</sup> Viscusi Report at paragraph 32.

<sup>39</sup> McKeganey Report at page 10.

<sup>40</sup> McKeganey Report at page 40

research. Two propositions relevant to the question of the effects of standardized packaging regulations on underage smoking are apparent from this body of research: (a) many variables are now known to be associated with underage decisions to initiate and continue smoking; (b) features of cigarette packaging have been relatively little studied as a cause or correlate of underage smoking, with no published field studies demonstrating an association between standardized cigarette packaging characteristics and reduced smoking initiation or continuation by underage persons. Together, these propositions urge caution in basing the draft regulations on speculation from indirect evidence about the possible impacts of standardized packaging on adolescent smoking.<sup>41</sup>

Adding that:

"Given the numerous factors that influence adolescent decisions to smoke, and given that these factors can interact to produce unexpected results or to undermine an intervention that is aimed at a subset of these factors, it is perilous to base a large-scale intervention on hopeful speculation about the positive effects of this intervention."<sup>42</sup>

*Existing regulation already prohibits the use of any misleading and deceptive terms on tobacco packaging*

6.25. Plain Packaging is also unnecessary because existing regulation already prohibits the use of any misleading and deceptive terms on tobacco packaging:

6.25.1. The Tobacco Products (Manufacture, Presentation and Sale) (Safety) Regulations 2002/3041, provide that "No person shall supply a tobacco product the packaging of which carries any name, brand name, text, trade mark or pictorial or any other representation or sign which suggests that that tobacco product is less harmful to health than other tobacco products." (Regulation 11(1)). The same regulations make it an offence under the Consumer Protection Act 1987 to supply tobacco products that are not compliant with this regulation; and

6.25.2. The Consumer Protection from Unfair Trading Regulations 2008/1277 also provides that it is a criminal offence to engage in unfair commercial practices, including:

6.25.2.1. marketing products that "[i]n overall presentation in any way deceives or is likely to deceive the average consumer" as to matters including the "main characteristics of the product" and such characteristics

<sup>41</sup> Mitchell Report at paragraph 50.

<sup>42</sup> Mitchell Report at paragraph 58.

include the "risks of the product" and the "benefits of the product" (Regulations 5(2), 5(4) and 5(5)); and

6.25.2.2. engaging in any practice that "omits material information" or "hides material information" or "provides material information in a manner which is unclear, unintelligible, ambiguous or untimely" (Regulations 6(1)(a), (b) and (c)).

6.26. The Government should not be introducing additional regulation when there is already existing regulation that can be enforced, should the Government have legitimate basis to claim that the extant trade marks on cigarette packaging are misleading.

### **C. Plain Packaging is not appropriate**

6.27. The Government has correctly stated that in order for Plain Packaging to be justified, it must provide a genuine contribution to the objective of reducing smoking prevalence "over and above existing tobacco control measures."<sup>43</sup> As detailed below, Plain Packaging is not appropriate for achieving this objective.

*The objective evidence to date shows that Plain Packaging has not reduced smoking behaviour*

6.28. As detailed in section 4 of this Response, the evidence to date from Australia shows that more than 18 months after its introduction, Plain Packaging has not had any effect on smoking behaviours beneficial to public health. This evidence includes:

6.28.1. the Roy Morgan population survey data;

6.28.2. industry sales data;

6.28.3. CITTS data; and

6.28.4. the 2013 National Drug Strategy Household Survey data.

*The Government's speculative quantification of the alleged health impacts of Plain Packaging is an inappropriate basis on which to base a policy decision to introduce Plain Packaging*

6.29. As explained in Section 4 of this Response, the quantification of the alleged health benefits of Plain Packaging in the 2014 Impact Assessment, based entirely on the biased subjective assessments of tobacco control advocates, has no predictive validity.

<sup>43</sup> 2012 Impact Assessment at paragraph 13. See also 2014 impact assessment at paragraph 45.

- 6.30. The quantification is entirely flawed and renders the entire calculation of alleged health impacts of Plain Packaging, which are claimed to justify the measure, invalid.
- 6.31. The Gibson Report examined the 2014 Impact Assessment and concludes that:

*"The IA's evaluation of the health benefits of plain packaging relies exclusively on the Pechey paper which [...] is biased, purely directional and second-best compared to the direct evidence which contradicts the Pechey results. The IA recognises that the evidence is indirect and suggests that it will "take account of any later research that becomes available". However, the IA has not taken account of the evidence from the Roy Morgan Research data or the Cancer Institute NSW Tobacco Tracking Survey (both of which were available at the time) in estimating the possible benefits of plain packaging. The sensitivity analysis in the IA shows that if one uses the direct evidence of the impact of plain packaging on smoking prevalence from RMR, rather than the indirect evidence of the impact from Pechey, the NPV of the policy (using the other assumptions and calculations in the IA) is reduced to -£2bn and would be significantly higher if the costs were properly calculated."<sup>44</sup>*

*Expert evidence provided with this Response demonstrates that the studies relied on to promote Plain Packaging are flawed and unreliable, and Plain Packaging would not reduce smoking prevalence*

- 6.32. The studies relied on to promote Plain Packaging are flawed and unreliable, and Plain Packaging would not reduce smoking prevalence. BAT provided evidence of this to Sir Cyril Chantler as part of his evidence gathering (see Appendix 2).
- 6.33. The evidence provided by BAT has been ignored or inadequately addressed by the Chantler Report and the 2014 Impact Assessment. As further explained in BAT's response to Question 1 of the Consultation below (paragraph 7.1 *et seq.*), given the acknowledged lack of evidence on actual behaviours, the Chantler Report seeks to 'bridge the gap' by relying on limited evidence from other spheres and experiments that have taken place in different contexts, and on the basis of conclusions that are stated to have "considerable intuitive plausibility" and offer "the best fit with the wider evidence"<sup>45</sup>. These conclusions are hypothetical and speculative.
- 6.34. As part of this Response, BAT also submits reports from experts directly involved in areas of behavioural psychology, warnings and smoking behaviour to review the Chantler Report and the evidence relied on to promote Plain Packaging, and to provide their opinions on whether Plain Packaging will impact on smoking behaviours. These expert reports include the:

<sup>44</sup> Gibson Report at section 8.9.

<sup>45</sup> Chantler Report at page 30

6.34.1. Viscusi Report, which having reviewed the literature that claims that Plain Packaging will contribute to reducing smoking initiation and more generally to reducing smoking prevalence by making health warnings more effective, and which concludes that *"the adoption of a plain packs policy will not make warnings more effective, increase risk awareness, or reduce smoking initiation."*<sup>46</sup>

6.34.2. Mitchell Report, which addresses whether Plain Packaging is likely to reduce underage smoking in light of relevant scientific research on adolescent decision-making and behaviour. The Mitchell Report concludes that:

*"Existing theories and research on adolescent decision-making and behavior do not support the contention that standardized packaging regulations will result in net reductions in underage smoking."*<sup>47</sup>

And

*"The draft regulations, if implemented, are not likely to change norms about the act of smoking or beliefs about smoking among adolescents."*<sup>48</sup>

6.34.3. Furthermore, the Mitchell Report cautions about the risk of a "boomerang effect", noting that *"[t]o the extent that elimination of brand-specific packaging is perceived as governmental overreaching, or is portrayed that way in the media or within families or peer groups, the [Plain Packaging] regulations are likely to trigger psychological reactance motivations that increase the motivation to smoke and increase the willingness to display cigarette packs."*<sup>49</sup>

6.34.4. In short, the Mitchell report underscores that Plain Packaging will not work and, in fact, could be counterproductive.

*Plain Packaging may encourage down trading which could lead to an increase in consumption*

6.35. Plain Packaging would remove all trade marks and other branding from packs, except for standardised and inconspicuous word marks. As a result, premium tobacco products would lose their distinctiveness. Consumers would be deprived of essential information concerning product origin and quality that allows them to distinguish among products in the market and would increasingly focus on price alone. This would encourage consumers to downtrade to cheaper products and the illicit market. The only means by which tobacco companies could differentiate their products would be price.

<sup>46</sup> Viscusi Report at page 1.

<sup>47</sup> Mitchell Report at paragraph 59.

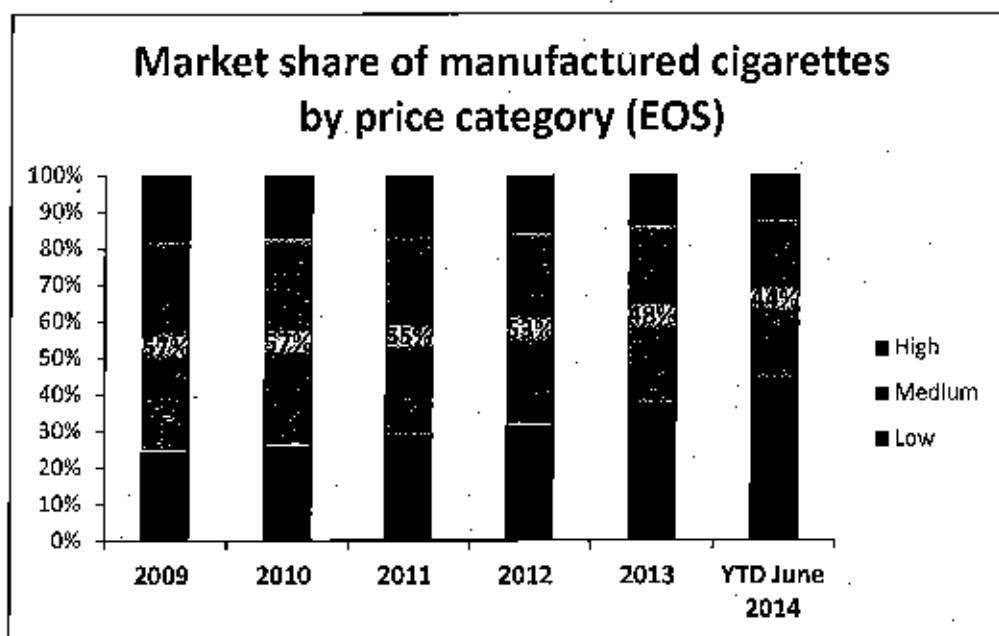
<sup>48</sup> Mitchell Report at paragraph 60.

<sup>49</sup> Mitchell Report at paragraph 45.



As a result tobacco consumption could also increase, especially among price-sensitive consumers (such as youth). This would undermine the aim of Plain Packaging.

- 6.36. The chart below confirms that the anticipated risk of commoditisation and down-trading continuing or increasing following the introduction of Plain Packaging has become a reality in the Australian market. Consumers are moving away from the mid-priced and premium brands and towards cheaper cigarettes.



- 6.37. BAT also submits the expert report of Mr Neil Dryden, Executive Vice President of Compass Lexecon, which analyses the impacts of Plain Packaging on competition. Mr Dryden's report (the "Dryden Report") is submitted with this Response (see Appendix 7). Mr Dryden explains that the standardisation of cigarette packaging under Plain Packaging will distort competition by reducing overall consumer economic welfare, concluding that:

*"Before any tax increases to offset anticipated price reductions, standardised packaging will either distort competition by reducing consumer welfare, or increase consumption contrary to the health objectives of standardised packaging. I conclude that the tax increase required to neutralise the likely price reduction is large, will unambiguously reduce consumer welfare and will increase incentives for illicit trade. I conclude that Sir Cyril Chantler's review and the impact assessment contain an*

*incomplete, and in some cases erroneous and simplistic, analysis of these issues.*<sup>60</sup>

- 6.38. The Dryden Report also concludes that Plain Packaging would likely result in further tax revenue losses to the UK exchequer because those consumers who value branded packaging would have: *"increase[d] incentives [...] to engage in legitimate cross-border trade to the extent that they valued the packaging itself."*<sup>61</sup>

*Plain Packaging would exacerbate an already significant illicit trade problem in the UK*

- 6.39. The 2014 Impact Assessment recognises the risk that Plain Packaging will increase the illicit market, stating that: *"There is a risk that the intervention may unintentionally encourage smokers who want branded tobacco to seek it from places where it is still available ... standardised packaging could increase the demand for and supply of illicit tobacco."* The 2014 Impact Assessment also concludes that *"there is likely to be an increase in the UK duty unpaid segment but we have no means of quantification."* However, the 2014 Impact Assessment provides no proposal for dealing with this increased risk. Instead, the 2014 Impact Assessment proposes to monitor the impact on the illicit market on the basis that *"[m]itigating action could however be taken if the intervention causes an increase in the illicit tobacco market."* However, it is also stated that: *"[t]o mitigate any increase in illicit trade would require additional resources devoted to reducing the demand, and intercepting the supply of illicit tobacco products which would increase costs and the additional funding required cannot be guaranteed or assumed."* This is not a proposal to address the issue at all, but essentially ignores the issue and hopes for the best. There is no proposed measure to mitigate the risk.

- 6.40. As part of this Response, BAT also submits the expert report of Mr Stuart Crookshank, a recently retired former Her Majesty's Revenue and Customs ("HMRC") officer with nearly 40 years' experience, including in several senior roles devising and implementing the strategies for tackling tobacco smuggling in the UK. Mr Crookshank sets out his observations on the illicit trade of tobacco products in the UK and the likely impact of Plain Packaging on the illicit trade, based on his many years of experience in tackling the illicit tobacco market in the UK. Mr Crookshank's report (the "**Crookshank Report**") is submitted with this Response (see Appendix 8)

- 6.41. The Crookshank Report's main conclusion is that Plain Packaging would make a bad situation worse because:

*"Law enforcement is already challenged and it cannot be expected without significant additional resources to contain any potential growth in the illicit*

<sup>60</sup> Dryden Report at paragraph 2.2.

<sup>61</sup> Dryden Report at paragraph 8.23.

*market in the future. The Government cannot rely on enforcement reducing the risk that introducing standardised packaging will have on the illicit market if it does not at the same time provide more resources for enforcement, more frontline officers, more customs officers inland to control the international shops and supply chains together with a tobacco licensing regime, more DTS officers, a publicity campaign to provide intelligence to tackle the problem and robust sanctions procedures including prosecutions. Given the current lack of priority, resourcing and an effective approach to deterring and disrupting the illicit market within the UK, I cannot see how the Government can justify taking the unquantifiable risk of increasing criminality and reducing revenues collected by the Treasury and thereby not meeting Sir Cyril Chantler's proposed response to the increased risk to the illicit market which is to have an effective enforcement regime and appropriate sanctions."<sup>62</sup>*

#### **D. Plain Packaging Is disproportionate**

- 6.42. Plain Packaging is a wholesale expropriation of an industry's brands and trade marks, for which the Government is not offering any compensation, and also represents an unprecedented assault on commercial expression, which cannot be justified. The Government's proposals are based on the flawed assumptions contained in the 2014 Impact Assessment, which in turn rely on the speculative Chantler Report and the PHRC Review, both of which fail to address seriously the unintended consequences of Plain Packaging. In BAT's view, it is impossible on the basis of the current evidence to support Plain Packaging. The interference resulting from Plain Packaging goes to the very essence of the fundamental rights of property and freedom of expression, meaning that the requisite thresholds for justification and proportionality are at their highest.
- 6.43. In this case, the proportionality of the interference must be judged against the background of the existing comprehensive ban on tobacco advertising and promotion as well as the ban on retail displays. Packs, and the trade marks used on them, are to all practical purposes the only means by which manufacturers can differentiate their products from those of their competitors. This further underscores that Plain Packaging is manifestly inappropriate.
- 6.44. BAT also submits the expert report of Professor Ronald J. Faber, a Professor of Mass Communication with expertise in advertising, marketing, mass communication and consumer behaviour. Professor Faber's report (the "Faber Report") is submitted with this Response (see Appendix 9). Professor Faber addresses the impact that Plain Packaging would have on trade marks and the brands that they represent, and on the market. His conclusions include:

<sup>62</sup> Crookshank Report at paragraph 43.

*"Trade marks are a key element in branding a product and perform valuable functions for both consumers and the brand manufacturers. They serve to help consumers identify brands and distinguish between competing brands. They aid consumers in selecting preferred brands over other alternatives. From a manufacturer's perspective, trade marks are a key element in developing and maintaining brand equity and "goodwill". This allows a company to enhance market share, achieve and maintain brand loyalty and command a premium price for its products."<sup>53</sup>*

And

*"In a mature market, like tobacco, trade marks and the brands that they represent are important to consumers because they help people who want a specific product to make informed decisions about which brand to buy i.e. selective demand. Once people have tried a brand, they may determine that they like it and buying it in the future will ensure that they are making a satisfactory product choice. Trademarked elements of the brand such as symbols, logos, designs or distinctive coloring or lettering can help people to identify and remember the brand. Consumers learn that a good identified by a specific trademarked symbol, design characteristic or brand can be relied upon to come from a particular source and have a given standard of quality and reliability."<sup>54</sup>*

And

*"In the current regulatory environment in the U.K., packaging is among the last remaining branding elements that can be used to differentiate between competing brands. Standardized packaging would prohibit the use of all trade mark elements on tobacco products and packages. This will limit adult consumers' ability to distinguish and identify preferred brands and adversely impact the ability of tobacco companies to successfully sell their brands, but will not serve to reduce primary demand. This change in trademarked packaging will also adversely affect the goodwill and brand equity a company has cultivated over years of investment."<sup>55</sup>*

*A range of effective alternatives are available*

- 6.45. In addition, there are a number of effective alternative measures that the Government could implement to further reduce tobacco use and youth access to tobacco.
- 6.46. The following measures, some of which are identified in the Government's current Tobacco Control Plan for England, are more effectively aimed at reducing tobacco use and youth access than Plain Packaging, and do not

<sup>53</sup> Faber Report at paragraph 7.

<sup>54</sup> Faber Report at paragraph 15.

<sup>55</sup> Faber Report at paragraph 7.

require the unlawful and unjustified expropriation of companies' intellectual property rights:

**6.46.1. Implementing more targeted youth education programmes** aimed at preventing young people from taking up smoking. A significant body of research, including research by the Nobel prize-winning economist James Heckman, establishes that early childhood interventions that affect personality traits and cognitive skills supportive of health can be effective policy tools in preventing unhealthy behaviour, such as smoking.<sup>58</sup>

**6.46.2. Implementing a consistent tax policy** that discourages youth uptake of smoking while disincentivising adult consumers from purchasing illicit products.

**6.46.3. Increasing measures to prevent the trade of illicit tobacco.** As already noted, illicit trade is a major problem in the UK and more needs to be done to combat it. Illicit tobacco undermines public health by:

6.46.3.1. supplying tobacco products to minors;

6.46.3.2. increasing smoking prevalence through the supply of cheap products; and

6.46.3.3. exposing consumers to unregulated products with no controls on hygiene standards and ingredients, or compliance with other product regulation including ceilings on tar, carbon monoxide and nicotine levels.

**6.46.4.** Accordingly, BAT sees it as vitally important that governments do not implement policies such as Plain Packaging that create conditions that encourage illicit trade and that they establish strong border controls and effective enforcement of laws to combat illicit trade.

**6.46.5. Enforcing existing laws forbidding retailers to sell to children.** The Government has taken welcome actions to reduce under-age access to tobacco products by raising the minimum age for sale to 18 years, and strengthening the penalties for retailers who break the law. We support more rigorous enforcement of these laws, which already contain tough but largely unused sanctions for

<sup>58</sup> Heckman J. "Skill formation and the economics of investing in disadvantaged children" *Science*, 312(5782), 1900-1902 (2006); Feeny T. "The case for investing in early childhood. A snapshot of research by Professor James Heckman (University of Chicago, USA) and Dr. Richard Tremblay (University of Montreal, Canada)", (April 2006), available at [http://www.thesmfamily.com.au/webdata/resources/files/Heckman\\_Tremblay\\_Snapshot\\_April\\_2006\\_B4F88.pdf](http://www.thesmfamily.com.au/webdata/resources/files/Heckman_Tremblay_Snapshot_April_2006_B4F88.pdf).

breach. For example, the Trading Standards Institute reported that in England in 2012/13:

- 6.46.5.1. 12% of test visits to shops by underage buyers in England resulted in a successful purchase;<sup>57</sup>
  - 6.46.5.2. the total number of prosecutions undertaken in England was 40, an average rate of prosecutions per authority of 0.6, of which 51% resulted in conviction;<sup>58</sup> and
  - 6.46.5.3. 86% of fines imposed for convictions for offences related to underage selling were of £500 or less against a maximum of £2,500.<sup>59</sup>
- 6.46.6. Introducing Plain Packaging without improving existing enforcement means that legitimate businesses are being further regulated because less scrupulous businesses are not being punished under existing legislation. It is unacceptable for the Government to impose further regulation to make up for its other enforcement shortcomings.
- 6.46.7. **Commencing the prohibition on 'proxy purchasing' for tobacco products** (i.e. the purchase of cigarettes on behalf of underage youth). The Government recently enacted legislation in the Children and Families Act 2014 to create an offence for a person to purchase tobacco products on behalf of those less than 18 years of age. However, this offence has not been commenced. We strongly support the commencement of this and related offences in England and Wales. Proxy purchases remain a significant problem. A recent survey carried out for the NHS Information Centre reported that:

*"In 2012, 8% of all pupils said that they had asked other people to buy cigarettes on their behalf. This figure increased with age from 1% of 11 year olds to 17% of 15 year olds. Girls were more likely to have done this than boys (9% and 7% respectively). The majority of current smokers had asked someone else to buy them cigarettes from a shop (88% of regular smokers and 49% of occasional smokers)."*

And

*"Pupils who had asked someone else to buy cigarettes on their behalf had generally been successful at some point. 88% of those*

<sup>57</sup> Tobacco Control Survey, England 2012/13 (the "Tobacco Control Survey"): A report of council trading standards service activity at page 16 (available online at: <http://www.derby.gov.uk/media/Trading-Standards-Institute-Tobacco-Control-Survey-2012-13.pdf>).

<sup>58</sup> Tobacco Control Survey, page 19.

<sup>59</sup> Tobacco Control Survey, page 19.

*who had asked someone else to buy them cigarettes from a shop had been bought cigarettes at least once in the last year.*<sup>60</sup>

- 6.46.8. **Exploring the use of targeted warnings to address any perceived information deficits.** To the extent that the Government is concerned about any specific information deficits about the health risks of smoking (despite the well-established nature of the public's awareness of these risks), it can remedy these concerns through focussed warning messages that would provide the appropriate, purportedly "unknown" information to targeted populations.
- 6.46.9. **Using existing laws to address claims that particular trade marks or colours used on tobacco packaging mislead consumers.** As already noted above existing regulation already prohibits the use of any misleading and deceptive terms on tobacco packaging (cf. Regulation 11(1) Tobacco Products (Manufacture, Presentation and Sale) (Safety) Regulations 2002/3041, and Regulations 5(2), 5(4) and 5(5) Consumer Protection from Unfair Trading Regulations 2008/1277). The Government should not be introducing additional regulation when there is already regulation that can be enforced.
- 6.47. **Implement and evaluate the tobacco control measures already enacted but not yet in force.** The Government should review the actual impact of measures such as the retail display ban and TPD2 (once each is fully implemented) to investigate whether additional measures are necessary before considering new initiatives.
- 6.48. The measures outlined above are sensible steps that could be taken to achieve the apparent aims of Plain Packaging, and do not have the real risks inherent in Plain Packaging. By failing to consider alternatives, the Government has not demonstrated that satisfactory outcomes cannot be achieved by less restrictive alternative measures. Such failure is inconsistent with Government policy to only regulate: "*having demonstrated that satisfactory outcomes cannot be achieved by alternative, self-regulatory, or non-regulatory approaches*".<sup>61</sup>

*Unjustified discrimination in comparison to other tobacco products such as cigars*

- 6.49. The draft regulations provide that the Plain Packaging requirements would only apply to cigarettes and RYO products. The provisions would not apply to other tobacco products, such as cigars. The purported rationale for this exemption, as set out in the 2014 Consultation, is the low rates of use of

<sup>60</sup> "Smoking, drinking and drug use among young people in England In 2012" Editor: E Fuller, London: National Centre for Social Research, (2013) at 29.

<sup>61</sup> Department for Business Innovation and Skills, "Principles of Regulation", available at <http://www.bis.gov.uk/policies/bre/principles-of-regulation>.

these other tobacco products, particularly by young people.<sup>82</sup> However, the Government's stated objectives in introducing Plain Packaging are not limited to reducing youth initiation.

- 6.50. The fact that the Government has limited the scope of Plain Packaging to cigarettes and RYO in this way therefore reflects an Internal inconsistency in the Government's tobacco policy. It also suggests that the Government has no real belief that Plain Packaging will achieve its objectives of increasing successful quit attempts, and reducing relapse.
- 6.51. There is also no lawful basis for such a distinction. The decision of the European Free Trade Association ("EFTA Court") in E-9/00. *EFTA Surveillance Authority v Norway* (the "Alcopops case") establishes that differential treatment of products based on their appeal to youth cannot be justified in circumstances in which both types of products in question are illegal to sell to young people.
- 6.52. In that case, the Norwegian Government argued that the stricter rules for the sale of alcopops were justified by the particular appeal that these products have to youth, referring to studies by the WHO. The EFTA Court accepted that alcopops appeal in particular to young people but nevertheless rejected Norway's argument and stated that *"the appeal to young consumers cannot justify the different treatment of those products."* The EFTA Court stated:
- "The different treatment of beer and other beverages with the same alcohol content appears to be neither necessary nor proportionate in relation to the health objectives pursued. In this context the Court notes that the Norwegian Alcohol Act prevents the serving of any form of alcoholic beverage to anyone under the age of 18 in establishments with a license to serve alcohol. To the extent that the defendant's concerns for an increase in the consumption of alcohol among people younger than 18, the adoption of measures to ensure the compliance with this requirement and the enforcement thereof, may constitute a more appropriate and less restrictive measure. In this context, the Court also notes that the advertising of alcoholic beverages is prohibited in Norway."* (emphasis added).
- 6.53. Similarly, more effective enforcement of existing laws prohibiting youth access would be a more appropriate and less restrictive measure to reduce youth smoking than the introduction of Plain Packaging.

<sup>82</sup> 2014 Consultation at paras 5.9 to 5.12.



## **7. SUBSTANTIVE RESPONSE TO QUESTIONS**

### **RESPONSE TO QUESTION 1**

*Do you have any observations about the report of the Chantler Review that you wish to bring to our attention?*

- 7.1. The Chantler Report does not and cannot support the introduction of Plain Packaging. This is because the Chantler Report:**
- 7.1.1. falls to take account of the evidence from Australia's experience with Plain Packaging;**
  - 7.1.2. does not provide a sufficient evidential basis upon which to introduce regulation;**
  - 7.1.3. relies on unsound, hypothetical evidence and ignores relevant evidence;**
  - 7.1.4. incorrectly concludes that branded packaging contributes to increased tobacco consumption;**
  - 7.1.5. Inappropriately dismisses concerns over the price impact of Plain Packaging; and**
  - 7.1.6. unjustifiably fails to consider the impact of Plain Packaging on illicit trade.**
- A. The Chantler Report fails to take account of the evidence from Australia's experience with Plain Packaging.**
- 7.2.** The Chantler Report purports to review the relevant evidence supporting and opposing Plain Packaging. However, omissions in the evidence examined in the Chantler Report indicate that the review was not approached in a thorough and unbiased manner. Most notably, the Chantler Report fails to address recent data from Australia that Plain Packaging has not reduced smoking behaviour since its introduction in 2012 (as discussed at paragraph 4.27 of this Response), including survey data from New South Wales showing that the proportion of smokers surveyed who smoked on a daily basis actually increased after the introduction of Plain Packaging.
- 7.3.** As noted above, this disregard is made all the more striking by the fact that members of the Chantler Report team (including Sir Cyril Chantler) travelled to Australia specially to observe the impact of Plain Packaging, including meeting with the Cancer Institute NSW whose surveys generated some of this data, and were advised of the existence of surveys but did not analyse the data so that it could be included in the Chantler Report.

- 7.4. Thus, although the Chantler Report suggests that the evidence on Plain Packaging points in one direction (a reduction in the consumption of tobacco), the data shows otherwise. That the Chantler Report does not take proper account of this evidence wholly undermines the conclusion of that report, as discussed above at paragraphs 4.27 to 4.35.
- 7.5. Proper consideration of the data from the Australian Plain Packaging experience shows that Plain Packaging is not reducing smoking in Australia, and rebuts claims that Plain Packaging will be effective.
- B. The Chantler Report's conclusion is an insufficient evidential basis upon which to introduce regulation.**
- 7.6. The Chantler Report concludes that:
- "... there is sufficient evidence derived from independent sources that the introduction of standardised packaging as part of a comprehensive policy of tobacco control measures would be very likely over time to contribute to a modest but important reduction in smoking prevalence especially in children and young adults."<sup>63</sup>*
- 7.7. By its own admission, the Chantler Report's claimed impact is only likely to be "modest", to occur "over time" and only as part of other tobacco control measures. The Chantler Report provides absolutely no clarity as to what level the impact will be, when the impact will occur or how the impact will be affected by other tobacco control measures.
- 7.8. This does not meet the standard required to justify the introduction of Plain Packaging, as recognised in the Government's 2012 Impact Assessment, which states:
- "For tobacco control policies to be justified the impact on smoking behaviour and the consequent improvement in health need to be sufficiently large to justify the related costs."*
- And further:
- "A policy to introduce standardised tobacco packaging would need to be justified and be based on expected benefits over and above existing tobacco control measures."<sup>64</sup>*
- 7.9. Mr Gibson considered the Chantler Report and concluded that the 2014 Impact Assessment is a manifestly inappropriate document on which to base a decision as important as the one facing the Government, saying that:
- "Overall the Chantler Report does little to extend the evidence base for plain packaging or to consider alternative approaches to reducing tobacco*

<sup>63</sup> Chantler Report at p40, paragraph 6.11.

<sup>64</sup> IA No. 3080, Standardised Packaging for Tobacco Products at pp 3 and 5, paragraph 13.

*consumption or the costs of plain packaging. It does not address the evidential and analytical weaknesses of the 2012 impact assessment, most of which are still evident in the current [2014 Impact Assessment].*<sup>65</sup>

**C. The Chantler Report relies on unsound, hypothetical evidence and ignores relevant evidence.**

7.10. The Chantler Report relies on the Plain Packaging literature reviewed in what it refers to as the "Stirling Review", a review of the evidence on the Impacts of Plain Packaging that was commissioned by the UK Government and accompanied the 2012 Consultation on Plain Packaging,<sup>66</sup> as well as the update report,<sup>67</sup> which is acknowledged to be "*relatively modest*", subject to "*limitations due in particular to constraints on study design*" and "*the findings are essentially indirect and speculative*".<sup>68</sup> It is also acknowledged that the evidence relies on stated intentions which are poor predictors of behaviour.<sup>69</sup>

7.11. However, it is claimed that the evidence has some strength because of its consistency of results on intermediate outcomes and because it points in a single direction. This does not fully acknowledge the findings of the assessment of the evidence undertaken by the academics for the Chantler Report. For example, the quantitative analysis (Annex D of the Chantler Report) notes that the outcomes of the different studies were too disparate to permit pooling.<sup>70</sup> The conclusions of the qualitative analysis (Annex E of the Chantler Report) also include that while the qualitative research suggests that Plain Packaging increases the visibility/prominence of health warnings, "*there is some evidence that smokers and non-smokers – including young people – are aware of, and/or can recall messages about health risks and harm but this may not alter behaviour*" and Plain Packaging "*may not deter current smokers*".<sup>71</sup>

7.12. Furthermore, a combination of unreliable and flawed studies does not create a reliable evidence base. BAT refers to the Viscusi Report which states: "*[c]ounting studies and the direction of the results does not certify the soundness of the experimental procedures, the relevance of the experimental effects to likely policy impacts, the statistical significance of the results, or the magnitude of the results.*"<sup>72</sup>

7.13. Given the acknowledged lack of evidence on actual behaviours, the Chantler Report seeks to bridge the gap by relying on evidence from other spheres and experiments that have taken place in different contexts and on

<sup>65</sup> Gibson Report at section 6.1

<sup>66</sup> Moodle et al (2012) Plain Tobacco Packaging A Systematic Review.

<sup>67</sup> Moodle et al (2013) Plain Tobacco Packaging Research An Update.

<sup>68</sup> Chantler Report at p29, paragraph 4.21 and p38, paragraph 6.2.

<sup>69</sup> Chantler Report at p5, paragraph 14.

<sup>70</sup> Chantler Report at p49, Annex D.

<sup>71</sup> Chantler Report at p57, Annex E.

<sup>72</sup> Viscusi Report at paragraph 36.

the basis of conclusions that are stated to have "*considerable intuitive plausibility*" and offer "*the best fit with the wider evidence.*"<sup>73</sup> These conclusions are merely hypothetical and speculative, as discussed above at paragraphs 7.11 and 7.12.

7.14. The Chantler Report points to an article alleging that the tobacco companies have engaged in "*evidential landscaping*", promoting a parallel evidence base to deflect attention from Plain Packaging.<sup>74</sup> This allegation is false. The Chantler Report, however, does exactly this in promoting studies from other spheres and in different contexts which provide no support for the proposition that removing branding from tobacco packaging will impact on behaviours.

7.15. The Mitchell Report states:

*"The Chantler Report's facile invocation of unconscious processes as an influence on adolescent decisions and behavior reveals a lack of understanding of adolescent theories of health behavior and of the limits of the research into unconscious causes of behavior."*<sup>75</sup>

7.16. The conclusion reached in the Chantler Report that Plain Packaging will result in fewer people being deceived into thinking that some brands are healthier than others, and health warnings will be more credible, memorable and effective, ignores the evidence discussed in paragraphs 6.15 to 6.20 of this Response that public awareness in the UK about the risks of smoking is effectively universal and that branding and packaging do not neutralise consumers' existing awareness of the risks of smoking or prevent consumers from seeing and assimilating the health warnings.

**D. The Chantler Report incorrectly concludes that branded packaging contributes to increased tobacco consumption.**

7.17. At the outset, it must be recognised that packaging is not advertising. Packaging is the identification of the product. Thus, the effect of advertising, which is banned in the UK, is not relevant for the purposes of examining the effects of Plain Packaging that prohibits the use of trade marks to identify and distinguish products.

7.18. In any event, and contrary to what the Chantler Report states, the evidence is not "*clear*", but rather is quite mixed, on the question of whether advertising causes or increases aggregate consumption. For example Duffy (1996) undertook an empirical investigation of the effect of total cigarette advertising on the demand for cigarettes in the UK and concluded that: "[n]o evidence is found in this research to back up the view that

<sup>73</sup> Chantler Report at p30, paragraph 4.22.

<sup>74</sup> Chantler Report at p28, paragraph 4.15.

<sup>75</sup> Mitchell Report at paragraph 16.

*aggregate cigarette advertising has the effect of expanding total market demand for cigarettes.*<sup>76</sup>

- 7.19. Furthermore, it is not credible to assert that branded packaging has the same effect as advertising when:
- 7.19.1. the UK heavily restricts advertising for tobacco products, which restrictions include (but are not limited to) a ban on advertising, on event sponsorship, and on vending machine sales, as well as the retail display ban (which has already been introduced into large retailers in England and will become effective for small retailers in 2015). These restrictions mean there can be no synergy between branded packaging and advertising and promotion instruments; and
- 7.19.2. the branding on packaging in the UK is already severely limited by the requirement to display large warnings and other information.
- 7.20. Plain Packaging has not worked in Australia and will not work in the UK because tobacco packaging is not a relevant factor that influences smoking behaviour. The real and universally accepted drivers of smoking initiation include factors such as parental influences, risk preferences, peer influences, socioeconomic factors, access and price.<sup>77</sup> These factors do not include product packaging.
- 7.21. The suggestion in the Chantler Report that branded packaging can stimulate smoking in experimental and established smokers by acting as a 'visual trigger' and that Plain Packaging will remove this effect,<sup>78</sup> is ill-considered. Under Plain Packaging the plain pack, or indeed the cigarette itself, would simply take on the significance, if any, of the formerly branded pack. Furthermore, numerous government-funded and independent studies show that factors other than packaging are the real drivers of decisions relating to quitting and relapse.<sup>79</sup>
- 7.22. Similarly, the suggestion in the Chantler Report that seeing branded packaging is a 'here and now' reward to which teenagers are particularly

<sup>76</sup> Duffy, *An Econometric Study of Advertising and Cigarette Demand in the UK*, *International Journal of Advertising*, 1996, 15, 262-284; see generally, [www.health.gov.au/internet/yourhealth/publishing.nsf/Content/pcda-tpa-ia-resta#.U0GqWGg6Lzl](http://www.health.gov.au/internet/yourhealth/publishing.nsf/Content/pcda-tpa-ia-resta#.U0GqWGg6Lzl).

<sup>77</sup> See, e.g., "Smoking, drinking and drug use among young people in England in 2012" Editor: E Fuller, London: National Centre for Social Research, (2013); US Government and Human Services, "Preventing tobacco use among young people: A report of the Surgeon General" (1994) (summarizing approximately 160 studies on the subject of the psychosocial risk factors associated with underage tobacco use); see also US Government and Human Services, "Preventing tobacco use among youth and young adults: A report of the Surgeon General" (2012), at Ch. 4 (reinforcing findings of 1994 Surgeon General's report with added emphasis on individual cognitive processes).

<sup>78</sup> Chantler Report at p23, paragraph 3.21.

<sup>79</sup> See, e.g. The UK Office for National Statistics, "Opinions Survey Report No. 40 Smoking-related Behaviour and Attitudes, 2008/09", (2009), Tables 3.5, 4, 11, and 4.12.

sensitive<sup>80</sup> ignores the evidence regarding the role of packaging in teenage smoking. For example, in preparing a report for Health Canada, Goldberg et al. concluded that: *"It is clear that in most first trials there are little package, brand or brand promotion elements. Most kids receive their first cigarette from friends. There is no brand choice - the choice is simply to smoke or not to smoke."*<sup>81</sup> Similarly, and more than a decade later, the Cancer Research UK report, "The Packaging of Tobacco Products", noted that: *"To some extent the pack appeared peripheral compared with the cigarette in youth smoking, particularly at the initiation/experimentation stage. . . Some said they never really saw the pack being used it was just the cigarette that was passed around. . ."*<sup>82</sup>

- 7.23. Professor Mitchell also found that the 'badge effect' the Chantler Report says exists as a result of branded packaging will not go away, it will merely change the balance between which brands are viewed positively and which brands are viewed negatively, without having any net effect on underage smoking prevalence.<sup>83</sup>

**E. The Chantler Report inappropriately dismisses concerns over the price Impact of Plain Packaging.**

- 7.24. This anticipated increase in price competition and consequential downtrading to cheaper products is recognised as one of the key potential implications of trade mark/brand removal resulting from a Plain Packaging regime, including in the 2012 Impact Assessment<sup>84</sup> and the 2014 Impact Assessment (*"Our central estimate for downtrading under standardised packaging is a doubling of the existing downtrading trend."*)<sup>85</sup>

- 7.25. The downtrading to cheaper brands following the introduction of Plain Packaging in Australia (which the Chantler Report recognises is already happening) is predictive of anticipated price competition. Contrary to the Chantler Report itself, the economic analysis (Annex C of the Chantler Report) notes that: *"there is some evidence that an existing trend for 'downtrading' towards value brands may have accelerated since the introduction of Plain Packaging."*<sup>86</sup>

- 7.26. It is premature for the Chantler Report to dismiss the downtrading risk which would be expected to occur over time. As the economic analysis attached to the Chantler Report notes: *"[i]t is too soon to make definitive*

<sup>80</sup> Chantler Report at pp21-22, paragraph 3.16.

<sup>81</sup> Goldberg M, Liefeld J, Kindra G, Madill-Marshall J, Lefebvre J, Martohardjono N, Vredenburg H. "When packages can't speak: Possible impacts of plain and generic packaging of tobacco products - Expert panel report for Health Canada", (March 1995), at 184.

<sup>82</sup> The Centre for Tobacco Control Research Core funded by Cancer Research UK, "The packaging of tobacco products", (March 2012), at 31.

<sup>83</sup> Mitchell Report at p. 27, paragraph 39-41.

<sup>84</sup> 2012 Impact Assessment at pp 17-18, paras 67-68.

<sup>85</sup> 2014 Impact Assessment at paragraph 244.

<sup>86</sup> Chantler Report at p45, Annex C.

conclusions."<sup>87</sup> It is disingenuous to assert on the one hand that the benefits of Plain Packaging will take time, but on the other hand dismiss an impact on average prices because it has not been clearly seen to date.

7.27. To that point, the Gibson Report states:

*"The Chantler Report should be scrupulously balanced, however it seems to give 'the benefit of the doubt' to possible future developments where they favour plain packaging, while dismissing concerns raised in respect of plain packaging on the basis that the evidence is not already apparent."*<sup>88</sup>

7.28. Furthermore, the suggestion in the Chantler Report that any price reductions could simply be mitigated through tax hikes is also misguided and over-simplifies matters. Tax hikes would most likely push the entire market upward and exacerbate existing price differentials between the legal and illicit market, at a time when the incentive to pay premiums for products is diminishing. Consequently, any such tax-hikes would only exacerbate downtrading and push more people into the illicit market in the UK. Any use of taxation to mitigate downtrading would necessarily further distort competition in the UK market.<sup>89</sup>

**F. The Chantler Report's rejection of the impact of Plain Packaging on illicit trade is not justified.**

7.29. While the Chantler Report seeks to discredit and dismiss the report on the illicit market in Australia undertaken by KPMG<sup>90</sup>, which found that illicit tobacco consumption reached its highest-recorded proportion of total consumption in Australia — 13.3% — following the introduction of Plain Packaging, it fails to justify the basis on which it does so.

7.30. The Chantler Report merely relies on the views of others that KPMG's methodology is flawed without identifying and explaining the alleged flaws, and concludes that: "[i]n a situation where estimates differ by such magnitudes, I do not have confidence in KPMG's assessment of the size of — or changes in — the illicit market in Australia."<sup>91</sup> The fact that they are different estimates does not justify rejecting one estimate. The Chantler Report's dismissal of KPMG's 2013 Half Year Australian report on this basis is entirely arbitrary. It is notable that the NAO recognised that the same KPMG methodology as used by KPMG in Australia confirmed HMRC's own

<sup>87</sup> Chantler Report at p46, Annex C.

<sup>88</sup> Gibson Report at section 6.1.

<sup>89</sup> Dryden Report at paragraph 10.12, page 59.

<sup>90</sup> The Chantler Report cites the KPMG, "Illicit tobacco in Australia, 2013 Half Year Report", October 2013.

<sup>91</sup> Chantler Report at p33, paragraph 5.7.

environment where there is a well-established illicit market and already established supply lines.<sup>98</sup>

7.35. There is also evidence from the UK that young smokers in the North East were twice as likely as adult smokers to be comfortable buying illicit tobacco.<sup>99</sup>

7.36. The NAO Report, which is not referred to in the Chantler Report, also found that HMRC has failed to meet any of its targets in 2012-13. The NAO Report noted that key initiatives to curb smuggling had been delayed or cancelled, while HMRC lacked a "good understanding" of the volume of prosecutions and other legal sanctions needed to provide an effective deterrent.<sup>100</sup> NAO head Amyas Morse said:

*"Tobacco smuggling is a significant threat to tax revenues, as well as making illicit tobacco cheaper and more accessible, which has implications for public health. HMRC's renewed strategy for tackling tobacco smuggling sets out the right measures but, two years on, the Department's performance on the ground is disappointing. It has not capitalised on extra reinvestment funding available under the 2010 spending review settlement. And it still cannot properly assess how effective its strategy is in tackling tobacco smuggling and the trade in illicit tobacco products in the UK."*<sup>101</sup>

Margaret Hodge, chairwoman of the Commons Public Accounts Committee, said HMRC had "not got a grip" on smuggling and was "falling short".<sup>102</sup>

7.37. The recent Home Affairs Committee Report on Tobacco Smuggling also concluded that the Government was not doing enough to combat the illicit tobacco trade, concluding that:

*"We are worried that not enough is being done by the Government and its appropriate agencies to combat the problem of tobacco smuggling at source"*

and:

*"over the last three years the numbers of prosecutions and convictions for organised crime cases involving tobacco have fallen. We do not believe that these numbers are decreasing due to the reduction in this type of crime and are deeply concerned that these figures may indicate a reduction in enforcement action."*<sup>103</sup>

<sup>98</sup> Crookshank Report at paragraphs 38 and 40.

<sup>99</sup> Tackling Illicit Tobacco in the North of England, NEMS Illicit Tobacco Survey 2013, Executive Summary at paragraph 32 ([http://www.illegal-tobacco.co.uk/wp-content/uploads/2014/03/NE\\_Illicit\\_Tobacco\\_Report\\_key\\_findings.pdf](http://www.illegal-tobacco.co.uk/wp-content/uploads/2014/03/NE_Illicit_Tobacco_Report_key_findings.pdf)).

<sup>100</sup> *Ibid.*

<sup>101</sup> <https://www.nao.org.uk/report/progress-in-tackling-tobacco-smuggling/>

<sup>102</sup> BBC News UK HM Revenue and Customs 'missing cigarette smuggling targets', 6 June 2013, available at <http://www.bbc.co.uk/news/uk-22786085>

<sup>103</sup> Home Affairs Committee First Report of Session 2014-15 on Tobacco Smuggling, June 2014.



- 7.38. It is clear that on all estimates, the illicit trade of tobacco in the UK is significant and well established. The suggestion in the Chantler Report that the illicit trade is being kept "to low levels"<sup>104</sup> is also clearly wrong and it cannot be assumed that any increase will be prevented by effective enforcement.
- 7.39. It would be manifestly inappropriate for the Government to even consider introducing Plain Packaging without having properly considered the risks of increasing the level of illicit trade and the fact that the proceeds of illicit trade are funnelled toward organised crime and potential terrorist activity.

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<sup>104</sup> Chantler Report at p37, paragraph 5.13.

## **RESPONSE TO QUESTION 2**

*Do you have any information, in particular any new or additional information since the 2012 consultation, relating to the wider aspects of standardised packaging, that you wish to bring to our attention?*

7.40. The objective evidence that has emerged since the 2012 Consultation on the impact of Plain Packaging in Australia, for which the Government stated it was waiting, shows that more than 18 months after its introduction Plain Packaging has not decreased smoking behaviour. Further evidence also shows that the illicit market in Australia has increased significantly since the introduction of Plain Packaging, revealing the risk that Plain Packaging could have on public health, organised crime and Government excise revenue in the UK.

7.41. BAT is also submitting a number of expert reports along with this Response and which we strongly urge the Government to consider carefully.

**G. Evidence on the Australian experience with Plain Packaging demonstrates that Plain Packaging has not had the intended impact and, indeed, has proven to be counterproductive.**

7.42. As detailed at paragraph 4.27 of this Response, the evidence from Australia shows that more than 18 months after its introduction, Plain Packaging has not decreased smoking behaviours. This evidence includes:

7.42.1. the Roy Morgan population survey data;

7.42.2. industry sales data;

7.42.3. data from The Cancer Institute NSW [New South Wales] Tobacco Tracking Survey; and

7.42.4. the 2013 National Drug Strategy Household Survey data.

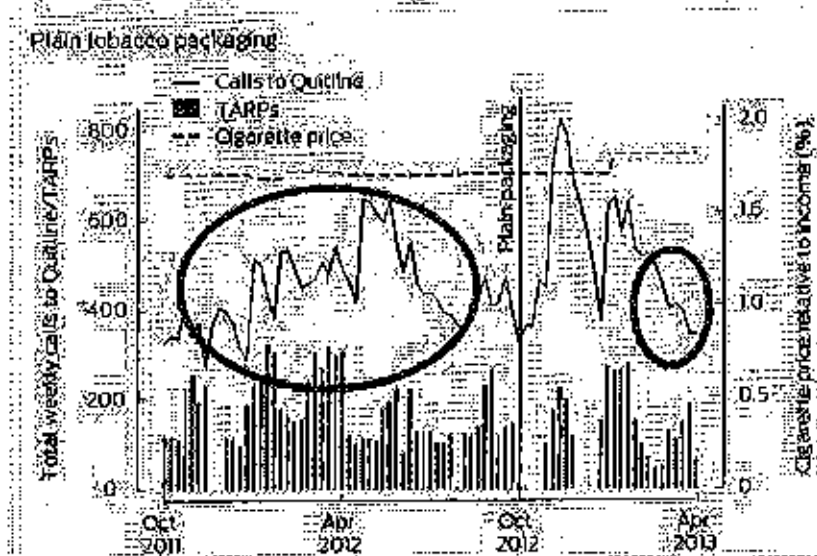
7.43. Overall tobacco consumption in Australia has been declining gradually for many years. Following the introduction of Plain Packaging on 1 December 2012, the trend has in fact flattened. KPMG confirms that:

*"Consumption between [the full year] 2012 and [the 12 months to 30 June 2013] was flat compared to a longer term annual decline ... of 2.9%."*<sup>105</sup>

<sup>105</sup> KPMG "Illicit tobacco in Australia" (October 2013) at p 6 (emphasis added) available at [http://www.bata.com.au/group/sites/bat\\_7wykq8.nsf/vwPagesWebLive/D09879X3/\\$FILE/medMD9D4L8C.pdf?openelement](http://www.bata.com.au/group/sites/bat_7wykq8.nsf/vwPagesWebLive/D09879X3/$FILE/medMD9D4L8C.pdf?openelement).

- 7.44. This is further supported by the recently released London Economics report which similarly established that there had been no change in smoking prevalence following the introduction of Plain Packaging in Australia.<sup>106</sup>
- 7.45. By contrast, the studies which seek to draw positive conclusions about the effects of Plain Packaging in Australia do not address the empirical data on smoking rates and consumption. For example, the Chantler Report refers to evidence of increased calls to the Australian Quitline,<sup>107</sup> but fails to note that this increase was only temporary and the number of calls returned to the level prior to the introduction of Plain Packaging within 6 months:<sup>108</sup>

2. Weekly calls to Quitline, target audience rating points (TARPs) and cigarette price relative to income, before and after the introduction of plain tobacco packaging and graphic health warnings



- 7.46. It should also be noted that this study does not establish any change in actual smoking behaviours. The authors themselves acknowledge that: "our study has shown an association but cannot prove causation."<sup>109</sup> Moreover, even where there was a short term increase in calls to the Australian Quitline (which was promoted by an advertising campaign confounding any role of Plain Packaging) there was no increase in actual quitting behaviour. This is consistent with the CITTs data, indicating that

<sup>106</sup> London Economics "An Analysis of Smoking Prevalence in Australia - Final" (November 2013), at p 1, available at <http://londoneconomics.co.uk/wp-content/uploads/2013/11/London-Economics-Report-Australian-Prevalence-Final-Report-25-11-2013.pdf>. London Economics "An Analysis of Smoking Prevalence in Australia - Press Release" (25 November 2013), available at <http://londoneconomics.co.uk/wp-content/uploads/2013/11/London-Economics-Press-Release-Australian-Prevalence-25-11-2013.pdf>.

<sup>107</sup> Chantler Report at p31, Box 2.

<sup>108</sup> Young JM et al. (2014). Association between tobacco Plain Packaging and Quitline Calls; a population based, interrupted time-series analysis. *Medical Journal Australia*. 200 (1): 29-32.

<sup>109</sup> *Ibid*, page 32.

smokers are finding it harder to quit following the introduction of Plain Packaging. It is also consistent with the McKeganey Report, which observes that "smoking cessation was not in any study found to be associated with smokers' perceptions of the attractiveness or appeal of branded packaging."<sup>110</sup>

**H. The Illicit market in Australia has increased significantly since the introduction of Plain Packaging.**

7.47. Since the 2012 Consultation, KPMG has also published its 2013 Full Year report on illicit tobacco in Australia, which shows a marked increase in the illicit market in Australia since the introduction of Plain Packaging. The findings of the KPMG study include:

7.47.1. consumption of illegal tobacco products reached record levels growing from 11.8% in 2012 to 13.9% in 2013, an increase of 19.1%;

7.47.2. the primary driver of growth in the consumption of illegal tobacco products has been a large increase in the consumption of illegal, branded cigarettes, with a 187% increase in counterfeit and a 148% increase in the consumption of contraband cigarettes (including illicit whites) from 2012 to 2013; and

7.47.3. the incidence of illicit whites increased by over 500% between Q2 2012 and Q4 2013, with the largest illicit white brand "Manchester", with a get-up similar to MARLBORO, having an equivalent legal market share of 1.7%. This was higher than that of legal brands such as CAMEL or KENT.<sup>111</sup>

7.48. While the illicit market in Australia is different to that in the UK, this report provides some insights into the risks that Plain Packaging could have on the illicit market, with the likely impact in the UK being significantly worse. As the Crookshank Report states:

*"The Chantler Report states (at page 35) that hardly any counterfeit standardised packages have been found in Australia, where standardised packaging has already been introduced. Whether this is the case or not, the UK is a different market to Australia. Australia does not have the availability of counterfeit cigarettes (and cheap whites) from the EU in the same way as the UK does. Counterfeit cigarettes would need to be flown into Australia or brought in by ship whereas in 2013, in Dover alone, there was an average of approximately 6770 tourist cars, 248 coaches and 6046 trucks passing through the port every day. The total number of passengers for the year was 12,753,343. In addition, the fact that the UK (and particularly London) has an extremely multicultural society means that there*

<sup>110</sup> McKeganey Report at page 26.

<sup>111</sup> KPMG "Illicit tobacco in Australia 2013 Full Year Report", April 2014.



*already is a thriving market here for counterfeits and cheap whites as brands of choice, as outlined below.*<sup>112</sup>

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<sup>112</sup> Crookshank Report at paragraph 19.



### **RESPONSE TO QUESTION 3**

*Do you have any comments on the draft regulations, including anything you want to draw to our attention on the practicalities of implementing the regulations, as drafted?*

7.49. BAT's view is that the regulations proposed are unlawful for the reasons set out in this Response. BAT offers no response at this time, but reserves its rights to do so in the future.

#### **RESPONSE TO QUESTION 4**

*Are you aware of any further evidence or information would improve the assumptions or estimates we have made in the consultation-stage impact assessment?*

7.50. The 2014 Impact Assessment is not a proper basis for decision making by the Government and a decision to move forward with Plain Packaging on the basis of the 2014 Impact Assessment would be manifestly inappropriate.

7.51. The 2014 Impact Assessment fails to comply with regulatory impact assessment guidelines and best practice for policy-making and fails to substantiate that Plain Packaging is necessary, appropriate and proportionate. It ignores the direct evidence that the Government stated that it wanted to consider, relies on erroneous biased assumptions, skews uncertain estimates toward results that favour the implementation of Plain Packaging, and lacks evidence in key areas. Furthermore, the methodology pursued in the 2014 Impact Assessment and process followed by the Government evidences a clear predisposition towards the implementation of Plain Packaging.

7.52. In addition, the Government's own expert studies underpinning the assumptions in the 2014 Impact Assessment can be shown to be tainted by bias and also to be unreliable and ignoring actual evidence.

#### **I. The Gibson Report's conclusions on the 2014 Impact Assessment.**

7.53. The Gibson Report assesses whether the 2014 Impact Assessment (defined in that report as the "IA") is consistent with the IA Guidance and the Principles, and whether the 2014 Impact Assessment provides an adequate basis to conclude that Plain Packaging is necessary, appropriate and proportionate. Mr Gibson concludes that:

*"The purpose of an impact assessment is to provide decision makers with "an analysis of the likely impact of a range of options for implementing a policy change". However it is clear that this IA has not followed the Government's impact assessment guidelines or regulatory best practice. The IA is subject to biases and errors and does not provide a solid, evidence-based proportionate basis on which to proceed with UK legislation. The IA has not shown that plain packaging is necessary, appropriate or proportionate as a policy measure."*

And

*"Overall the standard of process, evidence and analysis in this Impact assessment falls well below that required for a policy decision of this type. Taking all the concerns raised in this report together, it would be manifestly inappropriate to rely on this IA to move forward with UK*

**legislation on plain packaging.**<sup>113</sup> (emphasis in original)

7.54. Mr Gibson's specific criticisms of the assumptions and estimates in the 2014 Impact Assessment include:

**7.54.1. The 2014 Impact Assessment fails to substantiate that Plain Packaging is necessary, including that:**

- 7.54.1.1. the 2014 Impact Assessment relies on the European Commission's flawed impact assessment supporting TPD2 and therefore does not assess the efficacy of the tobacco control regulations in the baseline (which includes TPD2 measures and the ending of the retail display of tobacco) and identify any problems with them that might need to be rectified;<sup>114</sup>
- 7.54.1.2. there is no assessment of the efficacy of current tobacco control measures or those that are already 'in the pipeline';
- 7.54.1.3. the 2014 Impact Assessment does not demonstrate that the objectives of the policy are clearly necessary; and
- 7.54.1.4. there is no quantified assessment of Option 3 (the 'wait and see' option) against either Option 1 or Option 2 and no serious consideration given to this option.

**7.54.2. The 2014 Impact Assessment fails to substantiate that Plain Packaging is appropriate, including:**

- 7.54.2.1. the 2014 Impact Assessment ignores better quality and more direct evidence (discussed in paragraph 4.27 of this Response) pointing to the ineffectiveness of Plain Packaging in reducing smoking prevalence;
- 7.54.2.2. the assessment of health benefits is entirely dependent on the use of the elicitation of subjective assessments of tobacco control advocates to quantify the impact of Plain Packaging (reported in the Pechey report) despite the clear evidence that it is biased and its authors' own recognition that it is purely directional and second-best

<sup>113</sup> Gibson Report at section 2.

<sup>114</sup> In terms of the lack of an evidential base for Option Two, Mr Gibson concludes that paragraphs 15, 16, 71 to 74 of the 2014 Impact Assessment are inadequate because they all depend on the European Commission's TPD2 Impact Assessment (section 5.1.1 of the Gibson Report). Mr Gibson dismisses paragraphs 153 to 154 for the same reason. Paragraph 172 of the 2014 Impact Assessment is found to be inadequate because the added years of life and discount rates are inappropriately adjusted (section 8.7 of the Gibson Report). Mr Gibson also considers that paragraphs 260 to 266 are an inappropriate explanation of the value of lost consumer surplus (section 8.10 of the Gibson Report).



to direct evidence which directly contradicts the Pechey estimates;

7.54.2.3. Mr Gibson states:

*"It is clear that in relying exclusively on the Pechey report for quantitative results, where the authors themselves conclude that it only provides directional evidence and that it is second-best to direct evidence and then ignoring the direct evidence which contradicts those results, the IA has not provided adequate evidence of the effectiveness of plain packaging. Indeed, the direct evidence (which was available, but not considered in the Chantler Report or the IA) points to the ineffectiveness of plain packaging in reducing smoking prevalence."<sup>115</sup>*

7.54.3. **The 2014 Impact Assessment fails to substantiate that Plain Packaging is proportionate**, including in its price premium method of the loss of tobacco companies' Brand IP. The Anson Report concludes that:<sup>116</sup>

7.54.3.1. no rational decision maker could conclude, on the basis of the Government's calculations as presented, that Plain Packaging would only result in lost profits of £44 million and lost Brand IP of £39 million to UK tobacco manufacturers.

7.54.3.2. there is no basis for the Government's estimate that UK shareholders of tobacco manufacturers will bear only 10% of the lost Brand IP and lost profits.

7.54.3.3. there is no reason to assess lost brand equity using a price premium method, as claimed by the Government in the 2014 Impact Assessment which, in any event, has not been applied properly to the UK market.

7.54.3.4. the Government's choice of the price premium methodology is inappropriate and misapplied; instead, on the facts as currently available, the calculation would be better made using one or more of the cost approach, the income approach, the relief from royalty method or the market approach.

7.54.4. In addition, the 2014 Impact Assessment does not properly consider the impact on cross-border sales and the illicit trade. Mr

<sup>115</sup> Gibson Report at section 6.8.

<sup>116</sup> Anson Report at page 16.

Gibson refers to the Crookshank Report outlined above in this Response at section 6.3, which concludes that the proposal in the 2014 Impact Assessment to simply monitor the impact of Plain Packaging on the illicit market ignores the issue and risks creating a much worse situation that will undermine public health and support organised crime in the current environment where there is a well-established illicit market and already established supply lines (see Appendix 8).

7.54.5. The discussion in the 2014 Impact Assessment of the impact on competition is very limited, as set out in the Dryden Report and at paragraphs 6.39 and 6.40 above. The 2014 Impact Assessment does not consider, for example, issues of undue discrimination between different tobacco products - by requiring factory manufactured cigarettes and RYO tobacco to use Plain Packaging, but not requiring this for pipes, cigars or cigarillos; or the impact of Plain Packaging on:

7.54.5.1. barriers to entry;

7.54.5.2. market power;

7.54.5.3. innovation;

7.54.5.4. reduced consumer choice; or

7.54.5.5. other competitive impacts, including potential unintended consequences such as increased illicit trade and increased smoking.

7.54.6. The 2014 Impact Assessment does not address policy alternatives apart from the 'Do Nothing' baseline (Option 1), Plain Packaging (Option 2) and wait and see (Option 3). This is not in line with best practice or IA guidelines and seriously limits the value of the Consultation and impact assessment in supporting policy development.

7.54.7. **There are a number of unwarranted assumptions and errors in the 2014 Impact Assessment analysis of the costs and benefits of Plain Packaging, including:**

7.54.7.1. The assessment of costs and benefits is dependent on quantification from the Pechey report (the subjective assessments of tobacco control experts) despite clear evidence that it is biased and its authors' recognition that it is second-best to direct evidence (which contradicts those estimates).

7.54.8. Mr Gibson states:

*"The IA purports to show a very large net benefit of around £25bn for Option 2 (requiring plain packaging of tobacco products), however this is critically dependent on the assumptions (based on Pechey) about the effectiveness of the measure. If the more direct evidence showing the lack of any impact of plain packaging in Australia is used, then the purported benefits disappear and the policy gives rise to negative net benefits of over £2bn (using the other assumptions and calculations in the IA) and would be significantly higher if the costs were properly calculated."<sup>117</sup>*

7.54.9. As Mr Gibson opines in his report, the IA also includes a large number of unwarranted assumptions and errors:

- 7.54.9.1. there is no evidence for the estimated cost of switching/downtrading;
- 7.54.9.2. there is no evidence that the impact on young people will be identical to that for adults;
- 7.54.9.3. the assumption that reduced tobacco profits will be offset by increased profits on other goods is incorrect and has been criticised by the RPC;
- 7.54.9.4. there is no evidence for excess revenue being equally split between manufacturers and retailers;
- 7.54.9.5. the discussion of loss of brand value is superficial and inconsistent with accepted valuation methodologies;
- 7.54.9.6. the reduction of tobacco manufacturers' profits by a factor of 10 is against UK Treasury "Green Book" team guidance, not in line with other impact assessments and would have catastrophic implications for the UK economy if applied more widely;
- 7.54.9.7. introducing Plain Packaging on top of other tobacco control regulations and other changes in the marketplace stretches the assessment of impacts well beyond what is justified by the evidence;
- 7.54.9.8. the estimate of retailer costs is implausible and likely to be subject to large margins of error;
- 7.54.9.9. the estimate of lifetime benefit is subject to uncertainty and QALYs are valued at double previous estimates;

<sup>117</sup> Gibson Report at section 2, page 6.

- 7.54.9.10. reducing the discount rate by 2% is not in line with Green Book guidance and artificially increases the benefits very significantly;
  - 7.54.9.11. there is no evidence for a linear relationship between the number of cigarettes smoked and the level of risk;
  - 7.54.9.12. it is incorrect to 'assume away' the impact of mitigation of smoking reduction due to the availability of illicit and cross-border tobacco;
  - 7.54.9.13. the purported benefits of a reduction in children smoking are inflated by using the figure for 15 year olds; and
  - 7.54.9.14. the treatment of consumer surplus is very weak even though this potentially represents a very significant loss to continuing smokers.
- 7.55. Overall, as stated at the beginning of BAT's response to this Consultation Question, and for the reasons explained in detail above, in the words of Mr Gibson, the 2014 Impact Assessment:

***"[F]alls well below that required for a policy decision of this type. Taking all the concerns raised in this report together, it would be manifestly inappropriate to rely on this IA to move forward with UK legislation on plain packaging."***<sup>118</sup> (emphasis in original).

<sup>118</sup> Gibson Report at section 2.

## **8. CONCLUSION**

**For the reasons set out above, BAT believes that the Plain Packaging proposal should be abandoned. In summary, those reasons include:**

- 8.1. Plain Packaging appears to be the product of a flawed consultation exercise. The Government has followed a flawed and unfair process and appears to have closed its mind, moving the goal posts to avoid having to consider evidence contrary to its proposals from Australia.
- 8.2. The Government's quantification of the alleged impact of Plain Packaging is biased and fundamentally flawed, which renders the entire claimed health benefit of the measure invalid. The Government has failed to consider the costs and effects of existing tobacco control measures and those in the regulatory "pipeline" for the near future, and therefore offers no serious baseline for comparison.
- 8.3. Plain Packaging is unlawful, both *per se* and also because it is disproportionate, and irrational.
- 8.4. The Government appears to be running ahead with Plain Packaging when it is not even clear if the European Union legislation on which the Government will have to rely, namely Article 24(2) TPD2, will survive a legal challenge. Moreover, even if TPD2 does survive a legal challenge, the Government has not explained why it cannot wait to see the effects of full implementation of the retail display ban and TPD2.
- 8.5. Further, Plain Packaging amounts to a complete deprivation of BAT's intellectual property without compensation contrary to Article 1 of Protocol 1 to the ECHR. Any compensation payable for the loss of UK Brand IP, on any recognised valuation basis, would run into billions.
- 8.6. In addition, Plain Packaging violates the UK's international obligations such as the Community Trade Mark Regulation, the TRIPS Agreement and Bilateral Investment Treaties. Put simply, Plain Packaging places the EU in breach of its WTO obligations. The UK may also be exposed to retaliatory measures on UK exports to other countries.
- 8.7. It is clear that the evidence is against Plain Packaging, both in Australia and if proper and full consideration is given to all of the evidence available.
- 8.8. The latest data from Australia show that Plain Packaging has not reduced consumption, and has led to other negative and unintended consequences.
- 8.9. An unbiased examination of the evidence available shows that Plain Packaging will have no effect on smoking initiation or cessation because those processes are not driven by packaging at all.

8.10. The expert reports submitted by BAT along with this Response conclude that Plain Packaging is likely to exacerbate an already serious illicit trading problem.

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**Standardised Packaging of Tobacco Products  
Review of Department of Health Impact Assessment**



**SLG Economics Ltd**

**August 2014**

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## Standardised Packaging of Tobacco Products Review of Department of Health Impact Assessment

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## Standardised Packaging of Tobacco Products Review of Department of Health Impact Assessment

### 1 Introduction

On 17<sup>th</sup> June 2014, the Department of Health (DH) published a Consultation<sup>1</sup> and Impact Assessment<sup>2</sup> (IA) on the Introduction of regulations for standardised packaging of tobacco products; this updated a previous impact assessment on standardised packaging<sup>3</sup> published on 5<sup>th</sup> March 2012.

This report has been commissioned by Herbert Smith Freehills LLP on behalf of British American Tobacco UK Limited (BAT). It assesses whether the IA is consistent with UK regulatory guidance and better regulation principles, and whether the IA provides an adequate basis to conclude that standardised packaging (referred to in this report as plain packaging) is necessary, appropriate and proportionate.

### 2 Executive Summary

The purpose of an impact assessment is to provide decision makers with *"an analysis of the likely impact of a range of options for implementing a policy change"*<sup>4</sup>. However it is clear that this IA has not followed the Government's impact assessment guidelines or regulatory best practice. The IA is subject to biases and errors and does not provide a solid, evidence-based proportionate basis on which to proceed with UK legislation. The IA has not shown that plain packaging is necessary, appropriate or proportionate as a policy measure. Table 1 summarises the quality of the evidence in the IA.

<sup>1</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/323922/Cons\\_doc.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/323922/Cons_doc.pdf)  
<sup>2</sup> *Standardised packaging of tobacco products impact assessment*, Department of Health, June 2014

<sup>3</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/323518/impact\\_assessment.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/323518/impact_assessment.pdf)

<sup>4</sup> [http://consultations.dh.gov.uk/tobacco/standardised-packaging-of-tobacco-products/supporting\\_documents/17194%20Impact%20assessment%20%20Standardised%20packaging%20of%20tobacco%20products%20final.pdf](http://consultations.dh.gov.uk/tobacco/standardised-packaging-of-tobacco-products/supporting_documents/17194%20Impact%20assessment%20%20Standardised%20packaging%20of%20tobacco%20products%20final.pdf)

<sup>4</sup> *A Quick Guide to Regulatory Impact Assessments*, The Cabinet Office, March 2003  
[https://www.inmetro.gov.br/qualidade/comites/pdf/docGovernos\\_guide.pdf](https://www.inmetro.gov.br/qualidade/comites/pdf/docGovernos_guide.pdf)

**Table 1: Summary of evidence in IA on costs and benefits of plain packaging**

Benefits	Volume	Value
Reduced take up of smoking		Estimate of lifetime benefit subject to uncertainty. QALY valued at double previous estimates. Adjustment to discount rates Incorrect
Improved quit rates		Estimate of lifetime benefit subject to uncertainty. QALY valued at double previous estimates. Adjustment to discount rates Incorrect
Reduced cost of treating SHS		
Reduced healthcare costs		
Costs	Volume	Value
Loss of duty and VAT from reduced consumption		Indicative rates
Loss of duty and VAT from switching		Indicative rates
Loss of duty and VAT from cross-border and illicit trade		Indicative rates
Loss of brand equity		
Loss of profit from reduced consumption		
Loss of profits from switching		
Retailer costs		Evidence implausible and likely to be subject to large margin of error
Loss of consumer surplus		
Impact on competition		

**Legend**



No/incorrect evidence, or of insufficient quality to be included in IA  
 Weak evidence of insufficient quality to reach a robust IA conclusion  
 Good evidence

The analysis in this report shows that:

- The lack of time for consultation, the lack of detail in the IA, the failure to address the issues raised in the previous 2012 consultation and the very short period between the Chantler Report being produced and the IA being submitted to the Regulatory Policy Committee for review show that the DH has not followed Impact assessment guidelines, has not properly considered the evidence and has closed its mind to alternatives.
- The lack of analysis of the baseline or of the efficacy of current and planned tobacco control measures (including the Revised EU Tobacco Products Directive (TPD2) which itself is based on an Impact assessment which is manifestly inappropriate), and the ill-considered analysis of Option 3 (deferring a decision pending further evidence from Australia) means that the IA does not demonstrate that plain packaging is necessary.
- The IA ignores better quality and more direct evidence from Australia that directly challenges the effectiveness of plain packaging. It instead relies on weak, speculative and biased evidence from just one study (Pechey)<sup>5</sup> to quantify the effects of plain packaging even though the paper's authors' conclude that direct evidence would be superior and that their results are not quantified but purely directional. Therefore the IA has not provided adequate evidence of the effectiveness of plain packaging in reducing smoking prevalence (indeed the direct evidence points to its ineffectiveness in reducing prevalence).
- The IA does not properly consider the loss of brand value, the impact on cross-border sales and the illicit trade or the impact on competition. It does not consider other more targeted and focussed policy options as alternatives to plain packaging. It therefore does not demonstrate that plain packaging would be a proportionate policy measure.
- The assessment of costs and benefits is dependent on quantification from the Pechey report despite clear evidence that it is biased and its authors' recognition that it is second-best to direct evidence (which contradicts those estimates). The IA also includes a large number of unwarranted assumptions and errors:
  - There is no evidence for the estimated cost of switching / downtrading;
  - There is no evidence that the impact on young people will be identical to that for adults;
  - The assumption that reduced tobacco profits will be offset by increased profits on other goods is incorrect and has been criticised by the Regulatory Policy Committee;

<sup>5</sup> *Impact of plain packaging of tobacco products on smoking in adults and children: an elicitation of international experts' estimates*, R Pechey, D Spiegelhalter and T Marteau, BMC Public Health, 2013  
<http://www.biomedcentral.com/content/pdf/1471-2458-13-18.pdf>

- There is no evidence for excess revenue being equally split between manufacturers and retailers;
- The treatment of the loss of brand value is superficial and inconsistent with accepted valuation methodologies;
- The reduction of tobacco manufacturers' profits by a factor of 10 is against Green Book team guidance, not in line with other impact assessments and would have catastrophic implications for the UK economy if applied more widely;
- Introducing plain packaging on top of other tobacco control regulations (including the TPD2 measures and the full implementation of the ban on the retail display of tobacco products) and other changes in the marketplace, stretches the assessment of impacts well beyond what is justified by the evidence;
- The estimate of retailer costs are implausible and likely to be subject to large margins of error;
- The estimate of lifetime benefits are subject to uncertainty and the value of quality adjusted life years (QALYs) are double previous estimates;
- Reducing the discount rate by 2% is not in line with Green Book guidance and artificially increases the benefits very significantly;
- It is incorrect to 'assume away' the impact of mitigation of smoking reduction due to the availability of illicit and cross-border tobacco;
- The purported benefits of a reduction in children smoking are inflated by only using the figure for 15 year olds; and
- The treatment of consumer surplus is very weak even though this potentially represents a very significant loss to continuing smokers.

The IA purports to show a very large net benefit of around £25bn for Option 2 (requiring plain packaging of tobacco products), however this is critically dependent on the assumptions (based on Pechey) about the effectiveness of the measure. If the more direct evidence showing the lack of any impact of plain packaging in Australia is used, then the purported benefits disappear and the policy gives rise to negative net benefits of over £2bn (using the other assumptions and calculations in the IA) and would be significantly higher if the costs were properly calculated.

While this is a consultation-stage impact assessment, many of the points raised in this report reflect fundamental concerns with the IA that would require significant revision, additional work and further evidence before a proper policy decision could be taken. Overall the standard of process, evidence and analysis in this impact assessment falls well below that required for a policy decision of this type. Taking all the concerns raised in this report together, it would be manifestly inappropriate to rely on this IA to move forward with UK legislation on plain packaging.

### 3 SLG Economics

SLG Economics is an economic consultancy set up in 2011 by Stephen Gibson providing specialist micro-economic policy advice to regulated companies, regulators and government.

Mr Gibson has over 25 years' experience of leading major economic and strategy projects across a broad range of industries from both sides of the regulatory fence (a full CV is set out in Annex 2). He has directed, reviewed or had a major role in over 25 Impact assessments including:

- A review of the EU Impact Assessment of the Revised Tobacco Products Directive,
- A review of the Department of Health's previous (March 2012) Impact Assessment of Standardised Packaging for Tobacco,
- A review of the Scottish Government's Business and Regulatory Impact Assessment on minimum pricing of alcohol,
- A major Impact assessment underpinning Ofcom's policy proposals for regulation of TV advertising of junk food to prevent childhood obesity,
- Proposals for the switchover from analogue to digital TV,
- Proposals for launching a high definition TV service by the BBC,
- Proposals for the design of a range of spectrum auctions,
- Proposals to change the scope of the postal universal service in the UK, and
- Proposals to separate Royal Mail into different accounting entities.

Mr Gibson has been Chief Economist at Postcomm – the independent regulator of postal services, Principal Economist at Ofcom – the communications sector regulator and Head of Economics at Network Rail – the UK rail infrastructure owner, as well as a number of other senior economics positions. He was responsible for training Ofcom economists and policy advisors on how to carry out regulatory Impact assessments and for developing and rolling out the Postcomm Impact assessment guidelines. He has lectured at Birkbeck University on impact assessments using IAs he has worked on as case studies.

Mr Gibson has been a lecturer at City University, London on their MSc in Competition and Regulation and is a lecturer at Birkbeck University on their undergraduate and postgraduate Industrial Economics courses. He has lectured widely on economic regulation at national and international industry conferences and seminars. He was the external supervisor for a PhD in rail regulation at Cambridge University. He has an MA in Economics and Management Studies from Sidney Sussex College, Cambridge University and postgraduate qualifications in Computer Science, Accounting and Finance and Corporate Finance. He has published papers on regulatory and competition economics issues in peer reviewed books and journals.

## 4 The Department of Health Impact Assessment process

The IA does not provide sufficient time for interested stakeholders to respond to the complex issues raised, it is not sufficiently transparent to allow stakeholders to reproduce and properly comment on the calculations and does not address the many issues raised in response to the previous (2012) impact assessment on this subject. This, together with the very short time between the Chantler report being produced and the IA being submitted to the Regulatory Policy Committee suggests that the DH has not properly considered the evidence, has closed its mind to alternatives and has already decided to introduce plain packaging irrespective of the issues raised in the consultation responses.

### 4.1 Length of consultation

The IA does not follow the guidelines in the Government Compact on length of consultations. These recommend conducting "12-week formal written consultations, with clear explanations and rationale for shorter time-frames or a more informal approach"<sup>6</sup>. Similarly, the Better Regulation Task Force state "Stakeholders should be given at least 12 weeks, and sufficient information, to respond to consultation documents"<sup>7</sup>. While the consultation on the previous IA ran from April 2012 to August 2012<sup>8</sup> and so allowed 16 weeks for consultees to respond to the wide ranging and contentious issues raised, this consultation is scheduled for only 7 weeks and 2 days and runs into the August holiday period. This does not "allow stakeholders sufficient time to provide a considered response"<sup>9</sup> and suggests that the policy is being rushed in without allowing proper time for consideration of the important issues raised.

### 4.2 Transparency and level of detail in the Impact assessment

One of the five principles of Good Regulation is transparency. The Better Regulation Framework Manual states that "the evidence base should be drafted to make it easily understandable to stakeholders"<sup>10</sup>. However the IA does not provide sufficient detail of the model that is used to calculate the costs and benefits so that interested stakeholders are

<sup>6</sup> HM Government, The Compact, December 2010, paragraph 2.4  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/61169/The\\_20Compact.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/61169/The_20Compact.pdf)

<sup>7</sup> Better Regulation Task Force, Principles of Good Regulation, 2003, page 5  
<http://webarchive.nationalarchives.gov.uk/20100407162704/http://archive.cabinetoffice.gov.uk/brc/upload/assets/www.brc.gov.uk/principlesleaflet.pdf>

<sup>8</sup> The original closing date for the consultation was 10 July 2012. However, in response to a number of requests, the closing date was extended to 10 August 2012 to maximise the opportunity for people to respond to the consultation.

<sup>9</sup> Cabinet Office Consultation Principles, November 2013, page 2  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/255180/Consultation-Principles-Oct-2013.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/255180/Consultation-Principles-Oct-2013.pdf)

<sup>10</sup> BIS Better Regulation Framework Manual, July 2013, page 83  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/211981/bls-13-1038-better-regulation-framework-manual-guidance-for-officials.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211981/bls-13-1038-better-regulation-framework-manual-guidance-for-officials.pdf)

fully informed and able to comment on the detailed assumptions that underpin those calculations. Given the large numbers of un-evidenced assumptions that are set out in the IA which have a significant impact on the net benefits of the different policy options (see Section 8), this lack of full transparency means that errors and mistakes are less likely to be identified and corrected at the consultation stage, before the final policy decision is made.

#### 4.3 Consideration of responses to the previous consultation

Having carried out a previous consultation on this policy issue in 2012, the Department of Health published a summary of the responses received<sup>11</sup>. The summary report was only published in July 2013 – almost a year after the consultation ended and with no explanation for the delay, despite Government consultation principles stating: *“Consultation responses should usually be published within 12 weeks of the consultation closing. Where Departments do not publish a response within 12 weeks, they should provide a brief statement on why they have not done so”*<sup>12</sup>.

The summary report *“provides an overview of the responses received and a summary of the main themes that emerged in response to the specific consultation questions that were asked”*<sup>13</sup>. However, neither the summary report nor the current consultation nor the IA responds to the issues raised by respondents, or details how the DH has answered the many questions and comments raised by respondents, or explains whether the DH have adjusted their thinking to take account of the evidence and reasoning in the responses. The IA ignores many of the important points raised by BAT in their response to the 2012 consultation<sup>14</sup> without any explanation and repeats many of the errors from the 2012 consultation that were pointed out in the responses.

Responding to issues raised by respondents is an important part of good regulatory policy making; not doing so is a major failure of transparency and process in policy development and undermines most of the value in conducting a consultation process in the first place. The Government guide to impact assessments states that they should: *“summarise responses received from different sectors or types of business/body (where these vary) and set out how/whether you have changed the assumptions, costings, and recommendations following consultation”*<sup>15</sup> (emphasis added). Not responding to consultees responses suggests that the DH is not interested in those responses, has already closed its mind to

<sup>11</sup> Consultation on standardised packaging of tobacco products: Summary report, July 2013  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/212074/Summary\\_of\\_responses\\_to\\_consultation\\_-\\_standardised\\_packaging\\_tobacco.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/212074/Summary_of_responses_to_consultation_-_standardised_packaging_tobacco.pdf)

<sup>12</sup> Cabinet Office Consultation Principles, November 2013, page 3

<sup>13</sup> Ibid paragraph 2.3

<sup>14</sup> *Standardised Packaging Consultation, Response of British American Tobacco UK Ltd*, August 2012  
[http://www.bat.com/group/sites/uk\\_9d9kcy.nsf/vwPagesWebLive/D08WZC5E/\\$FILE/medMD8WZC6J.pdf](http://www.bat.com/group/sites/uk_9d9kcy.nsf/vwPagesWebLive/D08WZC5E/$FILE/medMD8WZC6J.pdf)

<sup>15</sup> *A Quick Guide to Regulatory Impact Assessments*, The Cabinet Office, March 2003  
[https://www.inmetro.gov.br/qualidade/comites/pdf/docGoverno\\_guide.pdf](https://www.inmetro.gov.br/qualidade/comites/pdf/docGoverno_guide.pdf)



policy alternatives and has already decided to introduce plain packaging irrespective of the issues raised by consultees.

#### **4.4 The timing of the IA**

The IA was submitted to the Regulatory Policy Committee for an opinion on 9<sup>th</sup> April 2014<sup>16</sup>. This was just 6 days (including a weekend) after the Chantler Report was published on 3<sup>rd</sup> April 2014. This very short period implies that the DH had drafted the IA and made up its mind on their preferred policy before they had received or considered the evidence in the Chantler Report. Again, this suggests that the policy development process has been rushed and that the DH had made its mind up before properly considering the evidence.

### **5 Establishing whether Plain Packaging is necessary**

The IA does not show that plain packaging is necessary – it does not analyse the baseline requirement for plain packaging or the efficacy of current or planned tobacco control measures, nor does it demonstrate that all the objectives are necessary. The analysis of Option 3 (deferring a decision pending further evidence from Australia) is particularly weak and ill-considered.

#### **5.1 Assessment of baseline**

In order to make a case for the need for further tobacco control regulation, the IA should assess the efficacy of the tobacco control regulations in the baseline (which includes the TPD2 measures and the full implementation of the ban on the retail display of tobacco products) and identify any problems with them that might need to be rectified by new regulations given that the objectives of the TPD2 overlap substantially with those for plain packaging. There is no analysis in the IA of the baseline or of the need for further regulations.

##### **5.1.1 Efficacy of current and planned tobacco control measures**

There is no assessment of the efficacy of current tobacco control measures or those that are already 'in the pipeline'. The IA relies on the EU impact assessment of the TPD2 for its assessment of the impact of those regulations as part of the baseline, however that impact assessment contains a number of errors and does not provide a solid basis on which to build an analysis of the incremental effects of plain packaging in the UK:

- The Impact Assessment Board<sup>17</sup> has been highly critical of the EU Impact assessment's approach and evidence base;

<sup>16</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/336590/2014-05-29-RPC12-DH-1229\\_2\\_-\\_Standardised\\_packaging\\_of\\_tobacco.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/336590/2014-05-29-RPC12-DH-1229_2_-_Standardised_packaging_of_tobacco.pdf)

<sup>17</sup> The IA Board is an Independent group attached to the Commission's Secretariat-General that assesses and publishes its opinion on the quality of each EU impact assessment report.

- The EU impact assessment misrepresents and fails to cite opposing evidence regarding the introduction of 65% graphic health warnings;
- The ban on menthol flavouring fails to highlight where the evidence is inconclusive, inconsistent or immaterial and fails to cite opposing studies;
- The requirements for substantial standardisation of packaging are not supported by robust or conclusive evidence;
- The assessment of costs and benefits contains a number of errors which when corrected change the net benefits very considerably and may lead to negative net benefits. These include:
  - Incorrectly calculating the discount rates,
  - Not using the discount rate in the EU Impact Assessment guidelines,
  - Not using an appropriate discount period,
  - Not taking account of the fixed costs of tobacco manufacturers,
  - Incorrectly calculating the loss of VAT,
  - Making unrealistic assumptions about the cross-elasticity of demand for tobacco products, and
  - Disregarding a number of the impacts on costs.

As a result of these and other concerns, my analysis of the EU impact assessment for TPD2 finds that it is manifestly inappropriate<sup>18</sup> and therefore it cannot provide a proper baseline for this IA.

#### **5.1.2 Demonstrating that the objectives are necessary**

The IA does not demonstrate that the objectives of the policy are clearly necessary. For example the IA suggests that an objective of plain packaging is to “reduce the potential for elements of packaging ... to detract from the effectiveness of [health] warnings”<sup>19</sup>. However Professor Viscusi<sup>20</sup> shows that: the hazards of smoking are overwhelmingly known to the public in the UK, including youth; that there is no credible evidence that plain packaging would increase the effectiveness of current warnings (let alone those that will be introduced under the TPD2); and that increasing the prominence of the health warning will not have an influence on smoking behaviours. Similarly existing regulations<sup>21</sup> already prevent misleading terms on tobacco packaging and any concerns in this area should focus on properly enforcing existing regulations, rather than introducing new legislation.

<sup>18</sup> A copy of this report was provided to the Secretary of State for Health in relation to BAT's challenge regarding the legality of TPD2.

<sup>19</sup> IA paragraph 46

<sup>20</sup> *An assessment of the likely effect of plain packaging on warnings efficacy*, W K Viscusi.

<sup>21</sup> For example Regulation 11 of the Tobacco Products (Manufacture, Presentation and Sale) (Safety) Regulations 2002, provides: “No person shall supply a tobacco product the packaging of which carries any name, brand name, text, trademark or pictorial or any other representation or sign which suggests that tobacco product is less harmful to health than other tobacco products...”

### 5.1.3 Gold-plating the policy option

The Regulatory Policy Committee opinion makes it clear that plain packaging is a gold-plated policy measure: *"by going beyond minimum EU requirements, the Department is gold-plating the measure"*<sup>22</sup>, this clearly conflicts with the Coalition's programme for Government which promises to: *"end the so-called 'gold-plating' of EU rules, so that British businesses are not disadvantaged relative to their European competitors"*<sup>23</sup>.

### 5.2 Analysis of Option 3: Deferring a decision pending evidence from Australia

The analysis in the IA of Option 3 (deferring a decision pending collection of evidence on experience with plain packaging in Australia) is particularly ill-considered. There is no quantified assessment of Option 3 against either Option 1 or Option 2 and no serious consideration given to this option.

In a written Ministerial Statement to Parliament about Standardised Packaging of Tobacco Products, the Secretary of State for Health (Jeremy Hunt) said that *"the Government has decided to wait until the emerging impact of the decision in Australia can be measured before we make a final decision on this policy in England"*<sup>24</sup>. However, the Department of Health has failed to consider the data on tobacco consumption in Australia following the introduction of plain packaging (which shows that plain packaging has not been an effective policy measure – see Sections 6.3 to 6.8 below). In addition the justification for rejecting Option 3 rests on the delay to the purported substantial health benefits, but that assumes that such health benefits will materialise which ignores the very evidence that will only be available if the Government accepts Option 3 and waits to see the evidence from Australia.

The IA states that *"the costs imposed by standardised packaging (other than for equipment being written off) are readily reversible"*<sup>25</sup>, suggesting that the Government could implement plain packaging and then if it turned out to be ineffective withdraw the legislation. Apart from the lack of political reality of this suggestion, it is simply not the case that premium brands whose market position has been built up over years or decades can simply reposition themselves after that market position has been destroyed by plain packaging – the loss of the value of those premium brands and the impact on competition in the tobacco market is by far the major cost of plain packaging, and is not something that can be *"readily reversed"*.

<sup>22</sup> Regulatory Policy Committee opinion on impact assessment on standardised packaging, May 2014, page 4 [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/336590/2014-05-29-RPC12-DH-1229\\_2\\_-\\_Standardised\\_packaging\\_of\\_tobacco.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/336590/2014-05-29-RPC12-DH-1229_2_-_Standardised_packaging_of_tobacco.pdf)

<sup>23</sup> The Coalition, *Our program for government*, May 2010, page 10 [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/78977/coalition\\_programme\\_for\\_government.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/78977/coalition_programme_for_government.pdf)

<sup>24</sup> Written Ministerial Statement, July 2013 [http://www.parliament.uk/documents/commons-vote-office/July\\_2013/12%20July/6.HEALTH.Consultation-standardised-packaging-of-tobacco-products.pdf](http://www.parliament.uk/documents/commons-vote-office/July_2013/12%20July/6.HEALTH.Consultation-standardised-packaging-of-tobacco-products.pdf)

<sup>25</sup> IA paragraph 175

## 6 The Adequacy of the Evidence for Plain Packaging

The IA ignores better quality and more direct evidence that directly challenges the effectiveness of plain packaging. It relies very heavily on weak, biased and highly speculative evidence about the possible impact of plain packaging from only one study to attempt to quantify the impacts of the preferred policy option.

### 6.1 The Chantler Report on standardised packaging of tobacco

The Chantler Report was commissioned by the Government in November 2013 to review the health benefits of plain packaging and was published on 3<sup>rd</sup> April 2014. The report solely considers whether plain packaging might have an impact on tobacco consumption (in particular by children) and concludes by providing a directional opinion rather than quantifying the purported effects of plain packaging.

The Chantler Report should be scrupulously balanced, however it seems to give 'the benefit of the doubt' to possible future developments where they favour plain packaging, while dismissing concerns raised in respect of plain packaging on the basis that the evidence is not already apparent.

The Chantler Report also ignores direct evidence from Australia (see Sections 6.3 - 6.7 below) which challenges the proposal that plain packaging is effective at reducing tobacco consumption (in fact suggesting the reverse). The Chantler Report claims that the evidence on intermediate outcomes all points in one direction, however the Chantler review team met with the Cancer Institute NSW and were made aware of their surveys (see Section 6.6 below) but failed to review them so as to realise that in fact this is not the case.

Professor Mitchell's review<sup>26</sup> of the Chantler Report found that:

- it supplied no theoretical basis to support imposing plain packaging;
- there is no direct empirical evidence that plain packaging plays a causal role in the adolescent decision to smoke;
- it is based on flawed speculation about the potential behavioural effects of plain packaging;
- there was no basis for the belief that plain packaging will only have positive effects on smoking decisions – even if it works as designed, it will at best affect attitudes towards particular brands rather than toward smoking; and
- there is no good empirical reason to believe that plain packaging will lead to net reductions in underage smoking.

Overall the Chantler Report does little to extend the evidence base for plain packaging or to consider alternative approaches to reducing tobacco consumption or the costs of plain

<sup>26</sup> *Observations on the Chantler Report: A Psychological Analysis of the Potential Impact of Standardized Cigarette Packaging on Underage Smoking*, G Mitchell.

packaging. It does not address the evidential and analytical weaknesses of the 2012 impact assessment, most of which are still evident in the current IA.

## 6.2 The DHPR (Pechey) study on plain packaging

The IA recognises that “*quantification of the likely scale of the impact on smoking take up and prevalence is difficult in the absence of directly comparable precedents*”<sup>27</sup>, however it then proceeds to rely exclusively on the results of one Department of Health Policy Research (DHPR) funded study (Pechey)<sup>28</sup> to quantify the effects of plain packaging<sup>29</sup>. The IA ignores the weaknesses, biases and flaws in the Pechey paper (which is the only quantified study that they cite) and incorrectly represents the results of that paper by using the quantified outcomes rather than the authors’ conclusions, which are not quantified and are purely directional.

The Pechey paper is written “*in the absence of direct evidence for the impact of introducing plain packaging on smoking rates in adults and children*”<sup>30</sup> – recognising that direct evidence is a far superior way of estimating the impact of plain packaging and that expert elicitation is second-best evidence that should only be used “*in the absence of direct evidence*”<sup>31</sup>. There is however direct evidence of the impact of introducing plain packaging on smoking rates of adults and children from the Roy Morgan data on smoking rates (see Sections 6.3 to 6.5 below) as well as other evidence that questions the effectiveness of plain packaging (Sections 6.6 to 6.8) that has not been considered in the IA.

The Pechey paper relies on evidence from a panel of tobacco control experts from the UK, Australasia and North America. However in selecting the expert panel, the requirements of impartiality and lack of personal economic stake in the potential findings have not been applied. The paper reports that the experts are very closely associated with smoking cessation interests or plain packaging interests, with a total of 23 competing interests listed for the 33 experts (see Table 3). It is notable that all the competing interests imply tobacco control experts with a personal stake in furthering plain packaging, rather than a selection of unbiased experts<sup>32</sup>.

<sup>27</sup> IA paragraph 15

<sup>28</sup> *Impact of plain packaging of tobacco products on smoking in adults and children: an elicitation of international experts’ estimates*, R Pechey, D Spiegelhalter and T Marteau, BMC Public Health, 2013 <http://www.biomedcentral.com/content/pdf/1471-2458-13-18.pdf>

<sup>29</sup> IA paragraphs 15 and 143 to 154.

<sup>30</sup> *Impact of plain packaging of tobacco products on smoking in adults and children: an elicitation of international experts’ estimates*, R Pechey, D Spiegelhalter and T Marteau, BMC Public Health, 2013, page 1 (Abstract) <http://www.biomedcentral.com/content/pdf/1471-2458-13-18.pdf>

<sup>31</sup> *Ibid*, page 1 (Abstract)

<sup>32</sup> This concern was raised in BAT's response to the 2012 IA consultation, but has not been addressed in this IA.

**Table 3: Competing Interests for Pechey panel of experts**

<p><b>Australasia (12 experts):</b></p> <ul style="list-style-type: none"> <li>• Two experts have received funding for consultancy from pharmaceutical companies for smoking cessation;</li> <li>• One expert has contracts with the New Zealand Ministry of Health to work on smoking cessation messages;</li> <li>• One expert is on a Technical Advisory Committee advising the Commonwealth on design and implementation of plain packaging for tobacco products;</li> <li>• Two experts work for the Cancer Council Organisation (Australia);</li> <li>• One expert is associated with Action on Smoking and Health (Australia).</li> </ul> <p><b>United Kingdom (14 experts):</b></p> <ul style="list-style-type: none"> <li>• One expert has received funding from Action on Smoking and Health (ASH) UK for research on plain packaging;</li> <li>• Two experts are associated with ASH UK;</li> <li>• One expert is associated with the Cancer Research UK Tobacco Advisory Group;</li> <li>• Two experts are associated with the Royal College of Physicians' Tobacco Advisory Group;</li> <li>• One expert is associated with the UK Centre for Tobacco Control Studies;</li> <li>• Six experts have undertaken research and consultancy for, and/or received honoraria for speaking at meetings for the manufacturers of smoking cessation medications/products;</li> <li>• One expert has a share of a patent for a novel nicotine delivery device.</li> </ul> <p><b>North America (7 experts):</b></p> <ul style="list-style-type: none"> <li>• One expert is serving as an expert witness for the Australian government on litigation concerning plain packaging of tobacco products;</li> <li>• One expert has advised different government agencies with regard to plain packaging of tobacco products.</li> </ul>
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Apart from a description of the competing interests, no attempt is made to adjust for, or consider the impact of experts with a financial interest in plain packaging or whose work involves promoting plain packaging either in the Pechey paper or in the IA using the Pechey results. This major shortcoming of the research clearly introduces a bias in the results and undermines their credibility and the way they have been used (particularly since the direct evidence from Australia challenges the judgements of the experts).

The Pechey paper suggests that expert elicitation methods have been used to estimate the risk of volcanic eruptions, climate change and the effect size in clinical trials. However none of these areas involve complex market decisions or consumer feedback mechanisms.

Given the small number of experts interviewed and the 'lumpy' nature of the predictions (around 90% of the estimates are either to the nearest whole or half a percentage point), the results are highly sensitive to potential adjustments. For example, if 6 experts with estimates of -1% or greater were excluded from the sample (perhaps because their competing interests were seen as being too conflicting), the median estimate for adult smokers would change from -1% to -0.6% over two years – a 40% reduction. This simple adjustment would reduce the purported benefits of plain packaging in the IA by around £10bn. Indeed, removing just one of the 14 UK experts due to conflicting interests would reduce the median of the UK experts to -0.5%, halving the estimate of the purported benefits in the IA.

The framing of the survey in terms of questions about percentage point reductions in adult and child smokers is also potentially misleading – for example the 3 percentage point median reduction in smoking for children (which may suggest a fairly modest impact), actually implies an 11% reduction in smoking prevalence<sup>33</sup> and drives the calculation of very large estimates of the purported benefits.

The Pechey results are over double that considered in the EU TPD2 Impact assessment for plain packaging plus additional regulations: *“plain packaging, full ban of additives, full ban of displays, which could lead to a reduction of consumption of up to 5%”*<sup>34</sup>.

Even within the panel of experts, many *“were uncomfortable with providing a precise estimate for the impact, given the lack of direct evidence, and a few declined to give numerical estimates on this basis”*<sup>35</sup>. The authors of the study recognise that *“the study method means that the results were based on subjective judgements”*<sup>36</sup> and they conclude that *“there remains considerable uncertainty about the likely impact of plain packaging of tobacco products given the policy has just been implemented for the first time”*<sup>37</sup>.

The conclusions of the study are purely directional that: *“a policy [plain packaging] will reduce smoking rates and that this will be greatest in children. None [no expert] viewed an increase in smoking as the most likely outcome”*<sup>38</sup> – the use of the raw results to provide quantified estimates in the IA is not underpinned by the conclusions of the authors' of the study.

Even the Chantler Report, having reviewed the DHPR (and other) studies found that the evidence was not sufficiently robust to quantify the effects of plain packaging: *“I have not*

<sup>33</sup> IA paragraph 151

<sup>34</sup> European Commission Impact Assessment, Part 6, page 3, A.5.2.1 (emphasis added) [http://ec.europa.eu/health/tobacco/docs/com\\_2012\\_788\\_ia\\_en.pdf](http://ec.europa.eu/health/tobacco/docs/com_2012_788_ia_en.pdf)

<sup>35</sup> *Impact of plain packaging of tobacco products on smoking in adults and children: an elicitation of international experts' estimates*, R Pechey, D Spiegelhalter and T Marteau, BMC Public Health, 2013, page 5

<sup>36</sup> *Ibid*, page 5

<sup>37</sup> *Ibid*, page 6

<sup>38</sup> *Ibid*, page 6

*seen evidence that allows me to quantify the size of the likely impact of standardised packaging*<sup>39</sup>.

In the light of this one might consider that the Pechey paper together with the Chantler Report provides if not quantitative, at least directional evidence of the effect of plain packaging. However this ignores other evidence which is not considered in the IA or in the Chantler Report (although it was available at the time) and is much more robust and direct evidence of the effect of plain packaging in Australia - the only jurisdiction in which plain packaging has been introduced.

### **6.3 Roy Morgan Research data on tobacco consumption**

The best direct evidence currently available about smoking prevalence of adults and children (14-17 year olds) before and after the introduction of plain packaging in Australia is provided by Roy Morgan Research (RMR).

Data on smoking is collected by RMR through monthly survey results from a nationally representative sample<sup>40</sup>. The RMR sample obtained provides monthly data from January 2009 to December 2013 on the percentage of respondents who smoke factory manufactured cigarettes (FMC), roll your own tobacco (RYO), pipes and cigars.

### **6.4 Analysis of Roy Morgan Research data for 14-17 year olds**

The RMR dataset for 14-17 year olds has been analysed using least squares regression<sup>41</sup> for each of the data series (FMC, RYO, pipes and cigars). The regression results (see Annex 1) show no systematic relationship or significant association between the surveyed levels of FMC, RYO, pipe or cigar smoking and the introduction of plain packaging<sup>42</sup>. None of the regression models show any statistically significant impact of the introduction of plain packaging on reported tobacco usage.

This data was also reviewed by Kaul and Wolf in a University of Zurich working paper<sup>43</sup> who found the same result - that there is no statistically significant evidence of an effect of plain packaging on tobacco consumption. Kaul and Wolf also considered various variations to their analysis and showed that these would reinforce their conclusion that plain packaging has had no impact on smoking by 14-17 year olds.

<sup>39</sup> *Standardised Packaging of Tobacco: Report of the independent review undertaken by Sir Cyril Chantler, April 2014, Paragraph 18* <http://www.kcl.ac.uk/health/10035-TSO-2901853-Chantler-Review-ACCESSIBLE.PDF>

<sup>40</sup> Monthly sample sizes range from 161 to 267 participants per month with an average of 212.

<sup>41</sup> The analysis used a linear time trend and a quadratic time trend. In the quadratic models, both time and time\*time were included in the regression model.

<sup>42</sup> In fact using a quadratic time trend suggests that plain packaging is associated with a 0.5 percentage point increase in FMC, although this effect is not statistically significant.

<sup>43</sup> University of Zurich working paper (May 2014): *The (Possible) Effect of Plain Packaging on the Smoking Prevalence of Minors in Australia: A Trend Analysis*, A Kaul and M Wolf <http://www.econ.uzh.ch/static/workingpapers.php?id=828>



A set of quarterly data for the real price of tobacco<sup>44</sup> were added to the analysis to see whether this improved the fit of the model. However adding tobacco prices did not increase the explanatory power of the model and plain packaging is not statistically significant when either the time trend or tobacco prices or both are included in the regression.

### 6.5 Analysis of Roy Morgan Research data for adults

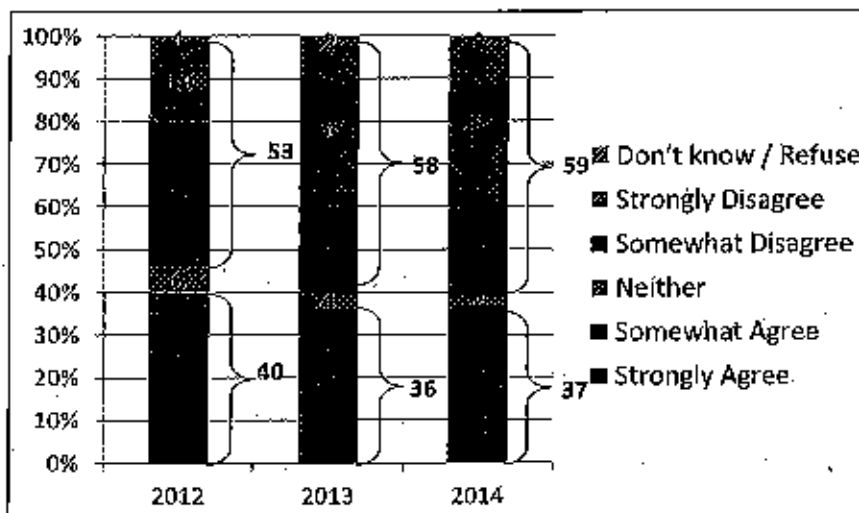
Kaul and Wolf have repeated their analysis of the RMR data for adults and failed to find any sustained impact of plain packaging on existing smoking prevalence trends.<sup>45</sup>

This direct evidence of smoking prevalence in Australia pre and post the introduction of plain packaging does not find any statistically significant effect of plain packaging on reported tobacco usage by adults or 14-17 year olds.

### 6.6 Evidence from the Cancer Institute NSW Tobacco Tracking Survey

The Cancer Institute NSW [New South Wales] Tobacco Tracking Survey (CITTS) is a serial cross-sectional telephone survey of adult smokers and recent quitters (who have quit in the previous 12 months) that includes questions pertaining to smoking-related cognitions and behaviours, as well as responses to tobacco control media campaigns and policies.

**Figure 1: Do you agree with the following statement? The graphic warnings encourage/d me to stop smoking<sup>46</sup>**



<sup>44</sup> Tobacco component of the Australian Consumer Price Index (16<sup>th</sup> series) <http://stat.abs.gov.au/Index.aspx?DataSetCode=CPI#>

<sup>45</sup> University of Zurich working paper (June 2014): *The (Possible) Effect of Plain Packaging on Smoking Prevalence in Australia: A Trend Analysis* <http://www.econ.uzh.ch/static/workingpapers.php?id=844>

<sup>46</sup> Based on SLG Economics analysis of CITTS survey dataset obtained through Freedom of Information Requests.

Figure 1 shows that when asked whether graphic warnings encouraged smokers to quit, the number of respondents strongly agreeing or somewhat agreeing reduced from 40% in 2012 to 36% in 2013 – after the introduction of plain packaging in Australia in December 2012, remaining at 37% in 2014. The number of respondents somewhat or strongly disagreeing increased from 53% to 58% between 2012 and 2013 and increased further to 59% in 2014 (and the number of respondents strongly disagreeing doubled from 19% to 38% between 2012 and 2013)<sup>47</sup>.

In terms of the wider impact of graphic health warnings, the CITS data strongly challenges the assumption that plain packaging increases the effectiveness of graphic health warnings as shown in Table 4. They show that since plain packaging was introduced:

- The proportion of smokers ignoring the health warning has increased;
- The proportion of smokers thinking health warnings are exaggerated has increased;
- The proportion of smokers thinking health warnings help them quit has decreased; and
- The proportion of smokers seeking to hide their cigarettes from others due to the health warnings has not changed.

**Table 4: Awareness of graphic warnings before and after plain packaging<sup>48</sup>**

	2012	2013	2014
I don't look at warnings each time I get a cigarette	3.7%	3.8%	3.8%
The graphic health warnings are exaggerated	2.7%	3.2%	3.3%
The graphic warnings encouraged me to stop smoking	2.8%	2.5%	2.6%
They make me feel that I should hide my packet from the view of others	2.5%	2.6%	2.5%

This evidence challenges the proposal that graphic health warnings are more credible and memorable on plain packaging than when they are juxtaposed with traditional branding – the evidence suggests that graphic warnings were, if anything, less effective after the introduction of plain packaging in Australia.

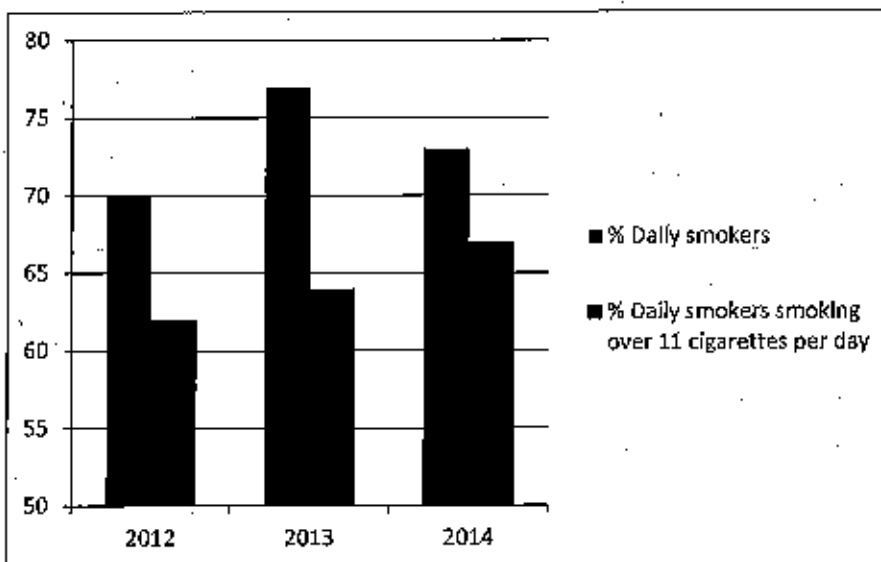
In terms of the wider argument and the suggestion in the Chantler Report that all the evidence on intermediate outcomes points in the same direction (towards a positive impact of plain packaging), these results (which were available while the Chantler review was being undertaken) show that this is not the case.

<sup>47</sup> This question was asked to respondents who noticed graphic health warnings in 2012 and to all respondents in 2013 and 2014. (2012 n=2314, 2013 n=1085, 2014 n=386).

<sup>48</sup> Based on SLG Economics analysis of CITS survey dataset obtained through Freedom of Information Requests

The CITTS study also shows that the proportion of smokers surveyed who smoked on a daily basis<sup>49</sup> actually increased from 70% in 2012 to 77%<sup>50</sup> in 2013 (after the introduction of plain packaging in Australia) and remained at 73% into 2014, while the proportion of people smoking at least weekly (including those who smoked daily) increased from 79.5% to 80.5% between 2012 and 2013. In addition there was a rise in the proportion of daily smokers who smoked over 11 cigarettes a day from 62% in 2012 to 64% in 2013 and to 67% in 2014<sup>51</sup> (see Figure 2).

Figure 2: CITTS data on consumer smoking behaviour<sup>52</sup>



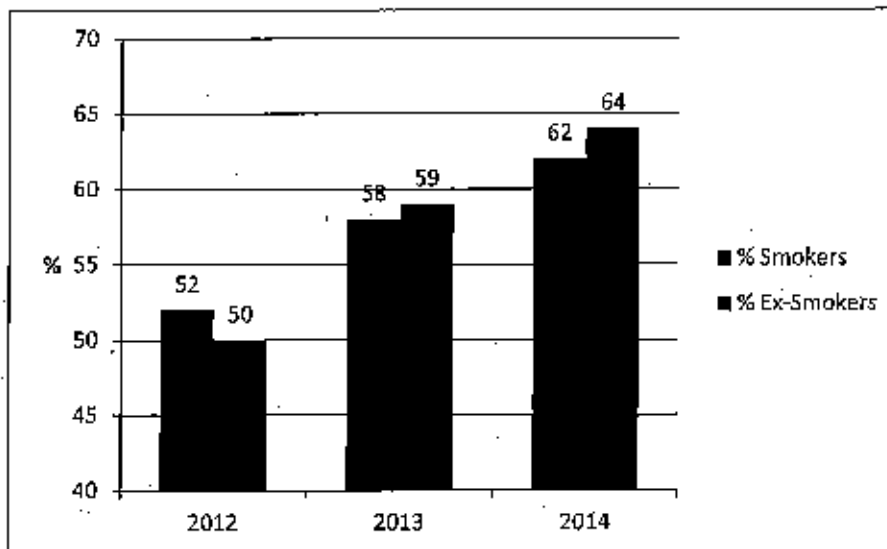
The NSW Cancer Institute survey also asked questions about the difficulty of quitting smoking. Figure 3 shows that for both smokers and ex-smokers it was perceived as more difficult to quit after the introduction of plain packaging than before it (for smokers this increase was significant at the 95% level).

<sup>49</sup> Question asked: And how often do you smoke cigarette, pipes or other tobacco products? 2012 (n=2,502), 2013 (n=2370), 2014 (n=400)

<sup>50</sup> Statistically significant at 95% level

<sup>51</sup> Question asked of daily smokers only: How many cigarettes, pipes or cigars PER DAY would you smoke, on average? 2012 (n=1835), 2013 (n=1818), 2014 (n=291)

<sup>52</sup> Based on SLG Economics analysis of CITTS survey dataset obtained through Freedom of Information Requests

**Figure 3: Smokers and Ex-smokers rating it difficult to quit smoking<sup>53</sup>**

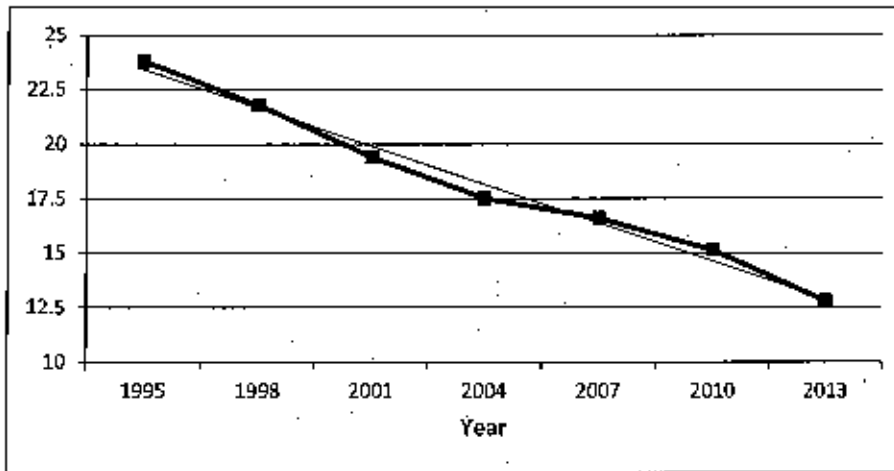
### 6.7 Australian 2013 National Drug Strategy Household Survey

The Australian National Drug Strategy Household Survey (ANDSHS) is conducted by the Australian Government every 3 years and collects data from 23,855 people selected by multistage stratified random sample design from across Australia. Figure 4 shows the data for daily smokers aged 14 and over since 1995, together with a linear best-fit trendline. While there are not enough data points for detailed statistical analysis, it is clear that the proportion of daily smokers has been declining steadily over time and the proportion in 2013<sup>54</sup> is almost exactly on the trendline (despite a 25% tax increase on tobacco in 2010). This is consistent with and supports the findings from Roy Morgan Research and suggests that there has been no significant effect on daily smoking from the introduction of plain packaging in Australia.

<sup>53</sup> Question asked: How difficult or easy do you think it would be for you to quit smoking on a scale of 0 – 107 (responses of 8-10 were rated difficult). Based on SLG Economics analysis of CITTS survey dataset obtained through Freedom of Information Requests

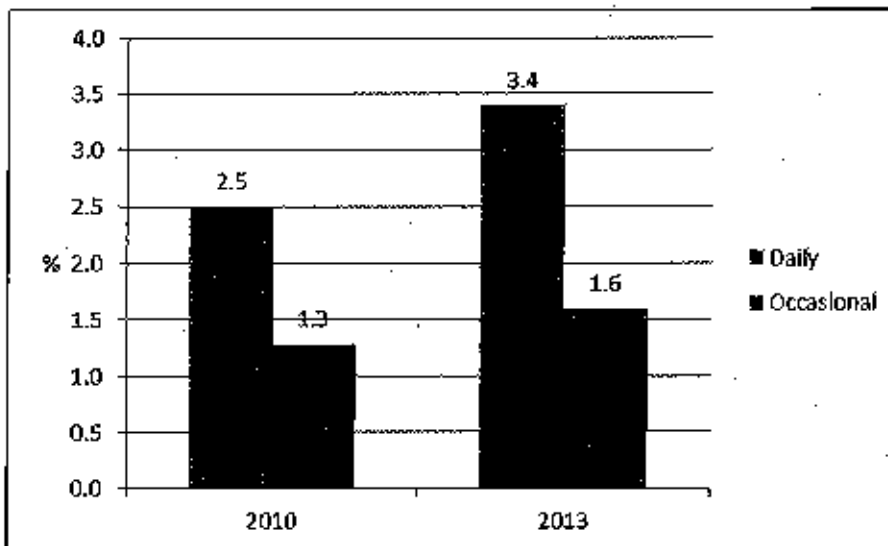
<sup>54</sup> Data collected 31 July – 1 December 2013 after the introduction of plain packaging in December 2012

**Figure 4: Daily smokers aged 14 years or older 1995-2013 (per cent)**



The ANDSHS also shows that the percentage of daily smokers aged 12-17 increased between 2010 and 2013 from 2.5% to 3.4% (the highest rate in the last 10 years) and the percentage of occasional smokers aged 12-17 also increased from 1.3% to 1.6% over this period (Figure 5).

**Figure 5: Daily and occasional smokers aged 12-17 years (per cent)**



Note: Occasional smokers includes people who reported smoking weekly or less than weekly

### 6.8 Conclusions on the adequacy of evidence in the IA

It is clear that in relying exclusively on the Pechey report for quantitative results,<sup>55</sup> where the authors themselves conclude that it only provides directional evidence and that it is second-best to direct evidence and then ignoring the direct evidence which contradicts those results, the IA has not provided adequate evidence of the effectiveness of plain

<sup>55</sup> IA paragraphs 15 and 143 to 154.

packaging. Indeed, the direct evidence (which was available, but not considered in the Chantler Report or the IA) points to the ineffectiveness of plain packaging in reducing smoking prevalence.

## 7 The Proportionality of Plain Packaging as a policy measure

The IA does not demonstrate that plain packaging would be a proportionate policy measure, in fact the IA does not properly consider a number of very important impacts including the loss of brand value, the impact on cross-border sales and the illicit trade, or the impact on competition. The IA does not follow Government impact assessment guidelines in failing to consider other more targeted and focussed policy options as alternatives to plain packaging.

### 7.1 Consideration of loss of brand value

The IA contains a very short and superficial discussion of the impact of plain packaging on brand value<sup>56</sup>. The Regulatory Policy Committee opinion on the IA comments on the "*brief explanation of the loss of brand value*" (emphasis added)<sup>57</sup>. Mr Anson finds that the analysis in the IA is "*inconsistent with the application of accepted valuation methodologies*"<sup>58</sup> and the lost profit analysis "*does not provide an indication of loss in Brand IP value*"<sup>59</sup>. He also states that "*no decision maker looking at loss of Brand IP value can make rational informed decisions based on the Impact Assessments published by the Department of Health*"<sup>60</sup>. Indeed, as Professor Faber states "*for many companies, brands are their most valuable and sustainable asset*",<sup>61</sup> Professor Faber quotes the example of PepsiCo for which approximately \$56.1bn of their \$86.8bn market value (65%) came from the intangible value of their trademarked brands<sup>62</sup>. The value of tobacco brands is similarly very substantial, for example Reynolds American recently announced that it would acquire Lorillard (manufacturer of Newport cigarettes) for \$27.4bn.<sup>63</sup> Most of the value of this acquisition (amounting to several billion US dollars) is attributable to brand value and goodwill; however the IA barely considers this important and significant impact. Indeed, the amount ascribed in the IA to the loss of brand equity for the entire UK tobacco industry is less than

<sup>56</sup> IA paragraphs 90 to 91

<sup>57</sup> Regulatory Policy Committee opinion on impact assessment on standardised packaging, May 2014, page 3 [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/336590/2014-05-29-RPC12-DH-1229\\_2\\_-\\_Standardised\\_packaging\\_of\\_tobacco.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/336590/2014-05-29-RPC12-DH-1229_2_-_Standardised_packaging_of_tobacco.pdf)

<sup>58</sup> *Preliminary Analysis of the UK Department of Health 2012 and 2014 Impact Assessments of Standardized Packaging for Tobacco Products*, W Anson, CONSOR Intellectual Asset Management, page 3

<sup>59</sup> *Ibid.*, page 3

<sup>60</sup> *Ibid.*, page 3

<sup>61</sup> *The Role of Trademarks and the Brands they represent*, RJ Faber, paragraph 20

<sup>62</sup> *Ibid.*, paragraph 20

<sup>63</sup> Announcement on 15 July 2014, <http://www.reynoldsamericainfo.com/news-and-media/news/2014/07/reynolds-american-to-acquire-lorillard>

the amount Lorillard ascribed to the intangible assets for SKYCIGS – a small UK e-cigarette brand it acquired in October 2013<sup>64</sup>.

## 7.2 Impact on cross border shopping (CBS) and illicit trade

The IA recognises that *“legitimate CBS may yet mitigate some of the benefits of standardised packaging”*<sup>65</sup> and that *“this is a particularly large risk as an increase in CBS when undertaken for personal use cannot be mitigated”*<sup>66</sup>. The IA also recognises the serious problems with this approach: *“we recognise that using an (unquantified) increase in the UK duty unpaid segment for this IA is not ideal”*<sup>67</sup>. The IA attempts an estimate of this effect at around a £2bn reduction to the Net Present Value (NPV) of the policy<sup>68</sup> (excluding the impact on Hand Rolled Tobacco (HRT) – although it recognises that this is very approximate. Mr Crookshank, a recently retired HMRC officer with nearly 40 years' experience, is of the view that the illicit market (and therefore the size of the risk in the IA) is substantially higher than the figures cited by Chantler and that adopting plain packaging involves *“taking the unquantifiable and unknown risk of potentially increasing criminality and reducing revenues collected by the Treasury”*<sup>69</sup>.

## 7.3 The impact on competition

The impact on competition is a key question that according to the Government's Better Regulation Framework Manual should be addressed when considering potential impacts: *“What are the impacts on competition? Will the number or range of suppliers be limited? Will their ability to compete be limited or the incentive to compete vigorously be reduced? Will the proposals impact on innovation?”*<sup>70</sup> It was also one of the points raised by the Regulatory Policy Committee in its opinion on the previous 2012 impact assessment as requiring further analysis: *“The IA acknowledges that as a result of this proposal, there is the possibility that tobacco companies will decide to compete on other grounds, if they can no longer compete on branding. The IA should discuss clearly the risks of how tobacco manufacturers are likely to respond to the proposal in terms of achieving the policy objectives of reducing smoking.”*<sup>71</sup> This is not addressed in the IA, implying that the IA is not

<sup>64</sup> Lorillard ascribed 77% of the fair value of SKYCIGS assets (\$38m for goodwill and \$35m for intangibles - approximately £45m in total) to goodwill and intangibles. [http://investors.lorillard.com/files/doc\\_financials/2013/Lorillard Annual%20Report 2013.pdf](http://investors.lorillard.com/files/doc_financials/2013/Lorillard%20Annual%20Report%202013.pdf) (page 68)

<sup>65</sup> IA paragraph 131

<sup>66</sup> IA paragraph 131

<sup>67</sup> IA paragraph 136

<sup>68</sup> IA paragraph 142

<sup>69</sup> *The Likely Impact of Standardised Packaging on the Illicit Tobacco Trade In The United Kingdom*, Statement of Stuart Crookshank OBE, page 4

<sup>70</sup> BIS Better Regulation Framework Manual, July 2013, page 66, paragraph 2.3.23

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/211981/bls-13-1038-better-regulation-framework-manual-guidance-for-officials.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211981/bls-13-1038-better-regulation-framework-manual-guidance-for-officials.pdf)

<sup>71</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/260631/RPC-Published-Opinions-2012.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/260631/RPC-Published-Opinions-2012.pdf)

'fit-for-purpose since: "the 'fit-for-purpose' rating only stands if the amendments highlighted by the comments are made"<sup>72</sup>.

Professor Faber comments on the potentially very significant impact on competition, that: "standardized packaging, along with all of the other restrictions on tobacco sales and promotion in the UK will make it extremely difficult, if not impossible, for a new brand to enter the market"<sup>73</sup>, and that "the primary impact standardized packaging is likely to have is to harm the ability of brands to compete in the marketplace"<sup>74</sup> and that "standardized packaging may, therefore, have the effect of making it difficult for manufacturers to introduce niche products and innovations"<sup>75</sup>.

The discussion in the IA of the impact on competition is very limited. It does not consider, for example, issues of:

- undue discrimination between different tobacco products - by requiring factory manufactured cigarettes and roll your own tobacco to use plain packaging, but not requiring this for pipes, cigars or cigarillos;
- the impact of plain packaging on:
  - barriers to entry,
  - market power,
  - innovation,
  - reduced competitive choice, or
  - other competitive impacts; or
- how plain packaging will impact on the development of tobacco products in the future (including the use of packaging to promote e.g. e-cigarettes).

#### 7.4 Consideration of alternative policy options

The IA does not consider or analyse policy alternatives apart from the Do Nothing baseline (Option 1), plain packaging (Option 2) and wait and see (Option 3). This is not in line with the Government's regulatory best practice or impact assessment guidelines and seriously limits the value of the consultation and the IA in supporting policy development.

<sup>72</sup> *Understanding the Impact of Regulatory Policy Committee Amber Opinions*, IFF Research report for the RPC, February 2014, paragraph 4.2  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/319181/Understanding\\_the\\_Impact\\_of\\_Amber\\_Option.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/319181/Understanding_the_Impact_of_Amber_Option.pdf)

<sup>73</sup> *The Role of Trademarks and the Brands they represent*, RJ Faber, paragraph 32

<sup>74</sup> *Ibid.*, paragraph 6

<sup>75</sup> *Ibid.*, paragraph 23



UK Government impact assessment guidance states: *"Because direct government intervention may not be the best way of addressing a policy problem or of realising policy objectives, alternatives to traditional regulation (e.g. self-regulation; voluntary codes) need to be properly considered from the outset"*<sup>76</sup>. The Government Better Regulation Framework Manual states: *"It is Government policy to regulate only as a last resort, having demonstrated that satisfactory outcomes cannot be achieved by alternatives, self-regulatory or non-regulatory approaches"*<sup>77</sup>. The Treasury Green Book on Appraisal and Evaluation in Central Government<sup>78</sup> states: *"The range of options depends on the nature of the objectives. For a major programme, a wide range should be considered before short-listing for detailed appraisal. Both new and current policies, programmes and projects should be included as options. At the early stages, it is usually important to consult widely, either formally or informally, as this is often the best way of creating an appropriate set of options"*<sup>79</sup>.

The IA does not consider other more targeted and focussed policy options to address the specific market failures that the Government may be concerned about. For example:

- If the policy concern is *"reducing opportunities for the packaging of tobacco products to mislead consumers about the effects of using them [and] reducing opportunities for the packaging of tobacco products to create false perceptions about the nature of such products"*<sup>80</sup>, then the IA should consider policy options to directly address those false beliefs and perceptions. This might include educational initiatives to inform children of the effects of smoking, targeted warning campaigns and enforcement of existing laws and regulatory powers (including those in the TPD2) that prohibit misleading terms on tobacco packaging<sup>81</sup>. It should also include a review of the evidence on the relationship between beliefs by smokers and non-smokers about the relative harmfulness of cigarettes and initiation, consumption and quit rates.
- If the concern is *"the take up of smoking by children"*<sup>82</sup> then different policy options might be considered for restricting youth access to tobacco products. A 2009

<sup>76</sup> HM Government Impact Assessment Guidance, August 2011, paragraph 27

<sup>77</sup> <http://www.bls.gov.uk/assets/blscore/better-regulation/docs/11-1111-impact-assessment-guidance>

<sup>77</sup> BIS Better Regulation Framework Manual, July 2013, paragraph 2.3.14  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/211981/bls-13-1038-better-regulation-framework-manual-guidance-for-officials.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211981/bls-13-1038-better-regulation-framework-manual-guidance-for-officials.pdf)

<sup>78</sup> [http://www.hm-treasury.gov.uk/d/green\\_book\\_complete.pdf](http://www.hm-treasury.gov.uk/d/green_book_complete.pdf)

<sup>79</sup> The Office of Rail Regulation guidance on Impact Assessments similarly states that an IA is intended to: *"place a discipline upon decision makers to demonstrate that they have considered a number of options to deal with specific regulatory policy issues"*. [http://www.rail-reg.gov.uk/upload/pdf/sp-impact\\_assess\\_guidnots.pdf](http://www.rail-reg.gov.uk/upload/pdf/sp-impact_assess_guidnots.pdf)

<sup>80</sup> IA, paragraph 46

<sup>81</sup> For example Regulation 11 of the Tobacco Products (Manufacture, Presentation and Sale) (Safety) Regulations 2002, provides: *"No person shall supply a tobacco product the packaging of which carries any name, brand name, text, trademark or pictorial or any other representation or sign which suggests that tobacco product is less harmful to health than other tobacco products..."*

<sup>82</sup> IA, paragraph 1

Department of Health study concluded: *"Pupils who smoked cigarettes, both regularly and occasionally, obtained cigarettes from a variety of sources. Most commonly, pupils reported being given cigarettes by other people (63%) and more than half were given cigarettes by friends (58% of smokers). A small proportion of pupils were also given cigarettes by their siblings (10%) and parents (6%), 45% of pupils who smoked cigarettes bought them from other people. This includes 33% who bought them from friends or relatives and 28% who bought them from somebody else."*<sup>83</sup> The Report recommended that to provide a better deterrent, all persons over 14 should be liable to a penalty or sanction for deliberately purchasing tobacco products that they are not legally entitled to, and that similar penalties should apply to adults who bought tobacco products for or on behalf of children (as is already the case in Scotland and is provided for in England and Wales by Section 91 of the Children and Families Act 2014, but has not been brought into force). In terms of restricting youth access, reducing smoking uptake and consumption by minors, using a commencement order to bring this policy into force in England and Wales would be better targeted and more focussed on the policy problem than plain packaging.

The Better Regulation Framework Manual states that in a consultation stage impact assessment: *"All the options considered should be identified, together with their potential for achieving the stated objectives"*<sup>84</sup>. Considering alternative policy options that target the alleged market failures would be consistent with proportionate and targeted regulation – two of the key principles of good regulation developed by the Better Regulation Executive and enshrined in the Legislative and Regulatory Reform Act 2006<sup>85</sup>. It would also be in line with the principle of seeking the least intrusive form of regulation possible,<sup>86</sup> the Coalition Government's policy to: *"remove or simplify existing regulations that unnecessarily impede growth; reduce the overall volume of new regulation by introducing regulation only as a last resort; [and] improve the quality of any remaining new regulation"*,<sup>87</sup> and the BIS regulation operating principles: *"Before bringing forward any proposal to introduce a new regulation, departments will need to satisfy the Better Regulation Executive (BRE) / sub-committee secretariat that it passes one of two tests: that no suitable alternative, non-regulatory or self-regulatory means of achieving the same outcome exists; that the measure either reduces the burden of regulation or is deregulatory"*.<sup>88</sup>

<sup>83</sup> E Fuller, Smoking, drinking and drug use among young people in England in 2008, 2009, page 26 <http://www.natcen.ac.uk/media/492785/de84e05d-5326-42c1-b687-3d75416b7fbb.pdf>

<sup>84</sup> BIS Better Regulation Framework Manual, July 2013, paragraph 2.3.15b [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/211981/bis-13-1038-better-regulation-framework-manual-guidance-for-officials.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211981/bis-13-1038-better-regulation-framework-manual-guidance-for-officials.pdf)

<sup>85</sup> Clause 19

<sup>86</sup> Ofcom's regulatory principles state: *"Ofcom will always seek the least intrusive regulatory mechanisms to achieve its policy objectives"*, <http://www.ofcom.org.uk/about/what-is-ofcom/statutory-duties-and-regulatory-principles/>

<sup>87</sup> <http://www.bis.gov.uk/policies/bre>

<sup>88</sup> <http://www.bis.gov.uk/policies/bre/principles-of-regulation>

Therefore, in terms of the Government policy to *"regulate to achieve its policy objectives only:*

- *having demonstrated that satisfactory outcomes cannot be achieved by alternative, self-regulatory, or non-regulatory approaches.<sup>89</sup>*

The DH proposals have not demonstrated that satisfactory outcomes cannot be achieved by alternative approaches – the IA has not even considered alternative approaches and in particular has not considered alternative measures that might be targeted on the particular policy concerns.

## **8 Assessment of Costs and Benefits of Plain Packaging**

There are a number of unwarranted assumptions and errors in the IA's analysis of the costs and benefits of plain packaging. However, the overriding unwarranted assumption on which the whole of the IA is dependent, is the use of the Pechey report to quantify the impact of plain packaging. This is despite the clear evidence that it is biased and its authors' own recognition that it is purely directional and second-best to direct evidence which directly contradicts the Pechey estimates (see Section 6 above).

### **8.1 Switching / downtrading between premium and economy cigarettes**

The IA expects that plain packaging will lead to a more rapid decline in sales of high price than low price cigarette brands. It assumes that the rate of switching will take place at twice the current rate after the introduction of plain packaging<sup>90</sup>. There is no evidence for this assumption and no reason to suppose that the future switching rate should bear any resemblance to the past switching rate (unless one assumes that plain packaging is ineffective and the trend in switching rate continues as before). This means that the estimated cost of switching has no evidence base.

### **8.2 Impact of the TPD2 on young people**

The IA assumes that the impact of the TPD2 on young people will be identical to that for adults (paragraph 150). There is no evidence for this assumption.

### **8.3 Reduced profits from reductions in demand for cigarettes**

The IA assumes that reduced profits to the tobacco industry and retailers will be offset by increased profits on goods and services purchased in place of tobacco<sup>91</sup>. This is incorrect and will significantly underestimate the cost of plain packaging, since:

<sup>89</sup> BIS Better Regulation Framework Manual, page 4  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/211981/bis-13-1038-better-regulation-framework-manual-guidance-for-officials.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211981/bis-13-1038-better-regulation-framework-manual-guidance-for-officials.pdf)

<sup>90</sup> IA paragraph 88

<sup>91</sup> IA paragraph 89

- The assumption of other goods being perfect substitutes for tobacco is highly unrealistic – In many cases consumers will not simply spend the money elsewhere, but will (at least partly) reduce their total spending; and
- The IA does not consider the 'multiplier effect' of cigarette sales – where people go to newsagents or other shops to buy tobacco products and at the same time purchase a newspaper, stamps, greetings cards etc which they would not have purchased if they had not had the primary purpose of buying cigarettes – thus increasing the economic activity by far more than the value of the cigarettes alone.

When commenting on this assumption in relation to the IA on mandatory age restriction technology or prohibition on the sale of tobacco from vending machines, the Regulatory Policy Committee<sup>92</sup> report criticises the use of this assumption:

*"13. Another possible cost raised that has not been quantified is lost manufacturers' profits from reduced tobacco sales. The justification given for not quantifying this is expressed as follows: "This is largely not an economic cost, as it would likely be offset by increased expenditure (and profit) elsewhere in the economy."*

*14. This does not provide a satisfactory explanation and is a questionable treatment of direct effects."*<sup>93</sup>

This error including the criticism by the Regulatory Policy Committee was raised in BAT's response to the 2012 impact assessment, however it has been repeated in this IA without any justification or explanation.

#### **8.4 Reduced profits from reduction in brand value and reduced prevalence**

The IA assumes that excess revenue is split equally between the manufacturer and retailer, but again provides no evidence for this assumption.

The IA also reduces the cost to manufacturers by a factor of 10, by only taking account of the loss of profits to UK shareholders of tobacco companies. This approach to valuing shareholder gains is not in line with the standard approach to assessing costs and benefits used in impact assessments. The Treasury Green Book states: *"The relevant costs and benefits to government and society of all options should be valued, and the net benefits or costs calculated ... Social Cost Benefit Analysis seeks to assess the net value of a policy or project to society as a whole"*. The references to costs and benefits to society as a whole make it clear that all shareholders, not just UK shareholders should be included in the IA analysis. Treasury Green Book team advice (see Annex 3) is that *"The analysis therefore*

<sup>92</sup> The Regulatory Policy Committee was set up by government to provide external and independent challenge on the evidence and analysis presented in impact assessments.

<sup>93</sup> <http://regulatorypolicycommittee.independent.gov.uk/the-protection-from-tobacco-sales-from-vending-machines-england-regulations-2010>

*should not just focus on UK [shareholders] unless the legislation is set for UK businesses only*<sup>94</sup>.

The IA approach is also not in line with the approach used in other impact assessments across a wide range of regulated sectors and regulators. None of the nearly 100 impact assessments reviewed by SLG Economics across a wide range of industry sectors (including previous tobacco related impact assessments), sponsoring departments (including the DH) and policy questions (including ones where the impact assessment took a different view on redeployment of resources) adopted this approach. Taking a correct approach to valuing these costs (but using the assumptions in the IA) the loss of profits to tobacco companies would be £440m (rather than £44m) and the total loss of value from plain packaging to manufacturers and retailers would be £662m (rather than £166m).

The loss of profits attributable to the reduction in premium brand value from those who quit smoking entirely is initially quantified in the IA at £39m. The split between retailers and tobacco companies is not made transparent in the IA, but assuming that even £10m of this was from tobacco companies and recognising the loss to all shareholders rather than just UK shareholders would increase this initial estimate to £129m; a higher share to tobacco companies would increase this even more.

Were it to be the case that wider UK government policy only took account of the impact of government policies on UK shareholders, the consequences could be catastrophic for the UK economy. In 2013 there was over £25 billion of direct inward investment into the UK plus a further £28 billion of portfolio investment into the UK<sup>95</sup>. If foreign companies and investors thought that the UK Government totally discounted and gave no value to the impact of their policies on those investments (as the IA suggests is the case) then the volume of inward investment could dramatically reduce and the returns required (for what would be seen as much more risky investments) would significantly increase. This would have potentially massive adverse effects on UK employment, growth, investment, economic activity etc.

Similarly, were foreign governments to totally discount the impacts of their policies on UK shareholders in foreign companies (which again would be consistent with them following the IA approach) then the over £1 trillion of UK international investment would be at risk as well as a further over £10 trillion of portfolio investment, financial derivatives and other UK investment abroad, again with potentially catastrophic results for savings, pensions, investments, exchange rates, balance of payments etc.

The approach of only considering the impact on the UK shareholders of the companies affected clearly discriminates against foreign shareholders in the policy setting process. This is a methodological error with no apparent economic justification or precedent for the approach and if applied more widely could have catastrophic impacts for the UK economy.

<sup>94</sup> Email correspondence with Miriam Sachak HMT Economics Branch and Green Book, see Annex 3

<sup>95</sup> ONS data series HJYU and HHZF

These concerns (including the advice from the Treasury Green Book team) were raised by BAT in its response to the 2012 impact assessment; however the error has been repeated in this IA without any further justification or explanation.

### 8.5 Introducing plain packaging at the same time as other regulations

Plain packaging is proposed to be introduced alongside the TPD2, as well as the second phase of ending the open display of tobacco products in retail premises. Even if plain packaging was to be introduced against a stable 'no change' environment holding all other relevant factors constant (as was hypothetically suggested in the question to tobacco control experts in the Pechey paper) the outcome would be very uncertain (as Pechey and Chantler conclude). However layering plain packaging regulations on top of these other regulations and then attempting to quantify the impact by subtracting one very uncertain and poorly evidenced figure (the possible impact of TPD2) from a second very uncertain and poorly evidenced figure (the possible impact of plain packaging) and ignoring the impact of other factors such as the ban on retail display of tobacco products, government policy on tobacco taxes and duty, the growth of e-cigarettes etc stretches the evidence well beyond what it can justify and moves this from evidence-based policy to pure speculation. This is another argument for Option 3, which would allow some of the impact of the existing tobacco regulations to become clearer before needing to estimate the incremental impact of plain packaging.

The Regulatory Policy Committee in its opinion on the 2012 impact assessment on standardised packaging also questioned the assessment of costs and benefits in the presence of other tobacco control measures: "*the IA would also benefit from explaining more clearly how this proposal will interact with these other recent [tobacco control] proposals in this area, such as the ban on display of tobacco products at points of sale.*"<sup>96</sup>

### 8.6 Retailer costs

The IA suggests that it is easier and quicker to select a specific brand of cigarettes from a (concealed) display of near identical packs, rather than from one differentiated by colour and style. This sounds implausible and the estimates used to support this are likely to be subject to large margins of error. The Regulatory Policy Committee opinion commented that "*the discussion and the conclusions [of the purported reduction in retailer costs] should be tested during consultation*"<sup>97</sup>. Plain packaging would add another layer of regulatory costs

<sup>96</sup> Regulatory Policy Committee, *Opinion on impact assessment on Standardised packaging for tobacco products*, Feb 2012, RPC12-DH-1229  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/250631/RPC-Published-Opinions-2012.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/250631/RPC-Published-Opinions-2012.pdf)

<sup>97</sup> Regulatory Policy Committee opinion on impact assessment on standardised packaging, May 2014, page 3  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/336590/2014-05-29-RPC12-DH-1229\\_2\\_-\\_Standardised\\_packaging\\_of\\_tobacco.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/336590/2014-05-29-RPC12-DH-1229_2_-_Standardised_packaging_of_tobacco.pdf)

on retailers in addition to costs relating to the implementation of the retail display ban and any costs associated with TPD2 measures

## 8.7 Estimating and monetising the benefits of plain packaging

### 8.7.1 Estimating the value of life

The IA relies exclusively on the use of a £60,000 value per quality adjusted life year (QALY) which is approximated by using this value per life year<sup>98</sup>. The value for a QALY used by Ofcom in their impact assessment of restrictions on TV advertising of junk food to children to address childhood obesity<sup>99</sup> was £30,000. This was based on the recommendation of the Food Standards Agency (FSA) and based on a number of sources including: the value NICE apply as a passmark in appraisal of health technologies; a study of air pollution for DEFRA; a study for Department of Health of willingness to pay for a QALY and the Department for Transport value of a statistical life<sup>100</sup>. Using £60,000 rather than £30,000 doubles the valuation of the purported benefits from the policy.

### 8.7.2 Adjusting the discount rate

The use of a 'minus 2%'<sup>101</sup> adjustment to the 3.5% social rate of time preference discount rate proposed in the Green Book is highly unusual and the IA provides no source for this adjustment except saying that it "takes account of the fact that the monetary value of a life-year can be expected to grow at the same rate as real economic growth"<sup>102</sup>. The Green Book indicates only two highly specific circumstances in which using the standard discount rate may not be appropriate (for international development assistance projects and for sensitivity analysis of the discount rate)<sup>103</sup>, the IA's justification does not fall into either of those circumstances<sup>104</sup>. The Better Regulation Framework Manual is clear that: "your approach to valuing costs and benefits of options should follow guidance in the Green Book, including the selection of discount rates"<sup>105</sup>.

<sup>98</sup> IA paragraphs 207-208

<sup>99</sup> [http://stakeholders.ofcom.gov.uk/briefings/consultations/foodads\\_new/statement/ia1.pdf](http://stakeholders.ofcom.gov.uk/briefings/consultations/foodads_new/statement/ia1.pdf)

<sup>100</sup> Mason H et al (2004) *For the Social Value of a QALY Project Team. Estimating a willingness to pay based value of a QALY from existing contingent valuation studies of prevented fatalities*, see footnote 142, page 152, *Television Advertising of Food and Drink Products to Children: Options for New Restrictions*, Ofcom 2006.

<sup>101</sup> IA paragraph 210, final bullet

<sup>102</sup> IA paragraph 210, final bullet

<sup>103</sup> HM Treasury, *The Green Book: Appraisal and Evaluation in Central Government*, updated July 2011, Page 99,

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/220541/green\\_book\\_complete.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/220541/green_book_complete.pdf)

<sup>104</sup> In any case the average real rate of GDP growth over the last decade has been below 1% rather than the 2% suggested by the IA's adjustment

<sup>105</sup> BIS Better Regulation Framework Manual, July 2013, paragraph 2.3.27 (emphasis added)

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/211981/bis-13-1038-better-regulation-framework-manual-guidance-for-officials.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211981/bis-13-1038-better-regulation-framework-manual-guidance-for-officials.pdf)

**Table 6: Effect of using 1.5% rather than 3.5% discount rate**

<b>No of years in future</b>	5	10	15	20	25	30
<b>Over-estimate of benefits</b>	10%	22%	34%	48%	63%	80%

Source: SLG Economics calculations

Table 6 shows that using a 1.5% rather than a 3.5% discount rate artificially increases the present value of the purported future benefits very significantly - the benefits accruing 10 years in the future are over-estimated by 22%, while benefits accruing further in the future (as is the case for most of the purported benefits from plain packaging) are overestimated by even more – those occurring 30 years in the future are over-estimated by 80%.

### **8.7.3 Adjusting for the number of cigarettes smoked**

The IA scales down the purported benefit in discounted life years by 65% and 61% for male and female estimates respectively to reflect the fact that the (male) doctors in the study smoked significantly more cigarettes than the current averages for men and women<sup>106</sup>. The IA assumes a linear relationship between the number of cigarettes smoked and the level of risk with no evidence for this assumption.

### **8.8 The impact of illicit trade and cross border shopping (CBS)**

The IA assumes that the experts in the Pechey report “would have taken account of some mitigation of smoking reduction due to the availability of illicit and foreign tobacco from CBS”<sup>107</sup> and that the experts also take account of “those who would otherwise have quit smoking who divert to the UK duty unpaid segment”<sup>108</sup>, both of these assumptions are highly unrealistic. Over half of the Pechey experts were recruited from Australasia and North America and would have had limited knowledge of the UK duty unpaid segment or the likelihood of switching to CBS and there is no indication that the experts were even alerted to this issue in making their estimates. While it might suit their purpose for the IA to “assume away” this effect, it in no way allows them to quantify or properly estimate the impact of plain packaging on illicit trade and cross border shopping.

### **8.9 Health benefits from reduced uptake of tobacco and higher quit rates**

The IA's evaluation of the health benefits of plain packaging relies exclusively on the Pechey paper which as shown above is biased, purely directional and second-best compared to the direct evidence which contradicts the Pechey results. The IA recognises that the evidence is indirect<sup>109</sup> and suggests that it will “take account of any later research that becomes

<sup>106</sup> IA paragraph 212 (c)

<sup>107</sup> IA paragraph 127

<sup>108</sup> IA paragraph 139

<sup>109</sup> IA paragraph 145



available"<sup>110</sup>. However, the IA has not taken account of the evidence from the Roy Morgan Research data or the Cancer Institute NSW Tobacco Tracking Survey (both of which were available at the time) in estimating the possible benefits of plain packaging. The sensitivity analysis in the IA shows that if one uses the direct evidence of the lack of impact of plain packaging on smoking prevalence from RMR, rather than the indirect evidence of the impact from Pechey, the NPV of the policy (using the other assumptions and calculations in the IA) becomes -£2bn<sup>111</sup> and would be significantly higher if the costs were properly calculated.

The analysis of the purported health benefits in the IA is not sufficiently transparent to allow reproduction of the estimates, but it is clear that there are a number of adjustments that inappropriately increase the estimate of the benefits – for example in paragraph 151 the IA suggests a reduction in children (11-15 year olds) smoking, but calculates it using only the 15-year-old age group, however 15 year olds are over 2½ times more likely to smoke than the average for 11-15 year olds<sup>112</sup>, overestimating the benefits to children 2½ times. It also repeats many of the arguments used to justify the TPD2<sup>113</sup> when any benefits from this will already be in the Option 1 baseline.

#### 8.10 Treatment of consumer surplus

The treatment of consumer surplus in the IA is very weak – there is no evidence for the claim that “branding may act as a cue that stimulates craving”<sup>114</sup> or that some people feel their consumption is “made less enjoyable or to feel inferior, by the conspicuous consumption of premium products by others”<sup>115</sup>. The IA recognises that its analysis “is insufficiently developed to provide a quantified estimate of the loss of consumer surplus”<sup>116</sup>, even though there is potentially a very significant loss to continuing smokers from plain packaging.

## 9 Conclusions

The purpose of an impact assessment is to provide decision makers with “solid evidence on the impacts and advantages of a range of policy options”<sup>117</sup>. However it is clear that this IA has not followed the Government's Impact assessment guidelines or regulatory best practice. The IA is subject to biases and errors and does not provide a solid, evidence-based proportionate basis on which to proceed with UK legislation. The IA has not shown that

<sup>110</sup> IA paragraph 145

<sup>111</sup> IA paragraph 189

<sup>112</sup> E Fuller et al, *Smoking, drinking and drug use among young people in England in 2012*, Health and Social Care Information Centre, Table B1, page 216 <http://www.hscic.gov.uk/catalogue/PUB11334/smok-drin-drug-young-peop-eng-2012-repo.pdf>

<sup>113</sup> [http://ec.europa.eu/health/tobacco/docs/com\\_2012\\_788\\_summary\\_ia\\_en.pdf](http://ec.europa.eu/health/tobacco/docs/com_2012_788_summary_ia_en.pdf)

<sup>114</sup> IA paragraph 163

<sup>115</sup> IA paragraph 165

<sup>116</sup> IA paragraph 266

<sup>117</sup> European Commission IA Guidelines, January 2009, page 13 [http://ec.europa.eu/smart-regulation/impact/commission\\_guidelines/docs/lag\\_2009\\_en.pdf](http://ec.europa.eu/smart-regulation/impact/commission_guidelines/docs/lag_2009_en.pdf)

plain packaging is necessary, appropriate or proportionate as a policy measure. Table 1 above summarises the quality of the evidence in the IA.

The analysis in this report shows that:

- The lack of time for consultation, the lack of detail in the IA, the failure to address the issues raised in the previous 2012 consultation and the very short period between the Chantler Report being produced and the IA being submitted to the Regulatory Policy Committee for review show that the DH has not followed impact assessment guidelines, has not properly considered the evidence and has closed its mind to alternatives.
- The lack of analysis of the baseline or of the efficacy of current and planned tobacco control measures (including the TPD2 which itself is based on an impact assessment which is manifestly inappropriate), and the ill-considered analysis of Option 3 (deferring a decision pending further evidence from Australia) means that the IA does not demonstrate that plain packaging is necessary.
- The IA ignores better quality and more direct evidence from Australia that directly challenges the effectiveness of plain packaging. It instead relies on weak, speculative and biased evidence from just one study (Pechey) to quantify the effects of plain packaging even though the paper's authors' conclude that direct evidence would be superior and that their results are not quantified but purely directional. Therefore the IA has not provided adequate evidence of the effectiveness of plain packaging in reducing smoking prevalence (indeed the direct evidence points to its ineffectiveness in reducing prevalence).
- The IA does not properly consider the loss of brand value, the impact on cross-border sales and the illicit trade or the impact on competition. It does not consider other more targeted and focussed policy options as alternatives to plain packaging. It therefore does not demonstrate that plain packaging would be a proportionate policy measure.
- The assessment of costs and benefits is dependent on quantification from the Pechey report despite clear evidence that it is biased and its authors' recognition that it is second-best to direct evidence (which contradicts those estimates). The IA also includes a large number of unwarranted assumptions and errors:
  - There is no evidence for the estimated cost of switching / downtrading;
  - There is no evidence that the impact on young people will be identical to that for adults;
  - The assumption that reduced tobacco profits will be offset by increased profits on other goods is incorrect and has been criticised by the Regulatory Policy Committee;
  - There is no evidence for excess revenue being equally split between manufacturers and retailers;

- The treatment of the loss of brand value is superficial and inconsistent with accepted valuation methodologies;
- The reduction of tobacco manufacturers' profits by a factor of 10 is against Green Book team guidance, not in line with other impact assessments and would have catastrophic implications for the UK economy if applied more widely;
- Introducing plain packaging on top of other tobacco control regulations (including the TPD2 measures and the full implementation of the ban on the retail display of tobacco products) and other changes in the marketplace, stretches the assessment of impacts well beyond what is justified by the evidence;
- The estimate of retailer costs are implausible and likely to be subject to large margins of error;
- The estimate of lifetime benefits are subject to uncertainty and the QALYs are double previous estimates;
- Reducing the discount rate by 2% is not in line with Green Book guidance and artificially increases the benefits very significantly;
- It is incorrect to 'assume away' the impact of mitigation of smoking reduction due to the availability of illicit and cross-border tobacco;
- The purported benefits of a reduction in children smoking are inflated by only using the figure for 15 year olds; and
- The treatment of consumer surplus is very weak even though this potentially represents a very significant loss to continuing smokers.

The IA purports to show a very large net benefit of around £25bn for Option 2 (requiring plain packaging of tobacco products), however this is critically dependent on the assumptions (based on Pechey) about the effectiveness of the measure. If more direct evidence showing the lack of impact of plain packaging in Australia is used, then the purported benefits disappear and the policy gives rise to negative net benefits of over £2bn (using the other assumptions and calculations in the IA) and would be significantly higher if the costs were properly calculated.

While this is a consultation-stage impact assessment, many of the points raised in this report reflect fundamental concerns with the IA that would require significant revision, additional work and further evidence before a proper policy decision could be taken.

**Overall the standard of process, evidence and analysis in this Impact assessment falls well below that required for a policy decision of this type. Taking all the concerns raised in this report together, it would be manifestly inappropriate to rely on this IA to move forward with UK legislation on plain packaging.**

**SLG Economics Ltd**

August 2014

**Annex 1: Roy Morgan Research data for 14-17 year olds regression results**

Factory Manufactured Cigarettes					
Plain Packaging + Linear Time Trend	-0.004	0.264	Plain Packaging+ Tobacco Prices + Linear Time Trend	-0.005	0.252
	0.007			0.008	
Plain Packaging + Quadratic Time Trend	0.005	0.269	Plain Packaging+ Tobacco Prices + Quadratic Time Trend	0.005	0.259
	0.011			0.011	

	RYO		PIPE		CIGAR	
Plain Packaging + Linear Time Trend	-0.002	-0.034	0.000	-0.032	0.001	0.029
	0.008		0.003		0.004	
Plain Packaging + Quadratic Time Trend	0.009	-0.027	0.004	-0.012	0.003	0.016
	0.012		0.004		0.006	

**Legend**

Coefficient	Adjusted R Squared
Std Error	

No results for plain packaging are statistically significant at 10% level

## **Annex 2: Curriculum Vitae, Stephen Gibson MA(Cantab), CDipAF, PGDipCS**

Mr Stephen Gibson is a recognised expert in micro-economics with over 24 years applied experience across a range of regulated sectors from both sides of the regulatory fence. He has been:

- Chief Economist and Director of Economic Policy at Postcomm – the independent regulator for postal services in the UK (2007-2011);
- Principal Economist at Ofcom (2004-2007);
- Senior Consultant at NERA Economic Consulting (2003-2004);
- Head of Economics at Network Rail (1994-2003); and
- Economist/Competition Policy Analyst at Royal Mail (1989-1994).

In 2011 he set up SLG Economics Ltd, a consultancy providing specialist micro-economic policy advice to regulators, regulated companies and government.

Mr Gibson is an Honorary Lecturer in Microeconomics at Birkbeck College, London (since 2005) and is Visiting Lecturer at City University on their MSc in Competition and Regulation (since 2011). He is a member of the Academic Panel of the Centre for Competition and Regulatory Policy. Mr Gibson has regularly appeared on the BBC news, Radio 4, Radio 5 and Sky news discussing government policy on regulation and privatisation.

### **Policy development and impact assessments**

Mr Gibson has wide experience of cost benefit analysis and impact assessments and using them to inform the development of public policy. He directed or had a major role in over 25 major impact assessments covering a wide range of major public policy questions including:

- A major impact assessment underpinning Ofcom's policy proposals for regulation of TV advertising of junk food to prevent childhood obesity,
- Proposals for the switchover from analogue to digital TV,
- Proposals for launching a high definition TV service by the BBC,
- Proposals for the design of a range of spectrum auctions,
- Proposals to change the scope of the postal universal service in the UK, and
- Proposals to separate Royal Mail into different accounting entities.

Mr Gibson was responsible for training Ofcom economists and policy advisors on how to carry out regulatory impact assessments and for developing and rolling out the Postcomm Impact assessment guidelines. He has lectured at Birkbeck University on impact assessments using IAs he has worked on as case studies.

### **Regulatory Economics**

Mr Gibson has a wealth of practical applied experience of regulatory economics. He has led or been heavily involved in seven major price controls in the postal, communications and rail sectors including work on:

- Cost of capital and regulated asset base;
- Form and structure of the charge control;
- Defining the high level outputs to be delivered by the regime;
- Incentive regimes, performance, quality of service regimes and charging for major infrastructure investments;
- Accounting and other separation options; and
- Regulatory incentive structures, management incentives and incentivising non-equity companies.

### **Competition Economics**

Mr Gibson has also led or been heavily involved in a wide range of Anticompetitive Investigations, Competition Act cases, Market Impact Assessments and Market Studies including: margin squeeze, bundling, foreclosure, undue discrimination and predatory pricing investigations; an appeal to the Competition Appeals Tribunal and directing the first market study of the UK postal sector.

### **Industry lectures**

Mr Gibson has lectured widely on applied micro-economics including most recently the prestigious Centre for Research in Regulated Industries (Rutgers University) International Conference on Postal and Delivery Economics (where his paper *A Market Study for Packages and Parcels Services* has been accepted for publication); the Government Economists in Regulation and Competition Conference 2011 - where he spoke and chaired the afternoon session; Developments in Postal Regulation organised by Ecolé Polytechnique Fédérale de Lausanne; and Cost of Capital and Financing of Regulated Industries organised jointly by Exeter Business School and the Competition Commission.

### **Qualifications**

- MA in Economics and Management Studies from Sidney Sussex College, Cambridge;
- Post-Graduate Diploma in Computer Science from Cambridge University;
- Certified Diploma in Accounting and Finance from the ACCA;
- London Business School Corporate Finance evening programme;
- External supervisor for Cambridge PhD in rail regulation;
- Honorary lecturer in Microeconomics at Birkbeck College, London;
- Lecturer at City University, London MSc In Economic Regulation.

**Peer reviewed publications**

- *A Market Study of Packets and Parcels Services in Multi-Modal Competition and the Future of Mail* (M Crew & P Kleindorfer eds.)
- *Incentivising Operational Performance on the UK Rail Infrastructure In Utilities Policy.*
- *The Allocation of Capacity in the Rail Industry in Utilities Policy.*
- *The Evolution of Capacity Charges on the UK Rail Network in The Journal of Transport Economics and Policy.*
- *Charging for the Use of Railway Capacity in Infrastructure Charging on Railways* (C Nash & E Niskanen eds.)

### Annex 3: Email correspondence with HM Treasury Green Book team

**From:** Sachak, Miriam - HMT [<mailto:Miriam.Sachak@hmtreasury.gsi.gov.uk>]  
**Sent:** 09 May 2012 12:21  
**To:** [stephen.gibson@slg-economics.co.uk](mailto:stephen.gibson@slg-economics.co.uk)  
**Cc:** Lowe, Joseph - HMT  
**Subject:** [UNCLASSIFIED] RE: Information on Green Book appraisals

Stephen,

I would suggest that the IA calculates the total loss of profits relative to the baseline assuming that this loss in profits is directly attributable to the intervention. I am not sure what would be the rationale for only calculating the loss of supernormal profits?

On your second point the Green Book states the following

"The relevant costs and benefits to government and society of all options should be valued; and the net benefits or costs calculated." Point 5.8 page 19.

Annex 2 says "Social Cost Benefit Analysis seeks to assess the net value of a policy or project to society as a whole" first line of page 57.

Again, happy to discuss any of the following

Miriam

Miriam Sachak | General Expenditure Policy | 020 7270 4348

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**From:** Stephen Gibson [<mailto:stephen.gibson@slg-economics.co.uk>]  
**Sent:** 09 May 2012 12:01  
**To:** Sachak, Miriam - HMT  
**Cc:** Lowe, Joseph - HMT  
**Subject:** RE: [UNCLASSIFIED] RE: Information on Green Book appraisals

Dear Miriam

Many thanks for the very useful response. On the first point I understand that the IA should look at costs and benefits, but one of the costs from this policy measure is a loss of profits to some companies compared to the (do nothing) base case – should the IA take account of the full loss of profits or simply the loss of supernormal profits?

Are you able to point me to something I can quote (say from the Green Book etc) on your second point about the IA analysing the costs to society as a whole rather than excluding the effects on overseas shareholders

Thanks

Stephen



**From:** Sachak, Miriam - HMT [<mailto:Miriam.Sachak@hmtreasury.gsi.gov.uk>]  
**Sent:** 09 May 2012 11:24  
**To:** [STEPHEN.GIBSON@SLG-ECONOMICS.CO.UK](mailto:STEPHEN.GIBSON@SLG-ECONOMICS.CO.UK)  
**Cc:** Lowe, Joseph - HMT  
**Subject:** [UNCLASSIFIED] RE: Information on Green Book appraisals

Stephen  
Many thanks for your email.

Firstly the assessment or appraisal of an intervention is to assess the additional costs or benefits relative to the baseline (do nothing option). So rather than considering this from a profit perspective, the Impact Assessment should calculate what are the additional costs or savings on business as a result of the legislation.

Finally economic appraisal focuses on the welfare implications of a proposal for society as a whole and for the purposes of comparing it with alternative uses of the public funds involved. The analysis therefore should not just focus on UK unless the legislation is set for UK businesses only.

Happy to discuss,

Kind regards,

Miriam

**Miriam Sachak | Economics Branch & Green Book | General Expenditure Policy**  
2/N1 | HM Treasury | 1 Horse Guards Road | London SW1A 2HQ | 020 7270 4348

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**From:** Stephen Gibson[SMTP:[STEPHEN.GIBSON@SLG-ECONOMICS.CO.UK](mailto:STEPHEN.GIBSON@SLG-ECONOMICS.CO.UK)]  
**Sent:** Tuesday, May 01, 2012 2:23:44 PM  
**To:** Greenbook - HMT  
**Subject:** Information on Green Book appraisals  
Auto forwarded by a Rule

Dear sir/madam

I am reviewing an Impact assessment and want to understand whether loss of profits to a business in one policy option and not the base case should be included in the IA, or whether it should be offset by likely profits in other industries (i.e. is it only the loss in supernormal profits that is of concern in the IA or the full loss of profits).

Also when considering costs/benefits of a fall in profits to UK companies, should you adjust this for the likely proportion of shareholders in that company who are UK residents (i.e. if only 50% of shareholders are British should you only take account of 50% of the extra profits generated by the policy option)

If you can offer guidance or point me to the appropriate guidance in the Green Book that would be very helpful

Many thanks

Stephen Gibson

**BRITISH AMERICAN TOBACCO UK LIMITED'S RESPONSE<sup>1</sup> TO  
SIR CYRIL CHANTLER'S REVIEW INTO STANDARDISED PACKAGING OF TOBACCO**

**1. BACKGROUND**

- 1.1 Between April and August 2012 the Department of Health (in conjunction with the Devolved Authorities in Scotland, Wales and Northern Ireland) conducted an extensive and extended UK-wide consultation into the issue of standardised packaging of tobacco (the "Consultation"). British American Tobacco UK Limited ("BAT") provided a seventy-four page response to the Consultation on 8 August 2012 ("BAT's 2012 Response"). This was one of over 668,000 responses the Consultation received.<sup>2</sup> After almost a year, the Consultation reported in July 2013. Following which, the government announced that it would wait until the impact of the decision in Australia to implement standardised packaging of tobacco could be properly analysed, before it made its decision on such a policy in the UK<sup>3</sup> (the "July Announcement").
- 1.2 On 27 November 2013 Sir Cyril Chantler was appointed to conduct an independent review into the issue of standardised packaging of tobacco (the "Review"). The Government publically announced the Review the next day (the "November Announcement"). The Announcement was an unexpected and surprising about-turn, given the Government's decision only four months previously. On 16 December 2013, Sir Cyril Chantler published the method statement for the Review (the "Method Statement"). The Method Statement requested all responses by "not later than Friday 10 January 2013".<sup>4</sup> BAT has already registered its objections to the Review, both in terms of form and substance (the "HSF Letter").<sup>5</sup> Following letters from both the Department of Health and Sir Cyril Chantler's solicitors (both dated 6 January 2014), it was confirmed that the Government "will give full consideration both to the matters within the scope of the [R]eview and to the wider issues raised" and that it will consider "whether, and if so, what kind and level of consultation might be required or appropriate."

**2. INTRODUCTION**

- 2.1 It is BAT's view that there is no credible and reliable evidence to support the proposition that the introduction of plain packaging is likely to lead to a decrease in the consumption of tobacco, in-particular among children. In fact, given the very likely boost the UK's illicit market in tobacco will receive from the introduction of plain packaging, the opposite appears more likely.
- 2.2 As detailed in the HSF Letter, this Review is flawed. First, due to the unreasonably short response time over Christmas and New Year, BAT has been unable to prepare a complete response. Furthermore, BAT continues to object to the ambiguous and confused scope, methodology and purported purpose of the Review. For the avoidance of doubt, this response is not to be taken as BAT submitting to, or in any way accepting the legitimacy or legality, of the Review. BAT continues to reserve any and all of its rights.

<sup>1</sup> British American Tobacco UK Limited submits this response on its behalf and on the behalf of other BAT group companies that would be adversely impacted by a plain packaging measure, including but not limited to the relevant BAT entities that own the trademarks used on cigarette packaging sold in the UK.

<sup>2</sup> Consultation on standardised packaging of tobacco products: summary report, page 8.

<sup>3</sup> The Secretary of State for Health (Right Honourable Jeremy Hunt MP), written Ministerial Statement, Consultation on Standardised Packaging of Tobacco Products: [http://www.parliament.uk/documents/commons-vote-office/July\\_2013/12%20July%20July%20HEALTH.Consultation-standardised-packaging-of-tobacco-products.pdf](http://www.parliament.uk/documents/commons-vote-office/July_2013/12%20July%20July%20HEALTH.Consultation-standardised-packaging-of-tobacco-products.pdf)

<sup>4</sup> Method Statement, page 2

<sup>5</sup> Herbert Smith Freehills LLP letter to Sir Cyril Chantler and the Right Honourable Jeremy Hunt MP dated 20 December 2013

- 2.3 This response will first summarise BAT's objections to the Review (set out more fully in the HSF Letter). Second, this response reviews the studies that look at plain packaging which have been published since the Consultation. As explained more fully below, such studies are limited both in their number and by the fundamental flaws in their methodologies and findings. Finally, as explained in paragraph 3.3.3 below, the conflicting recent messages from the Government on the one hand and Sir Cyril Chantler on the other make it unclear whether the important issue of illicit trade is excluded from the scope of the Review (as was originally indicated). However, a brief outline of the importance of this issue to the Review is set out below.
- 2.4 BAT notes that BAT's 2012 Response is available to the Review in full and in summary.<sup>6</sup> Due to the unfairly short time-frame within which this response was prepared, BAT's 2012 Response is incorporated into this response in full by reference.

### 3. BAT'S OBJECTIONS

#### **The purpose of the Review is flawed: plain packaging is illegal<sup>7</sup>**

- 3.1 The proposal which the Review has been established to consider would contravene the UK's legal obligations. It is a basic point of public law that the UK Government must act within the law.<sup>8</sup> We submit that the proposed plain packaging of tobacco infringes:
- 3.1.1 Article 34 Treaty of the Functioning of the European Union;
  - 3.1.2 Article 13(1) Tobacco Products Directive;
  - 3.1.3 Human Rights Act 1998, European Convention on Human Rights and EU Charter on Fundamental Rights;
  - 3.1.4 several World Trade Organization Agreements, including the Agreement on the Trade-Related Aspects of Intellectual Property and the Agreement on Technical Barriers to Trade; and
  - 3.1.5 other obligations under international law (such as bilateral investment treaties).
- 3.2 Furthermore, if implemented, the proposal would place the UK at risk of expensive litigation and significant compensation to tobacco companies deprived of their intellectual property, such as BAT. We submit that it is inappropriate and premature for the UK Government to propose to implement the very measure that is being challenged by five sovereign states in on-going World Trade Organisation proceedings, particularly given the UK Government is essentially involved in these proceedings.

#### **The methodology of the Review is flawed**

- 3.3 The scope and methodology of the Review are inadequate, inappropriate, misconceived, ambiguous, unsettled and confused.<sup>9</sup> The Review's flaws include:
- 3.3.1 the narrow scope of the Review, along with the rushed timetable, means that any conclusion it may reach will not be credible or have any practical real-world application;

<sup>6</sup> Method Statement, page 1

<sup>7</sup> For further information: *UK Standardised Packaging Consultation, Response of British American Tobacco UK Limited*, 08 August 2013, part 5 page 6/7 and answer to question 6

<sup>8</sup> This is notwithstanding the Department of Health's unsupported and plainly incorrect assertion to the contrary in their letter of 8 January.

<sup>9</sup> For the avoidance of doubt, BAT's objections are set out more fully in the HSF Letter and the below is supplementary to, and does not replace, the contents of the HSF Letter.

- 3.3.2 the narrow scope, together with the unreasonably short time-frame to respond, is in breach of BAT's legitimate expectation that it will be properly and fairly consulted on this issue (given that BAT is undoubtedly an interested party); and
- 3.3.3 the scope of the review is ambiguous, unsettled and confused; this will cause any purported conclusion of the Review to have no credibility or practical real-world application. For example, there have been contradictory statements in relation to whether the important issue of the illicit trade of tobacco is within the scope of the Review. On the one hand the Right Honourable Jane Ellison MP stated on 28 November 2013 that issues such as the illicit trade of tobacco are outside the scope of the Review (Hansard, 28 November 2013, column 414); on the other hand, Sir Cyril Chantler's solicitor commented on 6 January 2014 that "*the Review does not exclude an examination of issues such as the illicit trade in tobacco...*". These statements are plainly contradictory and demonstrate the ambiguous, confused and unsettled scope of the Review.

#### 4. THERE IS NO EVIDENCE TO SUPPORT PLAIN PACKAGING

- 4.1 According to the Method Statement, the evidence under consideration will include:<sup>10</sup>
- a) the systematic review undertaken as part of the Public Health Research Consortium (the "PHRC Review"),<sup>11</sup> and
  - b) the subsequent research update dated September 2013 (the "2013 Update").<sup>12</sup>
- 4.2 As discussed in BAT's 2012 Response, when the Department of Health first sought feedback on Plain Packaging (the "2009 Consultation"),<sup>13</sup> it concluded that there was no evidence that plain packaging reduced smoking uptake amongst minors or helped people quit. In light of this, the Minister of State for Public Health stated that considering the impact that plain packaging would have on intellectual property rights, the government would need "*strong and convincing evidence of the benefits to health*" before plain packaging could be promoted and accepted.<sup>14</sup> The need for evidence on the additional health benefits of plain packaging is confirmed in the Government's current Tobacco Control Plan for England which states that prior to implementing plain packaging, the Government "*wants to understand whether there is evidence to demonstrate that plain packaging would have an additional public health benefit*".<sup>15</sup>
- 4.3 The Department of Health relied on the PHRC Review in 2012 when considering introduction of plain packaging measures. The PHRC Review cited many of the studies that were already considered by the Department of Health in its 2009 Consultation where these studies were deemed to be insufficient to support the introduction of plain packaging measures. The other studies that were considered in the PHRC Review suffered from the same flaws.<sup>16</sup> They failed to make the key link between packaging and actual smoking behaviour.

<sup>10</sup> Method Statement dated 16 December 2013, Independent Review into standardised packaging.

<sup>11</sup> Moodie, C., et al., "Plain Tobacco Packaging: A Systematic Review" available at [http://phrc.lshtm.ac.uk/papers/PHRC\\_008\\_Final\\_Report.pdf](http://phrc.lshtm.ac.uk/papers/PHRC_008_Final_Report.pdf)

<sup>12</sup> Moodie, C., et al. "Plain Tobacco Packaging Research: An Update" available at <http://www.stir.ac.uk/media/schools/management/documents/Plain%20Packaging%20Studies%20Update.pdf>

<sup>13</sup> The Department of Health's 2008 Future of Tobacco Control Consultation.

<sup>14</sup> Parliamentary Debate (26 June 2009) available at <http://www.publications.parliament.uk/pa/cm200809/cmpublic/health/090625/pm/090625s09.htm>.

<sup>15</sup> HM Government, "Healthy lives, healthy people: A tobacco control plan for England", (March 2011), at para. 3.6, available at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/213757/dh\\_124960.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/213757/dh_124960.pdf).

<sup>16</sup> BAT's 2012 Response, pp. 17-20.

- 4.4 As discussed in BAT's 2012 Response, there is strong evidence to show that packaging has no impact on smoking initiation, cessation and relapse.<sup>17</sup> For example, according to a survey commissioned by the European Commission,<sup>18</sup> the primary drivers of initiation among youth were friends and family smoking. The other major factors cited as an influence for smoking initiation were the affordability of cigarettes and the taste or smell of tobacco. Even when prompted to consider packaging as a significant element in their decision to start smoking, and notwithstanding that the respondents could choose more than one element, 99% of the UK respondents did not choose packaging as a relevant factor. As far as cessation is concerned, according to a survey by the UK Office of National Statistics,<sup>19</sup> factors that affect smokers' decisions to quit smoking include concerns about current and future health effects of smoking, the costs of smoking and pressure from the family to quit, but not packaging. The PHRC Review and (as discussed below) the 2013 Update fail to consider this evidence in any way.

#### The 2013 Update

- 4.5 In September 2013, Moodie et al. published the 2013 Update which considered seventeen studies which had been published after the PHRC Review.

No.	Study	Topic
1.	Al-Hamdani (2013) <sup>20</sup>	Warning Salience and Effectiveness ("Warnings")
2.	Borland & Savvas (2013) <sup>21</sup>	Appeal, Harm Perception
3.	Borland et al (2013) <sup>22</sup>	Appeal, Warnings
4.	Edwards et al (2013) <sup>23</sup>	Facilitators/Barriers to Introduction of Plain Packaging ("Facilitators/Barriers")
5.	Ford et al (2013a) <sup>24</sup>	Appeal, Harm Perception
6.	Ford et al (2013b) <sup>25</sup>	Appeal, Harm Perception, Intentions, Beliefs, Attitudes and Behaviour towards Smoking ("Attitudes")
7.	Hoek et al (2012) <sup>26</sup>	Attitudes, Facilitators/Barriers

<sup>17</sup> BAT's 2012 Response, pp. 20-23.

<sup>18</sup> TNS Opinion & Social. Special Eurobarometer 385, "Attitudes of Europeans towards tobacco", (May 2012), available at [http://ec.europa.eu/health/tobacco/docs/eurobaro\\_attitudes\\_towards\\_tobacco\\_2012\\_en.pdf](http://ec.europa.eu/health/tobacco/docs/eurobaro_attitudes_towards_tobacco_2012_en.pdf).

<sup>19</sup> The UK Office for National Statistics, "Opinions Survey Report No. 40 Smoking-related Behaviour and Attitudes 2008/09", (2009).

<sup>20</sup> Al-Hamdani, M. (2013) "The effect of cigarette plain packaging on individuals' health warning recall" *Healthcare Policy*, 8(3): 68-77 available <http://www.longwoods.com/content/23210>.

<sup>21</sup> Borland, R. and Savvas, S. (2013) "The effects of variant descriptors on the potential effectiveness of plain packaging", *Tobacco Control*, published online 22nd February 2013. doi:10.1138/tobaccocontrol-2012-050736

<sup>22</sup> Borland, R., Savvas, S., Sharkie, F. and Moore, K. (2013) "The Impact of structural packaging design on young adult smokers' perceptions of tobacco products", *Tobacco Control*, 22(2): 97-102. doi:10.1136/tobaccocontrol-2011-050078

<sup>23</sup> Edwards, R., Peacor, J., Russell, M., Gifford, H., Thomson, G. and Wilson, N. (2012) "Qualitative exploration of public and smoker understanding of, and reactions to, an endgame solution to the tobacco epidemic", *BMC Public Health*, 12: 782. doi:10.1186/1471-2458-12-782

<sup>24</sup> Ford, A., Moodie, C., MacKintosh, AM. and Hastings, G. (2013) "How adolescents perceive cigarette packaging and possible benefits of plain packaging", *Education and Health*, 31(2): 83-88. Available online: <http://sheu.org.uk/x/eh312af.pdf>

<sup>25</sup> Ford, A., MacKintosh, AM., Moodie, C., Richardson, S. and Hastings, G. (2013) "Cigarette pack design and adolescent smoking susceptibility: a cross-sectional survey", *BMJ Open*, 3: e003282. doi:10.1136/bmjopen-2013-003282

8.	Maynard et al (2013) <sup>27</sup>	Warnings
9.	McCool et al (2012) <sup>28</sup>	Appeal, Warnings, Harm Perception
10.	Moodie & MacKintosh (2013) <sup>29</sup>	Appeals, Warnings, Attitudes
11.	Pechey et al (2013) <sup>30</sup>	Attitudes
12.	Ramunno et al (2012) <sup>31</sup>	Warnings
13.	Rosenberg et al (2012) <sup>32</sup>	Facilitators/Barriers
14.	Scheffels & Saebo (2013) <sup>33</sup>	Appeals, Warnings, Harm Perception, Attitudes
15.	Uppal et al (2013) <sup>34</sup>	Attitudes
16.	Wakefield et al (2012) <sup>35</sup>	Appeals, Warnings, Harm Perception, Attitudes
17.	Wakefield et al (2013) <sup>36</sup>	Appeals, Harm Perception, Attitudes, Facilitators/Barriers

4.6 These studies suffer from many of the same flaws as those reviewed in the PHRC Review, as summarised below.

4.6.1 The fundamental shortcoming of most of these studies is that they fail to observe plain packs in a natural setting. They lack real world evidence and do not evaluate the impact of plain packaging policy in practice.

<sup>26</sup> Hoek, J., Gendall, P., Maubach, N. and Edwards, R. (2012) "Strong public support for plain packaging of tobacco products", *Australian and New Zealand Journal of Public Health*, 36(5): 405-407. doi:10.1111/j.1753-6405.2012.00907.x

<sup>27</sup> Maynard, OM., Munafò, MR. and Leonards, U. (2013) "Visual attention to health warnings on plain tobacco packaging in adolescent smokers and non-smokers", *Addiction*, 108(2): 413-419. doi:10.1111/j.1360-0443.2012.04028.x

<sup>28</sup> McCool, J., Webb, L., Cameron, LD. and Hoek, J. (2012) "Graphic warning labels on plain cigarette packs: will they make a difference to adolescents?" *Social Science & Medicine*, 74(8): 1269-1273. doi:10.1016/j.socscimed.2011.12.043

<sup>29</sup> Moodie, CS. and MacKintosh, AM. (2013) "Young adult women smokers' response to using plain cigarette packaging: a naturalistic approach", *BMJ Open*, 3: e002402. doi: 10.1136/bmjopen-2012-002402.

<sup>30</sup> Pechey, R., Spiegelhalter, D. and Marteau, TM. (2013) "Impact of plain packaging of tobacco products on smoking in adults and children: an elicitation of international experts' estimates", *BMC Public Health*, 13: 18. doi:10.1186/1471-2458-13-18.

<sup>31</sup> Ramunno, S., Mandeville, KL. and Yarrow, K. (2012) "The effect of plain cigarette packaging on attention to health warnings." *The Lancet*, 380(November Suppl.): S5. doi:10.1016/S0140-6736(13)80361-X.

<sup>32</sup> Rosenberg, M., Pettigrew, S., Wood, L., Ferguson, R. and Houghton, S. (2012) "Public support for tobacco control policy extensions in Western Australia: a cross-sectional study", *BMJ Open*, 2: e000784. doi:10.1136/bmjopen-2011-000784.

<sup>33</sup> Scheffels, J. and Saebo, G. (2013) "Perceptions of plain and branded cigarette packaging among Norwegian youth and adults: a focus group study", *Nicotine & Tobacco Research*, 15(2): 450-456. doi:10.1093/ntr/nts153.

<sup>34</sup> Uppal, N., Shahab, L., Britton, J. and Ratschen, E. (2013) "The forgotten smoker: a qualitative study of attitudes towards smoking, quitting, and tobacco control policies among continuing smokers", *BMC Public Health*, 13: 432. doi:10.1186/1471-2458-13-432

<sup>35</sup> Wakefield, M., Germain, D., Durkin, S., Hammond, D., Goldberg, M. and Borland, R. (2012) "Do larger pictorial health warnings diminish the need for plain packaging of cigarettes?" *Addiction*, 107(6): 1159-1167. doi:10.1111/j.1360-0443.2012.03774.x

<sup>36</sup> Wakefield, MA., Hayes, L., Durkin, S. and Borland, R. (2013) "Introduction effects of the Australian plain packaging policy on adult smokers: a cross-sectional study", *BMJ Open*, 3: e003175. doi:10.1136/bmjopen-2013-003175

- 4.6.2 These studies generally do not demonstrate any impact on actual smoking behaviours.
- 4.6.3 These studies do not establish any information deficit or any misperceptions about the health risks associated with cigarettes.
- 4.6.4 Even the 2013 Update states that these studies merely "*suggest that plain packaging would: reduce the appeal of cigarettes and smoking; enhance the salience of health warnings on packs; and address the use of packaging elements that mislead smokers about product harm*" (emphasis supplied). Notwithstanding the methodological flaws in the studies, these effects that plain packaging may allegedly have are not predictive of a change in actual smoking behaviour. Therefore, the additional studies reviewed in the 2013 Update do not justify introduction of plain packaging because it fails to make the key link between packaging and smoking behaviour.
- 4.6.5 Many of these studies look at aspects like intentions, attitudes and impressions. They measure perceptions which are not predictive of actual behaviour. They examine the subjects' stated views of plain packaging but observe no actual smoking practices.
- 4.6.6 The studies do not consider well established evidence (as discussed in paragraph 4.4 above and BAT's 2012 Response<sup>37</sup>) on the real factors driving smoking initiation, cessation and relapse. These reports establish that packaging has never been considered a relevant factor in driving these behaviours.
- 4.7 Some of the more prominent studies reviewed in the 2013 Update are discussed in more detail below.

**Maynard et al (2013)**

- 4.7.1 This study examined eye movements with a convenience sample of 87 students (14-19 years) in three secondary schools in Bristol, UK. They were divided into four groups: never-smokers, experimenters, weekly smokers and daily smokers. The findings revealed that most participants made more eye movements towards the health warnings than to the brand name on plain packs but, overall, the participants made essentially the same number of eye movements to the health warnings irrespective of whether the packs were branded or plain. Moreover, the study found that adolescent never-smokers -- the key population focus of this Review -- looked at the health warnings more than any branding element irrespective of whether the pack was branded or plain and, actually, looked at the health warnings more when the pack was branded.
- 4.7.2 The key shortcomings of the study include:
- (A) as admitted by the authors, the sample used in the study is not representative of the relevant policy population and the extent to which the results of this study generalise to the wider population would be limited. For example:
- (1) only students from three schools were considered and the sample size was very small;
  - (2) the majority of the students were attending a school which was academically scoring above the national average;

<sup>37</sup> BAT's 2012 Response, pp. 20-23.

- (3) the majority of the students were studying psychology which could affect their opinions; and
  - (4) the never-smokers and experimenters were predominantly female, with more males in the smoking group.
- (B) eye movement as a test is not indicative of actual smoking behaviour. There is no validated link between the amount of attention people pay towards health warnings and their decision to smoke.
- (C) while this study finds more eye movements towards health warnings than to the brand name on plain packs, the total eye movement towards warnings as between plain packs and branded packs were essentially the same. If the premise for evaluating eye movements is that paying more attention to warnings leads people to quit smoking, this study suggests that plain packs do not focus more total attention to warnings as the difference between the actual time that adolescents pay attention to warnings on plain packs relative to branded packs is marginal.
- (D) the study provides no credible support to the claim that plain packaging is more effective in achieving actual reduction in smoking.

#### Moodie and MacKintosh (2013)

4.7.3 For this study, 187 young adult women (18 to 35 years) were recruited and instructed to use plain packs for one week and their own fully branded packs for one week. Following this, they completed questionnaires designed to assess their perceptions and feelings towards packaging and smoking, response to the warnings and avoidant and cessation behaviour. Plain packs were found to be less attractive than branded packs. The participants reported looking more closely at warnings on plain packs and thinking more about cessation.

4.7.4 The key shortcomings of the study include:

- (A) the duration of the study was only two weeks. It is an extremely short time frame and is not reflective of long term behaviour, particularly where the smokers would get accustomed to plain packs over time in a plain packaging environment. Moreover, the disparate emotions and intentions reported in this study in relation to branded and plain packs will be expected to dissipate if plain packs are the only packs available. Indeed, as the authors note, "*participants may respond differently if only plain packs were available on the legitimate market.*" Therefore, the value of the findings of this study is limited.
- (B) the impact on attitudes, beliefs and intentions of the participants is not predictive of actual behaviour. A respondent indicating that they find the packaging of a tobacco product less (or more) attractive alone is not an indication that the respondent's tobacco consumption will be affected by a change in the packaging.
- (C) it is self-reported and respondents to the study may not have been honest in their responses.
- (D) as the authors themselves admit, the results of this "*study cannot be generalised to all young women smokers*"<sup>39</sup>. Further, the findings cannot be generalised to male smokers, older female smokers, adolescent smokers and non-smokers.

<sup>39</sup> Moodie and MacKintosh (2013), at p. 8.



- (E) as is the case with most of the studies reviewed in the 2013 Update more generally, the setting is artificial as the plain packs carried fictitious names. Subjects trust existing brand names and may be suspicious of fake brand names. They may even consider the cigarettes provided under a fictitious brand name to be fake. This may have generated responses that one would not see if people were to smoke cigarettes from plain packs bearing actual brand names. Therefore, this study does not inform on the impact of the policy in practice.

**Wakefield et al (2013)**

4.7.5 This study involved a cross-sectional study conducted in November 2012 when plain packs were being rolled out in Australia but were not yet mandatory. It found that plain packs were associated with lower appeal relative to branded packs. People smoking from plain packs were more likely to think about quitting and support plain packaging measures.

4.7.6 The key shortcomings of this study are:

- (A) Its conclusions focus only on intentions, attitudes and impressions (and ignore objective smoking measures). It does not examine actual behavioural changes.
- (B) It found no differences between plain and branded pack smokers in relation to quit intentions within 30 days or the next six months. The study further found that there were no significant differences in the proportion of plain and branded pack smokers who thought frequently about the harms of smoking. As noted in the NHS's critique of this study, "There was no significant difference between groups for intentions to quit smoking, frequency of thoughts about harms or perceived exaggeration of harms."<sup>39</sup>
- (C) given that the study was conducted in November 2012, when plain packs had not yet been introduced in Australia, the findings of the survey may reflect an initial short term effect that would dissipate once people are accustomed to the plain packs after such packaging was made mandatory and plain packs were the only available cigarette packaging on the legal market.
- (D) as further noted by the NHS, this study has many other flaws, including: "that the study could not assess whether a change in packaging achieves the desired outcomes – of an increase in quit rates . . . whether the change in packaging prevented people from starting smoking in the first place . . . It also only looked at adults' beliefs, so the findings cannot be generalised to younger people . . . the amount people smoked was based on their own reporting, and there is a possibility that participants did not report their level of smoking consumption accurately. This could potentially bias the results as could the fact that some of the smokers of branded packs, may have previously smoked from plain packs."<sup>40</sup>

**Hammond et al (2013)<sup>41</sup>**

<sup>39</sup> <http://www.nhs.uk/news/2013/07/July/Pages/Does-plain-packaging-help-smokers-quit.aspx>

<sup>40</sup> <http://www.nhs.uk/news/2013/07/July/Pages/Does-plain-packaging-help-smokers-quit.aspx>

<sup>41</sup> Hammond D, Daniel S and White C (2013). The effect of cigarette branding and plain packaging on female youth in the United Kingdom. *Journal of Adolescent Health*, 52: 151-157. doi:10.1016/j.jadohealth.2012.06.003

4.7.7 While this study was not reviewed in the main body, it is considered in Appendix 2 of the 2013 Update as a part of the research within the UK. As a part of this study, 16 to 19 year old female subjects in the United Kingdom participated in an online survey. They were offered a cigarette pack that would be sent to them on conclusion of the study. Branded or plain packs were offered randomly. The study found that those who were offered branded packs were more likely to accept a pack than those offered plain packs (51.8% vs. 44.6%).

4.7.8 The shortcomings of this report are:

- (A) as in the case of Moodie and MacKintosh (2013), the preference may be an initial short term effect that would go away once people are accustomed to the packs or where plain packs become the norm extinguishing the legal availability of branded packs altogether.
- (B) it is possible that people may have deduced the purpose of the study. This would bias their responses, which are consequently unreliable.
- (C) the study cannot be generalised to a wider population as it exclusively looks at young female subjects. The findings cannot be generalised to males and older females (whether smokers or non-smokers).

#### Other recent studies

4.8 In addition to the studies considered in the 2013 Update, there are some other studies that have purported to look at the impact of plain packaging. These suffer from similar methodological flaws as the studies discussed above.

#### White et al. (2012)<sup>42</sup>

This study involved 640 Brazilian women (16 to 26 years) who participated in an online survey involving comparison of branded and plain packs on perceived appeal, taste, health risk, smoothness, etc. At the conclusion of the survey, they were shown a range of branded and plain packs from which they could select one as a free gift if they wanted, which constituted a behavioural measure of appeal. This paper found a large difference with 40% people choosing a branded pack and only 13% choosing a plain pack.<sup>43</sup>

4.8.1 This study suffers from the following shortcomings:

- (A) the survey suffers from a methodological flaw in that it offered people a choice between branded and plain packs. This is an artificial setting. In a real life situation, people would not get such a choice. Therefore, the mere fact that they would prefer branded packs over plain packs does not suggest that there would be any change in smoking prevalence if only plain packs were available. As a later study indicates,<sup>44</sup> the difference between people accepting a branded pack and people accepting a plain pack is significantly reduced once the element of choice is removed.
- (B) the shortcomings of Hammond et al. (2013), as discussed in paragraph 4.7.8 above are also applicable here.

<sup>42</sup> White, C., Hammond, D., Thrasher, J. and Fong, G. (2012) "The potential impact of plain packaging of cigarette products among Brazilian young women: an experimental study" *BMC Public Health* 2012, 12:737. Available online: <http://www.biomedcentral.com/1471-2458/12/737>

<sup>43</sup> It appears that the remaining 47% chose not to select a free pack of cigarettes.

<sup>44</sup> Hammond D, Daniel S and White C (2013). The effect of cigarette branding and plain packaging on female youth in the United Kingdom. *Journal of Adolescent Health*, 52: 151-157. doi:10.1016/j.jadohealth.2012.08.003

- (C) the relevance of the findings in the context of the UK is limited given that the sample consists exclusively of Brazilian women.

**Rousu and Thrasher (2013)<sup>45</sup>**

4.8.2 This study reports the results of experimental auctions with US smokers, assessing the percentage of smokers whose demand for cigarettes decreases when bidding on packs with graphic health warnings ("GHWs") and plain packs relative to packs with only text warnings. The study finds that GHWs are more effective in reducing demand than text-only warnings. Further, GHWs are more effective at encouraging younger smokers to reduce their demand. Plain packaging was found to be most effective in reducing demand among less educated smokers.

4.8.3 They key shortcomings of this study are:

- (A) the auction experiment that took place at tables in several grocery stores was contrived and very far from any naturalistic setting.
- (B) the sample is not representative. It includes only smokers and does not consider what the impact of larger GHWs and plain packs would be on young non-smokers – the key focus of this Review. Further, the authors admit that the study was conducted with a convenience sample of smokers recruited from grocery stores. Therefore, the results may not be generalizable to all US smokers. Given that the sample is not representative of US smokers, it may be of limited, if any value when considering the impact of plain packaging measures in the UK.
- (C) the reduction in demand for packs with larger GHWs and plain packs could be reflective of merely a short term demand change. The influence of the warnings may wear out and dissipate over time as they lose their novelty and smokers become more accustomed to them. Therefore, this study is not relevant when considering the long term impact of plain packaging on smoking.
- (D) as in the case of Hammond et al. (2013) and White et al. (2013), as discussed above, the reduction in demand could also be explained on the basis that, as packs become more and more different from what is available, subjects may become more suspicious that the pack of cigarettes is genuine. The study does not control for this possibility and therefore, its findings have limited, if any, value.

**Conclusion**

4.9 In conclusion, the studies considered above all suffer from several methodological flaws which undermine any evidential value they may otherwise have: no individual study is capable of being credible and reliable evidence that the introduction of plain packaging "is likely to lead to a decrease in the consumption of tobacco, including in particular a decrease in the risk of children becoming addicted".<sup>46</sup> Furthermore, a collection of studies which are all fundamentally flawed cannot together form credible and reliable evidence.

<sup>45</sup> Rousu, M. and Thrasher, J. (2013) "Demand Reduction from Plain and Pictorial Cigarette Warning Labels: Evidence from Experimental Auctions", *Applied Economic Perspectives and Policy* (2013) volume 35, number 1, pp. 171–184. doi:10.1093/aapp/pps049

<sup>46</sup> Method Statement dated 16 December 2013, Independent Review into standardised packaging.

- 4.10 In contrast, there is robust evidence to suggest that packaging is irrelevant to smoking initiation, cessation and relapse.<sup>47</sup> The studies cited in support of plain packaging fail to respond to - or even consider - such evidence.

## 5. ILLICIT TRADE AND CONSUMPTION – THE AUSTRALIAN NARRATIVE

### 5.1. Background

- 5.2 The illicit trade of tobacco is already a major problem in the UK. The HMRC estimate that in 2011-2012 the illicit market accounted for 7% of the market share for cigarettes and 35% of the market share for hand rolling tobacco.<sup>48</sup>

- 5.3 As explained in detail in BAT's 2012 Response,<sup>49</sup> it is accepted by a wide range of commentators, academics, law enforcement officials and members of the business community that plain packaging of tobacco is a policy option that comes with a very real risk of increasing illicit trade.

- 5.4 It is generally accepted that one of the biggest risks with plain packaging of tobacco is that it would increase price sensitivity and consumers' focus on price.<sup>50</sup> This would provide a huge advantage to those who can supply the lowest cost product: i.e. the illicit trader.<sup>51</sup> This would result in the price of tobacco being driven down, which would undermine the whole rationale for the proposal: it would make cigarettes more affordable for everyone and, in particular for children who are particularly price sensitive, and therefore is unlikely to achieve the aim of decreasing the prevalence of smoking<sup>52</sup> (and may even lead to an increased prevalence<sup>53</sup>). Additionally, this would expose customers to more unregulated products with no controls on hygiene standards and ingredients, or compliance with other product regulation including ceilings on tar, carbon monoxide and nicotine levels.

- 5.5 Furthermore, there are very important potential economic consequences for the downward pressure on the price of tobacco products (which the Review has expressly stated it is uninterested in).

### Research post-Consultation

- 5.6 Since the Consultation, a number of further studies have been published supporting the above:

*"Plain packaging is likely to lead to strong price competition triggered by illicit market suppliers."<sup>54</sup>*

*"In our expert opinion, plain packaging for tobacco products will worsen the illicit trade in tobacco products as it would open a number of new opportunities for illicit traders..."*

*In our expert opinion, plain packaging is highly likely to aggravate the existing negative impacts of the already serious and socially damaging trade in illicit tobacco. Since illicit products are often more accessible to those underage and those from low-income groups,*

<sup>47</sup> See footnotes 15, 16 and 17 above.

<sup>48</sup> HM Revenue & Customs, "Measuring Tax gaps 2013 Edition", (11 October 2013), at 27 and 28, available at <http://www.hmrc.gov.uk/statistics/tax-gaps/mtg-2013.pdf>

<sup>49</sup> BAT's 2012 Response, at pp. 56-59.

<sup>50</sup> Transcrime, *Plain Packaging and Illicit Trade in the UK: Study on the risks of illicit trade in tobacco products as unintended consequences of the introduction of plain packaging in the UK*, 2012, page 23

<sup>51</sup> Roland Berger Strategy Consultants, *The Potential Economic Impact of Plain Packaging for Cigarettes and Fine-Cut Tobacco in Ireland*, 2013 page 9

<sup>52</sup> Roland Berger Strategy Consultants, *The Potential Economic Impact of Plain Packaging for Cigarettes and Fine-Cut Tobacco in Ireland*, 2013

<sup>53</sup> Transcrime, *Plain Packaging and Illicit Trade in the UK: Study on the risks of illicit trade in tobacco products as unintended consequences of the introduction of plain packaging in the UK*, 2012, page 23

<sup>54</sup> Roland Berger, *The Potential Economic Impact of Plain Packaging for Cigarettes and Fine-Cut Tobacco in Ireland*, page 9

*plain pack laws risk undermining a key objective of plain packaging: to reduce smoking by these groups....*

*Policy makers should be aware that plain packaging will, in our expert opinion, make the illicit trade in tobacco worse and these policy makers should therefore be exceptionally careful to ensure that such regulations do not inadvertently undermine anti-illicit trade programs and initiatives.<sup>55</sup>*

- 5.7 Prior to the UK Government's abrupt and unexplained about-turn, BAT and the UK Government both believed that the impact of plain packaging of tobacco in Australia should be understood before other states considered similar regulation. Whereas the UK Government appears to have changed its view, demonstrated by the launch of the Review, BAT has been funding research into the impact of plain packaging in Australia. BAT, together with Imperial Tobacco Australia Limited and Philip Morris Limited, have commissioned KPMG to independently report on the consumption of illicit trade in tobacco in Australia bi-annually. KPMG's utilised several different sampling techniques<sup>56</sup> in its first bi-annual report was published in October 2013, and concluded that:

5.7.1 the level of illicit consumption grew from 11.8% to 13.3% (expressed as a percentage of total consumption);<sup>57</sup>

5.7.2 this growth in the illicit market has been mainly fuelled by a major shift to illicit manufactured cigarettes, which saw sales quadruple;<sup>58</sup> and

5.7.3 "[c]onsumption between 2012 and LTM H1 2013 was flat compared to a longer term annual decline" in each year since 2009.<sup>59</sup>

- 5.8 These reports suggest an alarming trend: an increasing illicit market and a deceleration of the longstanding decline in tobacco consumption. This is further supported by the recently released London Economics' report (commissioned by Philip Morris) which similarly established that there had been no change in smoking prevalence following the introduction of plain packaging in Australia, at least in regard to the number of people reporting smoking cigarettes.<sup>60</sup>

- 5.9 It is interesting to note that, notwithstanding any alleged and anecdotal suggestion of an initial increase in consumer complaints about the taste of tobacco products after the introduction of plain packaging, there has been no recorded corresponding decrease in tobacco consumption.

#### Conclusion

- 5.10 The risk of increased illicit trade undermining the health objectives associated with plain packaging of tobacco has long been widely recognised. Prior to any jurisdiction actually standardising the packaging of tobacco, the actual effect could not be researched (furthermore, it remains BAT's view that there is a lack of credible and reliable academic research in the area). The initial KPMG study in Australia that postdates the implementation of plain packaging of tobacco concludes that illicit trade is on the rise.
- 5.11 BAT submits that the above-referred KPMG study makes it very difficult – if not impossible – for the Review to conclude that new evidence (since the Consultation) supports the

<sup>55</sup> Zimmerman and Chaudhry, *The Impact of Plain Packaging on the Illicit Trade in Tobacco Products*, 2012

<sup>56</sup> Including: surveying smokers, examining empty packs, analysing sales of rolling papers and examining customs seizures data.

<sup>57</sup> KPMG (Instructed by BAT, Imperial Tobacco Australia Limited and Philip Morris Limited), *Illicit tobacco in Australia 2013 Half Year Report*, October 2013 page 6

<sup>58</sup> KPMG (Instructed by BAT, Imperial Tobacco Australia Limited and Philip Morris Limited), *Illicit tobacco in Australia 2013 Half Year Report*, October 2013 page 38

<sup>59</sup> KPMG (Instructed by BAT, Imperial Tobacco Australia Limited and Philip Morris Limited), *Illicit tobacco in Australia 2013 Half Year Report*, October 2013 page 6

<sup>60</sup> London Economics, *An analysis of smoking prevalence in Australia Final*, November 2013, page 4

theory that plain packaging of tobacco is likely to lead to a decrease in the consumption of tobacco, in particular amongst children. The KPMG study suggests that the introduction of plain packaging has coincided with an increase in the illicit market and a deceleration of the historic decline in smoking prevalence. This latter conclusion is bolstered by the recent report released by London Economics.

**6. CONCLUSION**

- 6.1 We submit that there is no credible and reliable evidence to support the proposition that the introduction of plain packaging of tobacco is likely to lead to a decrease in the consumption of tobacco, in particular among children. As outlined above, the studies that purport to reach such a conclusion do not look at any actual smoking behaviour but rather focus on intentions, attitudes and impressions. Moreover, the methodologies of the studies are fundamentally flawed. Furthermore, the initial KPMG report suggests an alarming trend following plain packaging of tobacco in Australia: an illicit market increasing in size and a deceleration of the longstanding decline in tobacco consumption.
- 6.2 It is difficult to see, on this evidence, how anyone could conclude that there is a likely public health benefit to the very expensive and illegal move of standardising packaging of tobacco in the UK.
- 6.3 Moreover, it defies common sense for the UK Government to move forward with this review where the legality of the measure under the World Trade Organisation agreements is currently pending and the UK Government is essentially involved in that litigation as a third party.



Appendix 3 of BAT's Response to the Consultation: The Anson Report

# **Preliminary Analysis of the UK Department of Health 2012 and 2014 Impact Assessments of Standardized Packaging for Tobacco Products**

## **Expert Report of CONSOR<sup>®</sup> Intellectual Asset Management**

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Submitted to

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Submitted by

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August 4, 2014

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## I. INTRODUCTION

### A. The Assignment

Herbert Smith Freehills LLP ("Counsel") has retained CONSOR<sup>®</sup> Intellectual Asset Management ("CONSOR") on behalf of British American Tobacco UK Limited ("BAT") to analyze the impact assessments of standardized packaging for tobacco products published by the UK Department of Health on March 3, 2012 (the "2012 Impact Assessment") and June 17, 2014 (the "2014 Impact Assessment") (collectively the "Impact Assessments"). This preliminary analysis addresses the calculation of loss of brand equity value, which includes the value of trademarks, trade dress, packaging designs, copyright designs, goodwill and the value of other intellectual property elements (collectively the "Brand IP") based on the data and reporting contained in the Impact Assessments. Specifically, I have been asked to provide opinions regarding the following:

1. Is there adequacy and accuracy in the UK government's calculations in attempting to establish the full amount of Brand IP value that will be lost if the plain packaging initiative is introduced?
2. What are the appropriate valuation techniques that should be used to establish the full amount of lost Brand IP?
3. Is the UK government's approach flawed and how does one apply the proper methodologies that capture the full value of lost Brand IP?

The analysis detailed in this report is presented as of August 4, 2014 (the "Report Date"). This report contains two appendices consisting of my qualifications, including a list of publications over the last ten years, and a list of the documents reviewed in this matter.

### B. Summary of Opinions

After reviewing the documentation provided, and performing research and analysis (as described below) that have been informed by decades of experience in intellectual property valuation, management, and calculation of intellectual property damages, my expert opinions are as follows. The bases for these opinions are explained in the subsequent sections of this report.

- No decision maker looking at loss of Brand IP value can make rational informed decisions based on the Impact Assessments published by the UK Department of Health.
- The analysis presented by the UK Department of Health in the Impact Assessments is inconsistent with the application of accepted valuation methodologies. Further, the lost profit analysis produced by the UK Department of Health does not provide an indication of loss in Brand IP value.
- There are four accepted valuation methodologies to quantify the loss in Brand IP value. These include the cost approach, the income approach, the market approach, and the relief from royalty approach.

- In the context of this assignment, the most accurate methods to quantify loss in Brand IP value are the cost approach and the relief from royalty approach.
- The actual loss in Brand IP value to UK tobacco companies will be measured in the billions of Pounds Sterling.

I reserve the right to revisit this analysis and amend these conclusions should additional information and/or documents become available for review. I further reserve the right to respond to opinions and issues raised by other experts.

### **C. CONSOR Qualifications**

CONSOR specializes in providing intellectual property valuations, royalty rate opinions, and intellectual property licensing. For the past 25 years, we have had a focused approach to this area, basing our opinions on well-documented research and on our proprietary personal knowledge of intellectual property transactions. In addition, we are active in all major intellectual property and licensing organizations around the world.

CONSOR personnel have served on the Board of the International Licensing Industry Merchandisers' Association (LIMA) for a decade. With its main office in New York City, LIMA is a non-profit organization of licensors, manufacturers, and support organizations working to advance professionalism in licensing. Its main objectives are to institute and maintain a standard of ethical business practices in the licensed merchandise industry and to establish and promote the industry with the government, the business community, other associations, the public, and the trade and consumer media.

CONSOR personnel have served for 15 years on the International Board of Delegates of the Licensing Executives Society (LES). LES functions as a non-profit professional and educational society encouraging high standards and ethics among persons engaged in the domestic and international licensing of intellectual property rights. In addition, Weston Anson has served as Chairman of the following committees: the Valuation Committee, the Trademark Licensing Committee, the Internet Committee, and the Asset Sales Committee.

CONSOR personnel belong to the International Trademark Association (INTA), and our Chairman is the head of one of its committees. INTA is dedicated to the support and advancement of trademark and related intellectual property concepts. The organization serves the common purposes of its worldwide members through advocacy, communication, and education to members.

Some of our clients over the years include:

AIG	Goldman Sachs	Oracle
Amazon	Guess?, Inc.	PepsiCo.
America's Cup	Hallmark Cards, Inc.	Pillsbury
American Heart Association	Harry Winston	Procter & Gamble
Anheuser-Busch	Hilton Hotels	Rawlings Sporting Goods
Audrey Hepburn Estate	IBM	Rolex
Blackstone Group	L.L. Bean, Inc.	Sara Lee
Bristol-Myers	L'Oreal	Sesame Street
Burger King	Levi Strauss & Company	Sephora
CA Communities	Louisville Slugger	SONY Corporation
CSAC	Lucasfilm, Ltd.	Staples, Inc.
Chevron	M&M/Mars	Syngenta
DuPont	Macy's	FIFA World Cup
Eddie Bauer	Major League Baseball Properties	The Olympics
Estate of Dr. Seuss	Mattel, Inc.	Toys R US
Ford Motor Company	McDonald's Corporation	US Communities
Fossil, Inc.	MGM	Wal-Mart
Frito Lay	National Association of Counties	Welch's
General Electric	Nestlé	Western Union
General Mills	NFL Retired Players	Woody Allen
General Motors Corporation	Ocean Spray	Xerox Corporation

CONSOR personnel have also served on the Board of Directors of the French Licensing Association, MICEL, as well as being active in the American Intellectual Property Law Association (AIPLA), the American Society of Appraisers (ASA), and The Institute of Property Taxation (IPT). Our Chairman is a certified official arbitrator/mediator for the World Intellectual Property Organization (WIPO). We are also active in the American Bankruptcy Institute. Our Chairman has also served as the Chair and Co-Chair of the Global IP Standards Committee for WIPO and LESI.

Our professionals have published well over 100 articles worldwide and are active in all of the major international trademark and licensing associations as speakers and/or officers. Our Chairman has also published a series of six books on the topic of intellectual property valuation and management for the American Bar Association. We travel extensively, counseling major multi-national corporations and small companies in the U.S. and overseas.

#### **D. Qualifications of the Named Expert**

I, Weston Anson, am Chairman of CONSOR<sup>®</sup>, an intellectual asset consulting firm specializing in trademark, patent and copyright licensing, valuation, and litigation support. After receiving my MBA (honors) from Harvard University, I served with the management consulting firm of Booz-Allen & Hamilton. Subsequently, I was Vice President at Playboy Enterprises, Inc., where I launched many of their licensing programs; and then Senior Vice President of Hang Ten International, which grew to nearly 100 licensees in 30 countries under my direction.

Over the last 25 years, I have led the way in developing and establishing accepted methods for establishing and maximizing the value of IP for companies. I am an expert in establishing new licensing strategies for IP, as well as developing and managing licensing programs. I am an active member of the international intellectual property community, as a Board Member of LESI, LIMA, Committee Chair at INTA, and the ABA. I am a lecturer and author of over 150 IP and licensing articles. I am the author of six books on various aspects of intellectual property. I recently served as Chair and Co-Chair of the International Valuation Standards Committee for the 2012 Global Technology Investment Forum. I also serve on the Financial Standards Panel for the Singapore government.

## **II. IS THERE ADEQUACY AND ACCURACY IN THE UK GOVERNMENT'S CALCULATIONS IN ATTEMPTING TO ESTABLISH THE FULL AMOUNT OF BRAND IP THAT WILL BE LOST IF THE PLAIN PACKAGING INITIATIVE IS INTRODUCED?**

### **A. Lost Profit Analysis**

The UK government's premise for determining the £44 million lost profits to manufacturers is based on a faulty price premium analysis of the incremental price difference, between premium and value packs of cigarettes, of £0.65 per pack. This implied price premium does not appear to be supported in the 2014 Impact Assessment. Further, the lost profits assumption regarding a decline in sales is not supported by reliable research. In any event, this calculation and conclusion has no relation to the loss in value of Brand IP to tobacco manufacturers.

The 2012 Impact Assessment assumes that any estimate of lost Brand IP to tobacco manufacturers should be adjusted to isolate only the loss of profits to UK shareholders. The 2012 Impact Assessment says one possible estimate of the amount of lost Brand IP attributable to UK shareholders could be based on the weighted average UK share of world GDP, as indicated by IMF Data, which results in an estimate of 10% of profits attributable to UK shareholdings. This assumption is predicated on the notion that all of

the manufacturer's profits are distributed equally to each shareholder. In fact, not all profits are distributed to the shareholders. As a UK based company, BAT will inevitably reinvest some portion of the profits back into the company and the UK. This 10% assumption is a significant driver of their value calculation. Further evaluation of the actual percentage of UK shareholders is imperative.

Properly applied, the price premium method for calculating lost profits and the associated loss in Brand IP value is one approach for determining lost value. However, there are several other approaches which will likely provide a more accurate analysis of the actual loss in Brand IP value, which the UK government's price premium approach did not take into account. We will address these approaches in the subsequent section of this report.

As a foundation for their price premium calculation presented in the 2012 Impact Assessment at Paragraph 81, the UK government references an article written by Mr. David A. Aaker. While no other peer reviewed sources are cited, we note the following assessment made by Aaker:<sup>1</sup>

*"One problem with price premium is that it is defined only with respect to a competitor or set of competitors. Thus, in a market with many competitors, several sets of price-premium measures will be needed."*

Even though the UK government directly cites Mr. Aaker as support for their chosen methodology for determining the loss in Brand IP value; they do not, as Mr. Aaker states in his article, properly use multiple sets of price-premium measures, as is necessary.

The price premium approach taken by the UK government was improperly applied, for reasons that will be addressed in Section IV. However, it bears noting that the price premium approach is not an accurate assessment of lost Brand IP value in this case, and therefore, is not a part of our analysis.

## **B. Lost Brand IP Analysis**

In the 2014 Impact Assessment, Paragraph 91 appears to be the only mention of the loss in Brand IP value specific to the proposed plain packaging initiative. This estimated loss in Brand IP value of £39 million, cited in Paragraph 91 of the 2014 Impact Assessment, is based solely on "the reduction in premium brand value from those quitting smoking entirely."

- The analysis in the Impact Assessments does not take into account the loss in Brand IP value, as a result of the plain packaging initiative's effect on price, the UK government's alleged (but not measured) future volume reductions, or brand migrations.
- Nor does the government's approach adequately measure the value of the brand assets lost in this plain packaging initiative, including: trademarks, trade dress,

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<sup>1</sup> Doc 3

copyrights, and other packaging and design elements that are components of Brand IP; all of which have had scores of millions of pounds invested in them over the last several decades.

### **III. WHAT ARE THE APPROPRIATE VALUATION TECHNIQUES THAT SHOULD BE USED TO ESTABLISH THE FULL AMOUNT OF LOST BRAND IP?**

The appropriate context is the loss of Brand IP value to the tobacco manufacturers, not some theoretical loss to UK shareholders. Further, the Impact Assessment context is an artificial scenario in that a single governmental entity is proposing to dictate removal of all Brand IP elements including:

- Forms of trademark identification;
  - Logo;
  - Design;
  - Stylized Mark;
  - Etc.
- Trade dress;
- Packaging design;
- Copyright design; and
- Other intellectual property elements.

When taken together, these represent in total the Brand IP—the primary differentiator for individual tobacco products. However, the UK government does not make any effort to value these assets.

Regardless of the objectives of the plain packaging directive that is being considered, the analysis of a loss in Brand IP value must be done using accepted and proven valuation methodologies. One cannot simply choose to create, as the government has done in its Impact Assessments, a new, unknown, and illogical method of establishing loss in Brand IP value.

The purpose of this section is to identify and briefly describe those methodologies that are accepted on a global basis by organizations ranging from WIPO to INTA, as proven approaches to valuation, and determining the lost value of Brand IP.

When valuing intellectual properties, it is essential to consider each of the different valuation methodologies, in light of the information available and the specific circumstances, in order to determine the best method for ascertaining value. The methodologies commonly used to determine the value of intellectual properties are: the Cost Approach, the Income Approach, the Market Approach, and a hybrid methodology known as the Relief from Royalty Approach.

#### **Cost Approach**

The cost method assesses the value of assets by measuring the expenditures necessary to replace the assets in question. In this instance, the cost/replacement approach measures the actual expenditures, which were necessary for building value in

the Brand IP that is being lost. This Brand IP value is based on consumer awareness, market share and other factors.

Costs that can be quantified include:

- Legal fees;
- Application/registration and other fees;
- Development costs;
- Production costs;
- Historic marketing and advertising costs; and
- Historic promotion costs.

This method does not give an indication of the economic benefit derived from ownership and utilization of the assets, which the income and relief from royalty approaches do address; rather, it provides a conservative minimum value for the assets.

#### Income Approach

The income approach is based on determining the future income streams expected from the asset under valuation. The income approach is one of the most widely used approaches, because the information necessary to determine value using this approach is usually relatively accurate and often readily available. The parameters used include:

- Future income stream;
- Duration of the income stream; and
- Discount rate.

With the income approach, an asset is worth the present value of the future economic benefits (income) that will accrue to its owner. Properly used, price premium is a form of the income approach. It requires a projection of future income, an estimate of the likely duration of the income stream, and an estimate of the risk associated with generating the projected income stream.

#### Market Approach

In the market approach, intangible assets are valued by comparing recent sales or other transactions involving similar assets in similar markets. This approach is appropriate if an active market exists that has several examples of recent arm's length transactions and adequate information on their terms and conditions. However, most intangible assets are not traded frequently enough to be able to establish a value based on market-based comparables. Moreover, it is very difficult to get enough detail on the similar transactions to be certain that all the elements of value that make a good comparable have been considered.

The market approach utilizes actual transaction values derived from the sale or license of similar assets. It has increasingly become the preferred approach in the valuation of intangible assets, if the necessary data can be found. In contrast to the other methodologies, the strength of the market approach is its reliance on market sales,

rents, and royalties. In practice, when the data is available, the market approach is practical, logical, and applicable to all types of intangible assets. As with the income and relief from royalty approaches, the value conclusion can be reviewed at any time to see if any adjustments are necessary. When reliable transaction data is available, the market approach is considered the most direct and systematic approach to value.

### **Relief from Royalty Approach**

The relief from royalty (RFR) approach is unique in that it is a combination of the income approach and market approach. With this approach, the value of the intangible assets is calculated as the present value of the royalties that the company is relieved from paying as a result of ownership of the assets. In briefest terms, the relief from royalty valuation approach is based on the calculation of the present value of a stream of royalties that the IP would have received. The clear value of the relief from royalty method is that it is often based on objective, market-based comparable royalty rate data, and is often used both in transactional work as well as in IP litigation. The RFR approach provides a measure of value by determining the specific royalty rates that the IP would be earning for its remaining useful life, and then combining that with an appropriate discount rate to calculate the present value of the royalty streams that the brand owner is relieved from having to pay.

When used appropriately, the RFR approach can be very accurate because it does segregate the specific portion of value or income to be received by a piece of IP or other intangible asset. The use of marketplace royalty rates in this part of the analysis lends credibility and consistency to value conclusions.

In this case, the RFR approach is appropriate for determining the lost value of Brand IP to tobacco manufacturers as comparable royalty rate transaction data is available. The reduction in royalty rates that any of the manufacturers will be relieved of paying can accurately be determined, as a result of their diminished ability to use certain trademarks, trade dress, copyrights, and other packaging and historic promotion related assets.

Usually, data from marketplace comparable license agreements are compiled and used as the source for establishing the royalty rate in calculating value for the IP. It must be noted, however, that there is no such thing as an exact market comparable royalty rate for intellectual property. By definition, each piece of IP and each intangible asset is different and unique in and of itself. The royalty rates being used will always vary (even though sometimes very subtly) from one piece of IP to another. However, inclusion of this marketplace comparable information always adds credibility to the analysis. As with other income-based approaches to valuation, the relief from royalty results can be revisited periodically as royalty rates rise and fall.

### **Conclusion – Appropriate Valuation Methodologies**

From the four methodologies listed above, and based on our preliminary view of the limited materials made available to date, two are most appropriate in this context. First is the cost approach, measured as the cost to replace the brand assets listed in the



opening of this section, which will be taken under the plain packaging initiative. These include all of the costs associated with building the brand in the form of historic marketing, advertising, promotional, and related historic expenditures that the tobacco companies have spent on their brands over the past twenty years. The cost approach will be based on the costs that each tobacco company has individually invested in the following areas to build Brand IP:

- Historic marketing;
- Historic Advertising;
- Historic promotion;
- Historic public relations;
- Historic package and development;
- Trademark maintenance and registration; and
- Other historic marketing and brand building expenses.

The cost approach will typically provide the base or minimum value for the IP. This is especially true as typically not all historical costs can be identified, nor the value of all brand building efforts captured.

The second approach is the relief from royalty which almost universally is thought to be the single best approach because it combines both comparable transactions in the form of royalty rates selected from other license agreements; as well as the income approach in that it establishes income levels generated through use of the assets. It is our view – and that of other professionals in the field – that when valuing intangibles such as Brand IP it is advantageous to apply two methodologies whenever feasible, in order to ensure that the valuation process is as accurate as possible. Thus we've reviewed our four primary methodologies above and concluded that the two primary approaches in this situation that best serve both accuracy and appropriateness of calculation are the cost approach and the relief from royalty approach.

While these two methods are the most appropriate in the context of this situation, this will not be the case in every scenario. When an active marketplace exists for the purchase and sale of comparable intellectual properties the market approach provides an accurate indication of value. Similarly, when relevant and verifiable data is available the income approach proves a strong indication of value.

#### **IV. IS THE UK GOVERNMENT'S APPROACH FLAWED AND HOW DOES ONE APPLY THE PROPER METHODOLOGIES THAT CAPTURE THE FULL VALUE OF LOST BRAND IP?**

The price premium method as used by the UK government in the Impact Assessments is not a proper price premium approach as understood and accepted by the International valuation community. The price premium method used in the 2014 Impact Assessment is not properly applied for the following reasons:

1. The reduction in Brand IP value based on lost profits is fundamentally flawed in that it is based entirely, and only, on assumptions as to how many people will purportedly quit smoking;

2. No allowance or assessment for valuing actual Brand IP has been made;
3. There is no basis for assuming the price premium of £0.65 is accurate or appropriate;
4. There is no reason to assume any price premium is split evenly between any manufacturer and retailer;
5. The assumption that 10% of the tobacco companies' profits are received by UK shareholders is unproven;
6. The assumption that there are no extra profits for a premium/mid-priced pack is not only unfounded, but faulty in the extreme;
7. Those assumptions as to how many people will quit smoking are based on unproven data and assumptions;
8. No attempt was made in the 2012 Impact Assessment or 2014 Impact Assessment to quantify actual revenues, pricing structures, or price premiums;
9. In using a price premium approach one must also consider actual pricing, and profits, based on brand positioning; and
10. The 2014 Impact Assessment assumes that all brands will be equally effected, with no allowance for current market position, or future impact of plain packaging on premium brands vs value brands.

As briefly summarized above, there are multiple fundamental errors in the government approach to this exercise. However, two primary glaring factual misjudgments have been made:

- First, the so-called reduction in Brand IP value has been based solely on a calculation that involves some theoretical number of people who will quit smoking. That calculation does not take into account what the loss in Brand IP value will be as a result of the effect on all of the other tobacco users in the United Kingdom.
- Secondly, no attempt was made by the UK government in the 2012 Impact Assessment or 2014 Impact Assessment to value the Brand IP held by tobacco companies.

## V. PRELIMINARY MARKETPLACE ANALYSIS

Based on a preliminary analysis of the marketplace, the projected loss in Brand IP to UK tobacco manufactures of £39 million, cited in Paragraph 91 of the 2014 Impact Assessment, is vastly understated. As previously noted, Brand IP is the primary differentiator for individual tobacco products. It is also the most valuable asset for tobacco companies. This can be illustrated through a review of four recent marketplace transactions.

To establish a range of values attributable to Brand IP in the tobacco industry, we reviewed mergers and acquisitions data from public financial statements. When public companies merge or acquire other companies they are required to make disclosures

Appendix 3 of BAT's Response to the Consultation: The Anson Report regarding the nature of the transaction. However, the level of detail contained in these disclosures varies on company-by-company and transaction-by-transaction bases. Generally, the level of detail correlates to the size of the transaction, as it would be impractical to disclose extensive information for many small transactions.

For certain large transactions, detailed purchase price allocations are included, attributing values to specific line items and asset classes. By specifically disclosing the portion of the purchase price attributed to the acquired Brand IP, we are given an estimate of the Brand IP's contribution to the overall value of the company.

The first transaction identified was announced on July 15, 2014 by Reynolds American Inc. Reynolds American Inc. has a definitive agreement to acquire Lorillard for \$27.4 billion.<sup>2</sup> Although a detailed purchase price allocation is not yet publicly available, we can draw conclusions regarding the value of the goodwill and intangible assets acquired by analyzing Lorillard's latest quarterly financials.

Figure 1.<sup>3</sup>

Reynolds American Inc. July 15, 2014 Acquisition of Lorillard		
(\$mm)	Estimated Value	Percent
<b>Total Purchase Price<sup>1</sup></b>	<b>\$27,400</b>	<b>100%</b>
<b>Lorillard Assets<sup>2</sup></b>		
Cash and Cash Equivalents	\$1,535	5.6%
Short-Term Investments	\$297	1.1%
Receivables	\$59	0.2%
Inventories		
Leaf Tobacco	\$367	1.3%
Manufactured Stock	\$180	0.7%
Material and Supplies	\$5	0.0%
<b>Total Inventories</b>	<b>\$552</b>	<b>2.0%</b>
Plant and Equipment Net	\$311	1.1%
Long-Term Investments	\$191	0.7%
Deferred Income Taxes	\$602	2.2%
Other Assets	\$365	1.3%
<b>Total Assets</b>	<b>\$9,912</b>	<b>14.3%</b>
<b>Implied Value of Goodwill and Intangible Assets</b>	<b>\$23,488</b>	<b>85.7%</b>

Notes

<sup>1</sup> Source: Doc 7

<sup>2</sup> Amounts reflect balance sheet figures as of March 31, 2014 (Source: Doc 6)

Collectively, the assets listed on Lorillard's balance sheet as of March 31, 2014 only accounted for 14.3% of the acquisition value. This indicates the value of goodwill and intangible assets is approximately \$23.5 billion. While complete transaction details have not yet been made publicly available, their balance sheet indicates that the majority of

<sup>2</sup> Doc 7

<sup>3</sup> Docs 7 and 8

the purchase price will reflect goodwill and acquired intangible assets, of which the trademarks and associated brand IP assets will account for the majority.

The second transaction identified was the February 2008 acquisition of Tekel, the Turkish state-owned tobacco company, by British American Tobacco for a purchase price of \$1.72 billion (£873 million). Figure 2 presents the Tekel purchase price allocation performed by British American Tobacco following completion of the transaction.

Figure 2.<sup>4</sup>

British American Tobacco February 22, 2008 Acquisition of Tekel		
(Millions)	Estimated Fair Value	Percentage
<b>Assets Acquired</b>		
Net Tangible Assets	£180	21%
Intangible Assets	£127	15%
Goodwill	£566	65%
<b>Total Net Assets</b>	<b>£873</b>	<b>100%</b>

*Notes*

<sup>1</sup> Source: Doc 5

While the value of intangible assets acquired was provided as a lump sum in the 2008 British American Tobacco Annual Report, the notes to the financial statements disclosed that the majority of the intangible asset value was attributable to acquired trademarks. "The acquisition only relates to the cigarette business assets of Tekel, which principally comprise trademarks, factories and tobacco leaf stocks."<sup>5</sup> The value of goodwill included in a transaction also serves as an indication of the value of Brand IP. "A trademark does not exist in a vacuum. A trademark is attached to a business – it symbolizes the goodwill of the business."<sup>6</sup> Collectively the value of intangible assets acquired and goodwill comprise 89% of the purchase price. Again this confirms the notion that Brand IP is the primary differentiator, and generator of value, for individual tobacco products.

The third transaction we identified was the October 2013 acquisition of SKYCIG®, a UK based electronic cigarette business by Lorillard for \$95 million (£58 million), including earn-out consideration. Figure 3 presents the SKYCIG® purchase price allocation performed by Lorillard following completion of that transaction.

<sup>4</sup> Doc 5

<sup>5</sup> Doc 5

<sup>6</sup> Doc 6

Appendix 3 of BAT's Response to the Consultation: The Anson Report  
Figure 3.

Lorillard October 1, 2013 Acquisition of SKYCIG		
Category	Estimated Value	Percentage
<b>Assets Acquired</b>		
Net Tangible Assets	-\$28	-61%
<b>Intangible Assets</b>		
Trademarks	\$34	74%
Non-Compete Agreement and Customer List	\$2	4%
<b>Total Intangible Assets</b>	<b>\$36</b>	<b>78%</b>
Goodwill*	\$38	83%
<b>Total Net Assets</b>	<b>\$46</b>	<b>100%</b>

Notes

\* Source: Doc 4

In this purchase price allocation, Lorillard specifically discloses that 74% of the purchase price was paid to acquire the trademarks of SKYCIG. This reinforces the notion that Brand IP is the primary differentiator, and generator of value, for individual tobacco products. When considered collectively, the trademarks and goodwill acquired (which reflect the value of the Brand IP) account for 157% of the total purchase price. This value was then partially offset in the total purchase price, due to Lorillard taking on liabilities of SKYCIG, leading to negative net tangible assets being acquired.

The last transaction we identified was the July 15, 2014 Imperial Tobacco Group PLC agreement to acquire a portfolio of US cigarette brands from Reynolds American Inc. for \$7.1 billion. "The [c]ompany expects the value of the gross assets that are subject to the [t]ransaction to be approximately \$0.8 [billion]."<sup>8</sup> This implies that \$6.3 billion or 88.7% of the purchase price is attributable to goodwill and intangible assets.

As illustrated, the majority of value to tobacco manufacturers is derived from use of their Brand IP. If the plain packaging initiative is implemented it will effectively prevent tobacco manufacturers from capitalizing on their Brand IP. Given the size of the industry, the potential loss in value to tobacco manufacturers will vastly exceed the estimate presented by the UK government. Contrary to the assertion presented by the UK Department of Health in the 2014 Impact Assessment, that the projected loss in Brand IP to UK tobacco manufactures will be £39 million, the actual loss in Brand IP to UK tobacco manufactures will be measured in billions of Pounds Sterling.

## VI. CONCLUSION

After reviewing the documentation provided and performing research and analysis that have been informed by decades of experience in intellectual property valuation,

<sup>7</sup> Doc 4

<sup>8</sup> Doc 9

Appendix 3 of BAT's Response to the Consultation: The Anson Report  
management, and calculation of intellectual property damages, my expert opinions are as follows. The bases for these opinions are explained in the body of this report.

- No decision maker looking at loss of Brand IP value can make rational informed decisions based on the Impact Assessments published by the UK Department of Health.
- The analysis presented by the UK Department of Health in the Impact Assessments is inconsistent with the application of accepted valuation methodologies. Further, the lost profit analysis produced by the UK Department of Health does not provide an indication of loss in Brand IP value.
- There are four accepted valuation methodologies to quantify the loss in Brand IP value. These include the cost approach, the income approach, the market approach, and the relief from royalty approach.
- In the context of this assignment, the most accurate indications of loss in Brand IP value are the cost approach and the relief from royalty approach, neither of which is employed by the UK Department of Health.
- The actual loss in Brand IP value to UK tobacco companies will be measured in the billions of Pounds Sterling.

I reserve the right to revisit this analysis and amend these conclusions should additional information and/or documents become available for review. I further reserve the right to respond to opinions and issues raised by other experts.

Sincerely,



**Weston Anson**  
Chairman  
CONSOR<sup>®</sup> Intellectual Asset Management

Appendix 3 of BAT's Response to the Consultation: The Anson Report  
**APPENDIX A:  
QUALIFICATIONS**

**WESTON ANSON  
Chairman, CONSOR<sup>®</sup>**

Weston Anson is Chairman of CONSOR<sup>®</sup>, an intellectual asset consulting firm specializing in trademark, patent and copyright licensing, valuations, and expert testimony. The firm is headquartered in La Jolla, California, and has offices in New York and London. He served for ten years as an officer and board member of the Licensing Industry Merchandisers' Association and is a lifetime member of the Board of Advisors. He currently serves as an active member of the International Licensing Executives Society Board of Delegates.

A seasoned consumer goods marketer, Mr. Anson, after receiving his MBA with honors from Harvard University, served a stint with the management consulting firm of Booz-Allen & Hamilton. Subsequently, he was the youngest Vice President and corporate officer at Playboy Enterprises, Inc., where he launched many of their licensing programs. Mr. Anson was also Senior Vice President of Hang Ten International, which grew to nearly 100 licensees in 30 countries under his direction. For the last 25 years, Mr. Anson has also led the way in developing and establishing accepted methods to value brands, technologies and other IP. He is an expert in building and licensing brands, as well as developing and managing licensing programs for all IP.

Not only a branding and licensing expert, Mr. Anson is also an acknowledged pioneer in developing the methodologies that enable accurate valuation of IP on a worldwide basis. His multiple books on the subject have been published in the US as well as in Europe and China. He is currently chairman of the Global Valuation Standards Committee for the LESI, which is establishing IP valuation standards in cross border IP transactions. These standards were adopted in 2011 at the Global Technology Forum, which included world IP bodies such as World Intellectual Property Organization, World Trade Organization and the Association of University Technology Managers.

Since founding CONSOR (and its predecessor company Trademark & Licensing Associates), Mr. Anson has developed numerous licensing strategies for major corporations and has performed valuations of hundreds of intellectual property components including: AAA, Barney's, America's Cup, Budget Rent A Car, Caterpillar, Inc., Estate of Dr. Seuss, Donna Karan, Amazon.com, DuPont, Ford Motor Company, General Motors Corporation, Hard Rock Café, Harrods, Hilton, IBM, L.L. Bean, Inc., Levi Strauss & Co., L'Oréal, Louisville Slugger, Lucasfilm, Ltd., The Estate of Marlon Brando, Marvel, Mattel, McDonald's Corporation, MGM/UA, NCR, The Olympics, PepsiCo, Polaroid, Polo/Ralph Lauren, Procter & Gamble, QVC, Sara Lee, Sesame Street, Sony Corporation, the Vatican Library and Xerox Corporation.

As an important part of his career today, Mr. Anson is a world-renowned IP expert with testifying experience in the United Kingdom, Europe, and in state, federal, tax, bankruptcy and probate courts in the US, as well as in arbitration and mediation. In trial testimony, multiple depositions, and numerous rule 26 reports, his expertise has been established and reaffirmed. Litigation clients include roughly half of the largest 100 US law firms. Notable cases range from the largest trademark jury award in history to Adidas of \$304.6 million, to the successful litigation of Woody Allen vs. American Apparel, which resulted in a \$5 million settlement in a right of privacy and publicity case. Furthermore, in a computer/telecom patent case, with Upald Systems, a \$70 million settlement was reached. In addition, Mr. Anson has been involved in other famous cases, such as the landmark Jesse Ventura case in which the eighth circuit court of appeals noted "Anson's qualifications are quite impressive, and certainly more so than those of some experts whose testimony this court has permitted."

**Honors, Speeches, Publications**

**Offices, Memberships**

**Current:**

American Bar Association (ABA), Associate Member, 2001 – Present  
ABA Litigation Section, Member, 2010 - Present  
ABA IPL Trademark Litigation Committee, Member, 2010 - Present  
ABA IPL Broadcasting, Sound Recordings & Performing Art Committee, 2011-present  
ABA Music and Copyright Committee 2012 – Present  
American Bankruptcy Institute (ABI), Asset Sales Committee, Chair, 2005 – 2008; Member, 2002 - Present  
International Trademark Association (INTA), Online Use Auctions Working Group Subcommittee, member, 2011 – Present  
INTA, Law Firm Committee, member, 2009 – Present  
INTA, Right of Publicity Subcommittee 2012 – Present  
INTA, Internet Committee, member, 2012 - Present  
Licensing Executives Society International (LESI), Valuation Standards Committee, Co-Chair, 2009 – Present  
Licensing Executives Society (LES), Member, 1992 – Present  
Licensing Economics Review, Editorial Board, 1999 - Present  
Licensing Business Review, Editorial Board, 2002 – Present  
Licensing Industry Merchandisers' Association (LIMA) Board of Advisors, Lifetime Member, 1996 – Present  
The Licensing Journal, Advisory Board, 1996 - Present  
National Association of Certified Valuation Analysts, Certified Instructor – Present  
Total Brand Licensing magazine, Editorial Advisory Board, 2013 - Present  
Turnaround Management Association (TMA), Member, 2001 - Present

**Past:**

ABA Trademark Licensing Committee, Co-Chair, 2005 - 2006  
American Intellectual Property Lawyers Association, Associate Member, 1995 - 2008  
American Society of Appraisers, Associate Member, 1993 - 2009  
American Tax Institute, Member, 1984 – 1997  
Global Impact Technology Forum, Co-Chair, Global Valuation Standards Committee, 2011 - 2012  
Helix BioMedix, Inc., Board of Directors, 2006 - 2008  
International IP Arbitration and Mediation (NAM), Member, 2003 - 2009  
INTA Strategic Planning Committee, Member, 1998 - 2002  
LES Internet/E-Commerce Committee, Co-Chair, 2002 - 2003  
LES Internet Licensing E-Commerce Committee, Chairman, 2000 - 2001  
LES Trademark Licensing Committee, Chairman, 1992-1994, 2001 - 2002  
LES Valuation and Taxation Committee, Co-Chairman, 1995 - 1996  
LES Valuation Committee, Chairman, 2002 – 2003  
LESI Board of Delegates Member, 1996 - 2011  
LESI Trademark and Character Licensing Committee, Co-Chair, 2003 -2004  
LIMA Board of Directors, 1990 - 1996  
LIMA Vice President, 1987 - 1990  
MICEL (French Licensing Organization), Director, 1985 - 1987  
National Auctioneers Association, Board of Directors, 2008 - 2009  
WIPO Trained In Mediation



**Seminars, Speeches and Presentations**

- 2014 Licensing Expo, Las Vegas – Right of Publicity: How Much Is Your Client Really Worth?
- 2014 Harbottle & Lewis LLP, London – Rights of Publicity: The US and UK Position
- 2014 LES Mid-Year Meeting, New York – Valuing IP in a Technology Driven World
- 2014 Beverly Hills Bar Association, Entertainment Law Section - The State of the Current Law
- 2013 Singapore IP Week – IP Valuation: Use the Science to Apply the Art; The Local Market Affordability Method; and, Valuing a Corporation's IP Bundles
- 2013 ABA Annual Meeting, San Francisco, CA – What's In a Name? Rights of Publicity and Trademarks in Social Media, and the Tool of Valuation; and, Using Expert Witnesses in Business & IP Valuation Cases: The Expert's Viewpoint
- 2013 Licensing Expo – Right of Publicity: How Much Is Your Client Really Worth?, Las Vegas, NV
- 2013 Thomas Jefferson School of Law – IP Valuation in Litigation and Transactions
- 2013 ABA Webinar – Expert Witnesses, Valuation and Damages
- 2013 LESI Annual Conference – Simplicity In Global IP Valuation, Rio de Janeiro, Brasil
- 2013 NY State Bar Association – Dying for Fame: Exploiting the Right of Publicity in the Age of Celebrity, New York, NY
- 2013 Brand Establishment Conference, San Diego – Maximizing Brand Value
- 2013 Rocky Mountain Conference – Finding the Silver Mining In Unexpected Places: Intellectual Property and Bankruptcy, Denver, CO
- 2012 ABA – Artist's Worth: Duelling Views of Value, Webinar broadcast
- 2012 Lawline.com – Intellectual Property and Intangible Asset Valuation, New York, NY
- 2012 NY State Bar – Rights of Publicity, New York, NY
- 2012 Ladas & Parry – How Much is Your Client Really Worth? New York, NY
- 2012 INTA Table Topic – Valuation of Trademarks In Litigation and Arbitration, Washington DC
- 2012 Beverly Hills Bar Association – Right of Publicity, Beverly Hills, CA
- 2012 NYC Bar Association – TM and IP Valuation, New York, NY
- 2012 Kenyon & Kenyon – IP Valuation, New York, NY
- 2012 Arent Fox CLE – IP Valuation, Washington, DC
- 2011 Foley & Lardner, CLE - IP Valuation, San Diego, CA
- 2011 Corporate Finance Conference, Bogota, Columbia
- 2010 Turnaround Management Association Annual Meeting, Atlanta, GA
- 2010 NAA Conference and Show, Greensboro, NC
- 2010 INTA Annual Meeting, Boston, MA
- 2010 iBIG Spring Distressed & Turnaround Investment Forum, Santa Monica, CA
- 2010 Ocean Tomo IP Think Tank, San Francisco, CA
- 2009 TMA Western Regional Conference, La Costa, CA
- 2009 NAA Conference and Show, Overland, KS
- 2009 IP Business Congress, Chicago, IL
- 2009 LIMA Annual Licensing Show, Las Vegas, NV
- 2009 La Jolla Bar Association Monthly Meeting, La Jolla, CA
- 2009 ICLE Intellectual Property Spring Seminar, Lansing, MI
- 2009 Annual ABI Rocky Mountain Bankruptcy Conference, Denver, CO
- 2008 ABA IPL Conference, Arlington, VA
- 2008 Arent Fox, Washington, DC
- 2008 Finnegan Henderson, Washington, DC
- 2008 Corporate IP Conference, Chicago, IL
- 2008 National CLE Conference, Vail, CO
- 2007 ABI Winter Leadership Meeting, Rancho Mirage, CA
- 2007 INTA Forum, Beijing, China
- 2007 Law Seminars International, Seattle, WA
- 2006 SRI, Boston, MA
- 2006 Brand Finance Forum, London
- 2006 ABI, Washington, DC
- 2006 Intellectual Property Association Hochiminh City (IPA HCMC), Vietnam
- 2006 LES, San Diego Chapter, San Diego, CA
- 2006 LeBoeuf Lamb, Green & MacRae, New York, NY

2005 ABI, Indian Wells, CA  
2005 New York City Bar Association, New York, NY  
2005 SRI IP Financing & Securitization Summit, New York, NY  
2005 LES Annual Meeting, Phoenix, AZ  
2005 Legal Publishing Group Live Interactive Teleconference Program, San Diego, CA  
2005 Licensing Letter Symposium, Chicago, IL  
2005 LESI, Munich, Germany  
2005 East Bay IT Group, Oakland, CA  
2005 INTA Annual Meeting, San Diego, CA  
2005 ABI, Washington, DC  
2005 ABA, Arlington, VA  
2005 SRI, Las Vegas, NV  
2005 San Diego Telecom Council IPSIG/San Diego LES Chapter, San Diego, CA  
2005 State Bar of California – Tele-Seminar, Sacramento, CA  
2004 INTA Leadership Meeting, Phoenix, AZ  
2004 LSI, Atlanta, GA  
2004 SRI, New York, NY  
2004 ABA, Toronto  
2004 LIMA/LESI Seminar, New York  
2004 SRI, London  
2004 LESI, Paris, France  
2004 ABA, Rancho Mirage, CA  
2003 CIT Business Credit, New York, NY  
2003 INTA Leadership Conference, Boca Raton, FL  
2003 Ladas & Parry, New York, NY  
2003 LES Annual Meeting, San Diego, CA  
2003 Hong Kong Intellectual Property Ministry, Hong Kong  
2003 Arent Fox, Washington, DC  
2003 GE Capital, Norwalk, CT  
2003 TMA, St. Louis, MO  
2003 IRS Cost Sharing Conference, Glendale, CA  
2002 IPQC Workshop, Chicago, IL  
2002 LES Annual Meeting, Chicago, IL  
2002 Web Seminar for Baker & Hostetler  
2002 Advanced Business Bankruptcy Seminar of the Texas State Bar, Houston, TX  
2002 Advanced Patent Law Institute 3rd Annual Seminar, San Jose, CA  
2002 INTA, Washington, DC  
2002 Advanced Business Bankruptcy Seminar of the Texas State Bar, Austin, TX  
2002 ABI Bankruptcy Conference, New York, NY  
2002 ABI Annual Spring Meeting, Washington, DC  
2002 ABI Winter Leadership Conference, Tucson, AZ  
2002 AIRA Business Valuation Conference, Park City, UT  
2002 Boston Patent Law Association, Boston, MA  
2002 Business Finance & Turnaround Assoc, Richmond, VA  
2002 Buchaller Nemer, Los Angeles, CA  
2002 Gateway, San Diego, CA  
2002 Gray, Cary, San Diego, CA  
2002 Global Summit Symposium, Bonita Springs, FL  
2001 LES Annual Meeting, Palm Desert, CA  
2001 ASA Advanced Business Valuation Conference, Seattle, WA  
2001 Lawry's, Monrovia, CA  
2001 Hallmark, Kansas City, MO  
2001 Eli Lilly, Indianapolis, IN  
2001 BBDO, New York, NY  
2001 Yahoo! FinanceVision—Live Presentation, New York, NY  
2001 The Clorox Company, Oakland, CA  
2001 PLI Conference, San Francisco, CA

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- 2001 IEG Sponsorship Conference, Chicago, IL
- 2001 Morrison & Foerster, San Diego, CA
- 2001 INTA, Washington, DC
- 2000 ACI, New York, NY
- 2000 ACI, Chicago, IL
- 2000 AIPLA, La Quinta, CA
- 2000 Bank of America, Chicago, IL
- 2000 Cyberspace Licensing, San Francisco, CA
- 2000 Darby & Darby, New York, NY
- 2000 Hong Kong Trade Development Council Regional Licensing Conference, Hong Kong
- 2000 Internet World Conference, Los Angeles, CA
- 2000 LES, New York, NY
- 2000 LES Annual Meeting, Toronto, Canada
- 2000 United Kingdom Sponsorship Conference, London
- 2000 Valuation Conference, San Francisco, CA
- 2000 WLE Licensing Conference, Munich, Germany
- 2000 Yahoo! Finance/Vision—Live Presentation, New York, NY

**Books**

1. Expert Witnesses, Valuation and Damages: The Expert's Point of View. Chicago: American Bar Association 2013
2. IP Valuation and Management. Chicago: American Bar Association, 2010.
3. Intellectual Property and Brand Values in China. Beijing: Intellectual Property Publishing Company of China, 2009.
4. The Attorney's Guide to the Business Mind – An Expert Explains Corporate Clients, Finance, and the Instincts of an MBA. New York: Kaplan Publishing, 2009.
5. The Intangible Asset Handbook – Maximizing Value from Intangible Assets. Chicago: American Bar Association, 2007.
6. Fundamentals of Intellectual Property Valuation – A Primer for Identifying and Determining Value. Chicago: American Bar Association, 2005.

**Book Chapters**

"Wiley Guide to Fair Value Under IFRS" (James P. Catty, Wiley, May 2010)

"Chapter 5.9: Brand Valuation Methods and Providers- Consor" (The International Brand Valuation Manual, Gabriela Salinas, Wiley, 2009)

"Accurately Valuing Trademarks and IP in Multiple Environments" (INTA Leadership Conference Paper, Forum Course Handbook, November, 2003)

"Valuing Intellectual Property and Licensing Agreements" (Advanced Licensing Agreements for the New Economy 2001, Forum Course Handbook, Practising Law Institute, March 2001)

"Chapter 2: Defining and Building the Brand" (Trademark Law Basics, Basics of Trademark Law Forum Course book, International Trademark Association, February 2001)

"Chapter 9: Section 1: Business Aspects of Licensing" (Trademark Law Basics, Basics of Trademark Law Forum Course book, International Trademark Association, February 2001)

"An Arm's Length View of Transfer Pricing" (The 1999 Guide to the World's Leading Transfer Pricing Advisors, Euromoney Institutional Investor PLC, December 1999)

"Hidden Value: Profiting from the Intellectual Property Economy" (Copyright 1999, co-authored by Weston Anson) "Intellectual Asset Management: Leveraging Intangibles" (Handbook of Business Strategy, 1999)

"Chapter 15: Managing Corporate Intellectual Capital" (Hidden Value: Profiting from the Intellectual Property Economy, Euromoney Publications, 1999)

#### Published Articles

March 2014 – "Tips in Using Your Expert Witness" (ABI Journal)

February 2014 – "IP Valuation: What Methods are Used to Value Intellectual Property and Intangible Assets?" (The Licensing Journal)

June 2013 – "Technology = Licensing Explosion" with Patricia Hopper and Jemma Samala (The Licensing Book)

May 2013 – "The Multiple Roles and Types of Experts" (GPS Solo eReport)

April 2013 – "Pulling a price on trademarks: trends in IP valuation and damages calculations" with Jeff Anderson and David Noble (World Trademark Review)

February 2013 – "Valuing A Celebrity's Right of Publicity" with Lacy J. Lodes and David Noble (Law Journal Newsletters)

September 2012 – "Simplicity in Global IP Valuation" with Brian Buss (Les Nouvelles)

June 2012 – "2012: Virality Builds Brands" with Lacy J. Lodes (The Licensing Book)

May 2012 – "Launching New Licensed Products by Collaborating Through Social Media" with Jemma Samala (The Licensing Journal, Volume 32, Number 5)

April 2012 – "Social Media: Opportunity and Minefield for your Client's IP" with Lacy J. Lodes (SDCBA Bar Report, Volume 19, Issue 4)

February 2012 – "Social Media: Pinterest – The New Social Media Darling for Consumers and Licensors" with Jemma Samala (The Licensing Journal, Volume 32, Number 2)

January 2012 – "The Role of Social Media and New Social Trends in Licensing" (The Licensing Journal, Volume 32, Number 1)

December 2011 – "Licensing the Foodcentric India: Learning to grow with the country and expanding India's flavours" with Jemma Samala (Retailer)

June 2011 – "Constancy of Change: There Will Never Be a Yesterday Again" with Jemma Samala (The Licensing Book, Volume 28, Number 3)

June 2010 - "Is the Crisis Over?" (The Licensing Book, Volume 27, Number 6)

February 2010 - "The Road to Asia" (World Trademark Review, Issue 23)

June 2009 - "Branding' is No Longer Enough" (The Licensing Book, Volume 26, Number 6)

June 2006 - "Into the 'New Economy': New Assets, Valuation Techniques, Regulations, and Issues" (ABF Journal, Volume 6, Number 6)

June 2008 - "Taking a Look at the 'Intangible Asset Economy'" (The Licensing Book, Volume 25, Number 6)

February 2007 - "Licensing's Silent Crisis" (The Licensing Book, Volume 24, Number 2)

December 2006/January 2007 - "Branding is Not Enough in the Licensing Industry" (Intellectual Asset Management Magazine, Issue 21)

September 2005 - "The Silent Crisis in the Licensing Industry" (The Licensing Journal)

November/December 2004 - "Transfer Pricing: Establishing Royalty Rates & Cost Sharing Arrangements" (Valuation Strategies) by Weston Anson & Chaitali Ahya

November 2004 - "What's it worth? Putting a figure on a musician's estate and celebrity images" (Copyright World)

October 2004 - "How to make transfer pricing work for IP and intangible assets" with Chaitali Ahya (International Tax Review)

February/March 2004 - "Accurate IP Valuation in Multiple Environments" with Daryl Martin (Intellectual Asset Management)

February, 2004 - "Aces high – Maximizing your mark in licensing negotiations" (Trademark World)

January, 2004 - "Intellectual Capital: Understanding the Value and the Risk" (ABF Journal)

September, 2003 - "Negotiating Complex Licensing Agreements" (les Nouvelles)

Summer/Fall 2003 - "Intellectual Capital Values in Liquidation" (Bankruptcy Law News, Volume XVIII, Nos 2 & 3)

September, 2002 - "Licensing and Valuing Trademarks in A Bankruptcy Environment: A Global Minefield" (Trademark World)

August 2002 - "Intangible Asset and Intellectual Property Valuation in Bankruptcy – Part 2 of 2" (Shannon Pratt's Business Valuation Update)

August 2002 - "Trademark Valuation: The How, When and Why" (Thomson & Thomson Client Times)

June 2002 - "Intangible Asset and Intellectual Property Valuation in Bankruptcy – Part 1 of 2" (Shannon Pratt's Business Valuation Update)

June 2002 - "Identifying Valuable Intellectual Property in Bankruptcy – Part 2" (American Bankruptcy Institute Journal)

May/June 2002 - "Valuing and Monetizing Intellectual Property in Bankruptcy" (The Secured Lender)

May 2002 - "Identifying Valuable Intellectual Property in Bankruptcy – Part 1" (American Bankruptcy Institute Journal)

March 2002 - "Brand Conscious" (Article by Donna Block in The Daily Deal, with Weston Anson as consultant)

February/March 2002 - "Capital Intellectual: Un Intangible Con Peso Propio [The Value of Intellectual Capital is Context Specific]" (C&D: Conocimiento & Dirección, Publicación para la Gestión del Capital Humano)

February 2002 - "Valuation and Sale of Intangible Assets, Intellectual Property and IP Licenses in Bankruptcy" (The Licensing Journal)

February 2002 - "Valuing Intellectual Property in a Bankruptcy" (Interview with Weston Anson In Licensing Economics Review)

December 2001 - "What's It Worth? Traditional Valuation Methodologies of Intellectual Property" (The Licensing Journal)

November/December 2001 - "Intellectual Capital Values in Liquidation" with Jay D. Lussan (The Secured Lender)

October 2001 - "What's It Worth? Proprietary Valuation Techniques for Intellectual Property" (The Licensing Journal)

June/July 2001 - "What's It Worth? Building the Value of Hospitality Brands" (The Licensing Journal)

June 2001 - "2010: The Future of Licensing" (The Licensing Book)

June 2001 - "Institutional Licensing is Poised for Growth" (Art Licensing)

May 2001 - "What's It Worth? New Economy Brand Building" (The Licensing Journal)

April 2001 - "What's It Worth? Valuing Internet Brands: The Internet Value Equation" (The Licensing Journal)

March 2001 - "What's It Worth? Accounting and IP Valuation: New Merger Accounting Rules Impact the Value and Valuation of Trademarks and Other Intangible Assets" (The Licensing Journal)

January 2001 - "What's It Worth? Intangible Asset Valuation Techniques" with Mario Serrano (The Licensing Journal)

December 2000 - "Licensing: The Key to Internet Brand Building" (New York Law Journal)

October 2000 - "Brand Valuation. Die marktorientierte Markenbewertung" (absatzwirtschaft Sondernummer)

September 2000 - "Using Licensing and Leverage To Maximize Internet Brand Values" (Sports and Character Licensing)

September 2000 - "What's It Worth? Valuing Internet Brands: The Internet Value Equation" (The Licensing Journal)

Summer 2000 - "Using Licensing To Maximize Internet Brands" (Licensing Today Worldwide)

July/August 2000 - "Introducing the Internet Value Equation" (Managing Intellectual Property)

July 2000 - "Licensing: A Giant Marketing Opportunity" (www.digitrends.net)

June 2000 - "Licensing 2000: The Ones to Watch: On the Net, Genuine Promise" (Brandweek)

June 2000 - "On the Net, Genuine Promise" (Brandweek)

Appendix 3 of BAT's Response to the Consultation: The Anson Report  
**APPENDIX B**

**DOCUMENTS CONSIDERED**

Doc #	Description
1	Standardised packaging for tobacco products, Impact Assessment 05/03/2012, Department of Health
2	Standardised packaging of tobacco products, Impact Assessment 17/06/2014, Department of Health
3	Aaker D A (1996). Measuring brand equity across products and markets. California Management Review 38(3):102-120.
4	Lorillard Annual Report 2013
5	British American Tobacco Annual Report 2008
6	Smith, Gordon V. and Parr, Russell L., Intellectual Property: Valuation, Exploitation, and Infringement Damages. John Wiley & Sons, Inc. 2005
7	Reynolds American to Acquire Lorillard. July 15, 2014. <a href="http://www.reynoldsamericaninfo.com/news-and-media/news/2014/07/reynolds-american-to-acquire-lorillard">http://www.reynoldsamericaninfo.com/news-and-media/news/2014/07/reynolds-american-to-acquire-lorillard</a>
8	Lorillard, Inc. Form 10-Q for the quarterly period ended March 31, 2014
9	Imperial Tobacco: Acquisition Transforms US Business, July 15, 2014. <a href="http://www.imperial-tobacco.co.uk/index.asp?page=78&amp;newscategory=&amp;year=&amp;newsId=2061">http://www.imperial-tobacco.co.uk/index.asp?page=78&amp;newscategory=&amp;year=&amp;newsId=2061</a>

**W. KIP VISCUSI**

**AN ASSESSMENT OF THE LIKELY EFFECT OF PLAIN PACKAGING ON  
WARNINGS EFFICACY: A RESPONSE TO THE UNITED KINGDOM IMPACT  
ASSESSMENT ON STANDARDISED PACKAGING OF TOBACCO PRODUCTS**

**4 AUGUST 2014**



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## I. EXECUTIVE SUMMARY

1. I have been engaged by Herbert Smith Freehills LLP on behalf of British American Tobacco UK Limited to provide my observations on the United Kingdom (U.K.)'s Department of Health June 2014 Impact Assessment on the Standardised Packaging of Tobacco Products<sup>1</sup> (2014 U.K. Impact Assessment). I have been asked in particular to review the literature that claims that plain or standardized packaging (hereafter "plain packaging") will contribute to reducing smoking initiation and more generally to reducing smoking prevalence, generally by making health warnings more effective and by preventing people from being misled by packaging features that draw attention away from the health warnings or suggest that the product is less harmful.
2. I conclude that the adoption of a plain packs policy will not make warnings more effective, increase risk awareness, or reduce smoking initiation. Although my reasons are readily apparent from the material that follows, I would like to highlight the following primary ones:
  - Public awareness about the health risks of smoking cigarettes is effectively universal. The hazards of smoking are known to the public in the U.K. including youth. The evidence demonstrates that new cigarette policies will be operating in an informational environment in which the health risks of smoking are well known.
  - The criteria for judging whether there is a productive role for warnings policies include whether they provide new information in a convincing manner and will lead to more accurate risk beliefs. To be of value, from the standpoint of promoting public health, information must influence decisions.
  - Given that consumers are adequately informed, there is no beneficial role for general additional warning efforts, which is essentially what it is contended that plain packaging would do given that plain packs do not provide any new information to consumers.

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<sup>1</sup> Available at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/323518/impact\\_assessment.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/323518/impact_assessment.pdf)

- The experimental literature on plain packs provides no evidence to support the claim that a plain packs policy will make warnings more effective, increase risk awareness, or alter smoking behaviors. Many studies of plain packs do not even set out to address any of these fundamental concerns but instead focus on third person opinions of how plain packs will affect the attractiveness of cigarettes to others.
- The cigarette warnings in the U.K. have achieved a high level of noticeability. Increasing the prominence of a health warning which is already very large will not have an influence on smoking behaviors.
- Based on the materials that I have reviewed, the U.K. government has yet to identify specific information gaps with respect to the knowledge of the risks of smoking. However, if there are informational gaps, targeted warnings focusing on the specific risks can be successful in increasing awareness of those risks.
- There is no evidence demonstrating the link of any color to undermining the efficacy of the warnings or misleading consumers as to the risks of smoking. However, if there are specific colors that the U.K. government believes are misleading, such specific colors could be restricted.
- The recognized drivers of smoking initiation are peer effects, family environment, access to cigarettes, and socioeconomic status, not cigarette packaging.
- Studies of plain packs do not examine the influence of these recognized drivers of smoking initiation or show that plain packs foster more accurate risk beliefs or decrease rates of smoking initiation.
- Based on my analysis of the evidence and my many years of research on the use of hazard warnings and consumer behaviors, I am of the view that there is no sound basis to conclude that plain packaging would be effective in increasing risk awareness or reducing smoking behavior.

## II. EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE

3. I am the University Distinguished Professor of Law, Economics, and Management at Vanderbilt University, where I hold tenured appointments in the Vanderbilt

University Law School, the Department of Economics, and the Owen Graduate School of Management. Throughout my career, my main research interest has been on societal and individual responses to risk and uncertainty, with primary focus on risks to health and safety. I currently focus on how consumers make decisions involving both the precisely understood risks and the less well understood hazards of particular products, including cigarettes and drinking water. Much of my research has analyzed regulatory responses to risk—such as hazard warnings, government regulation, and the role of other social institutions—and how they affect consumer behavior. I also have extensive experience in the theory and practice of benefit-cost analysis.

4. I received a Bachelor's degree in Economics from Harvard University. While at Harvard, I was inducted into Phi Beta Kappa, graduated *summa cum laude*, and won the Allyn A. Young Prize for the best undergraduate thesis in economics. I also received a Master's degree in Public Policy, a Master's degree in Economics, and a Ph.D. in Economics, all from Harvard University. My graduate dissertation focused on how workers learn and assess employment risks, and how risk beliefs affect quitting behavior. I won the David A. Wells award for the best Ph.D. dissertation in economics.
5. Since obtaining my Ph.D., I have taught at several universities and held the following tenured faculty positions: University Distinguished Professor of Law, Economics, and Management, Vanderbilt University; John F. Cogan Jr. Professor of Law and Economics and Director of the Program on Empirical Legal Studies, Harvard Law School; Allen Professor of Economics, Duke University; Professor of Economics, Northwestern University; and Professor of Business Administration, Fuqua School of Business, Duke University. I have also been the Olin Visiting Professor at the University of Chicago.
6. My professional engagements have also included work with the U.S. federal government. In 1979, I was appointed to be the Deputy Director of President Carter's Council on Wage and Price Stability, a Senior Executive Service position within the Executive Office of the President. The primary purpose of the Council was to provide Executive Branch oversight for all major new federal regulations

and to bring inflation under control; it was a major problem at the time. The Council on Wage and Price Stability also had responsibility for the White House oversight of all new federal regulations.<sup>2</sup> We also had input on all major economic policies, since we were a member of the Economic Policy Group, which was President Carter's cabinet-level group dealing with economic policy. I left that position in 1981.

7. The Reagan Administration subsequently asked me to become involved in a significant policy controversy as an expert on benefit-cost analysis. In 1982, the Occupational Safety and Health Administration performed a benefit-cost analysis of new regulations requiring that dangerous chemicals in the workplace be labeled, and it proposed what was known as the hazard communication regulation. The Office of Management and Budget (OMB) rejected that proposal, claiming that the costs were in excess of the benefits. Then-Vice-President Bush concluded that an expert should be brought in to resolve the dispute between the agencies, and both OMB and the Secretary of Labor nominated me. Prior to this time, there was no requirement that dangerous chemicals in the workplace be labeled; and this was the most expensive regulation that the Reagan Administration had considered up to that point. My report showed that the benefits did in fact exceed the costs and recommended issuing the new regulations. The regulation was issued soon after my report in support of it reached the White House. Among the items that came out of this regulation are the Material Safety Data Sheets now found in workplaces across the U.S.
8. I have worked extensively with the U.S. Environmental Protection Agency (EPA) on a continuous basis from 1983 to 2012 serving in several different roles. From 2002 to 2003, I was a full-time employee of that agency while on sabbatical from teaching. I have also been a member of numerous committees of EPA's Scientific Advisory Board, including the Environmental Economics Advisory Committee, the Clean Air Act Compliance Analysis Council, and the Homeland Security Advisory Committee. I have served as a consultant to EPA on public smoking restrictions. I have directed studies for EPA regarding risk communication, morbidity risk

<sup>2</sup> President Reagan transferred that authority to the Office of Information and Regulatory Affairs, U.S. Office of Management and Budget.

valuation, environmental regulation enforcement, hazardous waste cleanup, drinking water safety, and other matters.

9. I have conducted numerous studies for EPA that are closely related to the evaluation and design of hazard warnings. Much of my work for EPA has focused on the development of guidelines for the Agency for hazard warnings for dangerous pesticides and chemicals. These studies involved an experimental structure in which consumers reviewed different warnings, assessed the implied risks, and indicated the precautions that they would take in using the product. This work has appeared in numerous articles, and much of it is summarized in two books: W. Kip Viscusi and Wesley Magat, *Learning about Risk: Consumer and Worker Responses to Hazard Information* (Cambridge: Harvard University Press, 1987), and Wesley Magat and W. Kip Viscusi, *Informational Approaches to Regulation* (Cambridge: MIT Press, 1992). These peer reviewed studies can be viewed as the academic precursors to much of the recent experimental work on cigarette warnings and plain packs.
10. In addition to my extensive work for EPA, I have consulted for several other governmental entities on a variety of issues, including the U.S. Department of Transportation, the U.S. Department of Labor, the U.S. Department of Justice, the U.S. General Accounting Office, the U.S. Department of Health and Human Services, the U.S. Office of Management and Budget, and the National Oceanic and Atmospheric Administration. I have also taught courses about risk, uncertainty, risk analysis, and hazard warnings to hundreds of Food and Drug Administration officials, congressional staff, and federal and state judges. I served as the Associate Reporter on The American Law Institute Study on Enterprise Responsibility for Personal Injury and co-wrote the chapter on Product Defects and Warnings. And I have testified before the U.S. Congress on nine occasions as an expert in economics and risk analysis. This testimony addressed such topics as, for example, alcoholic beverage warnings.
11. Apart from my academic and governmental work, I have consulted on matters such as risk perception, hazard warnings design, and safety devices for large companies, including Bic, DuPont, Becton Dickinson, R.J. Reynolds, Bristol-Meyers Squibb,

Anheuser-Busch, Black & Decker, and Medline Industries. I have also served as a consultant/expert witness for the U.S. Department of Justice in a variety of cases. These include an analysis of natural resource damages issues in connection with the Exxon Valdez oil spill. I have also testified on behalf of the Province of Quebec on risks and warnings for video lottery terminals.

12. In addition to my teaching and other professional engagements, I am heavily involved in writing and publishing scholarly research articles. My own writing includes authoring or co-authoring more than 20 books and 300 articles, most of which focus on risks to health and safety, including risk perception and hazard warnings. I am one of the top 25 economists in the world in terms of overall citations to my work in the leading peer-reviewed economics literature. I am a founding editor of two journals: the *Journal of Risk and Uncertainty*, which publishes peer reviewed articles on issues relating to risk perception and analysis; and *Foundations and Trends: Microeconomics*. And I am currently on the board of several other academic journals, including *Regulation*; *Journal of Law, Economics and Policy*; *Journal of Tort Law*; *Contemporary Economic Policy*; *Regulation and Governance*; *Managerial and Decision Economics*; *Journal of Risk and Insurance*; *Journal of Benefit-Cost Analysis*; *Review of Environmental Economics and Policy*; *American Journal of Health Economics*; and *The Geneva Risk and Insurance Review*. I have also held editorial positions with such journals as *American Economic Review*, which is the official journal of the American Economic Association; *Review of Economics and Statistics*, a journal specializing in quantitative applied economics and based at Harvard University; *Journal of Environmental Economics & Management*; *Public Policy*; *International Review of Law and Economics*; and *Journal of Regulatory Economics*. I have served as a peer reviewer for dozens of other publications and for government agencies in countries throughout the world.
13. I have won several awards for my books and articles. These include the "Article of the Year" award from the Western Economic Association for an article on the valuation of life; the "Article of the Year" award from the Royal Economic Society, an international economic society based in England, for an analysis of how ambiguous risk information influences decision-making; and the "Article of the

Year" award from the American Risk and Insurance Association for an article on automobile insurance regulation. I am also a four-time winner of the Kulp Award for "Book of the Year," also given out by the American Risk and Insurance Association. Other recent professional awards include being named an Honorary Member of the Academy of Economics and Finance; and winning the University of Chicago Law School's Ronald H. Coase Prize for an article on risk perception.

14. Much of my scholarly research and writing has focused on issues of risk and health relating to smoking. My work on risk analysis, risk perception, consumer behavior, and regulation as it relates to smoking has included extensive research into the history of the tobacco industry and the related public health discussions, as well as current events as they pertain to these issues. These articles have been widely disseminated and subject to peer review.
15. I have also written two books exclusively related to smoking. The first, *Smoking: Making the Risky Decision* (Oxford University Press, 1992) is about smoking and smoking risks, and analyzes how the available information about smoking has changed over time, how people have assessed the risks of smoking, and how those risk perceptions affect smoking behavior. The book also explains how changes in the price of cigarettes affect cigarette consumption. The second book, *Smoke-Filled Rooms: A Postmortem on the Tobacco Deal* (University of Chicago Press, 2002), includes chapters on risk perceptions and addiction, youth smoking, environmental tobacco smoke, the promotion of potentially safer cigarettes, the settlement of the U.S. state litigation against the tobacco industry, the U.S. Master Settlement Agreement, and the financial costs of smoking. Both books were subject to peer review.

### III. ASSESSING THE LIKELY EFFECT OF PLAIN PACKS ON WARNINGS EFFICACY

#### A. The "Effectiveness" of Health Warnings in the Light of the Stated Health Objectives of Plain Packaging

16. The proposed plain packaging requirements for tobacco products eliminate the use of trademarks on tobacco product packaging, except for the brand name and the brand variant which may only appear on the pack in a standardized font and size,



and standardize the pack appearance. The objectives of requiring plain packaging for tobacco products are set out in 2014 U.K. Impact Assessment, as follows:

"The objectives of a policy for standardised packaging would be to improve public health by:

- discouraging people from starting to use tobacco products
- encouraging people to give up using tobacco products
- helping people who have given up, or are trying to give up, using tobacco products not to start using them again
- reducing the appeal or attractiveness of tobacco products
- reducing the potential for elements of the packaging of tobacco products other than health warnings to detract from the effectiveness of those warnings
- reducing opportunities for the packaging of tobacco products to mislead consumers about the effects of using them
- reducing opportunities for the packaging of tobacco products to create false perceptions about the nature of such products."

17. For the plain packs requirement to meet any reasonable standard of efficacy, *i.e.*, of being able to provide a genuine contribution to the public health objective, it must further one or more of the behavioral objectives set out above (*i.e.*, reducing initiation, increasing cessation and reducing relapse). Such a test is standard in assessing the economic value of informational policies such as plain packs or warnings, because these regulatory efforts have no economic value if all consumer decisions remain unchanged.<sup>3</sup> Analogously, from the standpoint of policy, failure to promote any behavioral change would be an indicator that the policy did not pass an efficacy or genuine contribution test.
18. As I will explain further below, the studies relied on to promote plain pack policy do not demonstrate any effect of plain packs on risk beliefs, smoking behavior, or public health. Moreover, even if there were such a linkage, the results of the

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<sup>3</sup> Howard Raiffa, *Decision Analysis: Introductory Lectures on Choices Under Uncertainty* (Random House, 1968).

studies would be called into question by the failure of the hypothetical experiments used in the studies that are intended to evaluate plain packs to replicate the experience in which the smoker views warnings multiple times on a pack rather than a single time on a computer screen or some other artificial experimental context.

19. Before addressing the relevance of the study results relating to the mechanisms described above, it is important to first elaborate on the meaning of the term "effectiveness" of health warnings as used in the 2014 U.K. Impact Assessment. This 2014 U.K. Impact Assessment sets out specific objectives that provide the reference point for assessing efficacy, i.e. discouraging smoking, fostering smoking cessation, and reducing relapse. In contrast, many studies of plain packs have framed the efficacy test in terms of measures not directly related to actual impacts. The 2012 review of the plain packaging literature by the Public Health Research Consortium (2012 PHRC Review) relied on in the 2014 U.K. Impact Assessment cites the following categories of possible "benefits" of plain packaging: "The Framework Convention on Tobacco Control (FCTC) proposes that plain packaging would have three benefits: it would reduce the attractiveness and appeal of tobacco products, it would increase the noticeability and effectiveness of health warnings and messages, and it would reduce the use of design techniques that may mislead consumers about the harmfulness of tobacco products."<sup>4</sup> These criteria are not tantamount to measures of efficacy with respect to smoking behaviors. Increasing the effectiveness of warnings as measured by "recall, attention, seriousness and believability"<sup>5</sup> is only of behavioral consequence if consumers currently have an informational deficit and do not find existing warnings credible, neither of which is established in any of the studies. To the extent that the studies in the literature deal with measures more directly related to risk beliefs or smoking behavior, the findings in the literature are largely consistent with my conclusion below that there is no substantive basis for concluding that plain packaging will decrease smoking prevalence rates or exposure to tobacco smoke.

<sup>4</sup> Crawford Moodie, et al., Plain Tobacco Packaging: A Systematic Review, i (University of Stirling, 2012).

<sup>5</sup> *Id.*, at ii.

20. In sum, whether plain packs will enhance the effectiveness of warnings on risk beliefs depends on how much people know about the risks of smoking and how much having warnings on plain packs rather than regular packs will alter these risk beliefs. In the next section, I review the state of public knowledge and the degree to which there is widespread awareness of the risks of smoking. Since plain packaging policies do not provide any new information, but only affect the appearance of the packaging, one would not expect any extra benefit from plain packaging if consumers are already cognizant of the messages currently being communicated.

**B. The Current Extent of Risk Beliefs**

21. Adopting a plain packs policy does not alter the informational content of the warnings being provided. Thus, before embarking on any new informational regulations, it is essential to inquire whether people are cognizant of the risks associated with smoking behavior.
22. It is generally recognized that one of the most remarkable public health achievements of the past 60 years has been the communication of the risks of smoking to the public and the resulting reduction in smoking rates. Much of the effect of cigarette warnings stemmed not from the wording of the warnings but from the fact that cigarettes were the first mass marketed consumer product to have safety warnings pertaining to inherent risks associated with the product. Over time the progress that can be made through additional warnings efforts will taper off as people become better informed of the risks of smoking. There is diminishing incremental efficacy of warnings efforts. Once people become generally aware of the major risks posed by cigarettes, such as the mortality risk and lung cancer risk, there will be fewer gains in risk awareness that can be achieved, if any.
23. Examination of the current state of consumer knowledge provides substantial insight into what informational efforts have already accomplished and whether the public has, in effect, reached a level of awareness in which there will be few if any additional gains to be derived from new informational efforts, let alone from efforts such as plain packaging that do not provide any new information. If consumers are adequately informed, there is no beneficial role for additional warnings efforts of a

general nature. Policies designed to strengthen the existing warnings in some way will not produce the anticipated improvements to public health once there is substantial risk awareness.

24. The test for whether risk awareness is adequate takes on particular significance given the multiplicity of risks associated with cigarettes. In some product contexts, there may be a single risk, such as whether a braking system may fail. However, for cigarettes, medical researchers have documented multiple hazards, ranging in severity and their likelihood of occurrence. Examining the entire spectrum of risks consequently is important, but this must be done in a way that is linked back to how perceptions of this spectrum influence smoking behavior.
25. As a consequence, the full information reference point for judging a decision does not require that people be cognizant of all the risks of cigarettes. A person might overestimate the probability of some health hazards such as lung cancer and underestimate other risks, such as that of gum and mouth disease. Indeed, in the extreme case, there could be some health risks associated with smoking that a person is not aware of at all. The test for consumer decisions is whether taking into account the consumer's assessment of the risks of smoking and the harms to health associated with the risks the consumer is deterred from smoking to the same extent as would be the case if the consumer was further informed regarding the risks. This criterion is a different and more comprehensive test that focuses on the influence of the sum total of the role of risk beliefs rather than whether any particular health risk is known. As the data indicate, people are acutely aware that smoking poses the risk of lung cancer, death, life expectancy loss, and other hazards. Given these risk beliefs, it is unlikely that knowledge of other specific risks would change their smoking behavior. What additional information in terms of the risks associated with smoking needs to be conveyed to consumers in order to influence their smoking behavior is important; it is however not a pertinent question, unfortunately, in the context of plain packaging given that a plain packaging measure does not provide any new information on the specific risks associated with smoking.

**1. Risk Beliefs in the U.K.**

26. The public, including youth are well informed about the risks of smoking. Statistics reflect the widespread exposure of the public to anti-smoking messages, and indicate universal awareness of the potential health consequences of smoking. Youth are often taught about the dangers of smoking in schools, and are targeted in media campaigns that warn of possible health risks.
27. The Public Health Research Consortium report on a study commissioned by the U.K. Department of Health to review the effects of the implementation of graphic health warnings in England in 2008 (2010 PHRC Report), found that:
- "Among those aged 13-17, awareness of the health risks associated with smoking was high both pre and post 1st October 2008. For example, 100% of young people agreed that smoking causes lung cancer and virtually all young people named at least one health effect associated with smoking. No young people perceived smoking to carry no health risks."<sup>6</sup>
28. The NHS Statistics on Smoking: England, 2012, also states:
- "When asked about their beliefs about smoking, the majority of pupils reported strong agreement with the negative effects of smoking. Almost all the pupils thought smoking can cause lung cancer (99%), makes your clothes smell (97%), harms unborn babies (97%), can harm non-smokers health (96%) and can cause heart disease (93%)."<sup>7</sup>
29. I note that as a statistical matter, it is virtually impossible for any poll or public opinion survey to reach 100%; to quote a report on smoking from the U.S. Surgeon General, it may be "unrealistic to set a goal above 90 percent of smokers for public knowledge."<sup>8</sup> To provide some context, in a 1999 U.S. Gallup poll only 79% of respondents knew that the Earth revolves around the Sun.<sup>9</sup>

<sup>6</sup> Public Health Research Consortium, "Evaluating the Impact of Picture Health Warnings on Cigarette Packets", National Centre for Social Research, (2010) at 52.

<sup>7</sup> The NHS Information Centre, Lifestyle Statistics, Statistics on Smoking: England, 2012, p. 47 and Table 3.22.

<sup>8</sup> U.S. Public Health Service, "Reducing the Health Consequences of Smoking: 25 Years of Progress, A Report of the Surgeon General," at 221 (1989).

<sup>9</sup> The Gallup Poll, July 1999, see <http://www.gallup.com/poll/3742/new-poll-gauges-americans-general-knowledgelevels.aspx>

30. The substantial belief in the risks of smoking is also accompanied by the awareness of the current warning labels in the U.K. The 2010 PHRC Report<sup>10</sup> found that:

- For adults (aged 18 years and older) "Overall, recall of at least one health warning message was high, 93% of smokers pre 1<sup>st</sup> October 2008 and 100% post 1<sup>st</sup> October 2008 could name at least one warning message. Post 1<sup>st</sup> October 2008, awareness of the picture health warnings was high, only 6% of smokers did not name one of the new warnings messages when asked..."(p33).
- For youth (aged 13-17) "Awareness and recall of the picture health warnings was high. Post 1<sup>st</sup> October 2008, 85% of young people correctly described one of the health warning message, though for a majority of young people, the message most remembered was the front of packet message 'Smoking Kills.'" (p65).

## 2. Implications for Consumer Choice

31. A person's decision to smoke is not a sign of ignorance of the risks or irrational behavior. Consumers do not become irrational just because they smoke or contemplate smoking. It is obvious that smokers can derive positive utility from smoking just as there might be a rational basis for undertaking any other risky activity in our daily lives. This is neither idiosyncratic nor reflexive, and it is not insubstantial. Smoking was once the norm among adults in many countries, and even today, empirical evidence on consumer smoking behaviors indicates that smokers continue to perceive substantial benefits from smoking.
32. The data also indicate that consumers' decisions about smoking are rational and consistent with decision-making of the usual economic fashion, in which costs and benefits are weighed against each other. For example, cigarette demand declines as the price rises. In the rational economic framework, if the benefits of a product are high and the perceived risks are low, the net benefit of the product to the consumer will be high. If the risk is high and the benefit is low, the product will be unattractive for purchase by a rational consumer. People who perceive greater risks

<sup>10</sup> Public Health Research Consortium. "Evaluating the Impact of Picture Health Warnings on Cigarette Packets", National Centre for Social Research, (2010).

are less likely to smoke. The public is overwhelmingly aware of the dangers of smoking. In this environment, there is no beneficial role of plain packs for increasing the effectiveness of warnings or discouraging smoking initiation.

**C. Assessment of the Studies Allegedly Supporting the Conclusion that Plain Packaging Increases the Effectiveness of Health Warnings.**

33. In Appendix A of this report, I provide guidance on what properties sound experimental studies should have in order to properly test the efficacy of a policy such as plain packaging. I then undertake a critical review and assessment of the studies allegedly supporting the conclusion that plain packaging increases the effectiveness of health warnings. I find no evidence from these studies that plain packaging will increase the effectiveness of warnings. The main results of these studies take the form of plain packs being less attractive than regular packs, which is exactly what one would expect given that plain packs resemble cheaper generic brands. Only a small number of plain pack studies have specifically focused on the effect of plain packs on risk beliefs, and these studies indicate that people think that smoking is dangerous whether presented in plain packs or regular packs. The findings from the studies reviewed provide no basis for concluding that plain packs will make warnings more effective.
34. The limitations of experimental studies in assessing the likely effects of plain packaging were noted by the Expert Panel Report for Health Canada (1995).<sup>11</sup> That report considered plain pack studies in the literature at the time and concluded that there was little evidence that plain packs would affect youth smoking initiation. On page 2 the Expert Panel Report for Health Canada states:

"The study of consumer behavior is limited by methodological concerns about validity and reliability. Virtually all consumer behaviour research is conducted in a contrived environment with simulated purchases, or through vignettes describing product decisions. The results may approximate real consumer behaviour but probably would not replicate it."<sup>12</sup>

<sup>11</sup> Expert Panel Report for Health Canada, *When Packages Can't Speak: Possible Impacts of Plain and Generic Packaging on Tobacco Products* (March 1995).

<sup>12</sup> Expert Panel Report for Health Canada, *When Packages Can't Speak: Possible Impacts of Plain and Generic Packaging on Tobacco Products*, 2 (1995).

35. The 2012 PHRC Review of the literature also acknowledges the limitations of the studies in assessing actual behaviors, stating that:

“Some caution is required in interpreting these findings, as expressed smoking-related intentions are not always predictive of future smoking behaviour (Ajzen & Madden 1986, Sheeran 2002) and perceptions of the impact of a future policy measure on the behaviour of others are of course subjective.”<sup>13</sup>

36. The 2012 PHRC Review<sup>14</sup> and the 2013 update of that review<sup>15</sup> (the 2013 PHRC Review; and together the PHRC Reviews) which are relied on in the 2014 U.K. Impact Assessment provide a general overview of plain packaging and related warnings issues. Neither of these reports presents new research or provides a thorough assessment of the scientific merits of the studies or any evidence regarding actual impacts of plain packs on smoking risk beliefs or smoking prevalence. Rather, the emphasis is on identifying and classifying the articles in the literature, which deal with various experimental contexts. Counting studies and the direction of the results does not certify the soundness of the experimental procedures, the relevance of the experimental effects to likely policy impacts, the statistical significance of the results, or the magnitude of the results. The nature of the 2012 PHRC Review's findings is reflected in the conclusion of the 2012 PHRC Review that 19 studies rated plain packs as less attractive; and 12 studies found that plain packs were perceived to be of poorer quality. Such counts are not informative of the quality or policy applicability of the studies. Moreover, for many of the key issues examined, the results were not clear-cut. The 2012 PHRC Review found that with respect to warning salience, 4 studies indicated a positive effect of plain packs, 1 found no difference, and 2 found mixed effects. The effects on perceptions of product harm and strength, as well as the effects on smoking behavior likewise were “mixed”. As my detailed critique of the studies in Appendix A shows, these results are based on hypothetical responses in experimental contexts and are far removed from actual behaviors. Interestingly, the 2013 PHRC Review reported on

<sup>13</sup> Crawford Moodie, et al., *Plain Tobacco Packaging: A Systematic Review*, (University of Stirling, 2012) at 87.

<sup>14</sup> Crawford Moodie, et al., *Plain Tobacco Packaging: A Systematic Review*, (University of Stirling, 2012).

<sup>15</sup> Crawford Moodie, et al., *Plain Tobacco Packaging Research: An Update* (University of Stirling, 2013).



one intervention in Scotland that was closer to a realistic experiment than the other studies reviewed in which a sample used their own cigarette brand for one week and a plain pack brand for one week. While respondents reported saying that they would look more closely at the plain pack and its warning, which one would expect given the unfamiliar appearance of the experimental packs, there was no impact of plain packs on risk beliefs: "No significant overall differences in salience, seriousness or believability of health warnings were found between the pack types."<sup>16</sup>

37. The report of the independent review undertaken by Sir Cyril Chantler on standardized packaging of tobacco (the Chantler Report) relies on the two PHRC Reviews and an assessment of those reviews.<sup>17</sup> The assessment does not involve a critical scientific appraisal of the studies or presentation of any new empirical evidence in support of plain packs. Much of the report consists of an endorsement of the PHRC Reviews (referred to in the Chantler Report as the Stirling Systematic Review) such as the following: "The Stirling evidence has been criticized for relying on stated intentions in hypothetical situations. I recognize that stated intentions are generally weak predictors of behaviour (regardless of whether the situation is hypothetical or not). I see the importance of Stirling as being the consistency of its results on appeal, salience and perceptions of harm, most notably that standardized packaging is less appealing than branded packaging."<sup>18</sup> This and related defenses of the PHRC Reviews are based solely on a subjective judgment by Sir Cyril Chantler and do not add in any way to the weight or policy implications of the empirical evidence in the PHRC Reviews.
38. The 2014 U.K. Impact Assessment relies on the PHRC Reviews and the Chantler Report as well as an elicitation of assessments by international experts, which is reported in Pechey et al. (2013).<sup>19</sup> The assessment by international experts involved a phone interview where selected tobacco control experts were asked to

<sup>16</sup> Crawford Moodie, et al., Plain Tobacco Packaging Research: An Update (University of Stirling, 2012), at 6.

<sup>17</sup> Standardised Packaging of Tobacco, Report of the Independent Review Undertaken by Sir Cyril Chantler, April 2014.

<sup>18</sup> *Id.*, at 5.

<sup>19</sup> Department of Health, Standardised Packaging of Tobacco Products, Impact Assessment, June 2014.

assess the likely effect of plain packaging.<sup>20</sup> The disclosure of the interests of the experts clearly demonstrates their lack of independence and vested interest in the issue, which could bias their assessments. There were 14 experts from the U.K. and 19 from North America or Australasia.<sup>21</sup> The assessed impacts of plain packaging were close to zero—with a median response of one percentage point for adults and three percentage points for 11-15 year olds. However, these are all educated guesses and have no empirical foundation. A further deficiency of the expert assessments study is that these judgments are not independent assessments based on the respondents' expertise. Rather, the respondents were sent copies of the 2012 PHRC Review, which will tend to bias their judgments as providing this information is an endorsement of its relevance and its findings.

**IV. ASSESSING THE IMPACT OF PLAIN PACKAGING IN LIGHT OF THE ROLE OF WARNING PROMINENCE AND COLORS ON RISK BELIEFS**

39. Cigarette packaging can differ on dimensions such as size and type of the warning and pack colors. The question addressed in the next section is whether such aspects of the pack may undercut the effectiveness of health warnings.

**A. Warning Prominence**

40. The experimental evidence on the role of warning prominence for cigarette packs is generally consistent with basic warnings principles. Eventually, there is diminishing marginal effectiveness of making any warning more prominent. And once a warning has achieved noticeability, increasing the warning size or prominence does not have an influence on smoking behaviors.

41. The review of the literature on warning size by Kleijnen Systematic Reviews (2011) concluded that there was a "lack of good quality evidence" indicating that an increase in warning size from 30 percent to 50 percent of the front of the pack would affect smoking initiation, prevalence, or cessation.<sup>22</sup>

<sup>20</sup> Rachel Pechey et al., *Impact of Plain Packaging of Tobacco Products on Smoking in Adults and Children: An Elicitation of International Experts' Estimates*, *BMC Public Health* 2013, 13: 18.

<sup>21</sup> *Id.*

<sup>22</sup> Kleijnen Systematic Reviews Ltd., *Systematic Review of the Effectiveness of an Increase in the Size of Tobacco Health Warning Labels on Cigarette Packs in Reducing Smoking: Final Report* (June 2011).

42. An interesting tobacco-related study that documents the role of informational saturation with respect to the size of cigarette warnings is the study by Bansal-Travers et al. (2011a).<sup>23</sup> Respondents addressed the question of which cigarette they would buy if they were trying to reduce the risk to their health. The percentage choosing cigarette packages with different warning labels was 34 percent for warnings comprising 30 percent of the label, 11 percent for warnings comprising 50 percent of the label, and 53 percent for warnings comprising 100 percent of the label. This U-shaped pattern of concern for averting risk and its relation to the percentage of warnings on the pack implies that there is no consistent relationship at all between the amount of warning information and choices based on health risk. And once again, the study's focus avoids the more fundamental issue of whether increasing the warning label's percentage significantly affects whether the warning is read, understood, and leads people to have more accurate risk beliefs. And if there are such effects, will they be observed for regular smokers rather than in a one-time experiment?
43. The most meaningful test of whether graphic warnings will have an effect on smoking behavior is to analyze the effect of those warnings on smoking prevalence in countries that have implemented these warnings. The only government agency that has done this to date in relation to a proposal to introduce graphic warnings is the U.S. Food and Drug Administration (FDA).
44. In 2011 the FDA undertook a study to analyze the effect of graphic health warnings on Canadian smoking prevalence rates. In an analysis that accounted for the effect of cigarette tax changes but ignored the role of smoking trends, the FDA estimated an effect of graphic warnings on smoking prevalence rates of 0.574 percentage points in a comparison of 2001-2009 to 1994-2000.<sup>24</sup> However, in an analysis that also recognized trends in the U.S. experience as a control for existing smoking trends in Canada, which the FDA indicates is its "preferred estimation method," then the estimated effect of graphic warnings is only 0.088 percentage points. The FDA is correct in preferring a statistical approach that accounts for cigarette tax

<sup>23</sup> M. Bansal-Travers, et al., *The Impact of Cigarette Pack Design, Descriptors, and Warning Labels on Risk Perception in the U.S.* *American Journal of Preventive Medicine* 40(6), 674-682 (2011a).

<sup>24</sup> U.S. Dept. of Health and Human Services, Food and Drug Administration, *Required Warnings for Cigarette Packages and Advertisements*, *Federal Register*, Vol. 76, No. 120, June 23, 2011, p. 36756.

changes and accounts for U.S. smoking trends so as to control for what Canadian trends would have been without the graphic warnings. After making these adjustments, the FDA estimates that the effect of graphic warnings on smoking prevalence rates is less than one-tenth of a percentage point. Not surprisingly, the FDA concluded that their "effectiveness estimates are in general not distinguishable from zero; we therefore cannot reject, in a statistical sense, the possibility that the rule [requiring graphic warnings] will not change the U.S. smoking rate."<sup>25</sup>

45. As a second level of analysis the FDA commissioned a survey to measure consumer attitudes, beliefs, perceptions, and intended behaviors related to cigarette smoking in response to graphic warning labels.<sup>26</sup> This study included approximately 18,000 participants and is the largest survey of stated consumer responses to cigarette graphic health warnings ever conducted.<sup>27</sup> This study tested the relative efficacy of 50% graphic warnings relative to a control of a text only warning statement. The control group viewed a pack of cigarettes with just a text warning statement presented on the side of the packet in accordance with the current standard warning on cigarette packets in the U.S. The treatment groups (exposed to warning images) viewed a hypothetical pack of cigarettes that included the graphic warning label. The study failed to find a consistent pattern of significant effects on risk beliefs for a wide variety of possible graphic health warnings.<sup>28</sup> Notably, the authors concede that "[t]he graphic cigarette warning labels did not elicit strong responses in terms of intentions related to cessation or initiation."<sup>29</sup>
46. The study design is less informative than the examination of smoking prevalence trends for a number of reasons. The study presented respondents with computer images of different graphic warnings and compared their smoking attitudes and

<sup>25</sup> *Id.* at 36776.

<sup>26</sup> Nonnemaker, J., et al., Experimental Study of Graphic Cigarette Warning Labels: Final Results Report Prepared for Center for Tobacco Products, Food and Drug Administration, Contract No. HHSF-223-2009-10135G, Dec. 2010 at 1-2.

<sup>27</sup> US FDA, Frequently Asked Questions: Final Rule "Required Warnings for Cigarette Packages and Advertisements" ("FDA FAQ"), available at <http://www.fda.gov/TobaccoProducts/Labeling/CigaretteWarningLabels/ucm259953.htm>.

<sup>28</sup> For example, the study concluded with respect to the warning for fatal lung disease: "None of the warning images were significantly associated with the likelihood of quitting in the next 30 days (among adults and young adults) or the likelihood of smoking 1 year for now (among youth) compared with the control group."

<sup>29</sup> Nonnemaker, J., et al., Experimental Study of Graphic Cigarette Warning Labels: Final Results Report Prepared for Center for Tobacco Products, Food and Drug Administration, Contract No. HHSF-223-2009-10135G, Dec. 2010 at 4-4.

stated smoking intention responses to those elicited without the use of graphic warnings. This design does not in fact measure actual behavior (e.g., quitting smoking) following exposure to these messages. Rather, it employs a proxy measure—stated intention to quit—that is known to be unreliable and inaccurate and that undoubtedly overestimates actual behavior.<sup>30</sup> Many smokers who indicate an intention to quit make no effort to do so: This may be attributable to social-desirability bias associated with questions pertaining to this and similar subjects.<sup>31</sup> Consequently, quit intentions such as this tend to significantly overestimate the number of smokers who actually intend to quit as a result of the proposed warnings. There was no effort to account for this bias other than to acknowledge it.

47. Finally, this study also sought to assess the impact of the proposed graphic warning labels on discouraging smoking initiation among youth respondents.<sup>32</sup> Even accepting the research design at face value, the report to the FDA concluded that the data do not support the conclusion that exposure to the graphic warning labels will discourage smoking initiation<sup>33</sup> (“For youth, we used a measure of how likely [they] felt they were to be smoking 1 year from now as a measure of the impact of viewing the warning images on potential initiation. We did not find much evidence for an impact of the warning labels on this outcome.”). This study failed to find any demonstrable impact of graphic warnings over and above text warnings, on intentions related to smoking initiation or cessation.

48. Note, the U.K. also has actual experience with implementing policies that have increased the prominence of warnings. The 2010 PHRC Report makes a number of findings that establish that the introduction of graphic health warnings on cigarette packaging in England has not had any impact on smoking prevalence rates or aggregate cigarette consumption. In summary, the authors concluded:

<sup>30</sup> See, e.g., L. Kozlowski, “What Researchers Make of What Cigarette Smokers Say: Filtering Smokers’ Hot Air,” *Lancet*, at 699.

<sup>31</sup> See Sutton, S., et al. “Explaining Smokers’ Decisions to Stop: Test of an Expectancy – Value Approach” *Social Behaviour* 2: 35-49 (1987) at 47: “Furthermore, responses to the intention items may have been influenced by desirability or demand effect, with some smokers perhaps feeling that they should say that they intend to try”.

<sup>32</sup> Nonnemaker, J., et al., Experimental Study of Graphic Cigarette Warning Labels: Final Results Report Prepared for Center for Tobacco Products, Food and Drug Administration, Contract No. HHSF-223-2009-10135G, Dec. 2010 at 1-1. Note that this issue was only evaluated among youth respondents.

<sup>33</sup> *Id.* at 4-4.

"Post implementation of the pictures no increases were observed in the range or depth of awareness of the health risks associated with smoking or secondhand exposure to smoke. Cigarette smoking prevalence and cigarette consumption did not vary and there were no increases in behavioural responses such as attempting to stop smoking, forgoing a cigarette when about to smoke one or stubbing a cigarette out."<sup>34</sup>

49. Warnings on cigarette packages have contributed to widespread awareness levels of the dangers of cigarettes. Increasing the size of warnings or applying different warning formats (e.g., use of warning colors, safety symbols, signal words, etc.) to information does not increase behavioural compliance. Bolder warnings do not convey unknown information and telling people something that they already know in bold letters or **LARGE-TYPE FACE** or with graphics does not change that. Once a warning has achieved noticeability, increasing the warning size or prominence does not have an influence on risk beliefs or smoking behaviours. There is no empirical evidence that "shouting" works in increasing behavioural compliance in this context.<sup>35</sup> The underlying assumption for these changes is presumably that people are not aware of the risks or do not sufficiently appreciate the seriousness of those risks. As shown above, that assumption is inaccurate.
50. Warnings can change behavior, but unlike regulations, warnings do not demand compliance, warnings do not demand obedience under threat of sanctions but communicate information. It follows that warnings can only change behavior through the effect on risk beliefs by providing relevant information of which an individual was previously unaware. Once such warnings have achieved their objective, their effectiveness is not further increased by ever increasing the size of the warnings or by putting the large warnings in a plain pack environment.

#### B. Colors

51. Viewed from the standpoint of public health, if there are particular colors that undermine the warning messages, any government can assess whether to ban these

<sup>34</sup> Public Health Research Consortium. "Evaluating the Impact of Picture Health Warnings on Cigarette Packs", National Centre for Social Research, (2010) at 67.

<sup>35</sup> Experimental evidence on the diminishing benefits of increased print size is provided in Wesley Magat and W. Kip Viscusi, *Informational Approaches to Regulation*, (MIT Press, 1992).

specific colors under existing legal provisions. Presumably, all colors are not equally misleading if indeed any colors are. But as the review of the research in Appendix B shows, there is no evidence demonstrating the link of any color to undermining the efficacy of warnings or misleading consumers as to the risks of smoking.

## V. ASSESSING THE LIKELY EFFECT OF PLAIN PACKS ON SMOKING INITIATION

### A. Drivers of Smoking Initiation

52. If a person starts smoking, it does not mean that the person did not understand the risks or that cigarette packaging is responsible for the smoking behavior. A substantial literature has documented the principal drivers of smoking initiation, and these key factors do not include cigarette packaging, branding, and related factors.
53. The main determinants of smoking initiation, which typically takes place when one is young, involve factors other than influences that can be controlled through changes in cigarette packaging. The causes of youth smoking have been the subject of two reports by the U.S. Surgeon General as well as dozens of studies throughout the world. As the review below indicates, the key contributing factors to smoking initiation by youths are influences involving one's parents, siblings, friends, peers, access to cigarettes, personal characteristics, and cost.
54. The overviews of the literature echo a consistent theme. The U.S. Surgeon General (1994) report listed factors driving smoking initiation such as low socioeconomic status, peer and sibling use and approval of tobacco, lack of parental support, low levels of academic achievement, and low self-image.<sup>36</sup> The more recent U.S. Surgeon General (2012) report reiterated these themes and added emphasis on the high accessibility and availability of tobacco products, such as obtaining tobacco products from parents, siblings, or peers.<sup>37</sup> More generally, parental support, use by friends, and religion are among the other causal factors cited.

<sup>36</sup> U.S. Dept. of Health and Human Services, Youth and Tobacco: Preventing Tobacco Use Among Young People, A Report of the Surgeon General (1994).

<sup>37</sup> See U.S. Dept. of Health and Human Services, Preventing Tobacco Use Among Youth and Young Adults, A Report of the Surgeon General (2012).

55. Evidence from the U.K. provides a consistent view of these determinants. Fuller et al (2013) reports that factors strongly associated with smoking include being female, being older, risky behaviours (drinking alcohol, drug use, truancy), and having friends and family who smoke.<sup>38</sup>
56. Cigarette smoking is but one of many risky behaviors for youths, which include the use of illegal substances like alcohol consumption and drug use, and is subject to similar kinds of societal influences. The determinants of these risky behaviors are very similar as they involve peer influences, family background including parental and sibling influences, the school environment, and socioeconomic status.
57. Fuller et al (2013) also reports that pupils were most likely to have reported recent alcohol consumption than recent use of cigarettes or drugs: 10% said that they had drunk alcohol in the last week, compared with 6% who said they had smoked cigarettes in the last week and 6% who said they had used illicit drugs in the last month.<sup>39</sup>
58. Individual country studies generally explore the nature of the influences on youth initiation in greater detail but nevertheless focus on the same pivotal paths of influence. Most of the studies highlight one or more of the principal influences among those cited in the more comprehensive reviews above. The Canada Smoking Profile 2008/2009 found that peer and family member situations are associated with increases in youth smoking, as 76 percent of youth smokers have family members who smoke as opposed to 45 percent of non-smokers.<sup>40</sup> Similarly, 95 percent of smokers have close friends who smoke, as compared to 45 percent for non-smokers, and most youths in Canada obtain their cigarettes from family and friends. Ali and Dwyer (2009) undertook a longitudinal analysis of the effect of classmates, as having a close friend who smokes has a long-term effect that continues until adulthood.<sup>41</sup> Similarly, a study tracking smoking behavior by 3rd to 5th graders through 12th grade by Bricker et al. (2006) found that the smoking

<sup>38</sup> Fuller et al., (2013) Smoking, drinking and drug use among young people in England in 2012, Health and Social Care Information Centre, Lifestyles Statistics, at 18.

<sup>39</sup> Ibid, at 185.

<sup>40</sup> *Smoking Profile for Canada, The 2008/2009 Youth Smoking Survey*, Health Canada (2010).

<sup>41</sup> M. Ali and D.S. Dwyer, *Estimating Peer Effects in Adolescent Smoking Behavior: A Longitudinal Analysis*, *Journal of Adolescent Health* 45(4), 402-408 (2009).



behavior of parents, older siblings, and close friends all boosted smoking rates.<sup>42</sup> In the U.S., the study by DiFranza et al. (1994) found that friends were the source of the first cigarette for 69 percent of their sample of 721 youths aged 10-17 years.<sup>43</sup> Irrespective of the country, the role of factors such as these is a prominent determinant of smoking initiation. Cigarette packaging simply is not a factor leading to smoking initiation.

**B. The Studies Supporting Plain Packaging Do Not Examine the Drivers of Initiation**

59. The plain pack smoking initiation studies did not examine the influence of plain packaging on any of these drivers of smoking initiation and did not even ascertain how plain packs would affect the respondent's likelihood of starting smoking. Rather, the studies usually asked people whether they thought that plain packs would lead others to start smoking. Such questions not only did not deal with actual smoking behavior, or whether plain packs would affect the respondent's behavior, but inquired about third party opinions of how they thought plain packs would affect others. Such opinions are subject to very severe demand effects whereby respondents give the interviewer the answer that they think the interviewer wants to hear.
60. Moreover, at a more fundamental level, such studies of plain packs and smoking initiation are simply not legitimate scientific inquiries. Suppose that the matter of interest is whether exposure to some stimulus causes a behavioral effect. The appropriate scientific test is to vary the stimulus across experimental groups and examine whether their behavior differs. The approach in the plain pack studies is quite different as the researchers asked people whether they thought that the stimulus (in this case plain packs) would have behavioral effects on others. Subjective opinions on this relationship are irrelevant and provide no scientific basis for drawing any conclusions.

<sup>42</sup> J.B. Bricker, et al., *Close Friends', Parents', and Older Siblings' Smoking: Reevaluating Their Influence on Children's Smoking*, *Nicotine & Tobacco Research* 8(2), 217-226 (2006).

<sup>43</sup> DiFranza, J. R., et al., *Tobacco Acquisition and Cigarette Brand Selection among Youth*, *Tobacco Control* 3(4), 334-338 (1994).

61. A detailed discussion of the plain packaging studies and their failure to examine drivers of initiation can be found in Appendix C.

## VI. CONCLUSION

62. It is instructive to put the plain packs measures in perspective based on what is known about informational regulations generally. Warnings policies have diminishing incremental effectiveness as the amount of warnings increases. Once warnings have achieved an adequate degree of noticeability, as cigarette warnings in the U.K. have, increasing the size or prominence of the warnings will not foster the public health objectives.
63. One can best understand the overall merits of a plain packs policy proposal within the context of the entire set of smoking risk information efforts. For many years, the U.K. has had a vigorous cigarette warnings program and broad-based smoking information efforts. As a result, there is widespread knowledge of the hazards of smoking and awareness of the current warnings. Given this degree of risk awareness, there is no demonstrable need for seeking to enhance the current warnings and no reason to believe that changes in cigarette packaging would have a beneficial effect on public health.
64. The experimental literature on plain packs provides no evidence to support the claim that a plain packs policy will make warnings more effective, increase risk awareness, or alter smoking behaviors. Many studies of plain packs do not even set out to address any of these fundamental concerns but instead focus on third person opinions of how plain packs will affect the attractiveness of cigarettes to others.
65. Consideration of the likely efficacy of plain packs policies or other interventions should exploit our existing knowledge of what is known about the determinants of risk awareness and smoking behavior. A great deal is known about the determinants of smoking initiation, and the documented drivers of smoking initiation do not pertain to cigarette packaging. Rather, the important influences are factors such as peer groups, the family environment, access to cigarettes in the home or from friends, performance in school, and socioeconomic status. The plain pack smoking initiation studies did not examine the influence of plain packaging on

any of these drivers of smoking initiation and did not even ascertain how plain packs would affect the respondents' likelihood of starting smoking.

66. Moreover, the proposed shift to plain packs involves a change in the format and structure of the packaging rather than its content. There is no evidence that such changes will promote public health. Should the U.K. Government identify specific risks that are not well understood or specific colors that are problematic, it would be preferable and more effective to employ targeted policies to address these issues rather than a less focused plain packs policy.
67. Based on my analysis of the evidence and my many years of research on the use of hazard warnings and consumer behaviors, I am of the view that there is no sound basis to conclude that plain packaging would be effective in increasing risk awareness or reducing smoking behavior.



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August 4, 2014

Date

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## APPENDIX A

### Analysis of the Studies Allegedly Supporting the Conclusion that Plain Packaging Increases the Effectiveness of Health Warnings

#### 1. General Comments on Methodology

1. As a preliminary matter, I note that the studies often raise similar methodological issues. Almost invariably, these studies are experimental studies using a survey methodology and do not address impacts on smoking prevalence rates. It is useful to outline some of the properties sound experimental studies should have in order to frame the subsequent discussion. In a previous submission to the U.S. Food and Drug Administration, I took a pro-active role in suggesting how a study might be designed to test the efficacy of a graphic warnings policy.<sup>44</sup> Many of my recommendations were based on the principles embodied in a series of experimental studies that I undertook on chemical and pesticide warnings for the U.S. Environmental Protection Agency.<sup>45</sup> Below I provide some similar guidelines that could be used to assess plain packaging.

#### a) Adopt sound survey methodologies

2. Surveys are problematic for a number of reasons and cannot replace naturalistic or experimental studies that track actual behavior. However, if surveys are to be used, a number of typical problems with survey evidence need to be avoided. The first matter of concern in relation to surveys, which is the predominant study methodology in this area, is the sample used for any survey. Many of the plain packaging studies have used Internet samples. An Internet panel can often be useful in studies of adults aged 18 and over, but less is known about the properties of such panels for the target youth smoking groups, who are usually the principal focus of studies pertaining to smoking initiation. Obtaining meaningful responses from this under-age group is complicated by the fact that their purchase of

<sup>44</sup> Statement of W. Kip Viscusi, U.S. Food and Drug Administration, Docket No. FDA-2010-N-0079 (April 21, 2010).

<sup>45</sup> W. Kip Viscusi and Wesley A. Magat, *Learning about Risk: Consumer and Worker Responses to Hazard Information* (Harvard University Press, 1987); Wesley A. Magat and W. Kip Viscusi, *Informational Approaches to Regulation* (MIT Press, 1992).

cigarettes is usually illegal, and their responses may be affected by a concern on their part that their parents will or may be aware of their participation in the survey, and aware of the substance of their responses if done on a home computer. It is important to verify that honest, accurate, and representative responses can be obtained from this under-age group. Thus, while it is not infeasible to use an Internet sample to study youth smoking, great care must be exercised to ensure that the responses are meaningful.

3. Experimental explorations of the likely effects of major policies also should be based on results for a sample that is nationally representative and reflects the population being targeted by the policy. The plain pack studies generally make no pretense that the sample meets this standard. Most are based on convenience samples prone to serious sample selection effects, such as student groups or subjects recruited at shopping malls. Convenience samples are often useful for pretests prior to a major study and can be used for some limited research purposes, but they should not be used for a study which is of major policy relevance because the results cannot be projected to any broader population of interest.<sup>46</sup>
4. Moreover, the survey research design should test across subjects, as opposed to within subjects, to assess any experimental effects. For example, if the study is testing two different types of packaging, different respondents should view the different packaging in order to avoid demand effects stemming from the survey. Failure to use such an across-subject design will lead to an overestimate of the effect of, for example, bolder warnings or plain packaging. If the study is done within subjects, as most plain packs studies are, the experimental plain packaging will tend to prompt a higher reported risk assessment.
5. Even a well-conceived survey design such as an Internet study of different types of packaging, however, is not capable of providing information from which conclusions regarding the relationship between exposure to plain packaging, on the

<sup>46</sup> A convenience sample is a survey sample of respondents who typically can be recruited quickly and without great expense. Convenience samples are not based on a random probability-weighted sample of the population and do not purport to be representative of the entire population. Convenience samples, such as interviewing people at mall intercepts or using people who volunteer to take an Internet survey on a particular topic, provide measures of how that particular sample responds, but the results are not generalizable to the broader population. Convenience samples are often used at the pretesting stage for a survey that will subsequently be fielded to a representative population.

one hand, and quitting smoking (or not starting, or re-starting), on the other hand, can be based. Surveys of this type that have been undertaken for plain packs are cross-sectional. In other words, they are capable of providing information about a single point in time (*i.e.*, when they are undertaken), about a particular group of individuals (*i.e.*, the respondents, and possibly, if the respondents are statistically representative of a larger population, the larger population of which the respondents are representative). Such cross-sectional surveys are not useful in terms of providing information on the genuine contribution that a regulatory measure may have on the policy outcome.

6. Many studies of plain packs contrast plain packs with branded packs in the same survey. Thus, they are within-subject comparisons rather than across-subject comparisons that will be less subject to demand effects and related biases. In the current cigarette market, the plain packs tend to be generic cigarette brands that are priced lower and are generally believed to be of lower quality than the branded cigarettes. Even if the person is a non-smoker and has had no experience with generic brands, inferences based on experience with generic brands in other contexts will usually lead people to believe that they are of lower quality. If that were not the case, given the lower price for generics they would drive all regular branded products out of the market.
7. Finally, the most exploratory type of study that has been undertaken with respect to plain packs is a focus group discussion. Focus groups generally consist of 6 to 10 people and a moderator, who leads them through a discussion of a particular topic, in this case, the consumer reactions to plain packaging. While focus groups are often useful as an exploratory first step in developing a more formal study, the outcome of focus group discussions can be very sensitive to the leadership of the moderator. In addition, focus groups have well-known shortcomings in that participants may say things to maintain their self-image during the focus group discussions or may be unduly influenced by an outspoken member of the group. "There is always the 'loudmouth' problem—when one highly opinionated person drowns out the rest of the group."<sup>47</sup> Even if a study includes a large number of

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<sup>47</sup> Phil Kotler and Kevin Keller, *Marketing Management*, 106 (12<sup>th</sup> ed., 2006).

focus groups, the results do not have statistical validity since the statements by the individuals are not independent of one another and also are not independent of the influence and potential bias of the focus group moderator. More generally, focus groups are not a substitute for more formal experimental or survey research.<sup>48</sup>

8. The studies of plain packs and warnings generally suffer from a series of these fundamental deficiencies—reliance on unrepresentative convenience samples, use of focus groups that have no statistical validity, and various shortcomings of the study design that make it infeasible to draw any conclusions about the effect of plain packs on the efficacy of warnings in altering either risk beliefs or smoking behaviors.

**b) Obtain a baseline of risk beliefs**

9. In order to determine the extent to which plain packaging affects risk beliefs, any study will need to carefully assess the baseline knowledge among respondents on those topics. There is a need for such a baseline in order to gauge whether the tested packaging in fact increases awareness, including along various demographic strata (age, smoking status, gender, *etc.*). The dimensions on which the baseline risk perception measures are defined should make possible meaningful comparisons with risk beliefs elicited after providing the warnings in a plain pack environment. The baseline risk perception measures should be defined so as to relate to the objective of fostering sound, informed smoking decisions.
10. The baseline risk perception questions could be at different levels of refinement. At the most fundamental level is a risk awareness question inquiring whether smoking increases the risk of certain diseases such as heart disease. But it would also be instructive to ascertain whether plain packs would lead people to increase their assessment of the level of the risk even if they were already aware of the hazard. Quantitative measures that I have used in my previous work include assessments of the life expectancy loss due to smoking and the increased probability of death, lung

<sup>48</sup> "Although many useful insights can emerge from thoughtfully run focus groups, there can be questions as to their validity, especially in today's marketing environment.... Even when multiple focus groups are involved, it may be difficult to generalize the results to a broader population." *Id.*

cancer, or heart disease due to smoking.<sup>49</sup> Other measures of the strength of risk belief also may be instructive to the extent that they make it possible to ascertain whether plain packs would increase respondents' assessment of the level of the risk.

11. None of the existing plain packaging studies starts from a determination of the existing risk beliefs to compare with the risk beliefs resulting from plain packaging.

**c) Reflect what will be experienced in practice**

12. Many types of surveys, including those done via the Internet, are not well suited to analyzing product packaging and warnings that appear on a product. In my various studies of alternative product warnings for the U.S. government, my colleagues and I have prepared actual mock-up products with labels as they will appear in commercial use.<sup>50</sup> Cigarette packages have a front, back, and sides that will include product information or warnings. The test warnings in plain packs studies should incorporate these aspects of product design. Examining the actual packaging is a much more meaningful approach to assessing plain packaging than seeing the front of such packaging on a computer screen. The salience of a warning is quite different when the warning is placed on a product that the consumer can examine, as in a realistic cigarette-usage situation.
13. More generally, when the packaging policy is implemented, people will not be viewing a series of alternative types of cigarette packaging, but will only be responding to the particular packaging and accompanying warning that is selected. For the survey to parallel the ultimate policy reality, it is essential to ascertain how respondents will react to that particular packaging rather than a set of possible alternative packaging.
14. Unfortunately, however, most of the experimental studies discussed below do not provide cigarettes in plain packaging that resembles actual packaging, but rather provide pictures of the packaging, often on computer screens and restricted to the front of the pack. As noted above, the salience of a warning is quite different when the warning is isolated on the screen rather than placed on the product so that the

<sup>49</sup> See W. Kip Viscusi, *Smoking: Making the Risky Decision* (1992); and *Smoke-Filled Rooms: A Postmortem on the Tobacco Deal* (2002).

<sup>50</sup> *Id.*



consumer can examine the warning as in a realistic cigarette-usage situation.<sup>51</sup>

Because cigarette packages have a front, back, and sides that include product information or warnings, proper test warnings should incorporate those aspects of product design. Plain pack studies generally have failed on this dimension.

**d) Assess risk beliefs and informational inadequacies**

15. To assess the informational value of plain packs, researchers should establish individuals' baseline risk beliefs before considering the warnings on plain packs and then ascertain whether these risk beliefs have increased after seeing the warnings on plain packs. If there is no increase in risk beliefs, then one cannot conclude that plain packs foster a greater understanding of smoking risks.
16. Even if risk knowledge rises after viewing a warning on cigarettes packs with plain packaging, there are two caveats before one can conclude that plain packs are effective. First, are the risks for which beliefs have increased among the major health risks or are they minor hazards compared to the more fundamental risks such as those pertaining to cancer, heart disease, and total smoking mortality? Second, what is the magnitude of the increase and is this increase of sufficient consequence to alter smoking behavior in a meaningful way? In any case, plain packaging does not provide any new warning information and there is no evidence that new warnings were not noticed before plain packaging. The plain pack studies fail to assess the alleged information deficit that plain packaging would fill and do not examine whether people's risk beliefs change as a result of plain packaging. General statements reflected in some of the studies that plain packs look less attractive, are considered as "stronger" in taste or are believed to be less misleading about the harmful nature of the product, do not address the key question of whether consumers are more aware of the risk of smoking once all cigarettes are sold in plain packs and that consumers beliefs are affected in such a way that they will change their behavior.

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<sup>51</sup> In my various studies of alternative product warnings—such as those included in my two hazard warnings books with Wesley Magat that are cited above—my colleagues and I prepared actual mock-up products with labels as they would appear in commercial use.

e) Explore effects on actual smoking behavior

17. A meaningful survey to assess the effectiveness of plain packaging with respect to encouraging cessation of smoking among current smokers would need to be longitudinal and to monitor actual smoking behavior over time rather than stated intentions. In other words, the survey should track a constant population over time to determine whether the exposure to a particular stimuli (here, plain packaging) has led to cessation.
18. Stated quit intentions have little relevance. Respondents may simply give the socially acceptable answer.<sup>52</sup> Questions that ask respondents whether they will engage in activity that is either illegal (among the minor respondents) or socially undesirable (smoking), may be biased by the likely desire of respondents to offer the legal and/or socially desirable response. This effect, which is often referred to as a social approval bias or a social desirability bias, is a well-established effect that has been observed with respect to other reported personal behaviors, such as dietary intake.<sup>53</sup> Recognition of such an influence is not new in smoking research. As Dr. Kozlowski noted in his *Lancet* paper more than 25 years ago, "Given the widespread harassment of cigarette smokers and the evidence that smoking is actually dangerous to health, it is not surprising that smokers sometimes lie about their smoking." "How better for a smoker to avoid the pesterings of a physician or other interviewer than to say (whether believing it or not) that he wants to and has even tried to give up cigarettes? And, if the questioner asks if the attempts to stop have been serious, who would want to confess a half-hearted effort? Yet, answers to questions on 'wanting to stop' and 'trying to stop' have regularly been used uncritically - as if smokers now must be telling the truth."<sup>54</sup>
19. The great majority of smokers indicate in surveys that they intend to quit, but they may make these statements independent of any actual quit intentions. As a result,

<sup>52</sup> S. Sutton, et al., *Explaining Smokers' Decisions to Stop: Test of an Expectancy-value Approach*, *Social Behavior* 2(1), 35-49, at 47 (1987) ("Furthermore, responses to the intention items may have been influenced by a desirability or demand effect, with some smokers perhaps feeling that they should say that they intend to try.")

<sup>53</sup> J. R. Hebert, et al., *Social Desirability Bias in Dietary Self-Report May Compromise the Validity of Dietary Intake Measures*, *International Journal of Epidemiology*, 24(2), 389-398 (1995).

<sup>54</sup> L. Kozlowski, et al., *What Researchers Make of What Cigarette Smokers Say: Filtering Smokers' Hot Air*, *Lancet* 315 (8170), 699-700, at 699 (1980). See also Giovino et al., *Trends in cigarette smoking cessation in the United States*, *Tobacco Control* 2(S), S3-S10, at S9 (1993) ("In 1991, 76 percent of current smokers stated that they wanted to quit, and the number hasn't changed much over time. Answering 'no' to this question is probably a socially unacceptable answer. We will need to consider that in our deliberations.")

stated intentions in this context may be meaningless. The object of any study should be to determine which informational interventions will lead to actual quit behavior, not stated quit intentions. To achieve that objective, one needs to use a survey with a longitudinal capability that focuses on actual behavior.

20. Designing a survey that attempts to predict whether exposure to plain packaging discourages initiation of smoking among youth and former smokers involves still further methodological considerations. Again, the design would need to follow a group of non-smoking youth and former smokers over time and, controlling for variables associated with smoking among each of those two groups, determine whether exposure to the stimuli health messages, all else being equal, predicted initiation among each of these populations, respectively. It is appropriate to have a control group that is not exposed to the stimuli, so as to distinguish the effect of the different warnings from the influence that arises from having smoking risks highlighted by the survey, itself.
21. Another significant limitation applies to an attempt to obtain through a survey information about future behaviors related to tobacco use. Quitting smoking may involve a series of actions that should be monitored to ensure that respondents follow through on their quit intentions. In his *Lancet* article cited above, Dr. Kozlowski also reports the results of a Philadelphia smoking cessation effort in which only 5 percent of those who expressed an interest in attending a smoking-cessation clinic actually did so (at 699).<sup>55</sup> The ideal way to control for the discrepancy between stated quit intentions and actual quit behavior is to measure what smokers actually do, not what they say, in response to questions about future tobacco use.
22. The plain packaging studies fail to examine actual behavior.

<sup>55</sup> Similar estimates are cited by Drs. Prochaska and Goldstein for a different smoking-cessation effort. J. Prochaska & M. Goldstein, *Process of Smoking Cessation: Implications for Clinicians*, *Clinics in Chest Medicine* 12(4), 727-735, at 729 (1991) ("In one of the largest HMOs in the Northwest, smokers were surveyed, and 70 percent to 80 percent said they would take advantage of free self-help programs. After an intensive publicity campaign, 4 percent requested the action-oriented materials."). More recent studies have made similar observations about the disconnect between stated smoking intentions and concrete quit efforts. M. Goldstein, *Bupropion Sustained Release and Smoking Cessation*, *Journal of Clinical Psychiatry* 59(S.4), 66-72, at 66 (1998) ("Although approximately 70 percent of current smokers say they want to quit smoking, only about 20 percent are actively attempting to do so.")

## Conclusion

23. In conclusion, research designed to assess the possible effects of plain pack policies should i) adopt sound survey methodologies, ii) obtain a baseline measure of risk beliefs, iii) provide cigarettes in packaging and frequency of use that closely follows what will be experienced in practice, iv) assess risk beliefs after receiving the warnings in a plain pack environment and ascertain whether the plain presentation of the pack and the warnings address informational inadequacies, and v) explore the likely effects on smoking behavior and public health based on an actual field experiment in which the effects of plain packs on smoking behavior are monitored. Unfortunately, the available research has not met these standards, as it has fallen short on almost all of these dimensions.
24. As discussed, although studies may have inherent limitations given the artificial attempt to simulate actual consumer decisions, the specific studies that I assess below have even more fundamental shortcomings than these inherent limitations.

### 2. Discussion of Specific Studies of Plain Packs and Warnings Efficacy, Including Its Impact on Health Risk Information

25. Here I will consider some of the more prominent studies of plain packs that are claimed to establish that warnings are more effective on plain packs.

#### a) Beede and Lawson (1992)

26. One of the first studies often cited in support of plain packs is the study of adolescent children in New Zealand by Beede and Lawson (1992).<sup>56</sup>
27. In this study, the sample was a convenience sample of 568 adolescents that was not representative. As with many other plain packs studies, the experimental design was a test of branded packs including additional information versus plain packs, which the researchers modeled on generic products. The study utilized focus group discussions followed by individual interviews with the focus group participants. Consequently, all data are contaminated by the group discussions led by the focus group moderator. There are no independent observations that can be used for

<sup>56</sup> P. Beede, and R. Lawson, *The Effect of Plain Packages on the Perception of Cigarette Health Warnings*. Public Health 106(4), 315-322 (1992).

purposes of scientific tests. As discussed above, such focus group studies yield no meaningful data because all of the responses are influenced by the group discussions and the comments by the focus group moderator.

28. The authors found a greater unaided and aided recall of ten health warnings for the plain packs, with modest discrepancies such as 74 percent recall for plain packs versus 64 percent recall for regular packs. These differences were concentrated among U.S. brands that were not familiar to the respondents. Consequently, the effects that would be observed for domestic brands would be less because people can process and recall the warning information on familiar domestic packaging more readily. Differences in recall rates also do not imply that there are any differences in risk beliefs for different kinds of packs. Even taken at face value, this study provided no evidence that plain packs were more successful in altering risk beliefs or smoking behavior.
29. Moreover, any possible effect of plain packs on recall rates has not generalized to other experimental situations. Germain et al. (2010) tested the recall of warnings for current cigarette packs modeled on the three most popular Australian brands and four plain pack variants that differed in terms of their format of brand names and fonts. All treatments included the same graphic health warning on the top, and one plain pack also included a large graphic health warning. Somewhat remarkably, despite the various packaging differences there were no statistically significant differences among the packs in the recall of the graphic health warning information: "Overall, 58% of the sample correctly recalled the graphic health warning and this did not vary by pack condition ( $p > .10$ )."<sup>57</sup>

**b) Rootman and Flay (1995)**

30. The ease of seeing the warnings rather than the more fundamental effect of plain packs on risk beliefs was also the focus of the study by Rootman and Flay (1995).<sup>58</sup>

<sup>57</sup> D. Germain, et al., *Adolescents' Perceptions of Cigarette Brand Image: Does Plain Packaging Make a Difference?* *Journal of Adolescent Health* 46(4), 385-392, at 389 (2010).

<sup>58</sup> I. Rootman and B. Flay, *A Study on Youth Smoking: Plain Packaging, Health Warnings, Event Marketing and Price Reductions*. University of Toronto, University of Illinois at Chicago, York University, Ontario Tobacco Research Unit, Addiction Research Foundation (1995).

31. Their study consisted of focus groups plus classroom surveys for students in grades 7 and 9 in Ontario and Chicago. The authors noted that warnings are prominent and remembered by four out of five Ontario students in grades 7 and 9, regardless of whether they are on plain or regular packaging, demonstrating that warnings are seen and assimilated. Furthermore, while the percentage remembering the warnings in Rootman and Flay's (1995) Canadian classroom study was greater in the Canadian study of plain packs versus regular packs (82 percent versus 62 percent), the authors found no difference between plain packs and regular packs when the study was replicated using a Chicago sample.<sup>59</sup> The students did indicate a preference for regular packs over plain packs, but this result implies nothing whatsoever about whether plain packs will make the warnings more effective and promote public health.

c) Goldberg (1999)

32. Goldberg's (1999) study of plain packs focused on the recall of warnings but still does not address risk beliefs.<sup>60</sup>
33. This study represents a more refined experimental test than in an earlier study by Goldberg et al. (1995), which included two noteworthy research components in addition to a literature review.<sup>61</sup> First, in the 1995 study, the authors undertook a national survey of 1,200 teenagers at mall intercepts and asked them to assess what effect plain and generic packaging would have on smoking rates. The results suggested that the effects would be small since only 30-40 percent of the sample thought that plain and generic packaging would make a difference, and the size of the likely effects for those indicating a difference were believed to be small in magnitude.<sup>62</sup> Second, the authors undertook a recall and cognition experiment in which teens who viewed plain packs and regular packs on a computer screen were more likely to recall the warning, "Smoking can kill you", on the plain pack.<sup>63</sup>

<sup>59</sup> See *id.*

<sup>60</sup> M. Goldberg, *The Effect of Plain Packaging on Response to Health Warnings*, *American Journal of Public Health* 89(9), 1434-1435 (1999).

<sup>61</sup> M.E. Goldberg, et al., *When Packages Can't Speak: Possible impacts of plain and generic packaging on tobacco products*. Expert Report Prepared for Health Canada, Ottawa: Health Canada (1995).

<sup>62</sup> *Id.*, at 7.

<sup>63</sup> *Id.*, at 10.

This study can be viewed as a limited pilot exploration for the Goldberg (1999) study described below.

34. In the 1999 study, using a mall intercept in Canada to recruit a sample of teens aged 14-17, Goldberg examined the recall of warnings for regular packs versus plain white packs. Subjects viewed the "packs" on computer screens. While plain packs were associated with increased recall of two warnings ("smoking can kill you", "cigarettes are addictive"), there was a 14 percent drop in recall rates for the warning pertaining to fatal lung disease for non-smokers. For this risk of smoking, plain packs decreased the recall of the health hazard.
35. In addition to providing very mixed results, the findings do not bear on the more fundamental issue of how effective plain packs would be compared to regular packs when people have repeated exposure to the packs and examine all sides of an actual pack rather than a computer image. In addition, in the event of any differences in the rates of recall, the study does not demonstrate whether such differences will translate into differences in risk beliefs and smoking prevalence, for the reasons explained above about the limited informational value of recall rates in the absence of an information deficit.

d) **Hammond et al. (2009)**

36. The study of U.K. adults and youths by Hammond et al. (2009) focused on risk beliefs and likewise did not produce evidence in support of plain packs.
37. The study utilized an Internet sample of 516 adult smokers and 806 youths aged 11 to 17 with a mean age of 14.6.<sup>64</sup> The sample participants viewed pairs of cigarette packs on the computer screen and rated them on various dimensions. A principal question of interest from the standpoint of plain pack warnings pertains to health risk beliefs: "If you were to choose between them, which one would you buy if you were trying to *reduce the risk* to your health?" The study included several pairwise comparisons, four of which involved plain packs versus regular packs without

<sup>64</sup> D. Hammond et al., *Cigarette pack design and perceptions of risk among UK adults and youth*, European Journal of Public Health, 19(6), 631-637 (2009). The youths' parents approved their participation, and the authors do not disclose what information was provided to the parents about the study. Whether the responses by youths are meaningful was not discussed in the article, and the authors present no evidence to suggest that the survey responses by youths should be taken at face value.

additional confounding complications such as including descriptors such as "smooth" on some packs but not others. Note that even the very weak results discussed below will overstate any relative impact of plain packs due to the influence of demand effects that arise in a within-subject experimental design.

38. Examination of the study results indicates that most respondents did not see any difference in the health risk of plain packs. The percentages for adults (youths) were as follows:
- For the Mayfair king size white background plain packs, 75 percent (71 percent) saw no difference in the health risk, 20 percent (17 percent) preferred the plain packs, and 5 percent (12 percent) preferred the regular packs.
  - For the Mayfair king size brown background plain packs, 78 percent (71 percent) saw no difference in the health risk, 11 percent (13 percent) preferred plain packs, and 11 percent (16 percent) preferred regular packs.
  - The results for the Lambert and King white background versus regular packaging had 77 percent (69 percent) finding no difference in the health risk, 17 percent (16 percent) preferring plain packs, and 6 percent (15 percent) preferring regular packs.
  - For the brown background Lambert and Butler packs, 75 percent (67 percent) saw no difference in the health risk, 9 percent (13 percent) preferred plain packs, and 15 percent (20 percent) preferred regular packs.
39. For all four sets of comparisons, about three-fourths of all respondents expressed no preference, and the remainder of the respondents is divided across the two types of packs to degrees that usually are not statistically significant.
40. The study also explored other comparisons of plain packs and regular packs with respect to lower tar, smoother taste, more attractive, easier to quit (for adult sample), and choice if going to try smoking (youths). Similar to the health risk ratings, over half of the respondents saw no difference on any of these dimensions in all but one instance. The only exception pertained to the attractiveness rating for which just under half – 40 percent to 49 percent – expressed no difference between the packs. For those who thought that plain packs were less attractive, the study



provides no insight into whether a person would be more likely to quit or less likely to try smoking if the only choices in the market were plain packs. Indeed, in the case of youths, the question regarding pack preference was conditional on wanting to smoke so that the findings provide no evidence that plain packs will discourage youth smoking.

e) Hoek et al. (2011)

41. In a New Zealand study of plain packs using a convenience sample of young adult smokers, Hoek et al. (2011) elicited from respondents an ordinal ranking of the attractiveness of different packs as well as a cessation index.<sup>65</sup>
42. Removing branding and increasing the size of the warnings would decrease the attractiveness of cigarettes and increase their assessed likelihood of cessation-related behaviors.<sup>66</sup> However, the finding with respect to warning size is inconsistent with the study below by Wakefield et al. (2012), which found no effect of increasing the warning percentage on the front of the pack from 30 percent to 70 percent, and then to 100 percent.<sup>67</sup> This may be explained by the effect that this study asked participants to compare a branded pack with a 30% graphic health warning with a plain pack with a larger 75% graphic health warning thus not allowing differentiation between the effects of larger warnings and plain packaging.
43. The Hoek et al. (2011) study did not address risk beliefs but did develop a cessation index for which plain packs scored higher.<sup>68</sup> However, cessation intentions may change once all packs sold are plain packs. The authors themselves cautioned that the cessation results may be problematic and not reflective of likely behavior since the subjects in the control pack treatment gave higher stated cessation rates than are reflected in current cessation behavior.<sup>69</sup> As with other such hypothetical experiments and overstatements of quit intentions, there is a potential influence of demand effects in which respondents give the answers that they believe the

<sup>65</sup> J. Hoek, et al., *Effects of dissuasive packaging on young adult smokers*. *Tobacco Control* 20(3), 183-188 (2011).

<sup>66</sup> *Id.*, at 183.

<sup>67</sup> M. Wakefield et al., *Do Larger Pictorial Health Warnings Diminish the Need for Plain Packaging of Cigarettes?*, *Addiction*, 107(6), 1159-1167 (2012).

<sup>68</sup> J. Hoek et al., *Effects of dissuasive packaging on young adult smokers*. *Tobacco Control* 20(3) 183-188 (2011).

<sup>69</sup> *Id.*, at 187. The authors observe that "...respondents' use of the Juster Scale to estimate likely cessation behaviours was higher for the control pack than suggested by current behavior..." and that "...additional research is required to estimate the predictive validity of the Juster Scale when used to estimate population health behaviours..."

researchers want to hear. Such behavior will generate apparent results that will not actually be realized if a plain packs policy is adopted.

f) **Munafò et al. (2011)**

44. Another way to assess what people are reading on a pack is to use an eye-tracking study such as that of Munafò et al. (2011).<sup>70</sup>
45. Such studies monitor what individuals are looking at on a pack. An eye-tracking study will produce apparent effects of the plain pack approach almost tautologically as plain packs have less to read so that there will be increased visual attention to the warning (i.e., the test measure of attention to different information is based on the number of saccades in the eye tracking test). Thus, even if there were an apparent effect of plain packs on the number of saccades in the eye tracking test, such a difference does not imply that people do not receive and process the warning information and give that information sufficient attention. Thus, a lower score for regular packs consequently would not imply that there is information overload or that the risk information is not being conveyed adequately on branded packs.
46. However, the results of the study failed to indicate any advantage of plain packs for regular smokers even though the nature of the eye tracking test would make the study predisposed to finding such an effect for plain packs. This U.K. study used a small convenience sample of 15 non-smokers, 14 weekly smokers, and 14 daily smokers. Experimental participants viewed images on an LCD screen rather than packs. The experiment analyzed the differences in eye movements and the degree of attention paid to the health warnings. A major finding of the study is that for daily smokers there was no effect whatsoever of viewing plain packs rather than regular packs. This result suggests that familiarity with cigarette packs eliminates any apparent effect of plain packs in the attention devoted to the warning information.
47. This study by Munafò et al. (2011) is perhaps most noteworthy for their comment on the research by others.<sup>71</sup> They concluded: "Our results are the first to show an

<sup>70</sup> M. Munafò, et al., *Plain Packaging Increases Visual Attention to Health Warnings on Cigarette Packs in Non-Smokers and Weekly Smokers but Not Daily Smokers*. *Addiction* 106(8), 1505-1510 (2011).

effect of plain cigarette packaging on objective measures of behaviour.” It should be emphasized that this concept of “behaviour” is quite limited because it does not pertain to beliefs or actions. Accordingly, such eye tracking studies have quite limited value and provide little insight into whether plain packs will achieve any of the avowed objectives of plain packs. However, the study is noteworthy in emphasizing how little evidence there was in support of plain packs. Put somewhat differently, according to the authors of the study, as of 2011, no studies had ever demonstrated a behavioral effect of plain packs. Moreover, the authors concluded with the type of cautionary observation that pertains not only to their study but to all other studies of plain packs: “[i]t is unclear whether increased visual attention to health warnings will translate to differences in actual smoking behaviour.”

**g) Wakefield et al. (2012)**

48. The apparent differences between regular packs and plain packs in terms of attractiveness and risk beliefs were the focus of a study by Wakefield et al. (2012).<sup>71</sup>
49. The study used a convenience sample of Australian adult smokers. Altering the percentage of the front of a plain pack that was devoted to the warning (30 percent, 70 percent, and 100 percent) did not have any significant effect on whether the cigarettes got a positive rating by respondents. Plain packs in general did have a lower positive rating than regular packs, as one would expect given the similarity of plain packs to generic brands. A key matter of concern is whether people think that plain packs are more risky than regular packs because the warning is more prominent. Using a 10 point scale with higher scores indicating higher risk to characterize the negative harm characteristics of the cigarettes, the authors found a rating of 7.7 for branded packs for all warning sizes (30 percent, 70 percent, and 100 percent) versus 7.6 for plain packs with 30 percent of the front devoted to the warning, 7.4 for plain packs with 70 percent of the front devoted to the warning, and 7.8 with 100 percent of the front devoted to the warning. Branded and plain

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<sup>71</sup> See *id.*

<sup>72</sup> M. Wakefield, et al., *Do Larger Pictorial Health Warnings Diminish the Need for Plain Packaging of Cigarettes?*, *Addiction* 107(6), 1159-1167 (2012).

packs do not materially differ on the negative harm dimension, and indeed, based on the point estimates, regular packs are viewed as more risky rather than less risky in two of the three instances.

50. Moreover, the percentage of the pack devoted to the warning had no material effect on the negative harm characteristics rating. The results of this study consequently call into question the relevance of studies that focus simply on the attractiveness of the packaging and do not delve further to examine how plain packs and warning size affect risk beliefs.

h) **Maynard et al. (2013)**<sup>73</sup>

51. This article reports on the results of an eye tracking study that utilized a convenience sample of 85 adolescents aged 14-19 years. The study monitored the number of eye movements to health warnings and the number of eye movements to the branding for both plain packs and branded packs. What the study did not seek to measure is what the effect of packaging was on either the knowledge of the risks of cigarettes or risk beliefs. The study was not concerned with any effect of plain packs on smoking prevalence rates.
52. The authors present the findings of their study in relative terms that provide a distorted assessment of the results. The authors found "more eye movements to health warnings than branding on plain packs, but an equal number of eye movements to both regions on branded packs." One might expect subjects to have more movements to the branding on a branded pack. But looking at a branded pack does not imply that the subjects did not look at the warning information on a branded pack. Even if eye movements are an appropriate measure of reading and understanding of a warning, what is more consequential is the total amount of movements devoted to warnings not the number of movements relative to looking at the brand.
53. There was actually no statistically significant difference between the number of eye movements per pack for the health warnings on the branded packs (14.7 with a

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<sup>73</sup> Maynard, O.M., Munafo, M.R., and Leonards, U. (2013). "Visual Attention to Health Warnings on Plain Tobacco Packaging in Adolescent Smokers and Non-Smokers," *Addiction*, 108(2): 413-419, doi: 10.1111/j.1360-0443.2012.04028.x.

confidence interval from 13.8 to 15.4) and the plain packs (14.9 with a confidence interval from 14.0 to 15.4). Indeed, for never-smokers, there were 16.5 eye movements for health warnings on branded packs as compared to only 15.4 movements for plain packs.

54. In short, this eye tracking study provides no evidence that warnings on plain packs are more effective in inducing people to read the warning information on cigarette packaging.

i) Rousu and Thrasher (2013)<sup>74</sup>

55. This study involved an experimental auction in which subjects bid for different cigarette packs. The authors "find that pictorial labels and pictorial labels accompanied by plain packaging are more effective at reducing demand for cigarettes than only a front text warning label."
56. Even taken at face value, this result does not provide support for the efficacy of plain packaging or any effect on smoking prevalence rates. The study never isolated the incremental effect of plain packaging on the bids in the auction. Rather, plain packaging was always combined with pictorial labels, which the experimental subjects compared to cigarette packs with a front text label. Thus, two characteristics of the packs changed simultaneously in this comparison—plain packaging and the use of a pictorial label—so that it is not feasible to isolate the influence of plain packaging as compared to the packs with a front text label and standard packaging.
57. In an auction setting in a cigarette sales regime in which plain packs are viewed as generic cigarettes, one would expect the bidding for cigarettes in plain packs to be reduced.

j) Moodie and Mackintosh (2013)<sup>75</sup>

58. This article elicited cognitive and emotional responses to plain packs using a sample of young adult women who used their own cigarette packs for one week and

<sup>74</sup> Rousu, M., and Thrasher, J. (2013). "Demand Reduction from Plain and Pictorial Cigarette Warning Labels: Evidence from Experimental Auctions." *Applied Economic Perspectives and Policy* (2013, Vol. 35, No. 1, pp. 171-184. Doi:10.1093/aep/pps049.

<sup>75</sup> Moodie, C.S. and Mackintosh, A.M. (2012). "Young Adult Women Smoker's Response to Using Plain Cigarette Packaging: A Naturalistic Approach." *BMJ Open* 2013; 3:e002402. Doi:10.1136/bmjopen-2012-002402.

plain cigarette packs for one week. The authors explored attitudes towards the cigarettes such as pack perceptions and feelings. Whether plain packs would affect smoking prevalence rates was not addressed in the study, as the focus was limited to various subjective attitudes.

59. The subjects were less comfortable displaying the experimental plain packs, as one might expect given that they are differentiated from all currently marketed cigarettes and are not the respondents' chosen brand.
60. Although respondents claimed that they devoted somewhat more attention to the health warnings on the experimental plain packs, the most pertinent aspect of the study is the set of results pertaining to the salience and credibility of the health warnings. Were the warnings noticed, viewed as being serious, and believable? The composite score on these dimensions for what the authors term the "overall warning response" indicated no statistically significant differences between the experimental plain packs and the respondents' regular packs.

**k) Guillaumier, Bonevski, and Paul (2014)<sup>76</sup>**

61. This study reports on the results of six focus groups in Australia in which participants discussed the efficacy of television campaigns and plain cigarette packs after the plain packaging requirements had gone into effect. Thus the study did not have an experimental design and did not formally test any hypothesis, but only provided a sense of the groups' reaction to plain packs. The study did not demonstrate any effect of plain packs on smoking prevalence rates.
62. In focus groups conducted after the implementation of plain packaging, participants judged that the change had little effect on their smoking behavior, other than at time of purchase having to "double check whether they're giving you the right cigarettes"(Group 4)." Most participants said they generally 'do not even look at the warning' (Group 2), others indicated 'they don't affect me at all. I get desensitised really quickly' (Group 5). While most participants admitted they noticed the new health warning labels that accompanied plain packaging at first, the

<sup>76</sup> Guillaumier, A., Bonevski, B., and Paul, C. 2014. "Tobacco Health Warning Messages on Plain Cigarette Packs and in Television Campaigns: A Qualitative Study with Australian Socioeconomically Disadvantaged Smokers. Health Education Research Advance Access, June 25, 2014, doi:10.1093/her/eyu037.

idea of being desensitized to the graphic images in health warning labels was repeatedly mentioned. Even on a retrospective basis the participants did not claim that plain packs altered their smoking behavior.

**Conclusions on Implications for Plain Packs and Warnings Efficacy**

63. The findings from the studies reviewed above provide no basis for concluding that plain packs will make warnings more effective. The main results of these studies take the form of plain packs being less attractive than regular packs, which is exactly what one would expect given that plain packs resemble cheaper generic brands. Only a small number of plain pack studies have specifically focused on the effect of plain packs on risk beliefs, and these studies indicate that people think that smoking is dangerous whether presented in plain packs or regular packs.

## APPENDIX B

### Analysis of the Studies Allegedly Supporting the Conclusion that Plain Packaging Reduces the Potential for Pack Colors to Undermine the Effectiveness of Health Warnings

#### a) Hammond and Parkinson (2009)

1. Hammond and Parkinson (2009) asked subjects in an Ontario mall intercept to rate different experimental brands based on tar, taste, and health on an ordinal scale from 0 to 9.<sup>77</sup> Packs with a lighter color, white symbol, and charcoal filter had lower scores on these dimensions. The magnitudes of the differences are not known since the ordinal scale does not permit such judgments. The questions with respect to risk beliefs that could have been addressed were not. This study did not address individuals' understanding of the warning information for packs with different colors, or the absolute risk beliefs and the effect on smoking behavior of package color. In the absence of such effects, these experimental results are largely irrelevant. At present, cigarettes are sold in packs with a wide range of colors. Neither this study nor any other study has demonstrated a significant relationship between pack color and risk beliefs or smoking behavior.

#### b) Moodie and Ford (2011)

2. Many pack colors had appeal in a U.K. study of young adults and cigarette packaging by Moodie and Ford (2011).<sup>78</sup> The authors used a series of focus groups with 54 young adult smokers aged 18-35 years, which is an approach that has all the attendant limitations of focus group studies as discussed above in Appendix A. The study did not elicit responses to specific questions or examine risk beliefs but instead focused on qualitative responses regarding feelings about smoking and perceptions of packs. Respondents associated colored packs with different types of cigarettes, such as green indicating menthol. However, when considering plain packs in dark brown color, younger males in general did not think that plain packs would alter their smoking behavior, and similar results were found for older males:

<sup>77</sup> D. Hammond and C. Parkinson, *The impact of cigarette package design on perceptions of risk*, *Journal of Public Health* 31(3), 345-353 (2009).

<sup>78</sup> C. Moodie and A. Ford, *Young Adult Smokers' Perceptions of Cigarette Pack Innovation, Pack Colour and Plain Packaging*, *Australasian Marketing Journal* 19(3), 174-180, 2011.



"All older males were adamant that the introduction of plain packaging would not alter their smoking behaviour..." Most females likewise did not think that plain packs would alter smoking behavior.

**c) Doxey and Hammond (2011)**

3. The studies of pack colors did not single out any role of particular pack color in undermining the effect of warnings, but there is a study of whether pink appeals to women. Doxey and Hammond (2011) used a Canadian convenience sample of 512 women between the ages of 18 and 25 to analyze the effect of pack colors on brand preferences.<sup>79</sup> They found that pink branded packs were more attractive to the female sample than white packs, *i.e.*, no colors, as in the colors for generic packs. Influencing attractiveness did not lead to any confusion about the riskiness of the cigarettes. Ratings of attractiveness did not imply differences in risk beliefs. The percentage of respondents in any variant of their study who thought that cigarettes posed "a little" or "a lot" less health risk than other brands is close to zero. And none of the differences in risk assessments across brands involving standard packs as compared to plain packs were statistically significant.

**d) Bansal-Travers et al. (2011a,b)**

4. Unlike the study by Doxey and Hammond (2011), which asked people to assess the riskiness of the packs,<sup>80</sup> Bansal-Travers et al. (2011a,b) asked people to choose packs if they were concerned with health.<sup>81</sup> The Bansal-Travers et al. (2011a) study utilized a convenience sample at a U.S. mall intercept consisting of 197 adult smokers and 200 non-smokers.<sup>82</sup> The study participants chose among 12 sets of packs. Not surprisingly, there was a preference for branded packs over plain white packs. This result is consistent with plain packs resembling generic packs in the current U.S. market.

<sup>79</sup> J. Doxey and D. Hammond, *Deadly in Pink: The Impact of Cigarette Packaging among Young Women*, *Tobacco Control* 20(5), 353-60 (2011).

<sup>80</sup> See *id.*

<sup>81</sup> M. Bansal-Travers, et al., *The Impact of Cigarette Pack Design, Descriptors, and Warning Labels on Risk Perception in the U.S.*, *American Journal of Preventive Medicine* 40(6): 674-682 (2011a); M. Bansal-Travers, et al., *What Do Cigarette Pack Colors Communicate to Smokers in the U.S.?*, *American Journal of Preventive Medicine* 40(6), 683-689 (2011b).

<sup>82</sup> M. Bansal-Travers, et al., *The Impact of Cigarette Pack Design, Descriptors, and Warning Labels on Risk Perception in the U.S.*, *American Journal of Preventive Medicine* 40(6): 674-682 (2011a).

5. The real question of interest is how respondents perceive the riskiness of the packs. When asked which cigarettes they would buy if trying to reduce the risks to their health, the results were split between branded packs (46 percent) and plain packs (48 percent), with missing observations (6 percent) constituting the remainder. For the key matter of concern, plain packs offer no material difference. And the study's results found that the cigarettes with the most tar were branded packs (54 percent) rather than plain packs (37 percent), which suggests that regular packs better communicate a key risk-related measure of the hazards of smoking. Only on smoother taste and overall brand preference independent of price did the branded packs have the edge over plain packs.
6. The companion study by Bansal-Travers et al. (2011b) focused on differences in colors. The convenience sample of 193 subjects viewed cigarettes online.<sup>83</sup> Respondents were asked to match colors with descriptors such as menthol. This matching process is more a test of the knowledge of the cigarette market than a measure of risk awareness. White packs were most associated with perceptions of safety. In this study and the predecessor, the authors never address the fundamental issues. How would people respond to actual cigarette packs rather than pictures of the fronts of the pack on a computer screen? Did respondents read the warning on the packs? Did the pack color interfere in any way with their processing of the risk information? If the person were to smoke cigarettes regularly, what would the effect of pack color be? And finally, what are their risk beliefs regarding smoking both before and after viewing the different packs?

#### Conclusion

7. The findings from the studies reviewed above provide no basis for concluding that pack colors affect the understanding of warnings, risk beliefs, or smoking behaviors.

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<sup>83</sup> M. Bansal-Travers, et al., *What Do Cigarette Pack Colors Communicate to Smokers in the U.S.?*, *American Journal of Preventive Medicine* 40(6): 683-689 (2011b).

## APPENDIX C

### Analysis of Plain Packaging Studies and Their Failure to Examine Drivers of Initiation

1. The study of third party opinions of plain packs by Beede and Lawson (1991) consisted of 80 focus group discussions in which New Zealand adolescent students participated in discussions of plain packs.<sup>84</sup> As discussed in my review of the studies in Appendix A, focus groups are at best exploratory efforts with no scientific validity because any results from such studies are subject to group influences in the focus group discussions as well as influences based on input from the focus group leader. Given the limits of the study design, the authors reported no statistical tests or any formal analysis of the strength of the influences being explored since such tests would not have meaning. The article instead reported on group discussions that included the opinion that plain packs would discourage smoking initiation among children since plain packs were viewed as dull and boring.
2. It is noteworthy that the discussions did not touch on whether they personally would be less likely to start smoking, which is more pertinent than whether others would start smoking. We also don't know how prevalent the view with respect to plain packs and smoking initiation was or what proportion of the participants had this view. Furthermore, such judgments were comparative statements made relative to the current cigarette market. While plain packs may be viewed as relatively dull compared to other cigarette packaging, they would not be relatively dull if all cigarettes are sold in plain packs. Thus, there may not be any effect on smoking initiation once all cigarettes have the same packaging so that current regular packs are not the frame of reference.
3. The study by Donovan (1993) used a convenience sample in Australia, in this case a mall intercept of 11-13 year olds accompanied by their parents.<sup>85</sup> The study involved showing participants various different kinds of packaging including

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<sup>84</sup> P. Beede and R. Lawson, R, *Brand Image Attraction: The Promotional Impact of Cigarette Packaging*, *New Zealand Family Physician* 18, 175-177 (1991).

<sup>85</sup> R. Donovan, *Smokers' and Non-Smokers' Reactions to Standard Packaging of Cigarettes*. University of Western Australia (1993).

standard packaging, current packaging, and current packaging in which warnings cover the entire back of the pack. Subjects were asked what effect they thought the packaging would have on other people's decisions to smoke. Most respondents (51.5 percent) thought that standard packaging would make no difference, with 13 percent thinking that all/most would smoke less and 25 percent thinking some would smoke less. Among non-smokers, there was no significant difference in the ratings for current packs and packs with expanded warnings. Such studies are an inappropriate research approach for exploring the possible influence of plain packs or expanded warnings since there is no exploration of how these changes affect the factors that determine smoking behavior. Rather, the researchers are taking the unscientific shortcut of trying to ask children for the answer regarding how they think plain packs and increased warnings will affect other people's decisions.

4. Two Canadian studies examining plain packs led to results that suggest such packaging would not be influential in changing smoking behaviors. Both studies focused on the earlier warnings era of 1994-1995 so that the switch to plain packs would be a greater packaging change than introducing plain packs in the current warning environment where the warnings are bolder and more extensive. Northrup and Pollard (1995) interviewed students in grades 7 and 9 and ascertained their third party opinions of the likely effect of plain packs.<sup>86</sup> Only one-third of the students thought that people would be less likely to start smoking if cigarettes were sold in plain packs, and this response was based on students thinking that plain packs were boring, not because the warnings would be conveyed more effectively. Students shown a poster with plain packs and with regular packs were able to recall the health warning in each case so that there was no evidence of an effect on risk awareness.
5. Ontario students interviewed for the study by Rootman and Flay (1995) likewise gave only lukewarm support to plain packs.<sup>87</sup> With respect to whether plain packs would lead smokers to smoke less, 71 percent said that it would make no difference

<sup>86</sup> D. Northrup and J. Pollard, J, *Plain Cigarette Packaging and Other Tobacco Issues: A Survey of Grade 7 and Grade 9 Ontario Students*. Institute for Social Research Newsletter, York University (1995).

<sup>87</sup> I. Rootman, and Flay, B. *A Study on Youth Smoking: Plain Packaging, Health Warnings, Event Marketing and Price Reductions*, University of Toronto, University of Illinois at Chicago, York University, Ontario Tobacco Research Unit, Addiction Research Foundation (1995).

while 24 percent thought that it would. Most respondents (62 percent) thought that plain packs would make no difference in whether non-smokers would start smoking, and only 35 percent indicated that they thought plain packs would make non-smokers less likely to start.

6. A slightly different third party perspective on plain packs is the study by RBJ Health Management Associates (1993), which is even further removed from ascertaining the preferences of those likely to be affected by plain packs.<sup>88</sup> This study asked "experts" in marketing and tobacco research what factors affect youth smoking, and if they thought that packaging and plain packs may matter. Asking third parties, some of whom may have prior policy beliefs, how the members of the public in a different demographic group (*i.e.*, youths) will react to plain packs is an unreliable substitute for analyzing how people themselves will respond. Even as a survey of experts, the paper falls short because there is no reporting of the distribution of the responses of the experts or a linkage of these responses to their areas of expertise. The results are anecdotal. The article also included the caveat: "However, plain packaging may or may not affect readability or believability, depending on the content of the message itself." The study reported no empirical results.
7. Given the absence of an effect of plain packs on the efficacy of warnings or risk awareness, it is not surprising that plain packs would not decrease rates of smoking initiation. Interestingly, the studies of plain packs and smoking initiation do not even attempt to delve into the influence on risk beliefs. Indeed, they do not even inquire how the respondents might be affected by plain packs. Rather, most of the studies ask for third party opinions of how plain packs might affect other people's decisions to smoke. In addition to lacking any scientific validity, these studies do not support plain packs as an effective policy instrument for discouraging smoking initiation because they do not address the drivers of smoking initiation.

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<sup>88</sup> RBJ Health Management Associates. *Impact of Plain Packaging of Tobacco on Youth Perceptions and Behavior*. Report of Study 1, Toronto, Canada (1993).

**A Critical Analysis of Evidence that Standardised Tobacco Packaging Will  
Reduce Smoking Prevalence in the United Kingdom**

Neil McKeganey

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5<sup>th</sup> August, 2014.

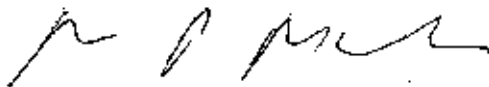
### Author Biography

Neil McKeganey B.A. (Hons), M.Sc., Ph.D., F.R.S.A. is one of the UK's leading addictions researchers. He has led and supervised applied behavioural and policy research on a diverse range of topics related to drug use, misuse and treatment over the last 25 years, including research on the determinants and impact of pre-teen drug use, evaluations of drug treatment services in the community and in prisons, links between drugs and crime, and the impact of drugs policy on treatment and criminal justice outcomes. He is the author/editor of eight published books, including *Controversies in Drugs Policy and Practice* (Macmillan, 2011) and the *A to Z of Drug Misuse and Addiction* (Macmillan, 2013). He has authored over 160 articles published in peer-reviewed journals on topics related to drug use, misuse, treatment and policy.

In 1994, McKeganey opened the Centre for Drug Misuse Research at the University of Glasgow. Since 2011, the Centre has functioned as a fully independent research company with links to a number of UK universities. In 2008, McKeganey was invited to the US White House to discuss his research on teenage cannabis use and in 2012 he was awarded the *Nils Bejerot Prize* for this contribution to international drug policy. Neil has provided consultancy support to a wide range of national and international bodies including: the United Nations Office of Drugs and Crime (UNODC), the World Health Organization (WHO), the US Department of Justice, the International Narcotics Control Board (INCB), Public Health England (PHE), the Scottish Government, the UK Medical Research Council, and the Joseph Rowntree Foundation.

McKeganey's research on the impact of drug treatment paved the way for the development of a recovery focus in UK drug treatment policy and practice and contributed to the development of new guidelines for the use of substitution treatment in opiate addiction. He regularly contributes articles on drug use to the print media, with articles appearing in *The Guardian*, *The Times*, *The Daily Telegraph*, *The Scotsman*, and *The Independent* newspapers, as well as *The Economist* magazine. He has also contributed to a diverse range of radio and television programmes on topics related to drug use and control.

Most recently, Neil has been conducting research on tobacco and nicotine use, specifically examining the roles of empirical evidence and public health advocacy in consideration of proposals to mandate the sale of tobacco products in standardised plain packaging. He is currently assessing psychosocial and product-related predictors of current smokers' experimentation, long-term adoption and rejection of tobacco harm reduction (THR) products, such as electronic cigarettes.



Neil McKeganey, 5<sup>th</sup> August, 2014.



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## 1. Introduction to the Critical Analysis

According to the World Health Organisation's (2004) *European Strategy for Smoking Cessation*, the vast majority of projected deaths that will be caused by smoking in the next 25 years will be among current smokers who continue to smoke. Therefore, the number of smoking-related deaths will rise if no current smokers quit or if there is solely a reduction in the number of young non-smokers taking up smoking. Health experts are therefore in universal agreement that increasing smoking cessation in adults is the single most important action that can be taken to decrease smoking deaths and improve public health in the short to medium term.

Even in Western countries, where tobacco control policies are well advanced, tobacco taxation is extremely high, and the health consequences of smoking are extensively advertised and well understood, cigarette smoking remains highly prevalent. Though adult smoking prevalence has declined year-on-year in Great Britain since 1998, approximately 10 million adults (aged 16+), or one-sixth of the total population, smoked cigarettes in 2010 (Action on Smoking and Health, 2013). Given the significant health consequences associated with habitual cigarette smoking, policies aimed at the prevention of smoking should ideally focus on (i) encouraging and assisting those who have already started smoking to quit at the soonest opportunity; (ii) preventing people, especially children, from starting smoking; (iii) motivating and assisting those who have quit to avoid relapsing; (iv) reducing exposure to environmental smoke, (v) and reducing tobacco-related harm in those who smoke who repeatedly fail to quit or are unwilling to quit use of tobacco and/or nicotine-containing products at present.

Mandating the sale of all tobacco products in 'standardised packaging', a term

used interchangeably with 'plain packaging', has been proposed by many tobacco control researchers as an additional measure of tobacco control that would, primarily by reducing the visual attractiveness/appeal of tobacco smoking, substantially reduce the rate of smoking initiation among young people and increase the rate of quitting among current smokers. Sir Cyril Chantler was recently requested by the UK Government to review the evidence for the hypothesis that standardised tobacco packaging, if implemented as part of a comprehensive programme of tobacco control, would reduce smoking prevalence in the UK. In his report to the Secretary of State for Health in April, 2013, Sir Cyril concluded:

*Having reviewed the evidence it is in my view highly likely that standardised packaging would serve to reduce the rate of children taking up smoking and implausible that it would increase the consumption of tobacco. I am persuaded that branded packaging plays an important role in encouraging young people to smoke and in consolidating the habit irrespective of the intentions of the industry. Although I have not seen evidence that allows me to quantify the size of the likely impact of standardised packaging, I am satisfied that the body of evidence shows that standardised packaging, in conjunction with the current tobacco control regime, is very likely to lead to a modest but important reduction over time on the uptake and prevalence of smoking and thus have a positive impact on public health. (Chantler, 2014: 6)*

It is unclear by what route Sir Cyril Chantler was able to determine that the plain packaging policy would produce a "modest" effect size given the acknowledged absence of the very data upon which such an effect size would ordinarily be calculated, nor indeed how the envisaged "modest" effect size translates into units of measurement that are meaningful to society – e.g. the number of lung cancer cases

avoided, reduction in chronic obstructive pulmonary disease (COPD) cases, reduction in respiratory symptoms, quality-adjusted life years gained as a result of plain packaging etc. Sir Cyril Chantler's optimistic assessment of the likely impact of the plain packaging policy was, it seems, largely based on what he considered to be a wealth of extra-scientific data (i.e. verbal reports by study participants) in which it is claimed that branded packaging promotes smoking in at least three ways: (i) branded tobacco packaging increases the appeal of smoking to non-smokers, especially children, (ii) branded packaging dis-incentivises quit attempts among current smokers, (iii) and branded packaging acts as cues to relapse among quitting smokers. In contrast, current smokers state that they would be more likely to think about quitting, and young non-smokers who are considering or curious about starting smoking would be significantly discouraged from starting, if cigarettes were sold in standardised tobacco packaging. This is apparently because: (i) standardised packaging is rated by both current smokers and young non-smokers as considerably less appealing/attractive than branded packaging; (ii) standardised packaging increases visual attention to pack displays of pictorial and text warnings about the health risks associated with smoking; (iii) and standardised packaging, unlike branded packaging, does not mislead people about the potential for harm associated with tobacco smoking.

This contribution to the UK Government's *Consultation on the Introduction of Regulations for Standardised Packaging of Tobacco Products* was requested by *Herbert Smith Freehills LLP* on behalf of *British American Tobacco UK Limited*. The arguments for and against tobacco plain packaging represent the latest controversy in tobacco control with tobacco control researchers, and public health advocates, arguing passionately for the policy to be adopted within the UK and elsewhere. The policy

itself has grown out of tobacco control advocacy and was first articulated in New Zealand in 1989. Since that time, plain packaging has been a policy in search of supportive evidence rather than a policy that has grown out of a body of evidence that demonstrates its effectiveness in changing smokers' behaviour. However, public policy should be based not on advocacy and passionate argument but on the best available evidence. With this in mind, this submission critically reviews the evidential case for requiring tobacco products to be sold only in standardised plain form.

The prevailing belief underpinning this policy is that a policy of standardised tobacco packaging will yield a notable reduction in smoking prevalence. Where research has been undertaken on plain and branded packaging, this has almost entirely consisted of studies that have examined smokers and non-smokers attitudes, views and subjective experience of plain and branded packs, the salience of health warnings on plain and branded packs and what smokers feel about using plain and branded packs. This body of research has not, however, shown that people smoke significantly fewer cigarettes when they are packaged in plain form, or that the overall prevalence of smoking reduces when tobacco products are packaged in plain form. The hypothesis, therefore, that plain tobacco packaging will reduce smoking prevalence and tobacco consumption has, to date, simply not been demonstrated or borne out by the evidence. Indeed, three decades and hundreds of studies of predictors/risk factors for smoking initiation, cessation and relapse have not identified packaging as a factor that influences people's decisions to start, stop, or re-start smoking.

Nevertheless, the policy of requiring tobacco products to be sold only in plain or standardised packaging has acquired considerable momentum, based, to a large extent, on the advocacy of public health specialists and tobacco control researchers. Reducing smoking prevalence in the UK, however, is too important a goal for policy

to be based upon advocacy and passionate argument. Increasingly it seems that plain tobacco packaging is a policy area where the advocates for increasing tobacco control are freed from the need to provide the evidence in support of the initiatives they favour, whilst those who are calling for the evidence, upon which tobacco control initiatives are based, are asked to provide the evidence for their own scepticism. This is an inversion of the proper place of evidence within public policy.

Given that tobacco plain packaging has been adopted in only a single country to date, there is a strong case for waiting for sufficient evidence to emerge from that country to see whether the policy has reduced smoking prevalence and tobacco consumption. Assessments of that evidence will need to be freed from the passionate advocacy that has already seen excessive claims being made for the policy, and it will need to show not only that smoking prevalence has indeed reduced following adoption of the policy, but that such reductions are indeed attributable to the policy. We note that Chantler's review included no evidence that smoking prevalence has been reduced by plain packaging, let alone that any reduction was attributable to plain packaging as distinct from other potential explanatory factors.

Part of the difficulty in providing a clear assessment of the evidence in support of the policy on tobacco plain packaging is the contested, even polarised nature of the world of tobacco research. In describing this world as contested I am not referring to the natural and inevitable divergences of opinion on the part of different experts; rather I am referring to the view that "tobacco research has come to represent as much a moral activity as an investigative one, a weapon used by the "researcher-activist" in the "fight against tobacco" (Mair & Kieran, 2007: 104). What this has meant in practice is that the principles of transparency and openness, for so long foundational tablets of the scientific enterprise, have on occasion been sacrificed in what is seen as



an academic and political war to be fought against the tobacco industry. We see this most clearly in the refusal on the part of some of the world's leading medical journals to publish research manuscripts that had received financial support, to whatever degree, by a tobacco company, and the refusal, even following Freedom of Information requests, to provide the tobacco industry with study materials and data collected by researchers working within tobacco control and broader public health.

In this submission to the consultation on plain packaging, I summarise the policy conclusions that are presently empirically supported, unsupported, and awaiting support; the methodological rigour with which plain packaging studies have been conducted; and the quality of evidence that should be sought to inform models of the potential effectiveness of plain packaging for reducing smoking prevalence among different groups in the UK.

## 2. Personal Position on Tobacco Smoking and Regulatory Science

I feel it would be helpful to preface my critical analysis of the evidence for plain packaging with a disclosure of my personal views on tobacco use and science, such that the reader may evaluate my contribution to this consultation within the context of my personal views. I do not smoke tobacco or use smokeless tobacco products, have never used any tobacco product, and can confidently predict that I will never use a tobacco product. I believe that every individual should be discouraged from tobacco use, primarily through education about the risks to mortality and morbidity associated with tobacco use, and secondarily, through conservative, multi-faceted, effective legislation to restrict the accessibility and availability of tobacco products. I believe that every person who uses a tobacco product should be encouraged and assisted to quit completely at the soonest opportunity. I believe that Governments should set ambitious targets for reducing smoking prevalence in society and regularly re-assess the effectiveness of established and pilot interventions for meeting initiation, cessation and relapse prevention targets.

To this valued goal of reducing smoking prevalence in our society, I believe that policy decisions on the regulation of tobacco products should reflect the state of empirical evidence, borne from appropriate tests of theoretical predictions, of the probability that, when accounting for other potential explanatory variables, implementing additional or amended regulatory legislation will yield incremental targeted health outcomes at an acceptable incremental cost to society. I firmly believe that, except in times of health emergencies (e.g. disease epidemics), a decision to implement public health policies should not be taken ahead of empirical support for their likely effectiveness, and there is always a risk of adverse effects of implementing health policies and interventions ahead of empirical support for their

likely effectiveness. I believe that health policy decision makers should have both the patience to allow experts in the medical and social sciences to accumulate an evidence base that can be drawn upon to estimate the likely effectiveness, as well as unintended adverse consequences, of different courses of preventive and remedial action, and the courage to resist pressure to take action ahead of the accumulation of a sufficient evidence base.

### 3. Predictors of Smoking Initiation

Tobacco use begins through a complex interaction of psychosocial risk factors, which broadly involve sociodemographic, environmental, behavioural, personal and interpersonal factors. Young people are more vulnerable to psychosocial influences and so are at greater risk of initiating smoking. Since psychosocial risk factors are the first links in the causal chain that culminate in tobacco-related mortality and morbidity, those charged to prevent smoking initiation by young people need to understand the role of these psychosocial factors in young people's decisions to start smoking so as to identify the adolescents at greater risk of initiating smoking, and to improve the relevance and delivery of prevention and early intervention programs to these adolescents.

The hypothesis at the core of advocates' calls for the UK Government to adopt plain packaging states that young people's exposure to branded tobacco packaging, and their perceptions of the attractiveness of branded tobacco packaging are significantly positively associated with their odds of initiating smoking, when evaluated alongside other putative causal variables. By extension, implementing measures that reduce the visual attractiveness of tobacco packaging to young people would reduce the rate of smoking initiation in this group. What data then would confirm this core hypothesis?

Empirical support for adopting such measures is contingent on the availability of two bodies of data. First, one must demonstrate that, in prospective designs (so as to rule out reverse causation) and controlling for the effects of other potential explanatory variables, greater exposure to branded tobacco packaging or higher ratings of the attractiveness/appeal of branded tobacco packaging significantly

increases a young person's odds of initiating smoking during adolescence. This requires that exposure data, perception data and smoking behaviour data be collected from the same individuals on several occasions over time. Second, one must show that smoking initiation is more strongly predicted by exposure to branded tobacco packaging or perceived attractiveness of branded tobacco packaging than by other empirically-supported predictor variables. If these data are found, then one would have an empirical rationale to expect that the rate of smoking initiation among UK young people can be significantly reduced by way of measures that reduce this group's subjective ratings of the attractiveness of branded tobacco packaging.

The question then is, have studies of why people initiate smoking, and of the circumstances under which people initiate smoking, consistently identified the subjectively rated appeal or attractiveness of branded tobacco packaging as a significant cause of smoking initiation among young people in any society? The answer: several comprehensive, authoritative systematic reviews of prospective longitudinal population studies, high quality cross-sectional studies, and observational studies that specifically examined the roles of tobacco advertising, packaging and tobacco manufacturers' sponsorship of sports and cultural events as predictors of smoking initiation, did not identify appeal/attractiveness of the packaging and design of tobacco products as a factor that causes young people to initiate smoking. Rather, these reviews report strong evidence that young people initiate smoking for many reasons other than the visual appeal of tobacco packaging, and by extension, prevention efforts would be better targeted at understanding and countering these empirically-supported predictors of smoking initiation.

### 3.1 *Report of the US Surgeon General (1994)*

The psychosocial risk factors for initiating tobacco use are most comprehensively reviewed in chapter 4 – *Initiation of Cigarette Smoking* – of the 1994 report of the Surgeon General on preventing tobacco use among young people (U.S. Department of Health and Human Services, 1994). This chapter synthesises findings extracted from over 150 peer-reviewed studies that had as their primary research question: “why do adolescents and young adults start smoking?”, or “under what circumstances do adolescents and young adults initiate smoking?”

This evidence review concludes that smoking initiation by adolescents and young people is most strongly predicted by many psychosocial factors, of which the perceived appeal/attractiveness of the packaging and design of tobacco products is not one. Sociodemographic factors predictive of smoking initiation during adolescence included being from a family with low socioeconomic status (in multiple longitudinal studies); lower parental education (multiple studies, some moderation by gender (fathers only); older age (multiple studies); living in a single-parent home (multiple cross-sectional studies); challenges associated with transition from elementary school to high school (multiple studies); being female; being Hispanic or black; being in a lower quality school; and living in a more crowded house.

Environmental factors – those that are external (or perceived as external) to adolescents and yet may influence their behaviour – that were predictive of smoking initiation during adolescence included a greater availability and accessibility of tobacco in the community (e.g. beliefs that cigarettes can be obtained locally without great difficulty); degree of social bonding with important others; and greater exposure to modelling of smoking behaviour by parents (predictive in 7/15 studies identified in Conrad, Flay and Hill (1992)), siblings (e.g. in one study, sibling smoking was

predictive of increased risk of initiating regular smoking and smoking prevalence after 10 years), and especially friends and peers (defined as persons of about the same age who feel a social identification with one another). The influence of having peers who smoke was posited as the "single most important factor in determining when and how cigarettes are first tried" (USDHHS, 1994: 97).

Perceived environmental risk factors include normative beliefs (e.g. believing that how one must smoke to appear acceptable to the social group, beliefs that most people in a social group are smokers); social support for smoking (e.g. peer pressure); perceived lack of concern/anger by parents about the adolescent's smoking; perceived parental approval of the adolescent's smoking; and higher adult discrepancy (i.e. a discrepancy between the adults behaviours that the adolescent wants to engage in and the behaviours that his/her parents engaged in during their adolescence).

Behavioural risk factors associated with higher odds of smoking initiation during adolescence include: poorer academic achievement; alcohol and drug use; higher risk-taking, rebelliousness and proneness to deviant behaviours; higher consumption of high fat food/ 'junk food'; poor skills to refuse cigarette offers/resist influences to smoke; and poor skills for coping without smoking in social situations that might indirectly motivate smoking.

Personal risk factors for smoking initiation include the functions that smoking serves in the adolescent's life; greater subjective expected utility (SEU) of smoking (i.e. the extent to which the individual expects the overall consequences of smoking to be positive); lower self-esteem; greater desire to improve self-image; lower self-efficacy for refusing cigarettes; and more/stronger symptoms of depression/depressed

mood. Knowledge of the long-term health consequences of smoking has not been a strong predictor of smoking initiation during adolescence.

This review of the literature implies many courses of action that the UK Government would be more strongly empirically supported to take to prevent smoking initiation during adolescence than legislating changes to the packaging or design of tobacco products. The main learning of this review is that smoking initiation during adolescence is socially learned and viewed as a social behaviour that has positive meanings and functions for vulnerable identity-seeking adolescents. Adolescents smoke largely because their friends do, or at least because they think their friends do. They smoke primarily because smoking has a positive expected utility; smoking is viewed as a behaviour that will ingratiate them to the group, enhance their popularity and perceived value to the group, and in turn, boost feelings of self-worth and self-esteem. To not smoke would be, in adolescents' views, to forego these desirable social relationships and experiences and risk social exclusion.

The Surgeon General concludes that smoking prevention efforts would therefore be best aimed at deconstructing the social-verbal contexts that have established smoking as a functional behaviour – i.e. contexts in which the act of cigarette smoking is viewed as cool, mature, normal and attractive – and establishing in their place contexts in which cigarette smoking is functionally related to negative personal and social outcomes. The strong prediction of initiation by peer approval, peer pressure and peer acceptance of smokers suggests that prevention interventions may be best delivered to groups of peers, such as in classrooms or sports teams, and enlisting peer-age role models who do not smoke to model healthy socialisation behaviours.



The findings also point to the importance of training and motivating parents to protect their children from smoking, challenge normative beliefs, denormalise smoking in the household, model healthy socialisation behaviours, provide basic psychoeducation about the health risks of smoking, and convey clear disapproval of their children's smoking. Other targets for preventative action include increasing adolescents' engagement in health-promoting activities (e.g. sport and exercise), improving skills to refuse peer offers of cigarettes, training a wider repertoire of cognitive and behavioural skills to cope with internal and situational cues to negative affect without resorting to smoking for relief, offering academically under-performing students greater tutoring assistance, and continuing to reduce the accessibility and availability of tobacco products. All of these courses of action were, in 1994, empirically-supported as more likely to reduce rates of smoking initiation among adolescents than was reducing adolescents' exposure to branded tobacco packaging.

### *3.2 Report of the US Surgeon General (2012)*

Chapter 4 of the 2012 report of the Surgeon General updates the 1994 understanding of the many factors involved in the initiation of smoking among young people (U.S. Department of Health and Human Services, 2012). In this report, the Surgeon General reports more evidence that smoking initiation during adolescence is strongly predicted by the factors identified in the 1994 report of the Surgeon General, with the most notable additions being evidence that adolescents initiate smoking as a means to cope with negative affect, and evidence suggesting that regular smoking is a heritable trait, moderated by social modelling influences.

Chapter 5 of this report – *The Tobacco Industry's Influences on the Use of Tobacco Among Youth* – describes packaging as “an integral component of the overall marketing strategy” for selling tobacco products (p530). However, the report concludes that “...the evidence is *suggestive but not sufficient* to conclude that tobacco companies have changed the packaging and design of their products in ways that have increased these products' appeal to adolescents and young people” (p10). If there is insufficient evidence that tobacco companies have changed the packaging and design of their products in ways that have increased their appeal to young people, then the Surgeon General must, by logical extension, also conclude there is insufficient evidence that young people start smoking because of the visual appeal of the packaging and design of tobacco products. If we accept this conclusion, then we must also accept that there is insufficient evidence that reducing the visual appeal of the packaging and design of tobacco products via standardisation would reduce these products' appeal to the point that it causes young people to not initiate smoking. Use of the term “suggestive but not sufficient” by the Surgeon General to summarise evidence on the mediational relationship between packaging and smoking initiation via reduced appeal of the product should be given great weight by Governments who are considering implementing plain packaging.

The Surgeon General's conclusion, based on an comprehensive review of studies that had assessed the extent to which smoking initiation among young people was related to this group's perceptions of tobacco product packaging, also stands in marked contrast to Sir Cyril Chantler's conclusion, which followed a review of studies that *did not* assess the statistical link between smoking initiation and individuals' perceptions of tobacco packaging: “I am persuaded that branded packaging plays an important role in encouraging young people to smoke and in

consolidating the habit" (Chantler, 2014: 6). Given that the Surgeon General's review, unlike Chantler's, included studies that had assessed, retrospectively and prospectively, why young people had started smoking and found insufficient evidence to conclude that the appeal of packaging factored into young people's decisions to start smoking, I would therefore recommend that the UK Government gives considerably more weight to the evidence summary and conclusions drawn by the US Surgeon General when estimating the likely impact of plain packaging on rates of smoking initiation.

Great weight should also be given to the fact that the Surgeon General's evidence summary is limited to cognitive effects of packaging (e.g. non-smoking youth demonstrate high levels of recall for leading package imagery; a package's colour and text descriptors help to segment brands, establish brand identity, and appeal to target groups; and elements of a package's design influence consumers' perceptions of the risk associated with the product). No evidence was described to suggest that adolescents and young adults' higher ratings of the appeal of the packaging and design of tobacco products are associated with higher odds of initiating use of these products. While this association does seem to be intuitive, policy makers should be cautious about making policies that seem intuitive but to date lack an evidence base. Instead, the Surgeon General does no more than describe the relationship between packaging and smoking initiation as a hypothetical relationship awaiting a test.

### 3.3 *Qualitative Studies.*

A potential caveat of quantitative assessments of predictors of smoking initiation that have not identified packaging as important is that several studies did not set out to assess perceptions of packaging attractiveness as a predictor of initiation, nor were participants of these studies likely to have had an opportunity to cite packaging (if applicable) as an influence on their smoking due to the structured nature of the assessment instruments. One may expect that individuals would be more likely to cite packaging attractiveness as having an influence on their decision to initiate smoking if given the opportunity in open-ended interviews.

A systematic review of 78 qualitative studies of self-reported reasons for initiating smoking, however, found no evidence to suggest that exposure to branded packaging or perceptions of branded packaging were even peripheral influences on individuals' decision to start smoking (Walsh & Tzelepis, 2007). Consistent with reviews of quantitative studies, findings indicated that when given the opportunity to freely point to any influence on one's decision to start smoking, individuals across these 78 studies identified smoking by peers, parents and siblings, the social acceptability of smoking within peer groups, the availability and accessibility of cigarettes, and the prominence of smoking in entertainment media as having influenced their decisions to start smoking. None of these 78 studies reported evidence that the attractiveness of tobacco packaging influenced decisions to start smoking.

#### 4. Predictors of Smoking Cessation

Identifying relapse-promoting mechanisms and tailoring smoking cessation interventions accordingly for populations at higher risk-of-relapse remain national priorities in the US (USDHHS, 2004) and the UK (National Institute of Health and Clinical Excellence, 2008). Numerous studies have attempted to identify the characteristics of individuals, policies, interventions and social circumstances that predict success and failure in smoking cessation in cohorts of cigarette smokers followed over many years. Knowledge of the factors that make an individual more or less likely to quit can be used to optimise treatment outcomes in several ways. For example, identifying individuals most at-risk of lapsing or relapsing to regular smoking soon after starting a quit attempt can inform a more efficient use of practitioners' time, and allows for potential matching of individuals to a mode and intensity of treatment that better meets their needs. Classification of a person as a former smoker- i.e. successful smoking cessation - in these predictor studies is typically made if the person reports not smoking for at least six months prior to the interview, though this definition varies by study occasionally.

Hymowitz et al. (1997) conducted telephone surveys of 13,415 cigarette smokers aged 25-64 years from 20 American and two Canadian communities, first in 1988 and re-interviewed in 1993 as part of the National Cancer Institute's Community Intervention Trial for Smoking Cessation (COMMIT). Approximately 33% of smokers in 1988 had quit smoking by 1993. The most common reasons given for quitting smoking were concern over health (91%), the expense of cigarettes (60%), concern about exposing others to second-hand smoke (56%), and wanting to set a good example for others (55%). Statistically significant predictors of smoking cessation in this cohort followed for five years included male gender, older age,

higher income, less frequent alcohol intake, lower levels of daily cigarette consumption and longer time to first cigarette in the morning (strongest predictors in the set), the use of premium cigarettes, initiation of smoking after age 20, a history of past quit attempts, a strong desire to stop smoking, and the absence of other smokers in the household.

Hyland et al. (2004) later reported data for 6,603 persons who completed tobacco use telephone surveys in 1988, 1993, and 2001 as part of the same COMMIT study. Approximately 42% of smokers in 1988 had quit by 2001. Reasons for having quit by 2001 largely resembled those cited for quitting in 1993: concerns about harm to health and the high price of cigarettes were the most frequently cited reasons for quitting, and measures of nicotine dependence (lower cigarette consumption, longer time to first cigarette in the morning) remained the strongest predictors of cessation in 2001. Older age, higher income, and less frequent alcohol consumption were again found to strongly predict smoking cessation.

Individuals who met the criteria of long-term smoking cessation ( $n = 1,206$ ) who were surveyed as part of the Global Adult Tobacco Survey in Poland between 2009 and 2010 also cited concerns about the health hazard of smoking (60.8%) and the high price of cigarettes (11.6%) as primary reasons for smoking cessation (Kaleta et al., 2012). Older age, high education attainment, awareness of smoking health consequences was associated with long-term cessation in both males and females. Employed males were twice as likely to have quit compared to unemployed males, while being religious did not predict successful smoking cessation.

A systematic review by Caponnetto and Polosa (2008) identified common predictors of smoking cessation that are fairly quick/easy to assess in clinical practice

in order to identify which smokers stand the best chance of quitting and which smokers who may benefit from more assistance. Being older, starting smoking before age 16 compared to after age 16, being married to/living with a non-smoker or ex-smoker, not having any other smokers in the household, greater familial support for quitting, having made longer previous quit attempts in the past, being treated with antidepressants, having lower levels of anxiety and depression, having lower nicotine dependence (as indexed by an Fagerstrom Test of Nicotine Dependence (FTND) score lower than 7), not normally smoking within 30 minutes of waking, not having a concurrent dependence on alcohol, and being more motivated to quit at the outset of a quit attempt, and having lower work stress were all identified in this review as strong predictors of successful smoking cessation up to at least one year later.

Lower levels of self-rated or counsellor-rated nicotine dependence is the most commonly observed predictor of successful future smoking cessation among adolescents (12- 18 years), adults (18-65 years) and elderly adults (65 years +). For example, in a prospective school-based cohort study of 1,384 New Hampshire high school students surveyed at baseline and annually up to 3 subsequent years regarding their smoking behaviour, adolescents who smoked cigarettes less frequently, a proxy indicator of nicotine dependence, were significantly more likely than daily smokers to quit (Sargent et al, 1998). Definite intent to quit in the future predicted successful cessation, but only among occasional smokers, suggesting intentions to quit are unreliable predictors of smoking cessation by adolescents who smoke more frequently. In contrast to adults, length of longest past attempt was not positively associated with likelihood of smoking cessation. In each of these five comprehensive studies of factors that predict smoking cessation at a population level, failure for

smoking cessation was not in any study found to be associated with smokers' perceptions of the attractiveness or appeal of branded tobacco packaging.

#### *4.1 Intentions to Quit do not Strongly Predict Successful Cessation*

Measuring change in smokers' 'intention to quit' pre/post-exposure to a smoking cessation intervention has become ubiquitous. Researchers' eagerness to measure the impact of plain packaging on smokers' intentions to quit, but not on actual cigarette consumption, likely stems from an intuitive view of intentions as proximal to performance; smokers' reporting the strongest intentions to quit smoking at one point in time should therefore be the ones most likely to have quit at some point in future time. However, prospective longitudinal studies have repeatedly demonstrated this belief to be erroneous.

Smokers who have tried to stop smoking will likely have heard that planning a quit attempt in advance and setting a 'quit date' for the near future are important steps to stopping smoking and 'staying stopped'. An eagerness to measure smokers' intentions to quit smoking, or their readiness for change, likely derives from the popular and prevailing 'stages of change' model of behaviour change, which states that people stop smoking by moving through a succession of motivational stages involving contemplating stopping, preparing to stop, and then subsequently trying to stop (Prochaska & Velicer, 1997), and that successful quitting is contingent on preparing for a quit attempt in advance. Consequently, physicians, GPs and smoking cessation therapists have been charged with using the model's 'four As' – ask, advise, assist, and arrange – to move smokers through these sequential stages of change (Royal College of Physicians, 2000). This typically involves assisting smokers to



anticipate potential difficulties in the early stages of quitting (e.g. identify the things, people, and places which stimulate craving), make plans to avoid/resolve these difficulties, set a date on which they plan to have stopped smoking completely, and plan rewards for maintaining abstinence between now and the quit date. Self-help pamphlets published by the UK National Health Service also emphasise that if smokers approach stopping smoking like any other major life change, with careful preparation and planning, they can succeed, and that the first step is to make a plan that will work for them.

Based on this philosophy of "fail to prepare, prepare to fail", the overarching goals of current cessation guidelines are to identify the smoker's stage at present, make recommendations appropriate for this stage, and move the smoker sequentially through to the final stage in which the smoker attempts to quit. Accordingly, the study of the effects of plain packaging have tended to focus on whether exposure to plain tobacco packaging increases smokers' desires and intentions to quit should all tobacco be sold in plain packs.

The 'stages of change' model of behaviour change as it applies to how people quit smoking has been criticised on many grounds, the most notable being the lack of evidence that most smokers actually plan their quit attempts in advance, and that doing so increases their odds of a successful quit attempt. Indeed, this model conflicts with the accounts of many ex-smokers who say they just decided to stop smoking one day and have not looked back since. In response to this gap in the literature, two relatively recent studies – one each in Canada and England – investigated the extent to which smokers planned their quit attempts, and the relative success of planned versus unplanned quit attempts.

Larabie (2005a) found that while 64% of smokers planned their quit attempts in advance (37% of smokers made unplanned quit attempts), the majority of ex-smokers (defined as those who had not smoked in the past six months) were those who had not planned their successful quit attempt in advance. Indeed, only 33% of ex-smokers had quit after making a plan to quit. The three most commonly reported types of planning were (1) planning to quit on a significant date (e.g. birthday, New Year's Day); (2) planning to obtain nicotine replacement medication in the near future; and (3) planning to quit once they had smoked all the cigarettes in their current carton.

Some examples of the unplanned quit attempts reported by participants are given below (Larabie, 2005b):

*"I found out I was pregnant and I just quit"* (LV, age 36).

*"I just felt like I had had enough and [I was determined] it was not going to kill me"* (CB, age 36).

*"I got 'the scare'. I went out from work to have a cigarette and got a severe dizzy spell and had difficulty walking for 20 minutes. I quit on the spot. I still had cigarettes left in my pack"* (LF, age 40).

Just as interesting was Larabie's finding that 79% of successful quit attempts were made unassisted – defined as no use of Bupropion, nicotine patches, nicotine gums, tapering, or hypnosis. Larabie's findings therefore argue against the prevailing model that successful smoking cessation depends on receiving assistance to quit (from medications, counselling etc.) and planning quit attempts in advance. Rather, the most effective quit attempts were found to be those done without prior planning or formed intention, and without assistance. The paradox in this, noted by Larabie, is that health

care providers may actually be hindering smokers' chances of quitting by dissuading unassisted quitting (and promoting the uptake of formal treatment programmes) and by discouraging sudden, unplanned quit attempts, though these hypotheses require testing in their own right.

Similar findings have been reported in England. West and Sohal (2006) observed a similar success of unplanned quit attempts among 918 smokers and 996 ex-smokers in England. Almost half of quit attempts (48.6%) were made without prior planning. Of the 611 quit attempts made between six months and five years previously, 65.4% of unplanned attempts lasted at least six months without smoking compared with 42.3% of planned attempts. This means that smokers who made unplanned quit attempts were 2.6 times more likely to still be not smoking six months later than those who made planned quit attempts. Likewise, smokers who made an attempt to stop smoking between six and 12 months previously were 2.5 times more likely to still be not smoking six months later than smokers who planned their quit attempts.

In short, a sudden decision to not smoke any more cigarettes was both common (around 50% of quit attempts in each study) and were more likely to be successful than quit attempts which started after a period of planning. While these data do not necessarily suggest that planning and forethought and promoting treatment options are counterproductive, they do provide a strong case for health care providers going against current guidelines to encourage smokers who are on the cusp of wanting to quit to recognise and act upon opportunities to quit on the spot.

In challenge to the prevailing 'stages of change' model, the findings of these two studies would suggest that smokers should capitalise upon any momentary

motivation to quit by doing so immediately, because intending to quit at some point in the future is significantly less likely to turn into a successful quit attempt. West and Sohal (2006) state that even small changes in the smoker's motivation to quit can trigger big changes, and smokers should be encouraged to capitalise upon any desire to stop smoking by stopping on the spot, instead of making plans to quit in the near future. Some plain packaging studies have claimed that plain packaging enhances smokers' intentions to quit, but other research has shown that such enhanced intentions lead to successful quitting in only a minority of smokers. Tobacco control would be better served by developing measures that powerfully and immediately irrationalise a decision to continue smoking, of the magnitude elicited by naturally occurring, emotive life events.

## 5. Predictors of Smoking Relapse

### 5.1 *Negative Reinforcement Theories of Smoking Relapse*

It is a well-established behavioural principle of contemporary reinstatement/relapse models of smoking motivation that the immediate benefits of avoiding the negative internal states (e.g. thoughts, feelings, emotions) that typically accompany nicotine withdrawal can provide powerful negative reinforcement for smoking as a rapid and efficient means of avoiding or managing negative affective states. Modern negative reinforcement theories of nicotine addiction have shifted in recent years from the physiologic effects of nicotine withdrawal to emphasise a reduction of negative affect as the core motivation for quitting smokers to resume smoking after a period of abstinence. The fundamental hypothesis of these theories is that "addicted drug users sustain their drug use largely to manage their misery" (Baker et al., 2004: 34). This hypothesis, which posits smoking relapses as functional behaviours exhibited, primarily to reduce negative affect, is supported by a wealth of experimental, cross-sectional and epidemiological evidence that (i) smoking rates are higher among individuals whom have inherited or acquired affective and depressive disorders, (ii) levels of negative affect are positively predictive of the severity of nicotine withdrawal symptoms and risk of relapse, (iii) and a reinstatement of smoking commonly after a period of abstinence typically occurs in affective situations for self-reported negative reinforcement reasons, and not for reasons related to the appeal/attractiveness of tobacco packaging.

### *5.1.1 Correlational Data*

Higher rates of smoking prevalence and lower quit rates have been found among individuals with depression (Pratt & Brody, 2010), affective disorders, and histories of traumatic events (Polusny & Follette, 1995) compared to individuals not diagnosed with these disorders, and conversely, higher rates of depression and some anxiety disorders have been found among current smokers compared to non-smokers (Zvolensky et al., 2005). A recent US Household Survey found that adults aged 20 years + with a current diagnosis of depression were more likely to be cigarette smokers than those without depression; that depressed individuals' likelihood of being a smoker was positively associated with the severity of their depression; and that depressed smokers reported more failed quit attempts than did non-depressed smokers (Pratt & Brody, 2010).

### *5.1.2 Causal Data*

Prospective studies have found that a history of depression (Anda et al, 1999; Ford et al., 2011), severity of negative affect at the beginning of treatment (Kinnunen et al., 1996), and severity of negative affect at post-treatment (Covey et al., 1990) are reliable predictors of quitting smokers' long-term vulnerability to relapse. Patton et al. (1996) found that adolescents with high anxiety and depressive symptoms were twice as likely to be smokers. In a later prospective study of smoking initiation in adolescents, Patton et al. (1998) later found that anxiety and depressive symptoms, when experienced in the presence of peer smoking, together predicted the initiation of experimental smoking and significantly increased the likelihood that these adolescents would progress to regular daily smoking.

### *5.1.3 Trait Affect*

Individuals who experience traumatic life events such as childhood abuse and parental divorce (Anda et al., 1999) and individuals who acquire depressive and anxiety disorders (Dierker et al., 2001) are significantly more likely to experiment with smoking as a means to reducing their high levels of negative affect. Smokers who have high anxiety sensitivity (a propensity to experience fear in response to interoceptive sensations) also report smoking as their preferred, frequent method of coping with their anxiety. For example, levels of anxiety sensitivity reported by 60 smokers with a past diagnosis of major depressive disorder were found to be positively associated with self-reported negative reinforcement smoking motives (i.e. smoking to reduce negative affect) and with quitters' risk of relapse within the first seven days post-quit (Brown et al., 2001).

### *5.1.4 Situational Affect*

Abstinent and current quitting smokers have retrospectively reported that past relapse episodes most frequently occurred in response to situational increases in negative affective states (e.g. anger, anxiety, frustration, worry, and depression), and that their decisions to resume smoking on those occasions were motivated by their desire to reduce high levels of negative affect to more tolerable levels (Shiffman, 1982; Brandon et al., 1990). A recent U.K survey of smokers who had tried to quit found that the most commonly reported reason for starting smoking again was because "life was too stressful/just not a good time" (38%; Lader, 2009). In an early examination of common antecedents to relapse in ex-smokers who called a relapse

counselling telephone hotline, approximately one-third of abstinent smokers reported that negative affect (anger, anxiety, and depression) elicited a strong urge to smoke (Shiffman, 1982). In a later study, 'bad mood' and stress were found to precede more than one-third of relapse episodes (Shiffman et al., 1996a). Additionally, both Shiffman (1982) and Shiffman et al. (1996) found that one-third of relapse episodes occurred to maintain positive affective states (relaxation, 'good mood'), suggesting that people relapse to smoking to both alleviate affective discomfort *and* maintain current levels of comfort.

In prospective design, increases in negative affect during the first week post-quit have been found to be especially predictive of full-blown relapse (Strasser et al., 2005). Rapid increases in negative affect in response to acute environmental stressors during nicotine withdrawal that lasted only a couple of minutes have also been found to be more strongly predictive of relapse than are by day-to-day fluctuations in negative affect (Shiffman & Waters, 2004).

#### *5.1.5 Smoking as Dysfunctional Coping Behaviour*

People who endorse smoking as a good way of coping with life stress are more likely to escalate their smoking, and quitting smokers who smoke to cope in affective life situations are more likely to progress to a full-blown relapse. For example, Dugan, Lloyd, and Lucas (1999) found that viewing smoking as a good way to cope with stress significantly increased the likelihood that adolescents (aged 11 to 16.5 years) who had never smoked at time-1 would have progressed to occasional smoking six months later, and that occasional smokers at time-1 would have progressed to regular smoking six months later. Believing that smoking relieves stress



appears to lead adolescents who perceive their lives as stressful to experiment with smoking and gradually develop an over-reliance on the stress-relieving functions of smoking thereafter.

## 6. No Evidence that Branded or Plain Tobacco Packaging Predicts Smoking Behaviour Change

In July, 2011, the Government of Mexico expressed concern to the Government of Australia that the latter had not provided any scientific or technical evidence that plain packaging influences consumer behaviour, and therefore, implementing the Tobacco Plain Packaging Bill would “restrict trade without doing anything to achieve the legitimate objective” of reducing smoking prevalence (Dorantes Sanchez, 2011). The Government of Mexico asked Australia to share the scientific information on which it based its decision to elaborate the Bill; and the rationale that helped Australia to determine that such legislation was the less trade restrictive policy available”. This question had been put to Nicola Roxon, Australian Minister for Health and Ageing, at a press conference on 24<sup>th</sup> May, 2011: “Minister, some members of the Opposition say they are keen to reduce the incidence of smoking, but they say you have no proof that this (plain packaging) will actually do it.” Roxon replied: “Well, this is a world first. The sort of proof they’re looking for doesn’t exist when this hasn’t been introduced around the world. We do have research that tests the interest in particular measures, tests whether or not you can make a packet less attractive, whether it makes a person less likely to buy a product.”

What Minister Roxon appears to be saying in this answer is that, though Australia didn’t have the gold standard behavioural evidence that was being asked for at the time, it did have extra-scientific attitudinal evidence to suggest the gold standard behavioural evidence would be found in due course. This is a perfectly valid hypothesis, but one that requires empirical support *before* a policy is rolled out nationally. It is anti-scientific and typically unwise to roll out a policy nationally without first establishing its efficacy under controlled conditions, except in times of a

public health emergency (e.g. minimally-tested treatments for AIDS were approved for widespread use by the US Food and Drug Administration at the height of the AIDS epidemic in the US).

In August 2012, Minister Roxon told a reporter: "We've been very clear – we haven't made any estimates about the level of reduction that will flow from plain packaging" (Anon., 2012). This statement conveys a dishearteningly unscientific approach to health policy making. It is difficult to think of other areas of public health and disease spaces that would be so publicly keen to proceed to implement health policy without first having demonstrated that the policy, or conditions which closely resembles those that would exist under the policy, reliably produce clinically significant, covariate-adjusted changes in the smoking behaviours of different groups of people, and without upper and lower bound estimates of the effect size that the policy may be expected to yield at a population level.

Without empirical evidence of the direct effects of plain packaging on tobacco use in experimental or intervention settings, one cannot calculate confidence intervals around a mean estimate of the change in smoking prevalence that is uniquely associated with plain packaging. Moreover, without a measure of effectiveness, Australia will be unable to calculate an incremental cost-effectiveness ratio for plain packaging compared to competing alternative courses of action, or conduct sensitivity analyses to estimate a range of incremental cost-effectiveness ratios when different assumptions are made about the costs and behavioural effects of plain packaging. Australia cannot demonstrate plain packaging to be the most efficient use of taxpayer money to reduce smoking prevalence, that is, that plain packaging returns a more favourable ratio of the total cost to implement the policy divided by the summed

monetized value of the health benefits (e.g. tobacco-related cancer cases avoided) that flow from the policy, compared to competing alternative courses of action that could be taken by the Government.

## 7. Summary of Evidence on Predictors of Smoking Initiation, Cessation and Relapse

A broad, consistent, strong and sufficient evidence base, accumulated over 30 years and summarised by the US Surgeon General and others, indicates that decisions to start smoking during adolescence and young adulthood are strongly motivated by many factors other than those related to the packaging and design of tobacco products. Quantitative and qualitative assessments of the psychosocial risk factors most strongly predictive of smoking initiation have not supported Sir Cyril Chantler's conclusion that "branded packaging plays an important role in encouraging young people to smoke and in consolidating the habit" (Chantler, 2014: 6), which poses a fundamental question about quite how Sir Cyril arrived at his conclusion.

The appeal of branded packaging is not empirically-supported as a factor that significantly increases the likelihood of smoking initiation during adolescence; there is currently no empirical basis, therefore, from which the UK Government can confidently expect that reducing the appeal/attractiveness of tobacco packaging via standardised packaging will reduce the rate of smoking initiation by young people. More critically for public health, such action would not address the factors that do motivate young people to start smoking.

With regard to smoking cessation and relapse, it is well-established that abrupt cessation of smoking following a period of chronic smoking evokes physiological and affective experiences that people find difficult to tolerate. In comparison to individuals who never smoke or those who sustain abstinence from smoking in the face of high levels of negative affect, those who initiate smoking, progress to regular daily smoking and fail to quit smoking are characterised by both higher trait negative

affectivity, higher sensitivity to interoceptive cues to negative affect, and by a stronger desire to avoid negative affect and occasioning situations. Baker et al.'s (2004) negative reinforcement model posits learning to respond to interoceptive signals to negative affect with smoking as the crucial formative experience for nicotine dependence. A wealth of experimental, correlational and cross-sectional data have been presented in support of the core hypothesis of contemporary negative reinforcement theories of smoking relapse, which states that nicotine-dependent individuals with ready access to a nicotine source smoke primarily as a means to avoid or escape the negative affect, which can derive from both pharmacologic (e.g. nicotine deprivation) and non-pharmacologic sources (e.g. work stress, arguments).

Neither exposure to tobacco packaging nor people's perceptions of the appeal/attractiveness of tobacco packaging have been identified in the literature as a significant motive/cause/reason for smoking behaviour change, let alone as a common predictor, or as a strong predictor by comparison to commonly identified predictors such as levels of negative affect, nicotine dependence, perceptions of the price of cigarettes, peer and familial support for smoking, age, age of smoking initiation, and availability of cigarettes. Given the lack of evidence to suggest that the design of tobacco packaging does influence people's decisions to start, stop, or re-start smoking in the context of tens of other causal influences, one must conclude that a decision by the UK Government to standardise the packaging of tobacco products in plain form would likely have no significant impact, positively or negatively, on rates of smoking initiation, cessation or relapse, either directly or indirectly via its (lack of) potency to affect change in well-established independent predictors of smoking behaviour change.

## **8. Review of the Methodological Quality of Plain Packaging Studies**

In a recent BBC Panorama documentary, *Burning Desire: The Seduction of Smoking*, Professor Melanie Wakefield, author of several studies included in Sir Cyril Chantler's evidence review (Chantler, 2014), was asked about the quality of the research that has been conducted by the tobacco industry on the potential effects of plain packaging on actual smoking prevalence. Wakefield answered, "I think quite a lot of the research that the tobacco industries fund is rubbish. It uses weak research methods, inadequate sample sizes, they have questions that are leading, and I am not convinced by any of it". This submission is not the place to debate Wakefield's low opinion of the quality of the majority of research funded by the tobacco industry. However, one needs to be cast-iron certain, in making such a bold, sweeping, derogatory statement about the quality of research commissioned/conducted by the tobacco industry, that the research studies purported to make the case for standardising tobacco packaging are not beset by the same problems. The following sections describe several core methodological limitations that have characterised study of the hypothetical and actual effects of plain packaging to date.

### ***8.1 Repeated Neglect to Assess Smoking Behaviour Change Attributable to Plain Packaging***

The neglect of the vast majority of plain packaging studies to measure smokers' actual tobacco use following exposure to plain versus branded packaging, let alone whether any change is statistically or clinically meaningful, is undoubtedly the single greatest methodological weakness of plain packaging studies that sought to inform the potential effectiveness of a population-level behaviour change intervention. Instead,

plain packaging research to date has been characterized by assessment of smokers' and non-smokers' attitudes, beliefs, and intentions as they relate to plain packaging and starting/stopping smoking.

A systematic review published by researchers at the University of Stirling in 2012 identified 37 individual studies of the effects of plain packaging; 15/37 were published in 2011 and 8/37 were unpublished manuscripts at the time of their inclusion in the review (Moodie et al., 2012a). The execution and reporting of the study search were excellent in terms of its exhaustive search, specification of terms, and screening procedure. The authors searched 21 electronic databases of journal articles, book chapters, and government reports on plain packaging from the fields of health, public health, social science and social care, and included articles initially on the basis of five criteria: primary research on tobacco and plain packaging in human populations published between 1980 to 31<sup>st</sup> August, 2011.

Of the 37 studies included in the final sample, 16 assessed attitudes towards plain packaging or perceptions of whether plain packaging would prevent initiation or aid cessation (e.g. prioritizing quitting, thinking more about quitting, planning to quit). These 16 studies near unanimously found that plain packs are negatively associated with feelings about smoking, and that plain packs are perceived as more likely to deter uptake of smoking and reduce consumption among existing smokers (although not a great impact in some studies). No study out of 37 measured the volume of tobacco consumed by participants before and after exposure to plain packaging, or the number of participants who achieved abstinence (prolonged or point prevalence) from smoking up to several months post-exposure. Indeed, only two of 37 studies reported statistical effect sizes for plain packaging versus branded packaging, mainly because most studies reported descriptive data (usually frequencies) or



described findings using only text descriptions, neither of which alone can be used to calculate a statistical effect size.

A further 17 published studies were added to the review in 2013 (Moodie et al., 2013), 15 of which were conducted in Australia, New Zealand or the UK. Eight assessed perceptions of whether plain packaging would prevent initiation or aid cessation; five used quantitative measures and three used qualitative measures. Of these five quantitative studies, only one (Moodie & MacKintosh, 2013) assessed self-reported change in cigarette consumption within a two-week, within-groups, naturalistic, randomized trial of branded versus plain packaging. The remaining four quantitative studies assessed how plain packaging influenced participants' intentions to start/quit smoking, without assessing whether these intentions were predictive of future smoking behaviour.

Therefore, at the point of publication of this update to the Stirling team's evidence review, only one (Moodie & MacKintosh, 2013) of 54 available studies of plain packaging had assessed actual levels of cigarette consumption associated with plain and branded packs. Criticisms of the methodological rigour of this sole behavioural outcome study are described in section 9 of this report. It is a simple fact that no evidence can be found to suggest that plain packaging will indeed reduce smoking prevalence if the research community persists with assessments of perceptions of how plain packaging will impact on behaviour at the expense of assessments of actual change in smoking behaviour (prevalence, consumption, abstinence) pre-post-exposure to plain packaging.

### *8.1.1 Explaining the Neglect to Assess Smoking Behaviour Change*

Two explanations are offered for why plain packaging studies have largely neglected to measure actual tobacco consumption, actual prevalence of cessation, and actual initiation of smoking, and instead have chosen to infer consumers' future behaviour from consumers' self-reports of what they intend and plan to do in the future. The first explanation states that, because assessments of smoking-related cognition within non-experimental designs (i.e. surveys, interviews, focus groups) typically require less money, fewer personnel and a shorter time to complete than do assessments of smoking behaviour change within a longitudinal experimental or intervention design, university-based researchers, whom are under institutional pressure to publish research findings in a timely fashion, may consider such an incremental investment to assess behaviour change a less efficient use of their resources.

Moodie et al. (2012a) have also suggested that it is not possible to conduct longitudinal or randomized control trials (in which one can assess mediation effects) until a policy of plain packaging is adopted in at least one jurisdiction. This claim is curious however, given that the primary author then authored a randomized intervention study of the behavioural effects of plain packaging in 2013 in the UK where plain packaging is not legislated (Moodie and Mackintosh, 2013). Several other studies of the behavioural effects of branded versus plain packaging have since started in the UK, indicating that the lack of legislation does not actually prevent researchers from examining behavioural effects in mock-up conditions that closely resemble those that would exist under a policy of plain packaging.

It is true that longitudinal assessments of plain packaging are unfeasible until plain packaging is legislated, but it is demonstrably not true that it is impossible or

prohibitively difficult to conduct high quality, well-powered, shorter-term, randomized controlled behavioural trials of plain packs versus branded packs until plain packaging is legislated. Intervention/experimental designs do require a great deal of planning and moderate funding to mount, but not only should it be entirely possible to implement such designs before a policy of plain packaging is introduced, it is proposed that the most robust design available to researchers for modelling the potential impact and mechanisms of impact of plain packaging involves: (i) randomizing participants to conditions in which they are presented with either branded packs or mocked-up plain packs of cigarettes for a period of time, (ii) measure participants' tobacco use (e.g. cigarettes smoked) as the primary behavioural outcome, and when possible seek biochemical confirmation of self-reported tobacco use (iii) measuring participants' smoking-related cognition (e.g. perceptions, attitudes, beliefs) as secondary outcomes and mediators of the primary behavioural outcome, and (iv) reporting of confidence intervals around mean estimates of behavioural outcomes to more accurately infer the true effects of plain packaging.

## ***8.2 Failure to Assess the Likely Contribution of Putatively Important***

### ***Mechanisms of Action***

The Australian Government's rationale for implementing standardised tobacco packaging is the expectation that plain packaging will contribute to public health over and above existing tobacco control measures by (i) reducing the attractiveness and appeal of tobacco products to consumers, (ii) increasing the salience and effectiveness of health warnings, and (iii) reduce the ability of branded packaging to mislead consumers' perceptions of the products' strength and potential for harm (Australian Government, 2011).

That is, the attractiveness of the pack, the salience of health warnings, and the consumers' perceptions of harm are hypothesised by advocates to be three mechanisms that will account for plain packaging's success in reducing smoking prevalence. To demonstrate that pack attractiveness, for example, is a critical mechanism of action through which plain packaging reduces cigarette consumption, one would need to show three statistical effects simultaneously: (i) plain packaging is rated as significantly less attractive (compared to branded packs)'; (ii) lower ratings of pack attractiveness predict lower cigarette consumption; (iii) the direct effect of pack type (plain versus branded) on cigarette consumption is statistically significantly weaker than the indirect effect of pack type on cigarette consumption transmitted through the 'attractiveness' mediator.

If these three effects are found, a mediational relationship can be said to exist between a pack design, perceived attractiveness, and cigarette consumption. To date, however, the vast majority of studies that purport to show 'strong evidence' that plain packaging will work because it is less attractive did not actually assess the extent to which attractiveness ratings are actually predictive of cigarette consumption. Instead, plain packaging studies have focused solely on testing the ability of plain packaging to act on the cognitive variables (perceptions, attitudes, beliefs) that are in turn hypothesised to act on smoking behaviour.

Tobacco control research should always seek to know what interventions and technique bundles reduce cigarette consumption, the mechanisms through which these interventions reduce cigarette consumption, and how these mechanisms can be better manipulated by clinical interventions and policy initiatives to further reduce cigarette consumption. It is disappointing therefore, that so few studies to date have examined

the effect of pack design on cigarette consumption that is transmitted through individuals' ratings of pack attractiveness and other putative mediator variables. Consequently, we have no knowledge of the variance in smoking outcomes following exposure to plain tobacco packaging that are attributable to the theoretically important mechanisms of action. Plain packaging may indeed be highly effective for changing smoking-related cognition, but these cognitive changes may not be predictive of future smoking behaviour. This may be the case, for example, in young people whose decisions to start smoking were influenced by variables other than pack design; standardising cigarette packs may well reduce the attractiveness to these young smokers, but if the attractiveness of the pack isn't a factor currently motivating smoking, then it is unlikely that varying the pack design in any way will increase that person's likelihood of quitting, let alone starting to smoke in the first place. Or it may be the case that plain packaging exerts its effects on smoking behaviour through cognitive mechanisms other than those proposed in the literature. Indeed, it is entirely possible that the observed behaviour change occurred *in spite of* parts of the intervention.

In any event, mediational study designs will be required to improve knowledge of why plain packaging succeeds or fails to change smoking behaviour away from the behaviours associated with branded packaging. Until these putative relationships are tested, advocates for plain packaging are without evidence to rule out the possibilities that (i) plain packaging reduces tobacco use but not through its attractiveness, (ii) plain packaging reduces ratings of attractiveness but not tobacco use, and (iii) plain packaging reduces ratings of attractiveness and tobacco use but the reduction in attractiveness is statistically unrelated to the reduction in tobacco use.

### 8.3 *Asking the Wrong Question about Appeal/Attractiveness*

Reducing smoking prevalence via plain packaging will require more than simply measurement of the relative positions of plain packaging and branded packaging in terms of their appeal/attractiveness, salience of health warnings, and perceptions of harm. Measuring the significance of the difference between consumers' ratings of the attractiveness of plain packs versus branded packs, for example, lacks ecological validity because, should a plain packaging policy be implemented, consumers will not be required to choose between more attractive branded packs and less attractive plain packs at the shop counter – only plain packs will be on sale. One needs to know, therefore, not merely the extent to which plain packs are *less* attractive, but whether they are *sufficiently* unattractive to change consumers' behaviour, and at what level of unattractiveness does the consumer's rationale for quitting outweigh the rationale for continuing to buy plain packs.

Individuals' perceptions of the attractiveness of tobacco packaging has not to date been evidenced as a significant predictor of smoking initiation, cessation or relapse. However, those who in the future hypothesise perceptions of tobacco packaging to be predictive of, for example, smoking cessation, must design their research studies to answer three important questions: (i) Is there a critical threshold of unattractiveness that plain packs must achieve to motivate a quit attempt? (ii) If yes, do consumers' ratings of the unattractiveness of plain packs fall above or below the critical threshold that demarcates an attempt to quit smoking from a decision to continue smoking? And (iii) how can tobacco packaging be designed to be *sufficiently*

unattractive to motivate a quit attempt? No study to my knowledge has shown that, in environments in which only plain packs are available, plain packs were found to be *sufficiently unappealing/ unattractive to motivate quit attempts*; that is, motivated-to-quit smokers do not cite the unattractiveness of plain packaging as part of their motivation to quit. By extension, no data exist on the effect of greatest interest, and most relevant to the claim that plain packaging 'will work': the extent to which consumers' ratings of the attractiveness of plain packs translate to abstinence from tobacco use. Without these data, one cannot know the importance of subjective pack attractiveness relative to other cognitive (e.g. peer pressure) and non-cognitive (e.g. price) empirically supported predictors of smoking uptake and cessation.

It is very possible that consumers will feel that plain packs are hideously ugly but still buy them; after all, we presume that regular smokers buy cigarettes for their nicotine, not for the colours and shape of the packaging they come in. Yet this possibility that pack attractiveness is not a sufficient cause of smoking behaviour is seldom discussed in articles that report data on the relative attractiveness of different pack designs. And while acknowledging the importance of pack design to consumers when choosing between different brands after one has started smoking, data on the importance of pack attractiveness as a predictor of smoking initiation – relative to other social and experiential motives for starting smoking, such as peer pressure, socialisation, social modelling and affect regulation – are sparse.

### *8.3.1 Little Consideration of Potential Unintended Consequences of Reducing the Attractiveness of Tobacco Packaging*

There has been little consideration of potential unintended consequences of wrapping

tobacco products in unattractive packaging – consumers may simply buy plain packaged cigarettes, take the cigarettes out of the pack, transfer them to a more attractive hard-shell container, and toss the plain pack with all its text and graphic health warnings into the bin. Projecting the loss of revenue and brand awareness that may result from being forced to sell cigarettes in unattractive packaging, it is naïve to think that counter-measures to the relative unattractiveness of plain packaging will not be pursued. For example, 1950's-style silvered cigarette boxes, which hold cigarettes in a neat array behind an elasticated strip, are not widely used at present nor is there any indication that they are making a return to fashion among smokers. But it is not difficult to imagine that, with the prospect of a plain packaging policy on the horizon, brighter marketing minds than ours are currently thinking up new strategies and products that will appeal to the consumers who do not like plain packaging.

It is also not difficult to imagine that independent entrepreneurs will develop an array of cool, customised 'iPhone style' casing products, that especially appeal to young people, as a way to maintain the appeal of smoking and minimise the visibility of deterrent health warnings. These independent entrepreneurs may also start marketing durable, wrap-around pack 'sleeves' that encase plain cigarette packs, thereby removing the necessity of decanting cigarettes from one container to another whilst at the same time concealing their health warnings from view. It is difficult to see how the sale of such boxes or sleeves could ever be banned given that they pose no health risk in themselves and could arguably be marketed for a variety of purposes. The main point is that those who advocate for plain packaging on the basis that plain packaging reduces the appeal of smoking relative to branded packaging will ultimately require evidence that plain packs are *sufficiently* unappealing to motivate consumers to quit/not initiate smoking. They will also need evidence that any



reduction in smoking prevalence attributable to the reduced appeal of plain packaging will not be subsequently off-set by a potential rise in popularity of 'alternative pack' products that encourage people to transfer cigarettes from plain packs to more attractive containers and then bin the plain packs, health warnings and all.

#### ***8.4 Expert Opinion is No Substitute for Empirical Data***

In the absence of direct evidence that introducing plain tobacco packaging will reduce smoking prevalence in the UK, policy makers have sought expert opinion on the likely effectiveness of plain packaging. The extent of support for plain packaging amongst tobacco control researchers can be gauged from the findings of a recent study (Pechey et al., 2013) in which 33 anonymous 'tobacco control experts' from the UK (n = 14), Australasia (n = 12), and North America (n = 7) – three jurisdictions where plain packaging is being considered, or has been implemented – were asked to provide their assessment of the likely change in smoking prevalence that would be seen two years after plain packaging is (hypothetically) implemented. The 33 experts estimated that, after two years, plain packaging would reduce smoking prevalence by 1% in adults and by 3% in children. A 1% reduction in the prevalence of adult smoking in the UK – from 21% to 20% – would equate to 500,000 fewer people at risk of tobacco-related morbidity and mortality. The study authors make only fleeting comments on the reasons given by these experts for their estimates; most experts believed plain packaging would have a greater impact on children than on established adult smokers because, in their view, young people are more affected by less appealing packs and a lack of brand awareness.

My concern is that policy makers, media, and academics will be mistakenly

inclined to conflate these extra-scientific expert conjectures about what may be found in the future with actual scientific data on what has been found in the past. My first instinct upon reading this article, for example, was to assume that these experts must have arrived at their estimates by extrapolating findings of previous naturalistic or laboratory-based studies of smoking behaviour change attributable to plain packaging, and possibly adjusting their estimate for contextual differences (e.g. cultural attitudes, taxation etc). This cannot be the case however, because less than a handful of such studies exist in the peer-reviewed literature. The study authors' give little information as to what quantitative information these experts' drew upon to give quantitative estimates of a 1% and 3% reduction in adult and youth smoking, respectively. This is a policy then around which strong "beliefs" have evolved in advance of the evidence even by those who, in their professional capacities, are committed to the collection and analysis of the best available evidence.

Given the insufficient evidence plain tobacco packaging will likely result in a significant reduction in smoking prevalence and tobacco-related harm, there is a danger that this policy will win governmental support for emotional rather than evidential reasons. To implement a policy that, in an expert's opinion, looks and feels like it should work, but has, to date, not been evidenced to work in any natural or contrived setting, is, by definition, anti-scientific. As a principle of social scientific research, one should not, except in times of national emergency (e.g. a disease epidemic), implement a healthcare intervention on a large scale without first demonstrating that it reliably produces targeted outcomes in small populations of differing characteristics via putative mediator variables. Such small controlled studies have yet to be conducted or reported. A decision to implement such a policy cannot, therefore, be said to evidence-based.

Professor David Spiegelhalter, a co-author of on the Pechey study described above, has said: "Expert elicitation methods can guide policy makers by quantifying uncertainty where no direct evidence exists" (Anon, 2014). Professor Spiegelhalter is correct, but it is important to add that health policy decision making should be guided by expert opinion *only* when no direct evidence is available and cannot feasibly be expected to be available soon. However, when it is possible to collect evidence of an effect that is being speculated about, then one should seek to obtain verifiable outcome data directly and relegate subjective data (e.g. attitudes, beliefs, opinions) to a supporting role in policy decision making. Moreover, the submission of any expert opinion to this consultation process, positive or negative about the likely effectiveness of plain packaging, should not discourage social scientists from designing and conducting research studies to determine the accuracy of experts' opinions, nor should funders consider any expert opinion as removing the need to continue to fund deserved research proposals.

In summary, it is important to acknowledge that few public health researchers have publicly expressed what I believe to be valid concern that the apparent strength of the consensus among tobacco control experts and advocates that 'plain packaging will reduce smoking prevalence' does not accurately represent to policy makers what research on plain packaging has actually shown to date, or which policy conclusions are permitted by the available evidence. To this concern, I would add that framing or alluding to the consensus of opinion on the 'likely' effectiveness of plain packaging as 'good evidence' in itself could inflate media and public perceptions of the volume and quality of the available evidence on plain packaging, which in turn would likely add more researchers and policy makers to the consensus, which in turn will further increase misperceptions of the volume and quality of the evidence, and so on to create

an escalating sense of consensus of opinion on the likely effectiveness of plain packaging that bears increasingly less resemblance to the available evidence.

## 9. Methodological Limitations of Specific Plain Packaging Studies

The following sections describe additional methodological limitations specifically identified in three prominent studies of plain packaging (Moodie et al., 2012b; Moodie and Mackintosh, 2013; Maynard et al., in press). These three studies were selected for critique on the basis of their prominence in the literature (as indexed by citations), use of a UK-based sample, and/or assessment of smoking behaviour following exposure to plain packaging

### 9.1 *Misleading classifications of participants' smoking status*

Moodie et al. (2012b) report the findings of an online survey of 658 young people's (aged 10 to 17) perceptions of pack colour, perception of branded and non-branded packaging, and reasons for starting smoking. Findings purport to show that branded packaging, by way of pack shape, colour and method of opening, both attracts young people and misleads them about the strength of cigarettes and harms associated with cigarette smoking. Upon reading the study abstract alone, I was naturally drawn to agree with the authors' conclusion that removing colour and standardising the shape of cigarette packaging may attract fewer young people to smoking. Upon closer scrutiny of the study method and results, however, my confidence in the reliability of these data waned considerably.

My first concern was that the authors' criteria for classifying individuals' smoking status did not fairly represent the participant's answers to questions about their smoking history. Participants were coded as either an 'ever-smoker' or a 'never-smoker'. Never-smokers were those who indicated that they had never smoked a cigarette in their life, not even a puff. Never-smokers were further classified as either

'susceptible to starting' or 'non-susceptible to starting' on the basis of their response to the question: "Do you think you will smoke a cigarette at any time during the next year?", with the response categories given as: definitely not, probably not, probably yes, definitely yes, and I'm not sure. The question of whether individuals have sufficient introspective access to know how they will behave in the next year notwithstanding, 'non-susceptible never-smokers' were those who indicated that they would "definitely not" smoke a cigarette during the next year; 'never-smokers susceptible to starting' were those whose response was *anything other than definitely not*. This means that participants who indicated that they would 'probably not' smoke in the next year were classified as 'susceptible to starting'.

It is difficult to see how such a classification is a fair representation of these participants' predictions of their future behaviour. Participants who stated that they were 'not sure' if they would smoke in the next year were also classified as 'susceptible to starting'. Presuming that the 'not sure' option of the five possible responses would conceptually fall precisely on the midpoint of a 0 (definitely no) to 100% (definitely yes) continuum, the authors had no more of a ration to classify 'not sure' participants as 'susceptible to starting' as they did to classify them as 'non-susceptible to starting'. Statistically speaking, 'not sure' (i.e. 50/50) responses qualify individuals neither for classification as 'susceptible to starting' nor as 'non-susceptible to starting'.

By giving an answer that doesn't allow them to be grouped with those whose responses fall either side of 50/50, these participants are expressly defining themselves as unlike 'never-smokers susceptible to starting' and 'never-smokers not susceptible to starting'. All statistical analyses of perception data in which participants are stratified by these flawed classifications of susceptible/not susceptible

to smoking status are therefore subject to significant error.

The sub-classification of ever-smokers is beset by a similar problem. Ever-smokers were further classified either as a regular smoker, an occasional smoker, an ex-smoker or an experimenter. To remind the reader, the study abstract stated that the online survey had 658 respondents, a sample size that would be sufficiently large to detect effects where they exist. Closer inspection of the data tables of the study's results section, however, showed that only 162 (25%) of the sample had ever smoked, and only 49 (7%) were regular smokers. Upon this discovery, one realises that data on young smokers' perceptions of plain packaging are much more limited than was conveyed in the study abstract. Moreover, it is likely that many of these 49 participants were not even moderate smokers let alone heavy smokers given that respondents were classified as 'regular smokers' if they indicated smoking at least one cigarette a week. One could easily make the case that smoking one cigarette per week is conceptually better described as 'occasional smoking' than 'regular smoking. Giving the same classification code to one-a-week smokers and 10-a-day smokers is highly misleading and discards a great deal of variance in cigarette consumption.

## *9.2 Leading Questions*

My second concern with Moodie et al.'s (2012b) methodology was the use of a patently leading question format to elicit the key data on perceptions of pack colour. Participants were asked to look at the array of four coloured boxes (figure 2), and asked which pack they thought would have (a) the strongest tasting cigarettes, (b) the weakest tasting cigarettes, (c) the most harmful cigarettes, and (d) the least harmful cigarettes. Response options included 'red', 'blue', 'green', 'white', 'they're all the

same', and 'don't know'.



Figure 2. Array of coloured unbranded cigarette packs shown to participants of Moodie et al. (2012b).

Note that participants were asked to make a connection between four pack colours and four effects of the cigarettes in those packs. It is very conceivable that this 4-to-4 format will have encouraged respondents to view this question as a sorting task, and will have lead participants to think that one of these four packs did actually contain the strongest tasting cigarettes, that another pack colour did contain the weakest tasting cigarettes, that another did contain the most harmful cigarettes, and that their task was to sort correct pairs of colours (red, blue, green, white) with letters (a, b, c, d). The correct format for assessing the perceived association between pack colour and strength and harm would have been to show packs of different colour (or shape) one by one to participants and ask them to rate, on a Likert scale centring on 50/50, how strong/weak they think the cigarettes in this pack would taste and how much harm they think the cigarettes in this pack would cause. It is unclear why the authors did not use this simple format.



### 9.3 *How Statistics Can Mislead Policy Makers about the Potential Effectiveness of Plain Packaging*

Moodie and MacKintosh (2013) report that individuals smoked statistically significantly fewer cigarettes during a week in which they drew cigarettes from plain packs compared to a week in which they drew cigarettes from branded packs over a two-week study conducted in naturalistic settings. First, an assessment of smoking behaviour change up to one-week post-intervention is woefully insufficient to draw any meaningful conclusions about the potential long-term behavioural effects of plain packaging, as judged by a workgroup formed by the *Society for Research on Nicotine and Tobacco* (SRNT) (Hughes et al., 2003). I will return to this limitation in section 9.4. Second, closer inspection of the authors' cigarette consumption data reveals an extremely small difference in cigarette consumption between plain pack smokers and branded pack smokers that would be highly unlikely to be *clinically* significant (i.e. to yield a significant improvement in population health), and is actually very close to zero.

The average midweek cigarette consumption in this study was reported as 14.9 cigarettes for plain pack smokers and 15.5 cigarettes for branded pack smokers. Average weekend cigarette consumption was 15.7 for plain pack smokers and 16.7 for branded pack smokers. Both differences were found to be statistically significant at  $p < 0.05$ , leading the authors to conclude that plain tobacco packaging would likely reduce cigarette consumption at a population level. It is extremely difficult, however, to argue that a midweek reduction of 0.6 of a cigarette and a weekend reduction of one cigarette represents a clinically significant health benefit of plain packaging. If this effect size difference were to hold across all smokers, then, on average, every

smoker in the UK may be expected to smoke approximately 83 fewer cigarettes per year – hardly the significant incremental public health impact that policy makers would expect of any new tobacco control initiative.

The authors' emphasis on the difference between percentage values without drawing attention to the difference in the raw numbers on which the percentage values are based also threaten to mislead the reader about the strength of the potential cessation effect of plain packaging. For example, the authors state that 33% of plain pack smokers wanted to quit compared to 25% of branded pack smokers who wanted to quit, a difference that is significant at  $p < 0.05$ . However, closer inspection of the data table reveals that these percentages represent a difference of four people (16 vs. 12). It is difficult to argue that a difference of just four people represents a convincing statistical trend that justifies the national roll-out of any intervention. Similarly, the authors report that 10% of plain pack smokers covered up their pack when in public compared to 2% of branded pack smokers who covered up their packs in public, a difference significant at  $p < 0.05$ . With a sample size of 48, these percentages translate to a difference of four people (5 vs. 1). Again, it is inappropriate to suggest that a difference of four people provides a reliable indication of what effect plain packaging may have at a population level. In addition, this finding implies that five out of every 48 smokers would cover up their plain packs in public. It is difficult to argue for the national implementation of an intervention that persuades only 10% of smokers to hide their packs in public, a variable which itself has no direct public health consequences. The problem here is that small count differences within a small sample are more likely to be found to be statistically significant even with a very small effect size, and thus suggest an interesting difference where likely none would exist in a larger sample.

#### 9.4 Use of Insufficient Assessment Periods

To remind the reader, no cigarette consumption data were collected from participants in Moodie and MacKintosh's (2013) naturalistic study beyond one week. The best practice guidance produced by the *Society for Research on Nicotine Tobacco* recommends that trials of smoking cessation interventions, pharmacological and psychosocial, should build in a 'grace period' after the start of the intervention, typically around two weeks but this should vary depending on the treatment, setting and population, in which smoking episodes are not counted as failures of abstinence (or indeed counted at all) as therapeutic effects of the intervention may still be emerging. This principle essentially means that authors should not make any claims about the potential long-term effectiveness of an intervention based on what happens during the participant's first two weeks in active receipt of an intervention.

Sadly, the trial conducted by Moodie and Mackintosh (2013) is not the only behavioural trial of plain packaging that did not build in a grace period as per the SRNT's recommendation. Maynard and colleagues presented a poster, now in press in *The Lancet*, at the 2014 annual conference of the *Society for Research of Nicotine and Tobacco* in Seattle, WA, titled "Plain Packaging and Smoking Behaviour: A Randomised Controlled Trial". Despite a promising title, the methods section of this poster states that 128 adult regular smokers smoked their regular brand of cigarettes from either a plain pack or a branded pack for just 24 hours. Working at the very limits of optimism, the authors' of this study suggest, merely by approving such a design, that: (i) exposure to plain packaging for just 24 hours can significantly change people's cigarette consumption; and that (ii) any change in cigarette consumption observed over 24 hours that is attributable to plain packaging is useful for predicting

people's smoking behaviour up to clinically meaningful end-points (e.g. 3, 6, 9, and 12 months post-intervention). Both suggestions are an affront to common sense and far, far removed from all theory and data on how intervention-assisted smoking cessation occurs. The findings of any smoking cessation intervention that assessed smoking behaviour change for only 24 hours are of little to no use to policy makers who wish to estimate the long-term effects of the intervention. This woefully insufficient assessment period alone should preclude this study's inclusion in any good meta-analysis of behavioural smoking cessation interventions.

A woefully insufficient assessment period of 24 hours was, to my surprise, however, not the feature of this poster that caused the greatest alarm. In the results section of this poster, the authors state: "Smokers randomized to the plain pack smoked an average of 0.58 fewer cigarettes and inhaled an average of 54.78 mL more smoke per cigarette, but the confidence intervals were wide and included the null". This last statement is an unnecessarily long-winded way of saying that the differences in cigarette consumption and inhaled smoke between plain pack smokers and branded pack smokers were not statistically significant at  $p < 0.05$ . In simple terms, the authors found that the differences between the two groups were not significantly bigger than zero, not bigger than the difference that they would have expected by chance.

Remarkably then, the authors arrive at a conclusion that is completely incongruent with the results they have just reported: "The results add to the growing evidence base that plain packaging is likely to be an effective tobacco control measure". This conclusion squarely contradicts the non-significant results reported only two paragraphs earlier! Absolutely no evidence was presented in this poster that justifies the conclusion that "plain packaging is likely to be an effective tobacco

control measure". The authors' explicitly acknowledge that levels of cigarette consumption reported by plain pack smokers and branded pack smokers were statistically equivalent. This is the only conclusion about plain packaging's likely effectiveness that is supported by the data. How then one arrives at the conclusion that the results "add to the growing evidence base that plain packaging is likely to be an effective tobacco control measure" is beyond comprehension. Such a grossly misleading summation of the data is, in my opinion, indefensible..

Lastly, the authors also report no significant differences were found between plain pack smokers and branded pack smokers in terms of perceived taste and quitting contemplation. These non-significant effects cannot be attributed to a lack of statistical power; 64 participants per group in a two-group comparison with up to five predictor variables/covariates would have yielded more than 80% power to detect a medium-sized effect difference between plain pack smokers and branded pack smokers, had one existed. The most likely explanation for the non-significant effects on the primary outcome variables and several secondary outcome variables is almost certainly that 24 hours is simply far too short a time period for smoking behaviours and attitudes to change by a significant magnitude. I can only hope that the authors, in *The Lancet* article in which this study will be described, caution readers that smoking behaviour observed for just 24 hours insufficient assessment period of 24 hours precludes any meaningful predictions being drawn about how plain packaging may or may not affect smoking behaviour beyond 24 hours.

## **10. Recommendations to the UK Government: Less Haste, More Quality, and More Certainty on Plain Packaging**

The remaining sections describe my recommendations of the study design features that would increase the methodological rigour of evaluations of plain packaging, a set of criteria for evaluating the quality of evidence that should soon emerge from Australia, and a set of fundamental principles of scientific research to which both tobacco control researchers and tobacco company researchers should adhere in their study of the effects of plain packaging.

### ***10.1 Every Plain Packaging Study Should Measure Smoking Behaviour Change as its Primary Outcome***

Given the health benefits of smoking cessation and the lack of known health benefits of smoking, Blanchard and Schwartz (1988) argue, "the only logically clinically significant change in smoking is total cessation" (p.180, italics in original). The first requirement of future studies of the effectiveness of plain packaging for producing smoking abstinence is to measure, as the primary outcome, the rate of smoking abstinence among participants who smoked before exposure to plain packaging. Almost all studies of plain packaging to date did not record any smoking behaviour by their participants, and researchers whom are assessing the effects of plain packaging in Australia are only now beginning to record smoking behaviour.

*10.1.1 How Should Smoking Behaviour Change Be Assessed in Plain Packaging Studies?*

A workgroup formed by the *Society for Research on Nicotine and Tobacco* (Hughes et al., 2003) recommended that aid-to-cessation intervention/treatment trials report multiple measures of tobacco abstinence. The workgroup recommends that 'prolonged abstinence from tobacco use' – defined as continuous abstinence since the end of a defined 'grace period' in which smoking is not counted as a failure as intervention effects may still be emerging – be used as the primary measure of intervention efficacy, and point prevalence abstinence self-report – defined as the prevalence of abstinence during a consecutive number of days preceding an assessment, but not necessarily continuously since the end of the 'grace period' – be used as the secondary measure of intervention efficacy.

Hughes et al. (2003) recommend that prolonged abstinence be used as the primary outcome measure because it: "(a) requires a long period of abstinence; (b) it captures long-term abstainers who initially slip and (c) it can be used with treatments that have a delayed effect" (Hughes et al., 2003: 18). Point prevalence abstinence is recommended as a secondary outcome measure because it is the modal outcome measure of behavioural smoking cessation interventions and meta-analyses of these interventions tend to base treatment recommendations on smoking point prevalence data (Fiore et al., 2008; Stead & Lancaster, 2009; Hajek et al., 2009). The point prevalence measure may better capture those who lapse to smoking early in a quit attempt but do manage to quit later in the process, that is, it can capture delayed effects of an intervention, and by extension, has higher power than prolonged abstinence to detect significant long-term differences between intervention samples. Six-month follow-up is the modal assessment point used in aid-to-cessation trials and

a standard criterion for inclusion in meta-analyses of smoking cessation treatment trials (Fiore et al., 2000, 2008; Hajek et al., 2009).

At each follow-up assessment, participants should be asked (at least) the following questions: (1) "Since [date end of 'grace period'], have you ever smoked at least a part of a cigarette on each of seven consecutive days?" (prolonged abstinence); (2) "Since [date end of 'grace period'], have you smoked any cigarettes in each of two consecutive weeks?" (prolonged abstinence); and (3) "Have you smoked at least part of a cigarette in the last 30 days?" (30-day point prevalence of abstinence).

Failure for prolonged abstinence is indicated by smoking on seven consecutive days or smoking at least once per week for two consecutive weeks, where a smoking episode was deemed to be anything over a single cigarette puff (Hughes et al., 2003). The latter part of this definition is intended to capture those who smoke regularly but on a less-than-daily basis. Failure for point prevalence abstinence is indicated by any smoking (i.e. even a puff) on any of the thirty days preceding a follow-up assessment; the even-a-puff criterion applies to point prevalence but not to prolonged abstinence because the point prevalence measure is intended to capture a cross-sectional snapshot of abstinence (Hughes et al., 2003).

### *10.2 Suggested Criteria for Assessing the Quality of Evidence on the Effectiveness of Plain Packaging*

A first step to assessing the quality of evidence cited in support of the claim that 'plain packaging will work' in the UK is to assess how closely the available evidence resembles the best evidence that feasibly could exist in a jurisdiction where plain packaging is not legislated. The 'best evidence' can be defined as the answer to



the question: if one wanted to tell policy makers that the available evidence allows one to be 95% confident that plain packaging will reduce smoking prevalence in the UK in the long-term, what would that evidence look like?

It is recommended that policy makers and scientists evaluate the quality of the evidence for the cessation efficacy of plain tobacco packaging relative to branded packaging by the extent to which that evidence satisfies nine criteria that together make up the core scientific criteria for defining empirically-supported treatments used by the American Psychological Association *Division 12 Task Force on Psychological Interventions* (Chambless & Hollon, 1998), and the framework for developing and implementing complex interventions described by the UK Medical Research Council (Campbell et al., 2000; Craig et al., 2008): (i) in a study design with 80% power to detect a medium-sized difference (Cohen's  $d = 0.50$ ) between two groups, (ii) a representative sample of individuals (aged 16+), (iii) identified as daily or regular smokers of combustible tobacco products, (iv) who were randomised to a condition in which they were given mocked-up plain packs of cigarettes (v) had significantly higher odds of biochemically-verified prolonged abstinence from tobacco use (primary measure of effect) (vi) or 30-day point prevalence abstinence from tobacco use (secondary measure of effect) (vii) at a clinically significant follow-up point (e.g. six months) after beginning use of plain packs (viii) compared to individuals who were randomised to a condition in which they given branded packs of cigarettes for the same period of time (ix) when statistically controlling for differences between participants on other variables that could explain variance in these three outcomes.

These initial nine criteria provide a useful minimum standard for defining as 'high quality' evidence suggestive of the cessation efficacy of plain tobacco

packaging. Many of these measures of methodological stringency can be implemented at little to no cost, and none are prohibited by the fact that plain packaging is not legislated in one's jurisdiction. A 10<sup>th</sup> criterion that would further enhance empirical quality, but may not be reasonably expected until statistical mediation analyses are better understood, is evidence that plain packaging increases individuals' odds of tobacco abstinence through putatively important cognitive mechanisms (e.g. attractiveness, perceptions of harm etc). Lastly, an 11<sup>th</sup> criterion for defining plain packaging as an empirically supported intervention is the requirement that evidence of the efficacy of plain packaging in controlled conditions be replicated by at least two independent investigators or teams using similar designs. It is the judgment of this author that the vast majority of available studies of plain packaging do not satisfy this proposed minimum standard for defining evidence as 'high quality', and those studies that to date have been conducted with sufficient methodological stringency have not found that plain packaging reduces smoking prevalence or tobacco consumption.

## 11. Summary of Findings for Policy Makers

This submission provides a critical analysis of quantitative and qualitative evidence that purports to describe the likely perceptual and behavioural effects of a policy of plain packaging on current smokers and non-smokers, and concludes that the majority of these studies are characterised by low levels of methodological rigour. The social science literature on plain and branded tobacco packaging consists almost entirely of studies that have measured as their primary outcome variable, cognitive variables – perceived appeal/attractiveness of pack designs, salience of health warning, perceptions of harm associated with cigarettes in plain and branded packs – that are hypothesised to influence smoking behaviour, but importantly have not to date been empirically-supported as predictors of smoking initiation, smoking cessation, or smoking relapse, the key outcomes that plain packaging is hoped to affect.

No evidence could be identified in this review that smoking prevalence or tobacco consumption significantly changes in any group (non-smoker, current smoker, ex-smoker) up to a clinically significant end-point (minimum of six months) in circumstances, experimental or naturalistic, in which tobacco products are available only in standardised packaging (compared to circumstances in which the same products are only available in branded packaging). Many studies purport to evidence targeted changes in smoking-related cognition pre-post exposure to plain packaging. No study to date, however, has followed this up with evidence that changes in smoking-related cognitions that are attributable to the reduced appeal of plain packaging are statistically predictive of targeted changes in the same individuals' smoking behaviour. Evidence of this critical cognition-behaviour link upon which the case for plain packaging rests is eagerly awaited, but it is vitally important that policy

decision makers give great weight to the fact that they do not have this keystone evidence in hand, and have courage to resist pressure to proceed to implement plain packaging ahead of this keystone evidence.

Indeed, policy makers are advised to give great weight, too, to over three decades of studies of the psychosocial risk factors of smoking initiation, cessation and relapse that have consistently identified a variety of individual and circumstantial factors as strongly associated with adolescents' and adults' likelihood of starting, stopping and re-starting smoking. Policy makers should be mindful that no predictor study has identified greater exposure to tobacco packaging or higher perceived appeal/attractiveness of tobacco packaging as a significant cause of smoking initiation or relapse in any societal group. The evidence base on predictors of smoking behaviour therefore indicates that changing the design of tobacco packaging to reduce its attractiveness would be highly unlikely to reduce smoking prevalence because people say that they do not start smoking or fail to quit smoking because of the packaging. Rather, thousands of smokers, contributing to hundreds of studies over 30 years, declare that they smoke largely for affective, physical and social reasons. Standardising tobacco packaging would be highly unlikely to affect the affective, physical and social factors that are well-established as causes of smoking.

Reducing smoking prevalence is too important a societal goal to be influenced by extra-scientific conjecture about what may happen if plain packaging is implemented, or by public health advocates' hopes and fears about what may happen if plain packaging is implemented. The decision to implement plain packaging should be based solely and squarely on an accumulation of high quality evidence that this course of action has demonstrated success on a small scale and can confidently be expected to work similarly when rolled out nationwide in the UK.



## 12. Conclusions on the Evidence for Plain Packaging

The most rational policies for tobacco control, from a public health perspective, are those which significantly reduce prevalence of tobacco use in the population at a cost to society that is equal to or less than the monetised health and social benefits generated by the policy. There is little evidence to date to indicate that introducing plain tobacco packaging in the UK would reduce prevalence significantly below the sub-group prevalence figures associated with current tobacco control measures, let alone at cost per benefit that falls below the Government's acceptability threshold.

Given the lack of a sufficient necessary evidence base upon which to implement plain packaging at the present time, a rational next step is to resource investigators to provide policy makers with high quality, robust evidence on the potential effectiveness and cost-effectiveness of plain packaging, and in particular, evidence of the characteristics and circumstances that make individuals more and less likely to not initiate smoking and quit smoking successfully.

Where possible, investigators should evaluate outcomes that emerge from designs in which individuals of varying motivation to initiate, cease or relapse to smoking and varying levels of tobacco use are randomised to experimental conditions in which they are given either branded packs or mocked-up plain packs of cigarettes; cigarette consumption (continuous measure) should be recorded pre- and post-exposure to plain packaging; smoking-related cognitive variables should be assessed as supplementary outcomes; the strength of the covariate-adjusted odds of tobacco abstinence associated with plain packaging (versus branded packaging) should be assessed up to several clinically significant end-points; and investigators should, when possible, assess statistical mediation of tobacco use outcomes associated with plain

(versus branded) packaging by changes in perceptions of pack attractiveness, salience of health warnings and perceptions of harm. I strongly recommend that the UK Government re-affirms its decision of July, 2013 to delay a decision to adopt or reject plain tobacco packaging in the UK until sufficient empirical support for either decision is in hand.

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**OBSERVATIONS ON THE CHANTLER REPORT: A PSYCHOLOGICAL ANALYSIS  
OF THE POTENTIAL IMPACT OF STANDARDIZED CIGARETTE  
PACKAGING ON UNDERAGE SMOKING**

**Gregory Mitchell, Ph.D.**

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**I. EXECUTIVE SUMMARY**

1. I have been asked by the law firm Herbert Smith Freehills LLP, on behalf of British American Tobacco UK Limited, to offer my observations on the Report of the Chantler Review (hereinafter referred to as the "Chantler Report"),<sup>1</sup> the draft Standardised Packaging of Tobacco Products Regulations issued by the United Kingdom's Department of Health (hereinafter referred to as the "draft regulations" or the "draft standardized packaging

<sup>1</sup> Standardised packing of tobacco: Report of the independent review undertaken by Sir Cyril Chantler (April 2014) (as published at: <http://www.kcl.ac.uk/health/10035-TSO-2901853-Chantler-Review-ACCCESSIBLE.PDF>).



regulations")<sup>2</sup> and the Impact Assessment of the draft regulations.<sup>3</sup> I have been asked to consider in particular whether the draft regulations are likely to reduce underage smoking in light of relevant scientific research on adolescent decision-making and behavior.

2. In summary, it is my opinion that:
  - a. The Chantler Report supplies no theoretical basis for its conclusion in support of imposing standardized cigarette packaging, and there is no direct empirical evidence to support the claim that standardized cigarette packaging plays a causal role in adolescent decisions to smoke, a fact acknowledged in the Chantler Report.<sup>4</sup> The Chantler Report ignores established risk factors for adolescent smoking, of which branded packaging is not one.
  - b. The Chantler Report bases its conclusion in favor of standardized packaging on flawed speculation about the potential behavioral effects of a move to standardized packaging.<sup>5</sup>
  - c. The Chantler Report ignores a crucial problem with a move to standardized packaging of cigarettes: there is no justification for the belief that differentiated packaging can have only positive causal effects on smoking decisions and, conversely, that standardizing packing can have only negative causal effects. Any move to standardized packaging is likely to decrease the attractiveness of some

<sup>2</sup> As published at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/323922/Cons\\_doc.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/323922/Cons_doc.pdf).

<sup>3</sup> As published at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/323518/impact\\_assessment.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/323518/impact_assessment.pdf)

<sup>4</sup> See paragraph 4.21 in the Chantler Report.

<sup>5</sup> See in particular paragraphs 4.21 to 4.25 in the Chantler Report, which set out the basis for its conclusion.

cigarette brands and increase the attractiveness of other brands and is not likely to change overall views about smoking or the incidence of smoking.

- d. In addition, a move to standardized packaging and the further commoditization of cigarettes is likely to lead to price reductions for some cigarette brands as cigarette makers attempt to compete for customers and maintain brand loyalty. Price reductions associated with a move to standardized packaging will likely lead to increased underage smoking absent further price regulation, which could result in other unintended consequences not addressed in the Chantler Report. Other perverse effects of standardized packaging may follow as well, including an increase in the expressive value of the act of smoking.
- e. There is no good empirical reason to believe that the draft regulations will lead to net reductions in underage smoking. If the draft regulations are implemented, there will very likely be a decrease in cigarette prices, an increase in the number of brands that are seen as acceptable to smoke, and an increase in smoking.
- f. Measures aimed at making adolescent access to cigarettes more difficult, such as increased prices and stricter enforcement of age restrictions on purchasing, are more likely to have a negative impact on underage smoking. However, regulators should recognize that, short of complete bans on the manufacture and sale of cigarettes, the demand for cigarettes among underage smokers may be difficult to reduce below current levels given adolescent desires for risky, experimental, and norm-testing behaviors.

## II. QUALIFICATIONS

3. I hold a Ph.D. in psychology and a J.D. from the University of California, Berkeley. I am a tenured professor at the University of Virginia, where I am the Joseph

Weintraub-Bank of America Distinguished Professor of Law and the Thomas F. Bergin Teaching Professor of Law. My curriculum vitae, which is attached hereto as Exhibit A, lists my publications and other academic achievements and provides a detailed record of my educational and employment background.

4. I regularly teach classes and give presentations on legal applications of social science research, advise students and colleagues on research methodology, and conduct research on human judgment and decision-making. A core area of my research is behavioral law and economics, which involves the application of behavioral research to legal and economic policy and involves the empirical study of how people make judgments and decisions and how legal regulations may affect these judgments and decisions. Another core area of my research involves social psychology and the study of how norms, values, attitudes and beliefs affect decision-making and behavior.

5. I have served as a member of the Advisory Panel for the National Science Foundation's Law and Social Science Program, and I often serve as a referee for research-grant organizations and peer-reviewed social science journals.

6. I have published numerous articles on the proper use of social science evidence for legal purposes. One of my articles on the appropriate uses and limits of social scientific expert evidence in employment discrimination cases, which was written with my colleagues John Monahan and Laurens Walker (Monahan, Walker & Mitchell, 2008), was cited approvingly by the U.S. Supreme Court in its decision in *Wal-Mart Stores, Inc. v. Dukes*, 131 S. Ct. 2541 (2011). In addition, I have served as an expert witness in a number of legal cases within the U.S.

### **III. SCOPE OF REPORT AND BACKGROUND INFORMATION**

7. My task is to provide an objective evaluation of the likely effects of standardized cigarette packaging regulations on underage smoking in light of existing theory and empirical

research on how people, especially adolescents, make decisions about health-related behaviors. I have not been asked to support any particular conclusion. I personally support the goal of reducing to the greatest extent possible smoking by persons of all ages. That goal may be advanced by some regulations and impeded by other regulations. Honorable intentions behind a regulation are no guarantee of effectiveness. Effective governance depends on critical analysis of the empirical foundation of laws.

8. The United Kingdom's Department of Health recently issued a consultation on the introduction of regulations for standardized packaging of tobacco products. These regulations, if implemented, would require (with respect to the retail packaging of tobacco products) the use of specified colors on external and internal packaging and would require that all text be in a standard font type, size and color in specified locations on cigarette packs, which must be made of specified materials and must contain at least 20 cigarettes. The draft regulations would also ban the use of inserts and the use of smells or noises as part of the packaging. These regulations would thus prevent the use of brand-specific distinctions on cigarette packs via trademarks or trade dress. The draft regulations would operate in conjunction with existing tobacco product regulations in the U.K., including the requirement of graphic warnings covering 40% of the back of the package and textual warnings covering 30% the front of the package, age-based use and purchase restrictions, price regulations, and restrictions on advertising and displays.<sup>6</sup>

<sup>6</sup> The European Tobacco Products Directive is presently set to take effect in May of 2016. Among other requirements and restrictions, this directive requires that graphic health warnings cover 65% of the cigarette pack and bans any labeling of the package that might give an erroneous impression about the health effects or risks of smoking.

9. The primary basis for the draft regulations was the independent inquiry by Sir Cyril Chantler into whether standardized cigarette packaging would likely have a positive effect on public health, particularly the health of children. The report by Sir Chantler concluded that a move to standardized packaging would likely have a modest positive impact on public health.<sup>2</sup>

10. My report is offered in response to the consultation's invitation for comments on the Chantler Report, the draft regulations and the Impact Assessment of the draft regulations. According to the Department of Health's consultation document, a key justification for the draft standardized packaging regulations is the belief that such regulations will reduce the incidence of smoking by underage persons (i.e., persons under the legal age for purchase or use of tobacco products).<sup>3</sup> Accordingly, my report focuses on the question whether mandated standardized packaging of the kind proposed in the draft regulations is likely to reduce the incidence of underage smoking within the United Kingdom.

11. To date, no published studies evaluate the impact of standardized packaging regulations on actual smoking behavior of minors. A number of surveys, focus group studies, and experiments examine reactions to standardized versus non-standardized packaging, but none of these studies examines the effects of standardized packaging on behavior in the field. The Chantler Report acknowledges this fact. As a result, the Chantler Report's conclusions were based on speculation about what impact standardized packaging might have on behavior.<sup>4</sup>

<sup>2</sup> See paragraph 5.13 in the Chantler Report.

<sup>3</sup> Throughout this report, I refer to smokers above the legal age for tobacco use or purchase as adult smokers and persons below the age of legal purchase as underage smokers. Occasionally I will also refer to persons under the legal age as adolescents, teens, or minors.

<sup>4</sup> See paragraph 4.21 in the Chantler Report.

#### **IV. ADOLESCENTS AND CIGARETTE PACKAGING**

12. In Sections IV.A and IV.B below, I discuss the arguments advanced by Sir Chantler in favor of a move to standardized packaging. I first discuss the failure of the Chantler Report to engage seriously with psychological theories of adolescent decision-making, and then I explain why existing theory and research do not support the specific hypotheses advocated in the Chantler Report. In Section IV.C, I provide an overview of research on the correlates of underage smoking to illustrate the many factors that may impact the effectiveness of smoking interventions and to show that brand information on cigarette packaging has not been shown to be a correlate of underage smoking and has not traditionally been a theoretical concern.

13. My analysis leads to the conclusion that, when the full potential effects of standardized packaging are considered, there is no empirical justification for the view that standardized packaging regulations will have net positive, or even net neutral, effects on the incidence of underage smoking. It is very likely that the draft regulations will increase the appeal and acceptability of a number of cigarette brands among adolescents and lower the price of cigarettes, which together could lead to a substantial increase in adolescent smoking.

##### **A. The Chantler Report's Conclusion Does Not Follow From Any Psychological Theory of Adolescent Behavior**

14. After acknowledging the lack of direct evidence to support a move to standardized packaging, the Chantler Report invokes "contemporary theories of behavioural psychology" and their emphasis on "non-conscious processes in determining behavior" to support its conclusion in favor of standardized packaging.<sup>10</sup> However, the Chantler Report never engages with any contemporary theories of adolescent health behavior and never provides any

<sup>10</sup> Paragraph 4.21 in the Chantler Report.

research that can support the claim that branded cigarette packages unconsciously influence adolescents to smoke.

15. First, the sources that the Chantler Report cites as supposedly showing that brand appeal may unconsciously cause children to eat fast food, drink alcohol or smoke do not actually support that claim, much less the claim that standardized packaging of cigarettes will reduce smoking.<sup>11</sup>

- a. The Robinson et al. (2007) study examined whether young children rated foods they believed to be from McDonald's better than from an unspecified maker (researchers ensured that children were aware of the branding difference rather than examining effects without brand direction).<sup>12</sup> The study examined only taste preferences and not consumption behavior. Whether young children preferred a branded product to an unknown product (after their attention was brought to this difference) has no bearing on how adolescents will naturally react to cigarettes in standardized packaging, and the study provides no evidence at all of any unconscious causal influence of McDonald branding on choices or decisions to eat or not eat fast food.
- b. Harris et al. (2009) examined the impact of television advertising that projected a sense of fun, happiness or excitement on snack food consumption of

<sup>11</sup> See paragraphs 3.18 and 4.22 and footnotes 45 to 49 and 67 in the Chantler Report.

<sup>12</sup> Robinson, T.N., Bozekowski, D.L.G., Matheson, D.M., & Kraemer, H.C. (7). Effects of fast food branding on young children's taste preferences. *Archives of Pediatric and Adolescent Medicine*, 161, 792-797.

- experimenter-supplied snack foods that could be freely consumed.<sup>13</sup> The study did not examine the effects of product branding on eating behavior.
- c. Engels (2009) placed young adult male participants in a "bar lab" in which beer, wine and soft drinks were freely available and then showed participants movie clips containing or not containing scenes and/or commercials in which people consumed alcohol.<sup>14</sup> The study did not examine the effects of product branding on drinking behavior.
- d. Field et al. (2009) examined the relation between attentional bias (i.e., a tendency for experienced users of substances to be more attentive to substance-related cues than inexperienced users) and self-reported craving for alcohol, caffeine, tobacco and illicit drugs.<sup>15</sup> The meta-analysis did not examine the impact of branding on craving, and, moreover, it found only a weak correlation between attentional bias and self-reported craving across all substances, with the correlation between bias and craving for alcohol and tobacco being even smaller than that found for drugs and caffeine.

<sup>13</sup> Harris, J.L., Bargh, J.A., & Brownell, K.D. (2009). Priming effects of television food advertising on eating behavior. *Health Psychology, 28*, 404-413.

<sup>14</sup> Engels, R.C.M.E., Hermans, R., van Baaren, R.B., Hollenstein, T., & Bot, S.M. (2009). Alcohol portrayal on television affects actual drinking behavior. *Alcohol, & Alcoholism, 44*, 244-249.

<sup>15</sup> Field, M., Munafò, M.R., & Franken, I.H.A. (2009). A meta-analytic investigation of the relationship between attentional bias and subjective craving in substance abuse. *Psychological Bulletin, 135*, 589-607.



- e. Engelmann et al. (2012) is a meta-analysis of brain activity during exposure to smoking imagery.<sup>16</sup> None of the studies in the meta-analysis examined the effects of cigarette branding on brain activity.

16. The Chantler Report's facile invocation of unconscious processes as an influence on adolescent decisions and behavior reveals a lack of understanding of adolescent theories of health behavior and of the limits of the research into unconscious causes of behavior. Although research has found that stimuli sometimes unknowingly influence attention and behavior in some settings, the robustness and reliability of these findings is a matter of considerable debate within psychology.<sup>17 18</sup> Activating, or priming, a concept such as an attitude or a stereotype has been shown in experimental settings to unknowingly affect behavior at times, but these behavioral priming effects are fragile and very sensitive to variations across people and situations, rendering the effects difficult to replicate even in controlled laboratory settings.<sup>19 20 21</sup> There is presently no theory of priming that will allow us to pick out which of the innumerable potential unwitting

<sup>16</sup> Engelmann, J.M., Versace, F., Robinson, J.D., Minnix, J.A., Lam, C.Y., Cui, Y., Brown, V.L., & Cinciripini, P.M. (2012). Neural substrates of smoking cue reactivity: A meta-analysis of fMRI studies. *NeuroImage*, 60, 252-262.

<sup>17</sup> E.g., Newell, B.R., & Shanks, D. (2014). Unconscious influences on decision making: A critical review. *Behavioral and Brain Sciences*, 37, 1-61;

<sup>18</sup> E.g., Oswald, F., Mitchell, G., Blanton, H., Jaccard, J., & Tetlock, P.E. (2013). Predicting ethnic and racial discrimination: A meta-analysis of IAT criterion studies. *Journal of Personality and Social Psychology*, 105, 171-192.

<sup>19</sup> E.g., Doyen, S., Klein, O., Pichon, C.-L., & Cleeremans, A. (2012). Behavioral priming: It's all in the mind, but whose mind? *PLoS One*, 7, e29081.

<sup>20</sup> E.g., Harris, C., R., Coburn, N., & Pashler, H. (2013). Two failures to replicate high-performance-goal priming effects. *PLoS One*, 8, e72467.

<sup>21</sup> E.g., Shanks, D.R., Newell, B.R., Lee, E.H., Balakrishnan, D., Ekelund, L., Cenac, Z., Kavvadia, P., & Moore, C. (2013). Priming intelligent behavior: An elusive phenomenon. *PLoS One*, 8, e56515.

influences will and will not have any impact on thought or behavior across persons and situations.<sup>22</sup>

17. The single source that the Chantler Report cites on “contemporary theories of behavioral psychology” is actually a meta-analysis of experimental studies examining the relationship between intentions to change behavior and subsequent behavioral change.<sup>23</sup> This study does not purport to analyze psychological theories of adolescent health behavior or the influence of non-conscious processes on behavior. The expectancy-value theories that are discussed in the cited source (i.e., theories of decision-making in which decisions are seen as a function of the expected value associated with different courses of action) posit that intentions can be good predictors of behavior *if* a number of variables that influence intentions and behavior are properly measured. Simply asking people whether a change in cigarette packaging would likely change their behavior or whether standardized packages are less attractive than differentiated packages will not yield reliable answers about future behavior.

18. Examples of expectancy-value models of decision-making include the Theory of Reasoned Action, the Theory of Planned Behavior and the Prototype-Willingness Model. Under the Theory of Reasoned Action, both goal intentions (what one plans to do) and implementation

<sup>22</sup> Cesario, J. (2014). Priming, replication, and the hardest science. *Perspectives on Psychological Science*, 9, 40-48.

<sup>23</sup> The single source cited in the Chantler Report (in footnote 65 of the report) is Webb, T.L., & Sheeran, P. (2006). Does changing behavioral intentions engender behavior change? A meta-analysis of the experimental evidence. *Psychological Bulletin*, 132, 249-268.

intentions (how one plans to do it) influence behavior.<sup>24 25 26 27 28 29</sup> Intentions are predicted by attitudes towards a behavior and subjective norms about the behavior, with attitudes and

<sup>24</sup> Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.

<sup>25</sup> Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.

<sup>26</sup> Gollwitzer, P. M. (1999). Implementation intentions: Strong effects of simple plans. *American Psychologist*, *54*, 493-503.

<sup>27</sup> Schwarzer, R. (2001). Social-cognitive factors in changing health-related behavior. *Current Directions in Psychological Science*, *10*, 47-51.

<sup>28</sup> Webb, T. L., & Sheeran, P. (2008). Mechanisms of implementation intention effects: The role of goal intentions, self-efficacy, and accessibility of plan components. *British Journal of Social Psychology*, *47*, 373-395.

<sup>29</sup> Webb, T. L., & Sheeran, P. (2007). How do implementation intentions promote goal attainment? A test of component processes. *Journal of Experimental Social Psychology*, *43*, 295-302.

subjective norms shaped by background behavioral and normative beliefs.<sup>30 31</sup> To make reliable predictions about behavior, one must gather information about intentions, which requires that one gather information about attitudes and subjective norms, which in turn requires that one

<sup>30</sup> A subjective norm refers to perceived direct or indirect social pressure to perform a given action behavior. Subjective norms are operationalized in terms of the views held by important others who might influence a given action (e.g., "Most people who are important to me think that I should smoke cigarettes"). In general, an individual is more likely to intend to engage in an action when he or she perceives social pressure to act, and these social pressures can produce intentions to act independent of the influence of attitudes on intention. Researchers now widely accept that there is utility in further distinguishing between two types of normative beliefs that individuals may hold: injunctive norms (i.e., perceptions of what others think one should do) and descriptive norms (i.e., perceptions of what others are doing). See Park, H., Klein, K. A., Smith, S., & Martell, D. (2009). Separating subjective norms, University descriptive and injunctive norms, and U.S. Descriptive and injunctive norms for drinking behavior intentions. *Health Communication, 24*, 746-751; Sheeran, P., & Taylor, S. (1999). Predicting intentions to use condoms: A meta-analysis and comparison of the theories of reasoned action and planned behavior. *Journal of Applied Social Psychology, 29*, 1624-1675. Measuring both injunction and descriptive norms improves prediction of behavioral intentions and behavior across a range of health behaviors, including smoking among adolescents and young adults. See Chassin, L. L., Presson, C. C., Sherman, S. J., & Edwards, D. A. (1984). Four pathways to young-adult smoking status: Adolescent social-psychological antecedents in a midwestern community sample. *Health Psychology, 10*, 409-418; Grube, J. W., Morgan, M., & McGree, S. T. (1986). Attitudes and normative beliefs as predictors of smoking intentions and behaviors: A test of three models. *British Journal of Social Psychology, 25*, 1-93; Vitória, P. D., Salgueiro, M., Silva, S. A., & de Vries, H. (2011). Social influence, intention to smoke, and adolescent smoking behaviour longitudinal relations. *British Journal of Health Psychology, 16*, 779-798.

For subjective norms, the distal variable of interest is the normative belief, which is an expectation of how important referent individuals or groups will or will not respond to particular behaviors. Not all normative beliefs will necessarily exert strong influence on intentions, because the opinions of some individual are given more weight than others. For a pre-teen, for instance, the opinions of parents typically exert stronger influence on their intentions, but as teens grow older, the opinions of peers often are given more weight and the opinions of parents less. See Vitória, P. D., Salgueiro, M., Silva, S. A., & de Vries, H. (2011). Social influence, intention to smoke, and adolescent smoking behaviour longitudinal relations. *British Journal of Health Psychology, 16*, 779-798.

<sup>31</sup> It is assumed that only a limited number of the many beliefs individuals might hold in relation to a given behavior will be cognitively accessible in any given decision context. Different beliefs are activated by different social and environmental cues, leading to different attitudes and thus different intentions, making it important to specify the context in which a behavior might be performed when measuring an intention. For a typical teen, for instance, beliefs about the way smoking might influence his or her social image (e.g., looking older) might be more accessible when he or she is offered a cigarette by a peer, whereas beliefs about the health consequences of smoking (e.g., getting cancer) might be more accessible when deciding whether or not to smoke a cigarette while sitting at home alone. Regardless of which belief is activated, the Theory of Reasoned Action posits that those beliefs that are brought to mind in a given context will be integrated with other activated beliefs to influence attitudes directly, which will influence behavior through behavioral intentions.

gather information about behavioral and normative beliefs. Unless one undertakes a careful analysis of these variables and the weights they are likely to have in particular situations, predictions about health-related behavior is likely to be poor.<sup>32 33 34 35 36 37 38 39 40</sup>

<sup>32</sup> An important component of the Theory of Reasoned Action is the principle of compatibility, which states that to predict a specific behavior with an attitude (mediated by the relevant behavioral intention), the attitude and the behavior must involve the same degree of specificity. Specificity occurs when the attitude and the behavior relate the same action (e.g., smoking), directed at the same target (e.g., a cigarette), to be performed within a specific context (e.g., with my best friend) and a specific time period (e.g., after school). When attitude measures possess this level of specificity to match specific behaviors, then prediction of behavior via attitudes typically is improved. See, e.g., Ajzen, I., & Fishbein, M., (1977) Attitude-behavior relations: a theoretical analysis and review of empirical research. *Psychological Bulletin*, 84, 888-918; Davidson, A.R., & Jaccard, J.J. (1979) Variables that moderate the attitude-behavior relation: Result of a longitudinal survey. *Journal of Personality and Social Psychology*, 37, 1364-1376; Kraus, S.J. (1995). Attitudes and the prediction of behavior: A meta-analysis of the empirical literature. *Personality and Social Psychology Bulletin*, 21, 58-75. The implication of this analysis for the prediction of adolescent smoking via attitudes is that, to have the greatest prediction, one should measure attitudes towards smoking cigarettes in specific contexts (e.g., with friends versus at home) and at defined time periods (e.g., this week or over the coming month).

<sup>33</sup> Godin, G., & Kok, G. (1996). The theory of planned behavior: A review of its applications to health-related behaviors. *American Journal of Health Promotion*, 11, 87-98.

<sup>34</sup> Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40, 471-499.

<sup>35</sup> Hagger, M. S., & Chatzisarantis, N. D. (2009). Integrating the theory of planned behaviour and self-determination theory in health behaviour: A meta-analysis. *British Journal of Health Psychology*, 14, 275-302.

<sup>36</sup> Shepherd, B.H., Hartwick, J., & Warshaw, P.R. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of Consumer Research*, 15, 325-342.

<sup>37</sup> Albarracín, D., Johnson, B. T., Fishbein, M., & Muellerleile, P. A. (2001). Theories of reasoned action and planned behavior as models of condom use: A meta-analysis. *Psychological Bulletin*, 127, 142-161.

<sup>38</sup> Sheeran, P., & Orbell, S. (1998). Do intentions predict condom use? Meta-analysis and examination of six moderator variables. *British Journal of Social Psychology*, 37, 231-250.

<sup>39</sup> Hausenblas, H.A., Carron, A.V., & Mack, D.E. (1997). Applications of the theories of reasoned action and planned behavior to exercise behavior: A meta-analysis. *Journal of Sport and Exercise Psychology*, 19, 36-51.

<sup>40</sup> Cooke, R., & French, D. P. (2008). How well do the theory of reasoned action and theory of planned behaviour predict intentions and attendance at screening programmes? A meta-analysis. *Psychology, & Health*, 23, 745-765.

19. The Theory of Planned Behavior builds on the Theory of Reasoned Action and aims to improve prediction of behavior occurring in situations where individuals have little control or lack the requisite ability, resources, or opportunities to perform desired behaviors.<sup>41</sup> The Theory of Planned Behavior adds to the Theory of Reasoned Action the construct of perceived behavioral control, which is a person's perception of the extent to which performance of a behavior is within his or her volitional control. As with attitudes and subjective norms, perceived behavioral control is thought to be influenced by distal control beliefs. Control beliefs refer to the perceived presence or absence of factors that may facilitate or impede performance of the behavior. These beliefs, weighted by the perceived power of each factor to influence overall behavioral control, are theorized to combine to create a single perception of perceived behavioral control for a given behavior in a given context. Perceived behavioral control can directly influence behavioral intention, because actors are not likely to intend to perform behaviors that they do not believe they can enact and are more likely to engage in behaviors they believe they can enact (e.g., if a teen believes a shop strictly follows age restrictions on tobacco sales, the teen is unlikely to attempt to purchase cigarettes in that shop).<sup>42 43 44</sup>

20. It is important to consider the accuracy of control beliefs and the potential ways that these beliefs may influence behavior without the mediation of behavioral intentions. Such unmediated influence can occur because actual control may set constraints that perceptions of

<sup>41</sup> Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl, & J. Beckmann (Eds.), *Action control: From cognition to behavior* (pp. 11-39). Berlin: Springer.

<sup>42</sup> Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40, 471-495.

<sup>43</sup> Godin, G., & Kok, G. (1996). The theory of planned behavior: A review of its applications to health-related behaviors. *American Journal of Health Promotion*, 11, 97-98.

<sup>44</sup> Sheeran, P., & Taylor, S. (1999). Predicting intentions to use condoms: Meta-analysis and comparison of the theories of reasoned action and planned behavior. *Journal of Applied Social Psychology*, 29, 1624-1675.

control do not capture (e.g., if a teen believes a shop is lax about age restrictions on tobacco sales and intends to purchase cigarettes from the shop, but the shop in fact abides by the age restrictions, then the teen will not engage in the purchase despite an intention to do so). Actual control can influence behavior via two pathways: (a) through its influence on perceived behavioral control (i.e., perceived control is likely to be a function of actual control), which will then influence behavior through intentions; (b) through direct (unmediated) influence on behavior (i.e., by setting limits on what can and cannot be done). For instance, if the price of cigarettes drops, then perceived and actual control over the ability to smoke will increase. Research has supported the importance of both perceived and actual control as determinants of behavior.<sup>45 46</sup>

21. The concern that the Theory of Reasoned Action and Theory of Planned Behavior give too much weight to deliberation and conscious intentions led to development of the Prototype-Willingness Model, which is designed to predict risky behaviors that may not be mediated by behavioral intentions, such as drug use and unprotected sex.<sup>47</sup> In addition to behavioral intentions, the Prototype-Willingness Model posits that behavioral willingness is a

<sup>45</sup> Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions and perceived behavioral control. *Journal of Experimental Social Psychology*, 22, 453-474.

<sup>46</sup> Sheeran, P., Trafimow, D., & Armitage, C. J. (2003). Predicting behaviour from perceived behavioural control: Tests of the accuracy assumption of the theory of planned behaviour. *British Journal of Social Psychology*, 42, 393-410.

<sup>47</sup> Gerrard, M., Gibbons, F. X., Houlihan, A. E., Stock, M. L., & Pomery, E. A. (2008). A dual-process approach to health risk decision making: The prototype willingness model. *Developmental Review*, 28, 29-61.

proximal determinant of behavior.<sup>48 49</sup> Willingness is conceptualized as an openness to perform a behavior, an orientation that is generated in the moment an opportunity presents itself. The Prototype-Willingness Model thus posits that there is a reasoned path to behavior that is mediated through intention, as in the Theory of Reasoned Action and the Theory of Planned Behavior, and a second, social reaction path, through which unplanned decisions occur in circumstances that are risk-conducive.

22. Under the Prototype-Willingness Model, a key question is whether the adolescent is willing to go along with the pressures encountered in a given situation, and it is assumed that most risks arise in social interactions where risk is promoted.<sup>50</sup> Thus, under the Prototype-Willingness Model the most important predictor of how adolescents will react are the prototypes, or social images, that they believe will be promoted by their choices and behaviors in these social interactions. When an opportunity to engage in a risky behavior is made available in a social interaction, this prototype is thought to influence the adolescent's decision to act or not, mediated by the effect of the prototype on willingness to go along with situational pressures. Support for the claim that adolescent risk-taking is not only mediated by intentions but also

<sup>48</sup> Gibbons, F. X., Gerrard, M., Ouellette, J. A., & Burzette, R. (2000). Discriminating between behavioural intention and behavioural willingness: Cognitive antecedents to adolescent health risk. In P. Norman, C. Abraham, & M. Conner (Eds.), *Understanding and changing health behaviour: From health beliefs to self-regulation* (pp. 137-161). Amsterdam Netherlands: Harwood Academic Publishers.

<sup>49</sup> Gibbons, F. X., Gerrard, M., Blanton, H., & Russell, D. W. (2003). Reasoned action and social reaction: Willingness and intention as independent predictors of health risk. In P. Salovey, A. J. Rothman (Eds.), *Social psychology of health* (pp. 78-94). New York, NY US: Psychology Press.

<sup>50</sup> Nadler, A., & Fisher, J. D. (1992). Volitional personal change in an interpersonal perspective. In Y. Klar, J. Fisher, J. Chinsky, & A. Nadler (Eds.), *Initiating self-change: Social psychological and clinical perspectives* (pp. 213-230). New York: Springer-Verlag.



prototype influences on behavioral willingness has been found in a number of studies of adolescent health behavior.<sup>51 52 53</sup>

23. An important finding from the expectancy-value approach to adolescent decision-making is that adolescents often recognize the risks inherent in particular behaviors but engage in the behaviors nonetheless (because intentions or willingness to comply with social pressures override perceived risks). Thus, contrary to a common trope, this research has shown that adolescents do not believe that they are invulnerable: they engage in risky behaviors despite knowing of the potential harms associated with the behaviors. Indeed, research has found that adolescents view themselves as more vulnerable than adults and exaggerate their likelihood of dying prematurely.<sup>54</sup>

24. With respect specifically to smoking, recent research finds that adolescents are generally aware of the health risks associated with smoking and do not believe that they are

<sup>51</sup> Gerrard, M., Gibbons, F. X., Houlihan, A. E., Stock, M. L., & Pomery, E. A. (2008). A dual-process approach to health risk decision making: The prototype willingness model. *Developmental Review, 28*, 29-61.

<sup>52</sup> Pomery, E. A., Gibbons, F. X., Reis-Bergan, M., & Gerrard, M. (2009). From willingness to intention: Experience moderates the shift from reactive to reasoned behavior. *Personality and Social Psychology Bulletin, 35*, 894-908.

<sup>53</sup> Gibbons, F. X., Gerrard, M., Blanton, H., & Russell, D. W. (1998). Reasoned action and social reaction: Willingness and intention as independent predictors of health risk. *Journal of Personality and Social Psychology, 74*, 1164-1180.

<sup>54</sup> Downs, J.S., & Fischhoff, B. (2009). Theories and models of adolescent decision making. In R.J. DiClemente, J.S. Santelli, & R.A. Crosby (Eds.), *Adolescent health: Understanding and preventing risk behaviors* (pp. 77-94). Hoboken, NJ: Jossey-Bass.

immune to the negative consequences of smoking, including youth in the U.K.<sup>55 56 57</sup> Even younger smokers perceive higher risks of their experiencing smoking-related negative outcomes than their non-smoking peers, at times overestimating their objective risk of disease and early mortality.<sup>58 59 60 61 62 63</sup> Particularly informative is a secondary analysis of a nationally representative sample of U.S. adolescents aged 12 to 18,<sup>64</sup> which revealed that the majority of adolescents recognize the negative health consequences of smoking, and, for those who initiate smoking, their personal estimates of the future probabilities of death increased by more than the objective increase in mortality risk.<sup>65</sup> The aggregate data patterns do not support the assumption that adolescents smoke because they are ignorant of the health consequences of tobacco. The explanation for this behavior under expectancy-value theories is that adolescents perceive the

<sup>55</sup> Alberts, A., Elkind, D., & Ginsberg, S. (2007). The personal fable and risk-taking in early adolescence. *Journal of Youth and Adolescence*, 36, 71-76.

<sup>56</sup> Kreipe, R. E. (1985). Normal adolescent development: Helping teenagers cope with change. *New York State Journal of Medicine*, 85, 214-217.

<sup>57</sup> Health and Social Care Information Centre, Lifestyles Statistics. (Aug. 16, 2012). Statistics on smoking: England, 2012 (available at <http://www.hscic.gov.uk/catalogue/PUB07019/smok-eng-2012-rep.pdf>).

<sup>58</sup> Viscusi, W. K. (1991). Age variations in risk perceptions and smoking decisions. *Review of Economics and Statistics*, 73, 577-588.

<sup>59</sup> Cohn, L. D., Macfarlane, S., Yanez, C., & Imai, W. K. (1995). Risk-perception: Differences between adolescents and adults. *Health Psychology*, 14, 217-222.

<sup>60</sup> Hanson, W. B., & Malotte, K. C. (1986). Perceived personal immunity: The development of beliefs about susceptibility to the consequences of smoking. *Preventive Medicine*, 15, 363-372.

<sup>61</sup> Reppucci, J. D., Revenson, T. A., Aber, M., & Reppucci, N. D. (1991). Unrealistic optimism among adolescent smokers and nonsmokers. *Journal of Primary Prevention*, 11, 227-236.

<sup>62</sup> Milam, J.E., Sussman, S., Ritt-Olson, A., & Dent, C.W. (2000). Perceived invulnerability and cigarette smoking among adolescents. *Addictive Behaviors*, 25, 71-80.

<sup>63</sup> Lundborg, P., & Lindgren, B. (2002). Risk perceptions and alcohol consumption among young people. *Journal of Risk and Uncertainty*, 25, 165-183.

<sup>64</sup> <http://www.bls.gov/nls/nlsy97.htm>.

<sup>65</sup> Sloan, F., & Platt, A. (2011). Information, risk perceptions, and smoking choices of youth. *Journal of Risk and Uncertainty*, 42, 161-193.

benefits to outweigh the costs, perhaps because smoking satisfies an adolescent's prototype of how to promote his or her social image within a group, making the immediate gains from smoking greater or more salient than the long-term risks.<sup>66</sup>

25. Another, complementary explanation for this risky behavior is found in developmental approaches to adolescent decision-making. Research in the developmental tradition has found that while adolescents possess the ability to reason logically about outcomes, they are more likely to attend to the immediate rewards rather than future costs that can come from engaging in risky behavior, just at the time when their desire for new sensations and experiences increases.<sup>67 68</sup> Thus, although adolescents often understand the risks of smoking and other unhealthy behaviors, they nonetheless experiment with those behaviors. Such experimentation, while it can lead to harms, is an important and inevitable part of development given the course of growth and maturation.<sup>69 70 71</sup>

<sup>66</sup> The fact that interventions aimed at educating adolescents to the dangers of smoking may not change attitudes, intentions or behavior demonstrates the importance of focusing on the full array of beliefs that contribute to attitudes and to pathways to behavior other than attitudes. See, e.g., Heimann, K. J. (2000). A school-based intervention program to prevent adolescent smoking. *The Journal of School Nursing, 16*, 22-27.

<sup>67</sup> Albert, D., & Steinberg, L. (2011). Judgment and decision making in adolescence. *Journal of Research on Adolescence, 21*, 211-224.

<sup>68</sup> Burnett, S., Sebastian, C., Kadosh, K., & Blakemore, S.J. (2011). The social brain in adolescence: Evidence from functional magnetic resonance imaging and behavioral studies. *Neuroscience and Biobehavioral Reviews, 35*, 1654-1664.

<sup>69</sup> Casey, B.J., & Caudle, K. (2013). The teenage brain: Self control. *Current Directions in Psychological Science, 22*, 82-87.

<sup>70</sup> Sales, J.M., & Irwin, C.B., Jr. (2009). Theories of adolescent risk taking: The biopsychological model. In R.J. DiClemente, J.S. Santelli, & R.A. Crosby (Eds.), *Adolescent health: Understanding and preventing risk behaviors* (pp. 31-50). Hoboken, NJ: Jossey-Bass.

<sup>71</sup> Willoughby, T., Good, M., Adachi, P.J.C., Hamza, C., & Tavernier, R. (2013). Examining the link between adolescent brain development and risk taking from a social-developmental perspective. *Brain and Cognition, 83*, 315-323.

26. Whatever theory or model of adolescent health behavior one adopts, none supports the Chantler Report's conclusions. As I explain in the next section, there are multiple ways in which a move to standardized packaging is likely to increase the appeal and availability of cigarettes and increase smoking by adolescents, and there is no reason to believe that any of the hypotheses accepted in the Chantler Report, even if partially correct, would lead to net reductions in smoking. The Chantler Report presents abstract and dubious speculation rather than careful analysis.<sup>22</sup>

## **B. Comments on the Hypotheses Accepted in the Chantler Report**

### **1. The Attitude Change Hypothesis**

27. The primary argument in favor of a move to standardized packaging is that use of drab, uniform packaging will negatively affect attitudes toward cigarette packages, the cigarettes within those packages, and presumably the act of smoking.<sup>23</sup> As support for this argument, the Chantler Report cites experiments, surveys, and focus group studies in which participants rate drab packaging as less appealing than branded packaging.<sup>24</sup> The Chantler Reports also cites as support tobacco industry documents indicating that tobacco companies have treated the cigarette

<sup>22</sup> As discussed above, at the beginning of Section IV.A, the Chantler Report's invocation of theories of behavioral psychology and unconscious processes that might influence adolescent decisions add no useful information to the analysis. Another example of an abstraction that leads to unhelpful speculation is found in paragraph 4.22 of the Chantler Report, which invokes the broad proposition that humans are predisposed to approach positive stimuli and avoid negative stimuli. There is no basis for assuming that cigarettes will be viewed more negatively by adolescents under the standardized packaging regulations; as I explain in the text of the next section, many cigarette brands are likely to be viewed more positively after standardization.

<sup>23</sup> See, e.g., Standardised packing of tobacco: Report of the independent review undertaken by Sir Cyril Chantler (April 2014) (available at: <http://www.kcl.ac.uk/health/10035-TSO-2901853-Chantler-Review-ACCESSIBLE.PDF>).

<sup>24</sup> Standardised packing of tobacco: Report of the independent review undertaken by Sir Cyril Chantler (April 2014) (available at: <http://www.kcl.ac.uk/health/10035-TSO-2901853-Chantler-Review-ACCESSIBLE.PDF>).

package as a means of advertising and that cigarette brands and packaging have been developed to appeal to particular segments of the market.<sup>25</sup> For instance, a number of brands have been packaged in ways to make them more appealing to women.<sup>26</sup>

28. This body of evidence is portrayed as supporting the conclusion that standardized packaging will render cigarettes in general less attractive, but that contention makes the fundamental mistake of confusing reductions in the appeal of *some* cigarette brands with reductions in the appeal of *all* cigarette brands. None of the existing research demonstrates that a move to standardized packaging will render all cigarettes equally unappealing, cause the act of smoking in general to become less attractive or common, or lead to reduction in the incidence of smoking.

29. The logic of targeted marketing of the kind engaged in by cigarette manufacturers (and makers of many other products) is that of brand differentiation to encourage brand loyalty and brand switching behavior: by emphasizing particular features of a brand (e.g., price, blend, origin), one brand may become more appealing to some consumers but less appealing to others; with enough different brands, a manufacturer may capture many different segments of the market. After standardized packaging and the removal of brand-specific imagery, a cigarette brand that was formerly unappealing to some segments of the market should therefore become more appealing.

30. For instance, before standardized packaging, a male adolescent may have avoided cigarettes in "feminine" packaging and female adolescents may have avoided cigarette brands

<sup>25</sup> Wakefield, M.A., Morley C., Horan, J.K., & Cummings K.M. (2002). The Cigarette pack as image: new evidence from tobacco industry documents. *Tobacco Control*, 11, 173-180.

<sup>26</sup> Kotnowski, K., & Hammond, D. (2013). The impact of cigarette pack shape, size and opening: evidence from tobacco company documents. *Addiction*, 108, 1658-1668.

popular among males. After standardized packaging, previously gendered brands are likely to become equally accessible to both males and females or more acceptable to the other gender. The male teen with access to his mother's cigarettes may now feel little compunction against smoking a "female" cigarette once brands' trade dress information is removed. Likewise, brands previously associated with "discount" or "low-quality" attitudes should eventually lose that lower status if the packaging really is an important determinant of attitudes toward cigarettes.

31. Thus, even if the draft regulations function as intended, they should, at best, cause attitudes toward some brands to become less positive and attitudes toward other brands to become more positive. In other words, standardized packaging regulations level the market: cigarettes that previously would not have been chosen, either because their packaging was not appealing or because their packaging was less appealing than that of other brands, will eventually cease to be seen as different from or less desirable than other brands.<sup>27</sup>

32. Product leveling-up and leveling-down effects of the kind likely to occur if the draft regulations are implemented have been observed with other regulations aimed at reducing smoking and other vices. For instance, following increased taxes in Spain on cigarettes, consumers shifted to cheaper fine-cut tobacco and hand-rolled cigarettes.<sup>28</sup> In general, substitution effects are likely to occur whenever multiple product brands or product types exist to satisfy a demand, particularly where those products are good substitutes that are cheaper and no

<sup>27</sup> Whether adolescents and adults will be motivated to personalize their cigarette packs or whether an after-market for distinctive cigarette holders will develop are important questions that the Chantler Report does not address. If possessing a distinctive pack is as important to adolescent smoking as the Chantler Report and Impact Assessment assume, then an after-market for personalized cigarette containers is likely to develop.

<sup>28</sup> López-Nicolás, A., Badillo-Amador, L., & Cobacho-Tornel, M.B. (2013). Will the European Union's new tobacco tax legislation lead to reductions in smoking prevalence? Evidence from a quasi-experiment in Spain. *Nicotine, & Tobacco Research*, 15, 1963-1970.

more difficult to obtain. Thus, in Australia and Germany, when taxes were passed to reduce consumption of ready-to-drink spirit-based beverages, especially by young people, overall alcohol consumption did not drop as drinkers switched to other cheaper alcoholic beverages.<sup>79 80</sup> Likewise, taxes on junk food and sugar-sweetened beverages often lead to substitution of other unhealthy foods.<sup>81 82 83</sup>

## 2. The Increased Saliency of Warnings Hypothesis

33. An alternative hypothesis endorsed by Sir Chantler is that standardized packaging will increase the saliency of package health warnings with two positive effects: (a) increased saliency of warnings will change attitudes toward the health consequences of smoking and (b) increased saliency of warnings will remind adolescents of their negative attitudes toward smoking at the point of drawing a cigarette from the package and thereby increase the deterrent effect of the warning.

34. First, as discussed above and as seemingly acknowledged but given no weight in the Chantler Report,<sup>84</sup> adolescents are aware of the risks of smoking and often overestimate

<sup>79</sup> Doran, C.M., & Digiusto, B. (2011). Using taxes to curb drinking: A report card on the Australian government's alcopops tax. *Drug and Alcohol Review, 30*, 677-680.

<sup>80</sup> Muller, S., Piontek, D., Pabst, A., Baumeister, S.E., & Kraus, L. (2010). Changes in alcohol consumption and beverage preference among adolescents after the introduction of the alcopops tax in Germany. *Addiction, 110*, 1205-1213.

<sup>81</sup> Edwards, R.D. (2011). Commentary: Soda taxes, obesity, and the shifty behavior of consumers. *Preventive Medicine, 52*, 417-418.

<sup>82</sup> Franck, C., Grandje, S.M., Eisenberg, M.J. (2013). Taxing junk food to counter obesity. *American Journal of Public Health, 103*, 1949-1953.

<sup>83</sup> Fletcher, J., Frisvold, D., Tefft, N. (2013). Substitution patterns can limit the effects of sugar-sweetened beverage taxes on obesity. *Preventing Chronic Disease, 10*, 120195.

<sup>84</sup> See paragraph 3.16 in the Chantler Report.

those risks. Even if we assume some incremental increase in the salience of warnings on unbranded cigarette packs, that increase is not likely to change beliefs about health risks.

35. Second, even the research relied on in the Chantler Report into whether health warnings are more salient on plain versus ordinary packaging has produced mixed results.<sup>85</sup> The Chantler Reports claims that the Stirling Review of plain packaging research concluded that there was "strong support" for the salience-gain hypothesis,<sup>86</sup> but that assertion is not borne out by the contents of the Stirling Review or the reviewed research. Moreover, as of May, 2016, the space devoted to branding is supposed to be no greater than 35% of the package, with 65% of the package covered by health warnings. Thus, if Tobacco Product Directive takes effect, the question is whether, after May, 2016, a move to standardized packaging would positively increase the salience of the health warnings covering 65% of the packages sold in the European Union. There is presently no reliable empirical basis for asserting that the draft regulations would lead to a net increase in attention to the warnings.

36. Third, the increased salience hypothesis ignores the regulatory environment in which adolescents come into contact with cigarette packs. Due to display and advertising bans, adolescents do not come into regular contact with cigarette packs unless they are possessed by family members or acquaintances, and the only time that an adolescent is likely to encounter a cigarette pack close up is when the adolescent has chosen to handle the pack, most likely in order to obtain a cigarette. Due to age restrictions on purchase and use, adolescents in the U.K. must

<sup>85</sup> See Moodie, C., Angus, K., & Bauld, L. (Sept. 2013). Plain tobacco packaging research: An update (available at: <http://www.stir.ac.uk/media/schools/management/documents/Plain%20Packaging%20Studies%20Update.pdf>).

<sup>86</sup> See paragraph 4.20 in the Chantler Report.



defensive rejection of persuasive messages, avoidance of persuasive message content, counter-argument, and greater commitment to and incidence of risky actions.<sup>90 91 92 93 94 95</sup>

### 3. The Display Effects Hypothesis

38. A third hypothesis endorsed in the Chantler Report is that standardized packaging will remove "badge" effects associated with carrying a branded cigarette pack. That is, standardized packaging will supposedly make the act of carrying a pack of cigarettes less attractive to adolescents.

39. First, the hypothesis that standardized packaging will reduce the badge effects of cigarette packs suffers from the same fundamental mistake as the argument that standardized packaging would render all cigarette brands less attractive: if some brands presently enjoy a positive display effect, then others presently suffer from a negative display effect, and the move to standardized packaging is thus likely to equalize display effects across brands.

40. After standardized packaging, the male adolescent who takes cigarettes from his mother's purse no longer needs to worry that his peers will detect him smoking a feminine cigarette. Following standardized packaging, it will be much easier to conceal (or will be much

<sup>90</sup> Goldenbeld, C., Twisk, D., & Houwing, S. (2008). Effects of persuasive communication and group discussions on acceptability of anti-speeding policies for male and female drivers. *Transportation Research Part F, 11*, 207-220.

<sup>91</sup> Leventhal, H. (1971). Fear appeals and persuasion: The differentiation of a motivational construct. *American Journal of Public Health, 61*, 1208-1224.

<sup>92</sup> Rogers, R. W. (1975). A protection motivation theory of fear appeals and attitude change. *Journal of Psychology, 91*, 93-114.

<sup>93</sup> Rogers, R.W. (1983). Cognitive and physiological processes in fear appeals and attitude change: A revised theory of protection motivation. In J.T. Cacioppo, & R.E. Petty (Eds.), *Social psychophysiology: A sourcebook* (pp. 153-176). New York: Guilford Press.

<sup>94</sup> Rogers, R. W., & Mewborn, C. R. (1976). Fear appeals and attitude change: Effects of a threat's noxiousness, probability of occurrence, and the efficacy of coping responses. *Journal of Personality and Social Psychology, 34*, 54-61.

<sup>95</sup> Witte, K. (1992). Putting the fear back into fear appeals: The extended parallel process model. *Communication Monographs, 59*, 329-349.

harder for others to detect) the particular brand of cigarette that one is smoking. Thus, to the extent norms push against smoking any particular brand, the move to standardized packaging should make it easier to avoid those effects. The adolescent who previously invoked disfavored brand status as the face-saving way in social settings to decline a cigarette may no longer have that tactic available, and the adolescent who previously could only have afforded discounted cigarettes or who only has access to "gendered" cigarettes need no longer worry that smoking such cigarettes will prompt ridicule given the ease of concealing the brand.

41. Second, both the Chantler Report and the Impact Assessment conflate the display benefits that may come from smoking or possessing cigarettes with the display effects of possessing a branded pack of cigarettes. Research indicates that the act of smoking, rather than the display of a particular branded package, is predicted by descriptive and injunctive social norms.<sup>96 97 98</sup> Adolescents initiate smoking, in part, for social approval and to project a desired social image: the presence of friends or other peers who either smoke or approve of smoking is a significant predictor of smoking behavior.<sup>99 100</sup> (Not only can social concerns override the negative attitudes teens have about the health risks of smoking, but the very nature of teen risk calculations may change when they are in the company of their peers, such that they focus more

<sup>96</sup> Mercken, L. L., Candel, M. M., van Osch, L. L., & de Vries, H. H. (2011). No smoke without fire: The impact of future friends on adolescent smoking behaviour. *British Journal of Health Psychology*, 16, 170-188.

<sup>97</sup> McMillan, B., Higgins, A. R., & Conner, M. (2005). Using an extended theory of planned behaviour to understand smoking amongst schoolchildren. *Addiction Research, & Theory*, 13, 293-306.

<sup>98</sup> Zaleski, A. C., & Aloise-Young, P. A. (2013). Using peer injunctive norms to predict early adolescent cigarette smoking intentions. *Journal of Applied Social Psychology*, 43(Supp. 1), E124-E131.

<sup>99</sup> Urberg, K. A., Değirmencioglu, S. M., & Pilgrim, C. (1997). Close friend and group influence on adolescent cigarette smoking and alcohol use. *Developmental Psychology*, 33, 834-844.

<sup>100</sup> Schaafer, D.R., Haas, S.A., & Bishop, N.J. (2012). A dynamic model of US adolescents' smoking and friendship networks. *American Journal of Public Health*, 102, e12-e18.

attention on the benefits than the costs of potentially risky actions, leading them to make riskier decisions with their peers than when alone.<sup>101</sup>) There is no evidence that adolescents will be less likely to display standardized cigarette packs or engage in less smoking of cigarettes from standardized packs.

42. There is also no evidence that standardized packaging leads to the creation of new norms against smoking in general.<sup>102</sup> Recall that adolescents' subjective norms encompass injunctive and descriptive norms. A move to standardized packaging is unlikely to have an effect on injunctive norms, or beliefs about what people should do. Underage persons smoke, among other reasons, to rebel against societal norms and to gain acceptance of their peers—adolescents smoke despite knowing that they should not. There is no reason to believe that a move to standardized packaging will remove the social prototype associated with *the act of smoking*. Indeed, to the extent cigarette packaging contributed to injunctive norms against smoking particular brands within a peer group or community, a move to standardized packaging may undercut norms against smoking particular (often cheaper and easier to obtain) brands.

43. Third, standardized packaging may increase the expressive value of the act of smoking. Adolescent smokers are more rebellious and rejecting of authority than their non-

<sup>101</sup> Gardner, M., & Steinberg, L. (2005). Peer influence on risk-taking, risk preference, and risky decision-making in adolescence and adulthood: An experimental study. *Developmental Psychology, 41*, 625-635.

<sup>102</sup>

smoking peers.<sup>103 104 105 106</sup> Smoking is commonly seen by adolescents as a way of projecting a more rebellious and “cool” identity to others.<sup>107 108</sup> If standardized packaging becomes symbolic of governmental control, then the protest value of smoking and carrying a cigarette package will increase and interest in cigarettes may increase. Similar ironic effects of labeling have been documented with content ratings placed on video games and other products popular among adolescents. For instance, one meta-analysis found that advisory ratings meant to help parents choose age-appropriate video and music content reduced interest among children under age 8 but increased interest among adolescents age 11 and older.<sup>109</sup>

44. Adolescence is a time in which normal development involves a pursuit of greater autonomy and freedom,<sup>110 111</sup> and research indicates that reactance is higher in late adolescence

<sup>103</sup> Brook, J. S., Whitman, M., & Gordon, A. S. (1981). Maternal and personality determinants of adolescent smoking behavior. *Journal of Genetic Psychology: Research and Theory on Human Development*, 139, 185-193.

<sup>104</sup> Choi, W. S., Harris, K., Okuyemi, K., & Ahluwalia, J. S. (2003). Predictors of smoking initiation among college-bound high school students. *Annals of Behavioral Medicine*, 26, 69-74.

<sup>105</sup> Gritz, E. R. (1984). Cigarette smoking by adolescent females: Implications for health and behavior. *Women, & Health*, 9, 103-115.

<sup>106</sup> Gordon, N. P. (1986). Never smokers, triers and current smokers: Three distinct target groups for school-based antismoking programs. *Health Education Quarterly*, 13, 163-179.

<sup>107</sup> Spijkerman, R., van den Eijnden, R. M., Vitale, S., & Engels, R. E. (2004). Explaining adolescents' smoking and drinking behavior: The concept of smoker and drinker prototypes in relation to variables of the theory of planned behavior. *Addictive Behaviors*, 29, 1615-1622.

<sup>108</sup> Spijkerman, R., van den Eijnden, R. M., & Engels, R. E. (2005). Self-comparison processes, prototypes, and smoking onset among early adolescents. *Preventive Medicine: An International Journal Devoted to Practice and Theory*, 40, 785-794.

<sup>109</sup> Bushman, B. J., & Cantor, J. (2003). Media ratings for violence and sex: Implications for policymakers and parents. *American Psychologist*, 58, 130-141.

<sup>110</sup> Kaliteyevskaya, E., & Leontiev, D. (2004). When freedom meets responsibility: Adolescence as the critical point of positive personality development. *Ricerche Di Psicologia*, 27, 103-115.

<sup>111</sup> Boykin McElhaney, K., & Allen, J. P. (2012). Sociocultural perspectives on adolescent autonomy. In P. K. Kerig, M. S. Schulz, & S. T. Hauser (Eds.), *Adolescence and beyond: Family processes and development* (pp. 161-176). New York, NY US: Oxford University Press.

than in subsequent developmental periods.<sup>112</sup> Importantly, reactance has also been shown to be a predictor of both (a) adolescent interest in smoking in general and (b) rejection of antismoking campaigns. For instance, data collected from a nationally representative sample of 2,400 Norwegian adolescents indicated that psychological reactance was not only correlated with smoking risk but predictive of negative attitudes towards the more coercive tobacco control efforts.<sup>113</sup> Other studies document similar links between psychological reactance and adolescent smoking or adolescent rejection of coercive antismoking messages,<sup>114 115</sup> with one study of Australian smokers aged 18 to 59 indicating that exposure to graphic tobacco warnings in and of itself was sufficient to increase psychological reactance.<sup>116</sup>

45. To the extent that elimination of brand-specific packaging is perceived as governmental overreaching, or is portrayed that way in the media or within families or peer groups, the regulations are likely to trigger psychological reactance motivations that increase the motivation to smoke and increase the willingness to display cigarette packs.

#### 4. Countervailing Supply and Price Effects

46. A move to standardized packaging would likely lead to a reduction in cigarette prices and an increase in cigarette supply. As cigarette manufacturers lose the ability to compete

<sup>112</sup> Hong, S., Giannakopoulos, E., Laing, D., & Williams, N. A. (1994). Psychological reactance: Effects of age and gender. *Journal of Social Psychology, 134*, 223-228.

<sup>113</sup> Wium, N., Aarø, L. E., & Hetland, J. (2009). Psychological reactance and adolescents' attitudes toward tobacco-control measures. *Journal of Applied Social Psychology, 39*, 1718-1738.

<sup>114</sup> Miller, C. H., Burgoon, M., Grandpre, J., & Alvaro, E. (2006). Identifying principal risk factors for the initiation of adolescent smoking behaviors: The significance of psychological reactance. *Health Communication, 19*, 241-252.

<sup>115</sup> Pavey, L., & Sparks, P. (2009). Reactance, autonomy and paths to persuasion: Examining perceptions of threats to freedom and informational value. *Motivation and Emotion, 33*, 277-290.

<sup>116</sup> Erceg-Hurn, D. M., & Steed, L. G. (2011). Does exposure to cigarette health warnings elicit psychological reactance in smokers? *Journal of Applied Social Psychology, 41*, 219-237.

for adult consumers on the basis of brand-specific imagery, price competition is likely to become a more important means of holding or gaining market share. Given that research indicates that underage smokers are much more sensitive to price than adult smokers,<sup>117 118 119 120 121</sup> any regulation likely to lead to reduced prices should be very carefully considered before implementation.<sup>122</sup> Indeed, given the research on the responsiveness of youth to tobacco price changes, adolescent increases in smoking from a price drop could easily outpace the optimistic estimates of smoking reduction from plain packaging that are found in the Chantler Report and Impact Assessment.

47. The draft regulations may also lead to increased supply through the brand-leveling effects discussed above: once observable differences in packages are removed, adolescents with access to discount and illicit cigarettes should be more willing to consume these previously lower-status cigarettes. Greater perceptions of ease in obtaining cigarettes is a

<sup>117</sup> Chaloupka, F.J., & Pacula, R.L. (2001). The impact of price on youth tobacco use. In National Cancer Institute, *Changing Adolescent Smoking Prevalence* (pp. 192-199), Smoking and Tobacco Control Monograph No 14. Bethesda, MD: U.S. Department of Health and Human Services.

<sup>118</sup> Ding, A. (2003). Youth are more sensitive to price changes in cigarette than adults. *Yale Journal of Biology and Medicine*, 76, 115-124.

<sup>119</sup> Ringel, J.S., Wasserman, J., & Andreyeva, T. (2005). Effects of public policy on adolescents' cigar use: Evidence from the National Youth Tobacco Survey. *American Journal of Public Health*, 95, 995-998.

<sup>120</sup> Ross, H., & Chaloupka, F.J. (2003). The effect of cigarette prices on youth smoking. *Health Economics*, 12, 217-230.

<sup>121</sup> Van Walbeek, C., Blecher, E., Gilmore, A., & Ross, H. (2013). Price and tax measures and illicit trade in the framework convention on tobacco control: What we know and what research is required. *Nicotine, & Tobacco Research*, 15, 767-776.

<sup>122</sup> This price effect should be particularly concerning in light of the fact that "[s]moking is most common among those who earn the least, and least common among those who earn the most." Impact Assessment for Standardized Packaging of Tobacco Products, at 5 (June, 2014) (available at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/323518/impact\\_assessment.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/323518/impact_assessment.pdf)).

significant predictor of smoking experimentation.<sup>123</sup> Parents constitute a major source of adolescent cigarettes,<sup>124</sup> and the removal of branding should likewise make the cigarette packs purchased by mothers and fathers more attractive to sons and daughters, respectively, than they otherwise would have been.

48. In sum, following standardization, the prices of formerly premium brands are likely to decrease and willingness to smoke brands previously associated with other groups or lower status should increase, both of which should increase minor access to and use of cigarettes. The very logic of the argument for removal of popular brand imagery leads to the conclusion that previously low-status cigarettes should become much more available and more acceptable to adolescents after a move to standardized packaging.

49. Both the Impact Assessment and Chantler Report acknowledge that the draft regulations may lead to greater price competition among tobacco companies, which could undermine any public health benefits of the regulations, but both assert that additional taxes

<sup>123</sup> Walsh, R.A., & Tzelepis, F. (2007). Adolescents and tobacco use: Systematic review of qualitative research methodologies and partial synthesis of findings. *Substance Use, & Misuse*, 42, 1269-1321.

<sup>124</sup> Walsh, R.A., & Tzelepis, F. (2007). Adolescents and tobacco use: Systematic review of qualitative research methodologies and partial synthesis of findings. *Substance Use, & Misuse*, 42, 1269-1321.

could be added to counteract the price reductions that may come with the draft regulations.<sup>125</sup> If additional price regulation is feasible, then that form of regulation should be favored over standardized packaging, because the negative impact of price increases on adolescent smoking have been demonstrated and are more predictable than the effects that may accompany standardized packaging. Indeed, other measures that make adolescent access to cigarettes more difficult, such as stricter enforcement of age restrictions, are likely to have a more predictable negative impact on underage smoking than standardized packaging.<sup>126</sup> If adolescents do not have early access to cigarettes, they will not develop experience with cigarettes and should be unlikely to initiate cigarette purchases later. Many studies have established that underage smoking can be reduced by efforts to make cigarette purchasing and access more difficult and expensive. Such efforts have been shown to reduce the number of teens who will try cigarettes, the number who will smoke regularly, and the number of cigarettes consumed by teens who do smoke.<sup>127, 128</sup>

<sup>125</sup> The Chantler Report concludes that there is little risk of increased use of illicit and counterfeit cigarettes, but the Report seems to accept the straightforward economic argument that removal of branding will lead to increased price competition among tobacco companies, asserting that these price effects could be mitigated by new taxes on cigarettes. One of the unidentified tobacco control experts quoted in Pechey et al. (2013) also warned about this price effect: "As is already happening following the ad ban, there is a shift to economy, ultra-low price tobacco, with premium brands losing market share. The market is more driven by price than it used to be, and this would be reinforced by plain packaging. It would be difficult to invest in branding, and there would be a proliferation of low cost brands. *Pricing could defeat the aims of the policy, so fiscal policy is needed to make sure this doesn't occur* (p. 5, emphasis added)." Pechey, R., Spiegelhalter, D., & Marteau, T.M. (2013). Impact of plain packaging of tobacco products on smoking in adults and children: An elicitation of international experts' estimates. *BMC Public Health*, 13, 18.

<sup>126</sup> Rabin, R.L. (2007). Controlling the retail sales environment: Access, advertising, and promotional activities. In R.J. Bonnie, K. Stratton, & R.B. Wallace (Eds.), *Ending the tobacco problem: A blueprint for the nation* (Appendix L). Washington, D.C.: The National Academies Press.

<sup>127</sup> "Raising Cigarette Taxes Reduces Smoking, Especially Among Kids (and the Cigarette Companies Know It)," <http://www.tobaccofreekids.org/research/factsheets/pdf/0146.pdf>.

<sup>128</sup> "Enforcing Laws Prohibiting Cigarette Sales to Kids Reduces Youth Smoking," <http://www.tobaccofreekids.org/research/factsheets/pdf/0049.pdf>.



### C. Correlates of Underage Smoking

50. Factors associated with the initiation, continuation, and cessation of underage smoking have been the subject of a large amount of empirical research. Two propositions relevant to the question of the effects of standardized packaging regulations on underage smoking are apparent from this body of research: (a) many variables are now known to be associated with underage decisions to initiate and continue smoking; (b) features of cigarette packaging have been relatively little studied as a cause or correlate of underage smoking, with no published field studies demonstrating an association between standardized cigarette packaging characteristics and reduced smoking initiation or continuation by underage persons. Together, these propositions urge caution in basing the draft regulations on speculation from indirect evidence about the possible impacts of standardized packaging on adolescent smoking.

51. The research literature on factors associated with underage smoking has been reviewed in numerous authoritative sources. I provide here only an overview of this research with the aim of demonstrating the breadth of the research and its support for factors I discuss above as important risk factors and demonstrating the relative dearth of attention paid to the role of standardized cigarette packaging in this large literature.

52. Correlates of underage smoking have been studied at the individual (genetic, cognitive, affective, demographic characteristics), proximal (familial, interpersonal, social networks), and environmental (neighborhood, community, state, national) levels. Within each level of analysis, a wide range of variables has been found to predict underage smoking initiation and continuation.

53. A number of factors observable at the individual level are associated with increased risk of underage smoking. For instance, lower socioeconomic status males with lower academic achievement are at greater risk of smoking than females in general or other males who

are from a different class or who are performing better in school.<sup>129</sup> Adolescents exhibiting certain behavioral and psychiatric disorders are at greater risk, as are victims of sexual abuse. Genetic markers indicating heritability for tobacco use have been found, and neurological correlates of tobacco use (in brain regions associated with decision-making and impulse control) have been found.<sup>130</sup>

54. A number of factors in an adolescent's proximal environment can increase the risk of smoking. For instance, the presence of a smoker in the household increases the risk of underage smoking, as does the presence of a smoker within a peer group.<sup>131</sup> Females appear to be more susceptible to peer influences, but the influence of peers for all persons will depend on the status of those peers within the potential smoker's social network, family views on smoking, and individual beliefs about the costs and benefits of smoking, as well as other individual, proximal, and environmental factors.<sup>132</sup>

55. Examples of correlates at the environmental level include price and purchasing regulations: increasing the price of cigarettes through government regulation has been found to be an effective means of reducing demand among underage smokers, and education of merchants

<sup>129</sup> U.S. Department of Health, & Human Services. (2012) *Preventing tobacco use among youth and young adults: A report of the surgeon general* (available at <http://www.surgeongeneral.gov/library>).

<sup>130</sup> U.S. Department of Health, & Human Services. (2012) *Preventing tobacco use among youth and young adults: A report of the surgeon general* (available at <http://www.surgeongeneral.gov/library>).

<sup>131</sup> U.S. Department of Health, & Human Services. (2012) *Preventing tobacco use among youth and young adults: A report of the surgeon general* (available at <http://www.surgeongeneral.gov/library>).

<sup>132</sup> U.S. Department of Health, & Human Services. (2012) *Preventing tobacco use among youth and young adults: A report of the surgeon general* (available at <http://www.surgeongeneral.gov/library>).

about restrictions on sales to minors and increased enforcement of laws prohibiting sales to minors is associated with reduced underage smoking.<sup>133</sup>

56. Within this large body of research cutting across many levels of analysis, one finds little attention paid to cigarette package branding itself as a possible causal influence. The Institute of Medicine's ("IOM") 1994 report on the prevention of nicotine addiction in children and youth discusses the role of health warnings and brand logos in promotional advertising, but does not discuss any research showing that plain packaging would reduce the incidence of underage smoking.<sup>134</sup> The IOM's 2007 report on reducing tobacco use likewise devotes little discussion to research into features of the cigarette pack except with respect to ways to enhance the deterrent effect of the health warning and the presence of potentially misleading descriptions of the cigarettes on the package, such as descriptions of the cigarettes as "low tar" or "light."<sup>135</sup> The Surgeon General's 2012 report on preventing tobacco use among minors and young adults discusses a number of studies examining reactions to various types of cigarette packages and changes to those packages, as does the Chantler Report, but none of the research discussed

<sup>133</sup> U.S. Department of Health, & Human Services. (2012) *Preventing tobacco use among youth and young adults: A report of the surgeon general* (available at <http://www.surgeongeneral.gov/library>).

<sup>134</sup> Institute of Medicine. (1994). *Growing up tobacco free: Preventing nicotine addiction in children and youths*. Washington, DC: National Academy Press.

<sup>135</sup> An appendix to the IOM's 2007 report addresses how descriptions of cigarette types on packages may be perceived by consumers and discusses how plain packaging might increase the salience of health warnings, but it presents no research on the effects of plain packaging per se on demand or initiation behavior. Ferrence, R., Hammond, D., & Fong, G.T. (2007). Warning labels and packaging. In R.J. Bonnie, K. Stratton, & R.B. Wallace (Eds.), *Ending the tobacco problem: A blueprint for the nation* (Appendix C). Washington, D.C.: The National Academies Press.

examined behavioral reactions in the field to standardized versus non-standardized packaging.<sup>136, 137</sup>

57. The state of the theory and research on the prevention of smoking reveals that regulations targeting the use of trademark and trade dress information on the package, as opposed to health warnings and potentially misleading information on the package, were not previously seen as a key intervention aimed at preventing smoking. As a result, only recently has research started to examine how smokers and potential smokers may be affected by standardized packaging, with this evidence consisting of small-scale experiments, surveys and focus group studies.

58. When one moves an idea from the laboratory to the field, it is often the case that the findings from laboratory settings do not replicate in the field, and with surprising frequency the direction of causal relations among variables will differ between the lab and the field (i.e., a variable shown to increase or decrease the frequency of behavior in the lab may have the opposite effects in natural settings where more variables are influential).<sup>138</sup> Given the numerous factors that influence adolescent decisions to smoke, and given that these factors can interact to produce unexpected results or to undermine an intervention that is aimed at a subset of these

<sup>136</sup> Given that Australia only recently mandated standardized packaging and is the only country to do so to date, it is not surprising that there is no field research into the effects of a move to standardized packaging on actual smoking behavior. But it is noteworthy that uniformity in pack color, brand presentation, and package shape and size have not been the focus of much prior theorizing or empirical study.

<sup>137</sup> As discussed in Moodie et al. (2013), a few studies have examined adult reactions to plain versus branded cigarette packs in Australia after introduction of the plain packaging regulations, but none has examined the impact of Australia's regulations on adult or underage smoking incidence. Moodie, C., Angus, K., & Bauld, L. (Sept. 2013). Plain tobacco packaging research: An update (available at: <http://www.stir.ac.uk/media/schools/management/documents/Plain%20Packaging%20Studies%20Update.pdf>).

<sup>138</sup> Mitchell, G. (2012). Revisiting truth or triviality: The External validity of research in the psychological laboratory. *Perspectives on Psychological Science*, 7, 109-117.

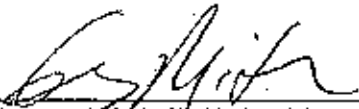
factors, it is perilous to base a large-scale intervention on hopeful speculation about the positive effects of this intervention. Although the Chanter Report is admirably candid about the limits of the evidence on which its conclusion is based, it repeatedly resolves ambiguities in this evidence in favor of a move to standardized packaging, optimistically embracing evidence of potential positive impacts and dismissing evidence of potential negative impacts. The Chanter Report ignores serious problems with the hypotheses it accepts and minimizes countervailing effects that are likely to accompany the draft regulations.

## V. CONCLUSION

59. Existing theories and research on adolescent decision-making and behavior do not support the contention that standardized packaging regulations will result in net reductions in underage smoking.

60. The draft standardized packaging regulations, if implemented, are likely to (a) cause attitudes toward many currently unpopular brands to become more positive, (b) cause a wider range of brands to become acceptable, and (c) cause cigarette prices to decrease and cigarette supplies to increase. The draft regulations, if implemented, are not likely to change norms about the act of smoking or beliefs about smoking among adolescents.

61. Smoking regulations may be designed to target particular at-risk subgroups, as with community intervention programs, or may be general regulations aimed at all smokers. The latter approach is much more difficult because any general regulation is unlikely to have uniform effects on behavior within a diverse population of individuals and because so many variables are likely to change in response to the regulation. Hence, many general regulations will have unanticipated and perverse effects. There is a very high likelihood that this will be the case for the standardized packaging regulations if they are implemented.

  
\_\_\_\_\_  
Gregory Mitchell, Ph.D., J.D.  
Date: July 30, 2014

**Exhibit A: Curriculum Vitae**

Gregory Mitchell  
University of Virginia School of Law  
580 Massie Road  
Charlottesville, Virginia 22903-1738



**Academic Appointments**

University of Virginia Thomas F. Bergin Teaching Professor of Law, Fall 2014-Present Joseph Weintraub-Bank of America Distinguished Professor of Law, Fall 2013 -Present Mortimer M. Caplin Professor of Law, 2010-2013 Class of 1948 Research Professor, 2010-2013 Daniel Caplin Professor of Law, 2008-2010 E. James Kelly, Jr.-Class of 1965 Research Professor, 2006-2009 Visiting Associate Professor of Law, Spring 2005	May 2006 to Present
Florida State University Sheila M. McDevitt Professor of Law, 2005-2006 Associate Professor of Law, 2004-Present Assistant Professor of Law, 2002-2004 Courtesy Professor of Psychology, 2002-2006	2002-Spring 2006
Vanderbilt University Visiting Associate Professor of Law	Fall 2004
Michigan State University Adjunct Professor of Psychology, 2001-2002 Assistant Professor of Law, 2000-2002	2000-2002

**Education**

Boalt Hall School of Law  
University of California, Berkeley  
J.D., 1993  
Executive Editor, CALIFORNIA LAW REVIEW  
Member, INDUSTRIAL RELATIONS LAW JOURNAL, Spring 1991

Graduate Program in Psychology  
University of California, Berkeley  
Ph.D., 1994, M.A., 1990 - Emphasis in Social Psychology (Dissertation Committee: Philip E. Tetlock, Tom R. Tyler and Franklin Zimring)  
Jacob K. Javits Fellow, 1988-1992  
MacArthur Foundation Fellow in Political Psychology, 1988-1989  
Teaching Assistant, Course on Attitudes and Persuasion, Spring 1990

University of Arkansas

B.A., 1988 - Psychology, magna cum laude  
Phi Beta Kappa

### Publications

#### 2014

Allan G. King, Gregory Mitchell, Richard W. Black, Catherine A. Conway & Julie A. Totten, *Discovery and the Evidentiary Foundations of Implicit Bias*, EMPLOYMENT RELATIONS LAW JOURNAL (forthcoming 2014)

Gregory Mitchell, *Alternative Behavioral Law and Economics*, in Eyal Zamir & Doron Teichman (Eds.), THE OXFORD HANDBOOK OF BEHAVIORAL ECONOMICS AND THE LAW (forthcoming 2014)

Gregory Mitchell, *The Price of Abstraction*, in Joshua C. Teitelbaum & Kathryn Zeiler (Eds.), RESEARCH HANDBOOK ON BEHAVIORAL LAW AND ECONOMICS (forthcoming 2014)

Gregory Mitchell & Philip E. Tetlock, *Experimental Political Philosophy: Justice Judgments in the Hypothetical Society Paradigm*, in NEW EXPLORATIONS IN POLITICAL PSYCHOLOGY (Jon A. Krosnick & I-Chant A. Chiang eds., forthcoming 2014)

Gregory Mitchell & Philip E. Tetlock, *Implicit Attitude Measures*, in R.A. Scott & S.M. Kosslyn (Eds.), EMERGING TRENDS IN THE SOCIAL AND BEHAVIORAL SCIENCES (forthcoming 2014)

#### 2013

Brandon Garrett & Gregory Mitchell, *How Jurors Understand Fingerprint Evidence: The Relative Importance of Match Language, Method Information, and Error Acknowledgement*, 10 JOURNAL OF EMPIRICAL LEGAL STUDIES 484-511 (2013)

Fred Oswald, Gregory Mitchell, Hart Blanton, James Jaccard & Philip E. Tetlock, *Predicting Ethnic and Racial Discrimination: A Meta-analysis of IAT Criterion Studies*, 105 JOURNAL OF PERSONALITY AND SOCIAL PSYCHOLOGY 171-192 (2013)

Philip E. Tetlock, Gregory Mitchell & L. Jason Anastasopoulos, *Detecting and Punishing Unconscious Bias*, 42 JOURNAL OF LEGAL STUDIES 83-110 (2013)

#### 2012

Allan G. King, Jeffrey S. Klein & Gregory Mitchell, *Effective Use and Presentation of Social Science Evidence*, 37 EMPLOYMENT RELATIONS LAW JOURNAL 3-21 (2012)

Gregory Mitchell, *The Importance of Replication in the Field*, 25 THE PSYCHOLOGIST 361-362 (2012)

Gregory Mitchell, *Revisiting Truth or Triviality: The External Validity of Research in the Psychological Laboratory*, 7 PERSPECTIVES ON PSYCHOLOGICAL SCIENCE 109-117 (2012)

Gregory Mitchell, *What Is Wrong With Social Psychology?*, 26 DIALOGUE 12-17 (Fall 2012)

#### 2011

Mary R. Baker, Hunter D. Hughes, III, Gregory Mitchell & Philip E. Tetlock, *Proactive*



*Approaches to Second-Generation Risks in Labor and Employment Cases*, 37 EMPLOYMENT RELATIONS LAW JOURNAL 28-53 (2011)

Hart Blanton & Gregory Mitchell, *Reassessing the Predictive Validity of the IAT: II. Reanalysis of Heider & Skowronski (2007)*, 13 NORTH AMERICAN JOURNAL OF PSYCHOLOGY 99-106 (2011)

Gregory Mitchell, *Should It Be Easier to Get Married?*, 2011 MICHIGAN STATE LAW REVIEW 215-226 (Symposium: E-marriage)

Gregory Mitchell, John Monahan & Laurens Walker, *The ASA's Missed Opportunity to Promote Sound Science in Court*, 40 SOCIOLOGICAL METHODS & RESEARCH 605-620 (2011)

Gregory Mitchell, John Monahan & Laurens Walker, *Case-Specific Sociological Inference: Meta-norms for Expert Opinions*, 40 SOCIOLOGICAL METHODS & RESEARCH 668-680 (2011)

Gregory Mitchell, Laurens Walker & John Monahan, *Beyond Context: Social Facts as Case-Specific Evidence*, 60 EMORY LAW JOURNAL 1109-1155 (2011)

## 2010

Philip E. Tetlock & Gregory Mitchell, *Situated Identities Constrain Morally-Defensible Choices*, 5 PERSPECTIVES ON PSYCHOLOGICAL SCIENCE 206-208 (2010)

David Klein & Gregory Mitchell, Editors, *THE PSYCHOLOGY OF JUDICIAL DECISION MAKING* (Oxford University Press, 2010)

Gregory Mitchell, *Evaluating Judges*, in *THE PSYCHOLOGY OF JUDICIAL DECISION MAKING* (pp. 221-248) (David Klein & Gregory Mitchell eds., 2010)

Gregory Mitchell, *Good Causes and Bad Science*, 63 VANDERBILT LAW REVIEW EN BANC 133-147(2010)

Gregory Mitchell, *Good Scholarly Intentions Do Not Guarantee Good Policy*, 95 VIRGINIA LAW REVIEW IN BRIEF 109-115 (2010)

Gregory Mitchell & Philip E. Tetlock, *Cognitive Styles and Judging*, in *THE PSYCHOLOGY OF JUDICIAL DECISION MAKING* (pp. 279-284) (David Klein & Gregory Mitchell eds., 2010).

## 2009

Hart Blanton, James Jaccard, Jonathan Klick, Barbara A. Mellers, Gregory Mitchell & Philip E. Tetlock, *Strong Claims & Weak Evidence: Reassessing the Predictive Validity of the IAT*, 94 JOURNAL OF APPLIED PSYCHOLOGY 567-582 (2009)

Hart Blanton, James Jaccard, Jonathan Klick, Barbara A. Mellers, Gregory Mitchell & Philip E. Tetlock, *Transparency Should Trump Trust: Rejoinder to McConnell and Leibold (2009) and Ziegert and Hanges (2009)*, 94 JOURNAL OF APPLIED PSYCHOLOGY 598-603 (2009)

Ronald Fisher, Neil Brewer & Gregory Mitchell, *The Relation Between Consistency and Accuracy of Witness Testimony*, in *HANDBOOK OF PSYCHOLOGY OF INVESTIGATIVE INTERVIEWING: CURRENT DEVELOPMENTS AND FUTURE DIRECTIONS* (pp. 121-136) (Tom Williamson, Ray Bull & Tim Valentine eds., 2009).

Daniel J. Meador & Gregory Mitchell, *AMERICAN COURTS, THIRD EDITION* (West Group, 2009).

Gregory Mitchell, *Second Thoughts*, 40 MCGEORGE LAW REVIEW 687-722 (2009) (invited lecture)

Gregory Mitchell & Philip E. Tetlock, *Facts Do Matter: A Reply to Bagenstos*, 37 HOFSTRA LAW REVIEW 737-761 (2009)

Gregory Mitchell & Philip E. Tetlock, *Disentangling Reasons and Rationalizations: Exploring Fairness in Hypothetical Societies*, in SOCIAL AND PSYCHOLOGICAL BASES OF IDEOLOGY AND SYSTEM JUSTIFICATION (pp.126-157) (John Jost, A.C. Kay & H. Thorisdottir eds., 2009)

John Monahan, Laurens Walker & Gregory Mitchell, *The Limits of Social Framework Evidence*, 8 LAW, PROBABILITY & RISK 307-321 (2009)

Philip E. Tetlock & Gregory Mitchell, *Implicit Bias and Accountability Systems: What Must Organizations Do to Prevent Discrimination?*, 28 RESEARCH IN ORGANIZATIONAL BEHAVIOR 3-38 (Barry Staw & Arthur Brief eds., 2009)

Philip E. Tetlock & Gregory Mitchell, *A Renewed Appeal for Adversarial Collaboration*, 28 RESEARCH IN ORGANIZATIONAL BEHAVIOR 71-72 (Barry Staw & Arthur Brief eds., 2009)

Philip E. Tetlock & Gregory Mitchell, *Adversarial Collaboration Aborted But Our Offer Still Stands*, 28 RESEARCH IN ORGANIZATIONAL BEHAVIOR 77-79 (Barry Staw & Arthur Brief eds., 2009)

#### 2008

Adam J. Hirsch & Gregory Mitchell, *Law & Proximity*, 2008 UNIVERSITY OF ILLINOIS LAW REVIEW 557-598.

John Monahan, Laurens Walker & Gregory Mitchell, *Contextual Evidence of Gender Discrimination: The Ascendance of "Social Frameworks"*, 94 VIRGINIA LAW REVIEW 1705-1739 (2008)

Philip E. Tetlock & Gregory Mitchell, *Calibrating Prejudice in Milliseconds*, 71 SOCIAL PSYCHOLOGY QUARTERLY 12-16 (2008)

Philip E. Tetlock, Gregory Mitchell & Terry L. Murray, *The Challenge of Debiasing Personnel Decisions: Avoiding Both Under- and Over-Correction*, 1 INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY: PERSPECTIVES ON SCIENCE AND PRACTICE 439-443 (2008)

#### 2006

Gregory Mitchell & Philip E. Tetlock, *Antidiscrimination Law and the Perils of Mindreading*, 67 OHIO STATE LAW JOURNAL 1023-1121 (2006)

Gregory Mitchell & Philip E. Tetlock, *An Empirical Inquiry into the Relation of Corrective Justice to Distributive Justice*, 3 JOURNAL OF EMPIRICAL LEGAL STUDIES 421-466 (2006)

Jonathan Klick & Gregory Mitchell, *Government Regulation of Irrationality: Moral and Cognitive Hazards*, 90 MINNESOTA LAW REVIEW 1620-1663 (2006)

#### 2005

Gregory Mitchell, *Libertarian Paternalism Is an Oxymoron*, 99 NORTHWESTERN UNIVERSITY LAW REVIEW 1245-1277 (2005)

Gregory Mitchell, *Empirical Legal Scholarship as Scientific Dialogue*, 83 NORTH CAROLINA LAW REVIEW 167-204 (2005)

Gregory Mitchell, *Beyond Fireside Inductions*, 32 FLORIDA STATE UNIVERSITY LAW REVIEW 315-321 (2005) (Symposium: The Behavioral Analysis of Legal Institutions)

Gregory Mitchell, *Asking the Right Questions About Judge and Jury Competence*, 32 FLORIDA STATE UNIVERSITY LAW REVIEW 519-527 (2005) (Symposium: The Behavioral Analysis of Legal Institutions)

#### 2004

Gregory Mitchell, *Case Studies, Counterfactuals, and Causal Explanations*, 152 UNIVERSITY OF PENNSYLVANIA LAW REVIEW 1517-1608 (2004)

#### 2003

Gregory Mitchell, *Tendencies Versus Boundaries: Levels of Generality in Behavioral Law and Economics*, 56 VANDERBILT LAW REVIEW 1781-1812 (2003)

Gregory Mitchell, *Mapping Evidence Law*, 2003 MICHIGAN STATE LAW REVIEW 1065-1148 (Symposium: Visions of Rationality in Evidence Law)

Gregory Mitchell, Philip E. Tetlock, Daniel G. Newman & Jennifer S. Lerner, *Experiments Behind the Veil: Structural Influences on Judgments of Social Justice*, 24 POLITICAL PSYCHOLOGY 519-547 (2003)

#### 2002

Gregory Mitchell, *Why Law and Economics' Perfect Rationality Should Not Be Traded for Behavioral Law and Economics' Equal Incompetence*, 91 GEORGETOWN LAW JOURNAL 67-167 (2002)

Gregory Mitchell, *Taking Behavioralism Too Seriously? The Unwarranted Pessimism of the New Behavioral Analysis of Law*, 43 WILLIAM AND MARY LAW REVIEW 1907-2021 (2002)

#### Pre-2000

Tom R. Tyler & Gregory Mitchell, *Legitimacy and the Empowerment of Discretionary Legal Authority: Abortion and the United States Supreme Court*, 43 DUKE LAW JOURNAL 703-815 (1994)

Gregory Mitchell, Comment, *Against "Overwhelming" Appellate Activism: Constraining Harmless Error Review*, 82 CALIFORNIA LAW REVIEW 1335-1369 (1994)

Gregory Mitchell, Philip E. Tetlock, Barbara Mellers & Lisa Ordóñez, *Judgments of Social Justice: Compromises Between Equality and Efficiency*, 65 JOURNAL OF PERSONALITY AND SOCIAL PSYCHOLOGY 629-639 (1993)

Philip E. Tetlock & Gregory Mitchell, *Liberal and Conservative Approaches to Justice: Conflicting Psychopolitical Portraits*, in PSYCHOLOGICAL PERSPECTIVES ON JUSTICE 234-255

(Barbara Mellers & Jonathon Baron eds., 1993)

Philip E. Tetlock, Charles McGuire, Jr. & Gregory Mitchell, *Psychological Perspectives on Nuclear Deterrence*, 42 ANNUAL REVIEW OF PSYCHOLOGY 239-276 (1991)

### Works in Progress

Toward a Meaningful Metric of Implicit Prejudice (with Hart Blanton, University of Connecticut, Jim Jaccard, Florida International University, and Philip E. Tetlock, University of Pennsylvania)

Expert Evidence and Gladwellian Storytelling

The Limits of Adverse Impact Review (with Philip E. Tetlock)

Calibrating Process and Outcome Accountability Systems to Workplaces – and Avoiding Both Under- and Over-correction (with William T. Self, University of California, Berkeley, Philip E. Tetlock, University of Pennsylvania, Barbara A. Mellers University of Pennsylvania, and J. Angus D. Hildreth, University of California, Berkeley)

Simulating the Cumulative Impact of Gender Discrimination in Large Organizations (with Fred Oswald, Rice University)

The Inefficiency of Oral Argument (with David E. Klein, Department of Politics, University of Virginia)

Reflection, Rationality and Morality

What Does  $p < .05$  Mean?

How Prevalent is Implicit Prejudice? (with Hart Blanton, University of Connecticut, Jim Jaccard, Florida International University, and Philip E. Tetlock, University of Pennsylvania)

Modeling the Influence of General Processing Speed on Response Latency  
Measures of Implicit Attitude (with Hart Blanton, University of Connecticut, Thomas Craemer, University of Connecticut, Jim Jaccard, Florida International University, and Philip E. Tetlock, University of Pennsylvania)

Avoiding Under- and Over-correction of Intergroup Bias (book manuscript under preparation with Philip E. Tetlock, University of Pennsylvania)

### Grants

Co-Principal Investigator, *Peer Review of Social Framework Analysis*, Searle Freedom Trust, \$50,000, May 2010-April 2011 (with Christopher Winship, Department of Sociology, Harvard University)

Co-Principal Investigator, *What Companies Need to Do to Curb Bias in Employment Practices: A Multi-Method Exploration of the Perceived and Actual Efficacy of Process Versus Outcome Accountability*, Society for Human Resource Management Foundation, \$50,000, December 2009-December 2010 (with Philip E. Tetlock, University of Pennsylvania)

Co-Principal Investigator, *Taking a Careful Scientific Second Look Before Making a Big Policy Leap: An Epistemic Audit of the Unconscious-Bias Research Program*, Searle Freedom Trust,

\$250,000, August 2009-July 2011 (with Philip E. Tetlock, University of Pennsylvania)

Funding for conference on "The Psychology of Judging," National Science Foundation, \$32,781, March, 2007 (with David E. Klein, University of Virginia Department of Politics; peer-reviewed)

Co-Principal Investigator, *The Development and Maintenance of Legal Reasoning*, Michigan State University Intramural Research Grant Program New Faculty Grant, \$50,000, January 2002-June 2003 (with David Z. Hambrick, Michigan State University Department of Psychology, Principal Investigator; competitively awarded grant)

### Presentations and Panels

Current Developments in Stereotyping Evidence, American Employment Law Council Annual Meeting (October 2013)

Improving Organizational Forecasts (with Philip E. Tetlock), University of Houston Second Annual Conference on Corporate Compliance (June 2013)

Alternative BLEs, Conference on Behavioral Law and Economics: Substance and Methodology, Notre Dame University School of Law (April 2013)

Settling Cases Brought by the EEOC, Annual Meeting of the Society of Industrial-Organizational Psychologists (April, 2012)

Lay Interpretations of Fingerprint Examiner Testimony, University of Illinois College of Law (April, 2012)

Panelist, Effective Use and Management of Social Science Evidence, American Employment Lawyer Council Annual Meeting (October 2011)

Panelist, Developments in Expert Evidence, Littler Mendelson Class Action Summit (September 2011)

Panelist, Communicating Research, and General Discussant, Future of Law & Social Science Workshop (sponsored by National Science Foundation (May 2011)

Resisting Your First Instincts: How Smart Lawyers Can Avoid Stupid Mistakes, Charlottesville-Albemarle Bar Association (April 2011)

Panelist, Translating Research into Action: A Crucial Role for the Legal Academy, 2011 AALS Annual Meeting (January 2011)

Should It Be Easier to Get Married?, E-marriage Symposium, Michigan State University College of Law (November, 2010)

Panelist, Proactive Management of Litigation Risk in Employment Litigation, American Employment Lawyer Council Annual Meeting (October 2010)

In Defense of Thinking, Mortimer M. Caplin Chair Lecture, University of Virginia School of Law (October 2010)

Beyond Context: Social Facts as Case-Specific Evidence, Michigan State University College of Law (February 2010) & Temple University Beasley School of Law (March 2010)

Evaluating Judges, University of Virginia Faculty Workshop (November 2009)

The Legal Relevance of Psychological Research on Memory Validity, 31<sup>st</sup> Congress of the International Academy of Law and Mental Health (July 2009)

Social Framework Evidence, Olin Conference on Combating Workplace Discrimination (conference presenter, moderator and organizer, April 2009)

Metacognition and Rationality, Seminar on Law and Economics, University of Illinois School of Law (March 2009)

Commenter, Law & Psychology Roundtable, Washington University at St. Louis (March 2008)

Second Thoughts, Distinguished Speaker Lecture, McGeorge School of Law (February 2008)

The Ascendance of Social Frameworks, University of Virginia Faculty Retreat (January 2008) & St. Louis University School of Law (March 2008)

Reassessing the Predictive Validity of the Race IAT, Ohio State University Psychology Department (November 2007)

What Must Organizations Do to Check Implicit Bias?, University of Pennsylvania School of Law, Law and Economics Workshop (March 2007) & Ohio State University Moritz College of Law (November 2007)

Panelist, The Hows and Whys of Empirical Legal Scholarship, Southeastern Association of Law Schools (SEALS) Conference (July 2005)

Government Regulation of Irrationality: Moral and Cognitive Hazards, University of Virginia Faculty Workshop (March 2005)

An Empirical Inquiry into the Relation of Corrective Justice to Distributive Justice, Vanderbilt University Law School Dean's Lunch (November 2004)  
Libertarian Paternalism Is an Oxymoron, New York University, Department of Economics, Colloquium on Market Institutions and Economic Processes (November 2004)

Unconfounding Intuitions About Corrective and Distributive Justice, Florida State University College of Law Faculty Workshop (June 2004)

Case Studies, Counterfactuals, and Causal Explanations, Southeastern Association of Law Schools (SEALS) Conference, Young Scholars Workshop (July 2003)

Panelist, Construing Science in Context: What Do Judges Need to Know?, Southeastern Association of Law Schools (SEALS) Conference (July 2003)

Mapping Evidence Law, University of Florida Levin School of Law Faculty Workshop (March 2003) & Michigan State University DCL College of Law Conference on Visions of Rationality in Evidence Law (April 2003)

An Idiosyncratic View of Psychological Theory in the Law, MSU Clinical Psychology Group (April 2001)

Judicial Accountability and Public Perceptions of the Judicial System, MSU-DCL Law Review

Forum on the Impact of the 2000 Elections on the Future of Our Courts (November 2000)

Legitimacy and Discretionary Legal Authority, Federal Judicial Center, Washington, DC  
(January 1994)

### **Teaching and Service**

Associate Editor, JOURNAL OF EMPIRICAL LEGAL STUDIES, 2006-2011

Occasional Referee for National Science Foundation, Israel Science Foundation, Swiss National Science Foundation, university presses, conference programs, and journals, including AMERICAN PSYCHOLOGIST, CHILDREN & YOUTH SERVICES REVIEWS, CURRENT DIRECTIONS IN PSYCHOLOGICAL SCIENCE, GROUP PROCESSES AND INTERGROUP RELATIONS, JOURNAL OF APPLIED RESEARCH IN MEMORY AND COGNITION, JOURNAL OF EMPIRICAL LEGAL STUDIES, JOURNAL OF EXPERIMENTAL PSYCHOLOGY: APPLIED, JOURNAL OF EXPERIMENTAL SOCIAL PSYCHOLOGY, JOURNAL OF LEGAL EDUCATION, JOURNAL OF PHILOSOPHY, SCIENCE AND LAW, JURIMETRICS, LAW AND HUMAN BEHAVIOR, LAW & SOCIAL INQUIRY, LAW & SOCIETY REVIEW, PERSPECTIVES ON PSYCHOLOGICAL SCIENCE, PSYCHOLOGY, CRIME AND LAW, REVIEW OF PHILOSOPHY AND PSYCHOLOGY, SOCIAL JUSTICE RESEARCH, and SOCIAL AND PERSONALITY PSYCHOLOGY COMPASS

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### **Florida State University**

Courses: Civil Procedure, Complex Civil Litigation, Contracts II, Evidence, and Employment Discrimination

Committees: Academic Enrichment (2002-2003), Academic Waivers (2002-2003), Appointments (2003-2004, 2005-2006), University Library Committee (2002-2004), Library Steering Subcommittee (2003-2004), Library Patrons Subcommittee (2002-2003) and Library Resources Subcommittee (Chair, 2003-2004)

Faculty Advisor to Dispute Resolution Society and Mock Trial Team (2002-2005)

First Year Class Teacher of the Year and Co-Teacher of the Year 2003-2004; Second Year Class Teacher of the Year 2005-2006

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Courses: Civil Procedure I, Civil Procedure II, Complex Civil Litigation and Evidence

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Expert Consulting  
LASSC, LLC  
Charlottesville, Virginia  
2006-present

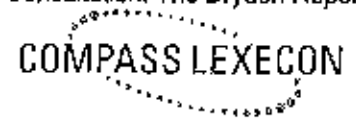
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Tennessee (1994), Middle District of Tennessee (1994), U.S. Court of Appeals for the Sixth Circuit (1996), Eastern District of Tennessee (1997), and U.S. Supreme Court (1999)

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Berkeley Law Foundation  
Behavioral & Brain Sciences Associate  
NBLSA Thurgood Marshall Mock Trial Competition Review Board, 2005-2006, 2010-2012  
Harry Phillips American Inn of Court, 1997-1998  
Board of Directors, Hands On Nashville, 1999-2000





# The effects of standardised packaging on competition

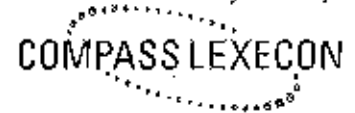
Neil Dryden

7 August 2014

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## Glossary of terms

<b>BAT</b>	British American Tobacco UK Limited.
<b>Consumer surplus</b>	The difference between consumers' willingness to pay for products and what they actually pay for them.
<b>Cross-border trade</b>	Import, for personal use, of cigarettes or other products by consumers who buy cheaply abroad, usually in jurisdictions characterised by lower tax rates.
<b>Economic welfare</b>	The sum of consumer surplus and producer surplus.
<b>FMC</b>	Factory made cigarette, a cigarette, produced by a tobacco manufacturer, capable of being smoked as such.
<b>Illicit trade</b>	Any practice or conduct prohibited by law and which relates to production, shipment, receipt, possession, distribution, sale or purchase of tobacco products.
<b>Producer surplus</b>	Profits of manufacturers.
<b>Standardised packaging</b>	Restrictions on a cigarette packet's colour; restrictions on permitted text and features on a cigarette packet; requirements for the cigarette packets to be flat and smooth and without ridges, embossing or other irregularities of shape or texture; restrictions on inserts and wrappers; and, restrictions on the appearance of cigarettes.
<b>TPD2</b>	Directive 2014/40/EU of the European Parliament and the Council, the Revised Tobacco Product Directive.

## Section 1

# Introduction

- 1.1 I am Neil Dryden, an Executive Vice President of Compass Lexecon, an economic consulting firm. Compass Lexecon is part of FTI Consulting Inc., a global business advisory firm. My experience and expertise is as a micro-economist, specialised in the economics of competition policy, regulation, public policy and market analysis. I have included my CV at Annex A.

## Background

- 1.2 In 2012, the UK government issued a consultation into the effects of the plain packaging of cigarettes and other tobacco products.<sup>1</sup>
- 1.3 In November 2013, the Department of Health requested Sir Cyril Chantler to provide advice "taking into account existing and any fresh evidence, as to whether or not the introduction of standardised packaging is likely to have an effect on public health (and what that effect might be), in particular in relation to the health of children".<sup>2</sup>
- 1.4 Chantler stated that he "would consider *evidence* on whether standardised packaging is likely to lead to a decrease in tobacco consumption, including in particular the risk of children becoming addicted". He said that we would start "from the uncontroversial premise that any such decrease will have a positive impact on public health".<sup>3</sup>
- 1.5 Chantler's results were published in 2014.

<sup>1</sup> "Consultation on standardised packaging of tobacco products" (2012).

<sup>2</sup> See Chantler (2014), page 3.

<sup>3</sup> See Chantler (2014), page 3, emphasis in original.

- 1.6 In 2014, a government consultation proposed the implementation of standardised packaging.<sup>4</sup> An accompanying Impact Assessment set out an analysis of three alternative policy options: (i) implementing the changes of TPD2<sup>5</sup> without standardised packaging, (ii) the implementation of standardised packaging on top of TPD2 (the government's preferred option),<sup>6</sup> and (iii) delaying the implementation of standardised packaging to observe better the effects of similar legislation in Australia.<sup>7</sup>

### Instructions

- 1.7 I have been asked to prepare this report by Herbert Smith Freehills LLP, on behalf of British American Tobacco UK Limited ("BAT").
- 1.8 I have been asked to set out my views on any distortive effects that the proposed standardised packaging regulations will have on competition in the supply of cigarettes within the United Kingdom.
- 1.9 I have also been asked to provide my opinions specifically on the following economic matters:
- The implications for consumer welfare resulting from the implementation of standardised packaging;
  - The implications for the prices of cigarettes of standardised packaging;
  - The implications for the quantity of cigarettes consumed of standardised packaging; and
  - The effects of an offsetting duty increase as a potential measure to counteract anticipated price decreases following the implementation of standardised packaging.
- 1.10 I have also been asked to comment on the Department of Health's Impact Assessment and Chantler's report, insofar as they address the issues outlined above.

<sup>4</sup> "Consultation on the Introduction of regulations for standardised packaging of tobacco products", 2014.

<sup>5</sup> Directive 2014/40/EU of the European Parliament and the Council, the Revised Tobacco Product Directive ("TPD2").

<sup>6</sup> As well as other forthcoming regulation such as the small business retail display ban.

<sup>7</sup> See Impact Assessment, p. 1.



## **My analysis of TPD2**

- 1.11 I have previously written an expert report for BAT regarding the impact of TPD2 on competition.<sup>8</sup> In that report, I showed that TPD2 will directly distort competition by restricting dimensions along which firms compete in the market. In particular TPD2 will reduce horizontal differentiation, product variety, and quality differentiation.
- 1.12 Using standard microeconomic models of competition, I showed that different aspects of TPD2 will either distort competition by reducing consumer welfare, or increase consumption contrary to the health objectives of TPD2.
- 1.13 I also set out that TPD2 will make price competition more intense with two main effects on manufacturers. First, it will reduce their incentives to invest in product innovation and quality. Second, it will make scale economies more important increasing the risk of exit for smaller, relatively inefficient players. Finally, I explained why TPD2 will increase the incentive to engage in illicit trade.
- 1.14 In this report, I explain how standardised packaging would result in a further direct restriction of a dimension of competition (i.e. differentiation) and would also lead to an accentuation of many of the effects associated with TPD2 and the upcoming small business retail display ban in relation to consumer surplus, price and quantity. Since standardised packaging comes on top of TPD2 and the retail display ban, the effects are if anything more serious as the costs to distorting competition are likely to be higher as the residual amount of competition left becomes less.<sup>9</sup> This report repeats my analysis of TPD2 where it is relevant to analysing the effects of standardised packaging.

## **Declarations**

- 1.15 I was assisted in preparing this report by Peter Caradonna, an Analyst at Compass Lexecon working under my supervision. However, the opinions contained in this report are mine alone.
- 1.16 Throughout this report I use the word "market". This is not intended to imply a well-defined market in competition policy terms.
- 1.17 I have set out the sources upon which I have relied in Annex B.

<sup>8</sup> "The effects of the European Union Revised Tobacco Products Directive on competition" (2014), provided to the Secretary of State for Health in connection with BAT's challenge of the legality of TPD2.

<sup>9</sup> See paragraph 4.8.



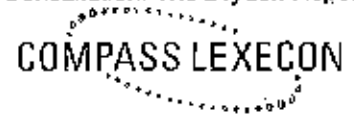
## Structure of the report

- 1.18 The next section sets out a summary of my conclusions.
- 1.19 The remainder of the report is then structure in four parts as follows.
- **Part 1 - Summary of Chantler/Impact Assessment.** First, I summarise the report of Sir Cyril Chantler, as well as the Department of Health's Impact Assessment where they relate to the issues I have been asked to examine (Section 3).
  - **Part 2 - Theoretical analysis.** Second, I set out a theoretical framework of analysis and apply it to understand the implications of standardised packaging for competition and for the specific issued I have been asked to examine (Section 4 to Section 8).
  - **Part 3 - Empirical analysis.** Third, I discuss the empirical simulation work of Dr. Jorge Padilla on the effects of standardised packaging in both the United Kingdom and Australia and then use the results of that work to model the scale of the countervailing duty increase required to offset the price effects resulting from the implementation of standardised packaging (Section 9 and Section 10).
  - **Part 4 - Comments on Chantler/Impact Assessment.** Finally, I provide my comments on Chantler's report as well as the Department of Health's Impact Assessment in the light of the analysis above (Section 11).

## Section 2

# Summary of conclusions

- 2.1 I consider that standardised packaging will directly distort competition by restricting dimensions along which firms compete in the market.
- 2.2 Before any tax increases to offset anticipated price reductions, standardised packaging will either distort competition by reducing consumer welfare, or increase consumption contrary to the health objectives of standardised packaging. I conclude that the tax increase required to neutralise the likely price reduction is large, will unambiguously reduce consumer welfare and will increase incentives for illicit trade. I conclude that Sir Cyril Chantler's review and the impact assessment contain an incomplete, and in some cases erroneous and simplistic, analysis of these issues.
- 2.3 In particular as set out in this report:
- the UK tobacco market is already highly regulated and the distortive effects of further regulation on competition are likely to be more serious than absent existing regulation;
  - standardised packaging will directly distort competition by severely restricting the scope for horizontal and vertical product differentiation;
  - standardised packaging will result in more homogenised products, intensifying price competition. This will result in lower prices and an increase in consumption;
  - consumer welfare may also fall if the loss of variety from brands outweighs the benefits of lower prices;
  - standardised packing will incentivise legitimate cross-border trade and illicit trade;
  - to the extent that the government increases tax to 'neutralise' any price reduction, this will unambiguously reduce consumer welfare, as consumers either turn to legitimate cross-border trade or illicit trade or pay the same for an inferior product (each of these options offering lower utility);



- the scale of the tax increase required to neutralise the price reduction is potentially large, increasing the tax incidence on cigarettes from 77% to a figure in the range 82-91%;
- the Chantler Report and the Impact Assessment contain at best a cursory analysis of the issues above. Inter alia they have not considered adequately the implications of the regulation for consumer surplus, the possible magnitude of price reductions, or the size or implications of any tax increase required to neutralise such price reductions.

Section 3

## Summary of Sir Cyril Chantler's report and Impact Assessment

- 3.1 In this section I summarise the work undertaken by Sir Cyril Chantler in his review of the likely effects of standardised packaging, and the Department of Health's Impact Assessment.

### Chantler's report

- 3.2 In November 2013, the Department of Health requested Chantler to provide advice "taking into account existing and any fresh evidence, as to whether or not the introduction of standardised packaging is likely to have an effect on public health (and what that effect might be), in particular in relation to the health of children".<sup>10</sup>
- 3.3 Chantler stated that he "would consider evidence on whether standardised packaging is likely to lead to a decrease in tobacco consumption, including in particular the risk of children becoming addicted". He said that we would start "from the uncontroversial premise that any such decrease will have a positive impact on public health".<sup>11</sup> His primary focus was therefore on the effect of the regulation on quantity consumed.

### Price and quantity effects

- 3.4 Chantler presented mixed conclusions on the implications of standardised packaging for prices.<sup>12</sup>

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<sup>10</sup> See Chantler (2014), page 3.

<sup>11</sup> See Chantler (2014) page 3, emphasis in original.

<sup>12</sup> See Chantler (2014), Annex C.

- 3.5 In relation to the demand side, he indicated that standardised packaging may cause prices (at least prices paid) to fall:

*"Overall, if standardised packaging was working, a degree of down-trading would be expected to occur, especially in the long-term. This reflects that tobacco in standardised packaging becomes less desirable than it was in branded packaging and therefore the amount consumers are willing to pay decreases".<sup>13</sup>*

- 3.6 He stated that evidence in relation to the supply side was mixed. Chantler referred to Dr. Padilla's report for PMI, stating this argued that prices would fall because of competition based "solely on price". He said this was contradicted by a report for JTI, indicating that standardised packaging would lead to a reduction in competition and an increase in barriers to entry.<sup>14</sup>
- 3.7 In relation to Australia, Chantler concluded that "there is no evidence to date of a commoditisation of the market leading to immediate and widespread price reductions". Further "It is too soon to make definitive conclusions, but the fact that leading brands are increasing prices above tax suggests that predictions of widespread price reductions are exaggerated, at least in the short-run".<sup>15</sup>
- 3.8 Chantler stated that a reduction in prices as a result of standardised packaging would not induce an increase in consumption as cigarettes have become less desirable.<sup>16</sup>
- 3.9 In the light of at least the possibility of price reductions, Chantler noted that, should prices actually fall as a result of the implementation of standardised packaging, such price reductions could be mitigated through an offsetting tax increase.<sup>17</sup>

#### **Consumer welfare**

- 3.10 Consumer surplus is not mentioned in Chantler's review, nor is any consideration made of variety effects or other utility-enhancing effects of branding upon consumers.

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<sup>13</sup> See Chantler (2014), p. 45.

<sup>14</sup> See Chantler (2014), p. 45-46.

<sup>15</sup> See Chantler (2014), p. 46.

<sup>16</sup> See Chantler (2014), p. 45.

<sup>17</sup> See Chantler (2014), p. 46.



### **Competition distortions**

- 3.11 In relation to other competition distortions, Chantler also observed that in Australia there has been evidence of decreased entry by new brands.<sup>18</sup>
- 3.12 Moreover, Chantler also noted that the rapid introduction of a number of new products just before the implementation of standardised packaging in Australia is likely evidence that it will be considerably harder for firms to communicate innovations in the future.<sup>19</sup>

### **Impact Assessment**

- 3.13 The Impact Assessment attempted to quantify the impact of standardised packaging on consumers, suppliers, and the government.

### **Price and quantity effects**

- 3.14 The Impact Assessment acknowledged the possibility that prices may decrease in response to the implementation of standardised packaging.<sup>20</sup>
- 3.15 However, it conducted no additional analysis on this topic relative to Chantler's report. It similarly stated that the ability to increase taxes to offset any price effects is grounds effectively to dismiss any further discussion of price impact.<sup>21</sup>

### **Consumer surplus**

- 3.16 The Impact Assessment does acknowledge that consumer surplus is normally an important consideration for any regulation. However, rather than address consumer welfare in a conventional economic fashion, the Impact Assessment argues that the change is ambiguous, and thus it is justified in assuming the net change to be zero in the absence of other evidence.<sup>22</sup>

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<sup>18</sup> See Chantler (2014), p. 46.

<sup>19</sup> See Chantler (2014), p. 46.

<sup>20</sup> Impact Assessment para. 88 considers the possibility of consumers substituting away from 'premium,' high-price brands. Paragraph 114 explicitly lists 'Drop in price' under potential costs to the exchequer.

<sup>21</sup> See Impact Assessment, para. 114.

<sup>22</sup> See Impact Assessment, para. 263.

- 3.17 The rationale for the assumption that consumer surplus can effectively be excluded in this context is the presumption that brands are not only utility-enhancing for their consumers, but are also envy-inducing for non-consumers. As such, the Impact Assessment states, "branding might therefore be seen as a zero-sum game".<sup>23</sup>
- 3.18 In conclusion, while acknowledging that consumer welfare is normally an important criterion in regulatory matters, the Impact Assessment discounts it in its analysis of the effects of the implementation of standardised packaging.

#### Competition distortions

- 3.19 The Impact Assessment also considered that standardised packaging would have implications for innovation. It argued that:

*"[Standardised packaging] is also expected to increase price competition, which may result in process innovation as companies improve the efficiency of the production process. Standardised packaging may result in product innovation as tobacco companies invent new ways of differentiating their products".<sup>24</sup>*

#### Conclusion

- 3.20 The above summarises the work of Sir Cyril Chantler and the Department of Health's Impact Assessment in reviewing the likely effects of standardised packaging. I provide my comments in Section 11.

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<sup>23</sup> See Impact Assessment, para. 263.

<sup>24</sup> See Impact Assessment, para. 203.

## Section 4

# Economic approach

- 4.1 In this and the following three sections of the report, I set out a theoretical framework of analysis and apply it to understand the implications of standardised packaging for competition and for the specific issues I have been asked to examine.
- 4.2 This section begins by setting out the economic approach that I have adopted.

### Baseline for comparison

- 4.3 To analyse the effect of some event or intervention in a market it is necessary to compare a 'factual' scenario (with the event or the intervention) with a 'counterfactual' scenario (in the absence of the event or the intervention). In the present case, the factual scenario refers to the future state of the UK tobacco market *with the implementation of standardised packaging* and the counterfactual scenario refers to the future state of the UK tobacco market *absent the implementation of standardised packaging*. I have assumed that TPD2 and the small business retail display ban will be introduced in either case.<sup>25</sup>
- 4.4 My approach is therefore to identify the *incremental* effects of standardised packaging relative to the existing regulations, assuming that TPD2 and the small business retail display ban will be introduced.
- 4.5 The market for cigarettes in the UK is already characterised by a high degree of regulation: inter alia, a partially implemented retail display ban, advertising and promotion bans, a general warning that covers at least 30% of the most visible surface of the packet, and additional warnings and graphics covering at least 40% of the other most visible surface of the packet.<sup>26</sup>

<sup>25</sup> The baseline "no action" policy regime described in the Impact Assessment links UK regulation to TPD2, implying further future regulation imposing homogeneity on the packaging of cigarettes irrespective of the implementation of standardised packaging. See Impact Assessment, p. 1.

<sup>26</sup> See "The effects of the European Union Revised Tobacco Products directive on competition" (2014), para. 4.8-4.10.



- 4.6 Additional UK restrictions include bans on advertising, event sponsorship, vending machine sales and retail display. The retail display ban was introduced into large retailers in England in April 2012 and will become effective for small retailers in April 2015. Similar display bans exist or are being introduced in Wales, Scotland and Northern Ireland. Broadly, these display bans require the tobacco products to be stored in specified storage units that prevent customers seeing the products except in limited circumstances, with additional requirements for displaying the prices of products.
- 4.7 Moreover, TPD2 and the small business display ban stand to be implemented in both the factual and counterfactual scenarios, imposing further restrictions on the available branding of cigarettes in the UK.
- 4.8 Therefore, any distortions arising from standardised packaging are likely to be more significant because they are on the top of already existing competition distortions.<sup>27</sup>
- 4.9 The cigarette market in Europe is characterised by a significant level of illicit trade before the introduction of standardised packaging.<sup>28</sup> Moreover, Judith Kelly of the HMRC's Tobacco Strategy and Policy Team indicated to Chantier that "the EU rates the UK as the number 1 destination for illicit tobacco so the threat to the UK remains high".<sup>29</sup>

### Economic methodology

- 4.10 I have analysed the effects of the intervention using standard tools of microeconomic analysis (see Section 5 to Section 8). I have used two standard theoretical models from the industrial organisation literature in microeconomics to identify the various effects on key variables of interest.

<sup>27</sup> See for example Bellamy & Child (2014) "European Union Law of Competition", Oxford University Press (seventh edition), paragraph 2.133 (in the context of agreements under Article 101 of the Treaty on the Functioning of the European Union): "Where there is limited scope for competition in the relevant market, any additional restriction or distortion arising from the agreement will be regarded as having a significant impact".

<sup>28</sup> According to a report commissioned by the European Commission, illicit trade in FMC stands at 8.25% of total trade in the EU. See Matrix Insight (2013) "Economic analysis of the EU market of tobacco, nicotine and related products", p.30.

<sup>29</sup> See Chantier "Notes of UK-based Meetings" (2014), p. 36. (<http://www.kcl.ac.uk/health/packaging-docs.aspx>)

## Identifying competition distortions

- 4.11 I have been asked to provide my opinion on any distortive effects that certain regulations required under the proposed standardised packaging legislation will have on competition within the United Kingdom. It is therefore necessary to consider what a distortion of competition amounts to. I have adopted two approaches.

### *Distortion of competition through restriction of parameters along which competition takes place*

- 4.12 First, a distortion of competition can be considered to be any situation where competition along a certain dimension (e.g. price, quantity or differentiation) is restricted.
- 4.13 The concept of competition envisages rivalry between competitors along parameters of competition, such as price, output, product quality, product variety or innovation.<sup>30</sup> At a high level, competition can be said to be distorted if a relevant parameter of competition is distorted in some way. This could include:
- Reducing the ability for companies to compete with one another by restricting a relevant parameter of competition, such as product variety; and/or
  - Favouring a subset of companies over another subset of companies. I understand that the provisions of standardised packaging apply equally to all manufacturers. However, there may be *de facto* favouring of some companies over others, for example by restricting a relevant parameter of competition (such as innovation) that some (but not others) have invested in.

<sup>30</sup> See European Commission 2011/C 11/01, "Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements" (henceforth "Horizontal Guidelines"), paragraph 27: "For an agreement to have restrictive effects on competition within the meaning of Article 101(1) it must have, or be likely to have, an appreciable adverse impact on at least one of the parameters of competition on the market, such as price, output, product quality, product variety or innovation".

*Restriction of competition through reduction of economic welfare or consumer surplus*

- 4.14 Second, the field of competition policy provides a further and useful reference point for what may be considered a distortion on competition, in particular an intervention that reduces total welfare, or which reduces the consumer welfare component of total welfare.<sup>31</sup>
- 4.15 Professor Massimo Motta, presently Chief Competition Economist of the European Commission, has argued that "economic welfare [or total welfare] is the objective that competition authorities and courts should pursue".<sup>32</sup>
- 4.16 Accordingly, Professor Motta has defined competition policy as "the set of policies and laws which ensure that competition in the marketplace is not restricted in such a way as to reduce economic welfare".<sup>33</sup>
- 4.17 It follows that an intervention that affected the choice of products available and altered competition between firms in a market, and which reduced the sum of consumer surplus and firms' profits (producer surplus), would be contrary to the objectives of competition policy and thus, in the terms of competition policy, a distortion of competition.
- 4.18 While most economists prefer a total welfare standard (like Professor Motta), competition policy in practice is based in many jurisdictions on a consumer welfare standard.
- 4.19 This is true for instance for the European Commission, whose Horizontal Guidelines state:

*"Intellectual property laws and competition laws share the same objectives of promoting innovation and enhancing consumer welfare."<sup>34</sup>*

<sup>31</sup> Total welfare comprises consumer surplus plus producer surplus. Consumer surplus is the difference between how much consumers value products at (i.e. their willingness to pay) and what they actually pay for them. Thus if a consumer values a packet of cigarettes at €10 but pays €8 to obtain it, €2 of consumer surplus is generated. Producer surplus (or profit) is the difference between how much consumers pay for the product and what it costs to supply an additional unit including taxes that have to be paid. Thus if a consumer pays €8 (as above) and the cost of manufacture and taxes is €7, the gross profit is €1.

<sup>32</sup> See Motta, M. (2004) "Competition Policy Theory and Practice", Cambridge University Press, p. 30, emphasis in original.

<sup>33</sup> See Motta, M. (2004) "Competition Policy Theory and Practice", Cambridge University Press, p. 30.

<sup>34</sup> See European Commission's Horizontal Guidelines, para. 269.

4.20 Also, the former European Commissioner for competition policy, Neëlle Kroes, has stated:

*"Consumer welfare is now well established as the standard the Commission applies when assessing mergers and infringements of the Treaty rules on cartels and monopolies. Our aim is simple: to protect competition in the market as a means of enhancing consumer welfare and ensuring an efficient allocation of resources."*<sup>35</sup>

4.21 Professor Motta's view, with which I agree, is that choice between a consumer welfare standard or a total welfare standard will often lead to the same conclusions. In particular, once it is recognised that a reduction in firm's profits will reduce firms' dynamic incentives to invest and innovate, lower profits are also seen to have a negative effect on consumer surplus in the long-run.<sup>36</sup> Thus a long-run assessment of the impact of a regulation or intervention on consumer surplus should also have regard to firms' profits.

4.22 It is also necessary to consider whether any identified distortions can be considered to be appreciable. In this regard, I note that distortions of competition are likely to be more significant where parameters of competition have already been restricted or reduced.<sup>37</sup> I discuss the status quo, including the current restrictions that manufacturers face in seeking to differentiate their products, in paragraphs 4.3 to 4.9.

*Summary of approach to identifying competition distortions*

4.23 In this report I therefore approach the question of whether certain regulations of standardised packaging have any distortive effects on competition as follows. I first consider whether the regulations I am addressing affect any relevant parameters of competition, which could in itself be characterised as a distortion of competition. I then use economic tools to consider the effects the regulations have on consumer welfare, as a means of identifying distortions of competition.

### Health aspects

4.24 My analysis assumes (conventionally) that consumer surplus is given as the difference between a smoker's valuation of cigarettes (given by their willingness to pay) and what they actually pay. I have assumed for the purposes of this report that smokers are fully aware of the risks associated with smoking, and that they fully factor them in their smoking decisions and in their willingness to pay for cigarettes.

<sup>35</sup> See SPEECH/05/512 of 15 September 2005.

<sup>36</sup> See Motta, M. (2004) "Competition Policy Theory and Practice", Cambridge University Press, p. 21.

<sup>37</sup> See footnote 27.

- 4.25 Second, my analysis of the effects of the regulation does not take into account the direct effects, if any, of health warnings on consumption levels. Within this regard, I understand that a report by Dr. Viscusi states that standardised packaging will not increase the efficacy of health warnings.<sup>38</sup>
- 4.26 I believe it is appropriate not to take account of health aspects in the context of this report since it allows for isolating any competition distortions from the impact on public health of consumption of cigarettes or of the impact of health warnings on consumption, which may then be analysed separately by those with expertise in those areas.
- 4.27 I consider the approach outlined in the previous paragraph (in particular, isolating the welfare effects of distortions in tobacco markets using a conventional economic welfare analysis) is consistent with the approach taken by competition authorities that have analysed competition in tobacco markets. For example, the recent analysis undertaken by the Jersey Competition Regulatory Authority on the supply of cigarettes in Jersey was prompted by concerns that the pre-tax prices of tobacco products were significantly higher in Jersey than in the United Kingdom.<sup>39</sup> In addition, in a recent case concerning vertical restraints between tobacco manufacturers and supermarkets in the UK, the OFT was concerned that the agreement had the objective of raising prices.<sup>40</sup>

### Summary of approach

- 4.28 In summary, I proceed by analysing the incremental effect of standardised packaging recognising that the market is already highly regulated (and will become more so as a result of TPD2 and the small business retail display ban) and that the competitive significance of any further distortion of competition may be correspondingly greater.

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<sup>38</sup> See Viscusi, W. K. (2014) "An assessment of the likely effect of plain packaging on warnings efficacy: A response to the United Kingdom Impact Assessment on standardised packaging of tobacco products".

<sup>39</sup> See Channel Islands Competition and Regulatory Authorities (CICRA) 14/20 (2014) "Review of the supply of tobacco products in Jersey".

<sup>40</sup> See Decision of the Office of Fair Trading, Case CE/2596-03: Tobacco, 15 April 2010.

## Section 5

# Standardised packaging and its economic nature

- 5.1 In this section, I set out my views of the economic nature of standardised packaging, which provides a starting point for assessing its effects.

### The regulations and their economic characterisation

- 5.2 Standardised packaging will make some or all products in the market more similar to each other. I refer to this reduction in product differentiation as "increased homogeneity" (or "homogenisation").
- 5.3 In particular, increased homogeneity arises from restrictions on a cigarette packet's colour; restrictions on permitted text and features on a cigarette packet; requirements for the cigarette packets to be flat and smooth and without ridges, embossing or other irregularities of shape or texture; restrictions on inserts and wrappers; and, restrictions on the appearance of cigarettes.<sup>41</sup>
- 5.4 In each case I assume that the number of products available on the market does not change,<sup>42</sup> but the regulations make them more similar (by suppressing branding or by suppressing communication of differentiating factors).
- 5.5 In what follows, I illustrate the nature of increased homogeneity within a product differentiation framework.

### The product differentiation framework

- 5.6 Economists distinguish between horizontal and vertical product differentiation.

<sup>41</sup> References to "standardised packaging" in this report relate to all of these requirements.

<sup>42</sup> This is not a restrictive assumption. All results on the economic outcomes of this regulation hold for the limiting case when all heterogeneity in a given dimension is removed from the market, rendering certain groups of brands indistinguishable. This outcome is then analogous to the redundant brands having been removed from the market.

- **Horizontal product differentiation** means that consumers have different tastes (preferences) over different goods. For the same price, some consumers prefer good *A* (e.g. Lucky Strike), while other consumers prefer good *B* (e.g. Camel).
- **Vertical product differentiation** means that consumers have the same tastes over quality: for instance, consumers may agree that product *A* is better than product *B*, and if these two products had the same price all consumers would buy *A* and nobody would buy *B*. However, if product *A* is more expensive, only a subset of consumers is willing to pay for the 'quality premium'.

- 5.7 In this section, I focus on horizontal product differentiation. However, I use an analytical framework that allows for the analysis of both horizontal and vertical product differentiation, which I also use later to analyse vertical product differentiation. This framework was first developed by the economist Kelvin Lancaster in his 1966 paper "A New Approach to Consumer Theory".<sup>43</sup>
- 5.8 Lancaster observed that consumers value the characteristics embedded in the products, rather than the products themselves. For instance a meal embeds at least two characteristics: nutritional values and taste. Two meals, such as a steak and sushi, differ because they deliver different amounts/values of these characteristics. Further, a meal in a restaurant differs from the (otherwise) same meal at home, as they differ among other things in the nature of social interaction.
- 5.9 In such a framework, products are simply collections of characteristics and are unique only insofar as they provide a unique combination of characteristics. This framework provides a convenient basis for the analysis of the impact of the proposed regulation.
- 5.10 To provide an intuitive formalisation of Lancaster's framework, I consider the UK market for cigarette with  $n$  product varieties (Marlboro red, Lucky Strike, ...), where each product is typified by  $m$  possible characteristics (taste and brand etc.).<sup>44</sup>
- 5.11 In what follows I first characterise products and product differentiation, and then discuss consumers' preferences.

<sup>43</sup> See Lancaster, K. J. (1966) "A new approach to consumer theory", *The Journal of Political Economy*, Vol. 74, No. 2.

<sup>44</sup> Mathematically this may be representable as a collection of  $n$  points in an  $m$ -dimensional space.

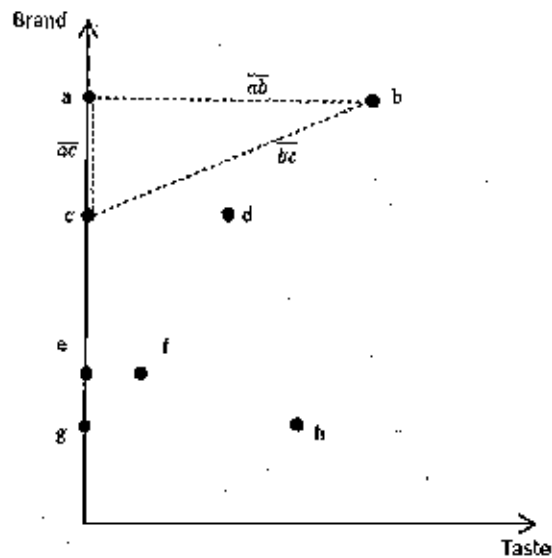
## Products and product differentiation

- 5.12 To make the exposition simpler, I assume that cigarette products only differ with respect to two characteristics: brand and taste (e.g. stronger versus weaker). This can be thought of as the subset of products that only differ along these two dimensions, and are otherwise equivalent (i.e. they have the same nicotine content, same additives, same pack size, etc.).
- 5.13 This simplified world is represented in Figure 1, where cigarette varieties are represented as points in this two-dimensional space.
- On the horizontal axis, cigarettes are ordered according to their taste: cigarettes to the left have a weaker tobacco taste than cigarettes to the right.
  - On the vertical axis, cigarettes are ordered by branding: two adjacent brands are perceived as more similar than two brands that lie far from each other. For instance, products that lie higher in the product space can be thought of as more strongly branded products, while products that lie lower are less branded products.<sup>45</sup> While branding is a complex concept, for expositional purposes I assume that each brand is valued by smokers in a different way. I also assume that smokers have heterogeneous preferences, meaning that different smokers may prefer different brands (horizontal differentiation). For clarity, I am not addressing here the quality difference between premium and non-premium brands. That issue relates to vertical (as opposed to horizontal) differentiation and I will address it in Section 7.
- 5.14 In Figure 1, product *a*, *c*, *e*, and *g* represent weak tasting products, while product *b*, *d*, *f*, and *h* have a stronger taste. Also, all brands supply both a strong tasting and a weaker tasting variant. For instance, products *a* and *b* share the same brand and thus lie at the same height in the graph.

<sup>45</sup> Points in the horizontal axis, not shown in the figure, would represent unbranded products.



**Figure 1: Product varieties in a two-characteristic world**

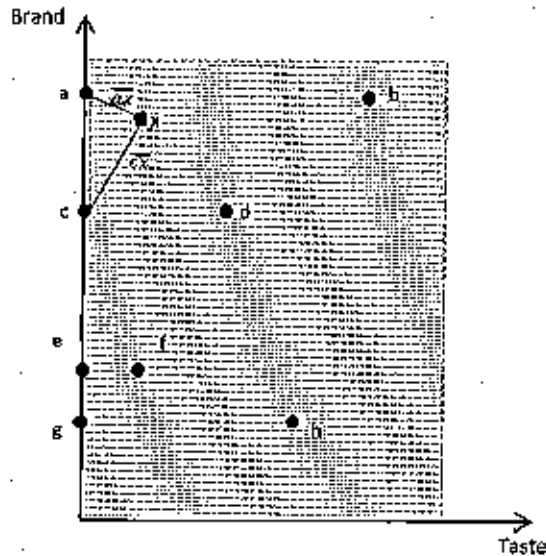


- 5.15 Drawing on the spatial differentiation literature, it is easy to supplement this formulation with a notion of distance: intuitively, the further two products in this space lie from one another, the more differentiated they are.
- 5.16 In the example above, products *a* and *c* are more similar to each other than they are to product *b*. Graphically, this translates to their distance  $\overline{ac}$  being smaller than the distance between *a* and *b* ( $\overline{ab}$ ) and also smaller than the distance between *b* and *c* ( $\overline{bc}$ ).

### Consumers' preferences

- 5.17 All else equal, each consumer buys the product that is more similar to his 'ideal' product, meaning the product that provides his/her ideal combination of characteristics. Each consumer can then be positioned in the product space according to his ideal product. For instance, if the consumer's ideal product is *a*, the consumer would be represented as a point coinciding with the product *a*.
- 5.18 Different smokers have different preferences over cigarette varieties, and as a result the market for cigarettes is characterised by a strong market-wide 'preference for variety'.
- 5.19 This preference for variety is represented in Figure 2 where I assume that consumers are distributed evenly over the whole product space, as represented by the green rectangle. The product space represents the set of all possible combinations of characteristics, i.e. the space of all potential products.

Figure 2: Consumers' ideal products



- 5.20 If products *a* and *c* had the same price, a consumer located at *x* (i.e. with preferences for brand and taste given by point *x*) would buy product *a* since it is closer to his ideal product than product *c* is. This is reflected in the distance between *a* and *x* ( $\alpha x$ ) being smaller than the distance between *c* and *x* ( $\beta x$ ).
- 5.21 This simple geometric framework proves useful for analysing the impact of the proposed legislation. In what follows, I discuss the effects of increased homogeneity.

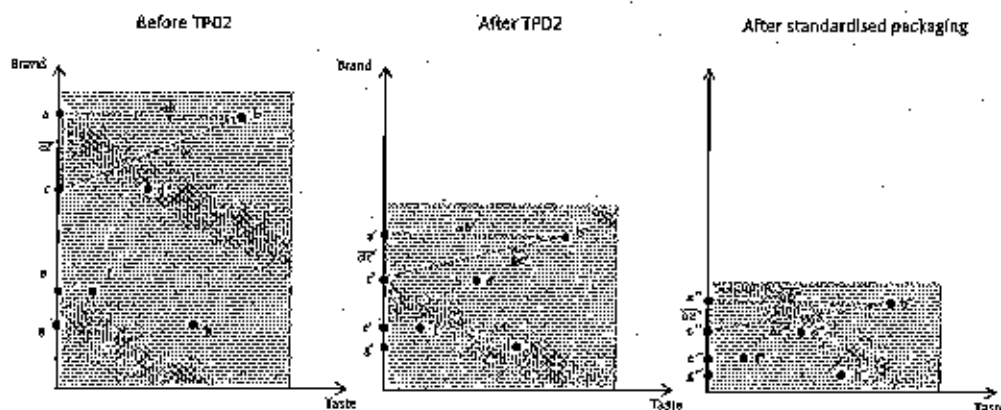
### Increased homogeneity

- 5.22 As discussed in paragraph 5.3 above, standardised packaging introduces various regulations that will have the impact of increasing homogeneity.
- 5.23 The sum effect of these regulations is to severely restrict the degree of differentiation of cigarette products in the eyes of the smokers.
- 5.24 For expositional simplicity, in what follows I focus on the severely reduced scope for branding. However, any regulation that results in increased homogeneity would have similar effects that differ in degree depending on the level of homogeneity imposed by the regulation.

5.25 In the Lancaster framework, the inability of manufacturers to communicate to consumers the distinguishing characteristics of their products – e.g. by branding or by displaying factual information on the packet – results in a contraction of the product space. This may happen through a reduction in the ability of manufacturers to differentiate their products along one dimension (e.g. lower scope for branding), as illustrated in Figure 3.

- The left hand side figure represents the market before the implementation of TPD2 or standardised packaging. The blue rectangle represents the feasible product space, i.e. where manufacturers can position their products in terms of branding and taste. If a manufacturer increases the branding of its product, it effectively moves the product upwards; if it increases how strongly its product tastes, it moves the product to the right. I assume for simplicity that the product space is bounded, e.g. there is a limit to feasible brand strength.
- The middle and right hand side figure respectively represent the market once further regulations contained in TPD2<sup>46</sup> and standardised packaging reduce the scope for brand differentiation. The feasible product space is compressed and manufacturers need to reposition their product in the market.<sup>47</sup> For instance, product  $a$  is repositioned at  $a'$ . Note that  $a'$  is effectively a different product than  $a$  because it embeds different characteristics (in this case less branding).<sup>48</sup>

Figure 3: Effect of standardised packaging - reduction in maximum differentiation



<sup>46</sup> As well as the small business retail display ban scheduled to go into effect in 2015.

<sup>47</sup> I note that while the axis denoting the strength of the tobacco taste of cigarette brands will not be compressed by TPD2, other product variety dimensions such as flavour will additionally be collapsed.

<sup>48</sup> It is important to emphasise that in this section I do not address the issue of vertical differentiation among premium and non-premium brands, but rather the issue of horizontal differentiation between different brands within one category. I will address vertical differentiation in Section 7.

- 5.26 The effect of severely restricting the scope for branding is twofold:
- First, some smokers are no longer able to consume a product as close to their ideal as before. For instance, smokers who like more information about the characteristics of their products as conveyed by branding are worse off because the scope for delivering product information through branding is reduced.
  - Second, differentiation among products is reduced. For instance, product  $a$  and product  $c$  become more similar, as captured by the fact that their distance is reduced (i.e.  $\overline{a'c'} < \overline{ac}$ ).
- 5.27 The first effect impacts smokers directly. The second effect affects smokers indirectly through its impact on the competitive interaction among companies. This effect is indirect because it affects consumers via a change in prices.
- 5.28 The purpose of Section 6 is to analyse the nature of these effects in more detail and to use a standard model of competition from the industrial organisation literature to make predictions about the impact of increased homogeneity on prices, quantities, consumer surplus and producer surplus.

## Conclusions

- 5.29 I have discussed an analytical framework that allows me to analyse the economic effects of the regulatory effects of standardised packaging.
- 5.30 The economic nature of the standardised packaging regulation is to increase homogeneity. The effects of increased homogeneity are as follows:
- The number of product characteristics along which products differentiate ( $n$ ) does not change. However, the scope for differentiation along one or more dimensions is reduced.
  - Products become more similar.
- 5.31 I will analyse the static effect of increased homogeneity, both horizontal and vertical, in Section 6 and Section 7. I analyse the dynamic effects of the regulation in Section 8.

Section 6

## Static effects of increasing horizontal homogeneity

- 6.1 In the previous section I discussed the effects of the proposed standardised packaging regulation, in particular the effect of increasing the homogeneity of cigarettes.
- 6.2 I have also shown, using an analytical framework developed by the economist Kelvin Lancaster, that increased homogeneity will produce a two-fold effect on consumers:
- **A direct effect**, which is the result of manufacturers supplying less differentiated products. For instance, total standardisation of cigarette packaging reduces the scope for branding. As a result, smokers who have a taste for more information about the characteristics of their products as conveyed through the brands are worse off.
  - **An indirect effect**, which arises from the impact of product repositioning on the pricing incentives of the manufacturers.
- 6.3 In this section I propose a framework that allows me to analyse the two effects in isolation. Using this framework, I discuss the results of the Salop (1979) model,<sup>49</sup> which is a standard economic model of product differentiation.
- 6.4 I conduct the analysis in two steps. First, I analyse the effect of the standardised packaging regulation before any offsetting tax increase (i.e. a tax increase to restore prices to their pre-regulation level). Second, I analyse the effect of standardised packaging after an offsetting tax increase (i.e. with prices restored to their pre-regulation level). Since I understand Chantler and the Impact Assessment envisage such a tax increase, I view the first step as an intermediate stage of the analysis and the second step as a prediction of the likely outcome of the regulation.

<sup>49</sup> See Salop, S. C. (1979) "Monopolistic competition with outside goods", *The Bell Journal of Economics*, Vol. 10, No.1.

- 6.5 At the first step, I show that reduced horizontal product differentiation produces more intense price competition which boosts consumption, contrary to the health objectives of the standardised packaging initiative outlined in the Department of Health's Impact Assessment.<sup>60</sup> The effect on consumer surplus is ambiguous, and producer surplus is reduced, with consequential negative impacts on investment in innovation and quality. Moreover, these effects are incremental over the effects of existing regulations, and therefore more significant than they would be in the absence of these existing regulations.
- 6.6 At the second step, I show that any offsetting tax increase would unambiguously reduce consumer welfare, as consumers either turn to legitimate cross-border trade or illicit trade or pay the same as the pre-regulation level for an inferior product (each of these options offering lower utility than consumers would obtain absent the regulation).

### **The 'variety effect' and 'price effect' of increased homogeneity**

- 6.7 When analysing the effects of increased homogeneity on market outcome I will distinguish between the direct (or 'variety') effect and the indirect (or 'price') effect. In order to analyse the two effects in isolation, I use the concept of consumer surplus. In what follows,
- I first discuss the concept of consumer surplus.
  - I then analyse the variety effect.
  - I finally analyse the price effect.

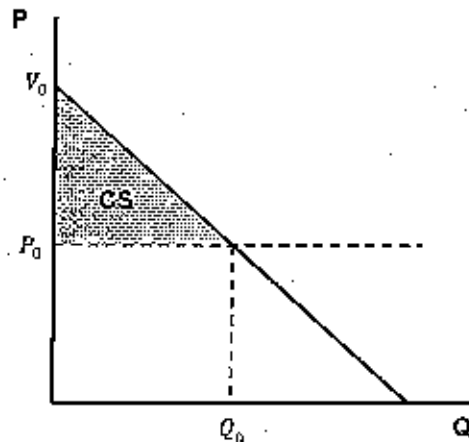
### **The concept of consumer surplus**

- 6.8 The concept of consumer surplus is illustrated in Figure 4 below.

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<sup>50</sup> See Impact Assessment, p. 1.

Figure 4: Illustration of consumer surplus



- 6.9 The diagonal blue line illustrates a market demand curve for a determined product (e.g. a strongly branded product). The demand curve is defined as the consumers' valuation of (or willingness to pay for) the product. This curve slopes downwards. There is a certain price –  $V_0$  – above which nobody wants to buy the product. That price is the maximum valuation for the product and lies at the intersection between the demand curve and the vertical axis. At prices slightly below  $V_0$ , a few customers (those who value the product very highly) are willing to buy the product, and a few sales are made. As price falls, subsequently more customers (with lower valuations) purchase the product and more sales are made.
- 6.10 The red line indicates the price that would be charged in equilibrium ( $P_0$ ). The intersection with the demand curve shows the quantity sold at this price ( $Q_0$ ).
- 6.11 Many of the customers that buy the product at  $P_0$  would actually be willing to pay a higher price. This is implied by the fact that, to the left of quantity  $Q_0$ , the demand curve lies above the line indicating the  $P_0$  price. A customer that values the product more highly than the price that he pays for it enjoys a surplus. The aggregate consumer surplus of the customers that purchase the product at price  $P_0$  is given by the area of the shaded triangle CS between the demand curve and the  $P_0$  price level.

- 6.12 The consumer welfare effect (i.e. the impact on consumer surplus) of homogenisation can be measured with a theoretical construct known as **Compensating Variation** ("CV").<sup>51</sup> The intuition for the CV is the following: if homogenisation reduces consumer welfare, consumers would prefer not to have it, unless they are compensated with a sufficient amount of money (e.g. €100 per consumer). The minimum compensation that consumers are willing to accept to allow homogenisation therefore represents their welfare loss from homogenisation. The CV represents the negative of that minimum compensation (e.g. -100€ per consumer) and can therefore be expressed as follows:

$$CV = (E(P_0, V_0, CS_0) - E(P_1, V_1, CS_0))$$

- 6.13 This expression represents the difference between two levels of expenditure: (i) consumers' total level of expenditure before homogenisation (the first term on the right hand side) and (ii) the level of expenditure consumers would need to have after homogenisation in order to achieve the same level of consumer surplus they enjoyed before the regulation (the second term on the right-hand side).
- 6.14 The first term on the right-hand side of the expression above (i.e.  $E(P_0, V_0, CS_0)$ ) represents the actual pre-regulation<sup>52</sup> expenditure ( $E$ ) of consumers. In this term,  $P_0$  represents the pre-regulation prices of all products;  $V_0$  represents the pre-regulation consumers' valuation of all products; and  $CS_0$  represents the pre-regulation consumer surplus.
- 6.15 The second term on the right-hand side (i.e.  $E(P_1, V_1, CS_0)$ ) represents the amount consumers would have to spend after the regulation has changed prices ( $P_1$ ) and the consumers' valuation of the products ( $V_1$ ). In order to obtain the same level of consumer surplus they enjoyed before the regulation ( $CS_0$ ).
- 6.16 If the second term is larger than the first term, this implies that consumers need to spend more money after the regulation than they spend before the regulation in order to achieve the same level of consumer surplus. The difference in expenditure levels is therefore the monetary compensation that would allow consumers to keep their welfare unchanged following the regulation. In other words, the difference in the expenditure levels represents the change in consumer welfare produced by the regulation.

<sup>51</sup> See Mas-Colell, A., Whinston, M., and Green, J. (1995) "Microeconomic Theory", Oxford University Press, New York, p.82.

<sup>52</sup> In this section I refer to "regulation" as increased homogenisation.



- 6.17 The CV can be decomposed into two parts that can be analysed separately: a variety effect ('VE') and a price effect ('PE').<sup>53</sup> The decomposition of the CV into a VE and a PE is a theoretical artefact that allows me to illustrate the various forces that produce the final effect of the regulation on the market outcome. Neither of VE and PE should thus be used in isolation to assess the impact of standardised packaging. It is only their combined effect that is observed in the market.

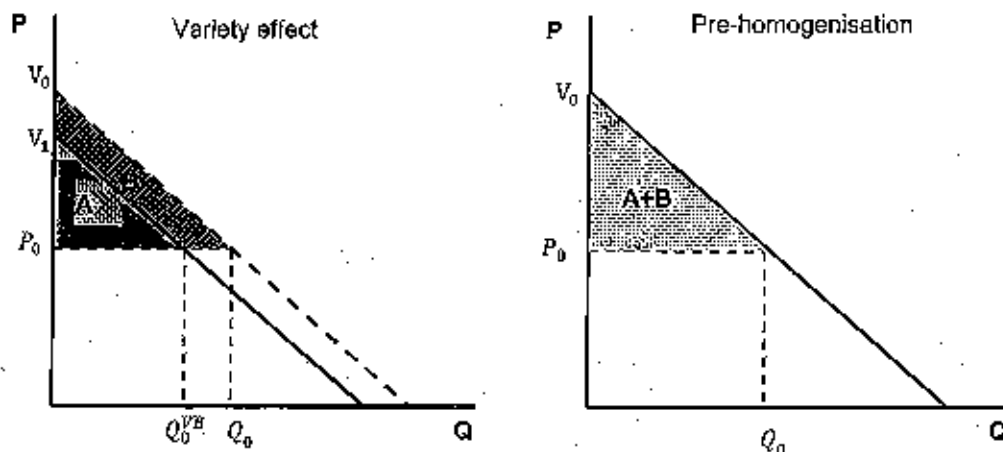
#### The variety effect

- 6.18 For a regulation that increases product homogeneity, the VE represents the direct change in consumer welfare due to the reduced product differentiation, and abstracts from any effects homogeneity may have on prices. The VE can be expressed formally as:

$$VE = (E(P_0, V_0, CS_0) - E(P_0, V_1, CS_0))$$

- 6.19 The VE is the difference between two levels of expenditure: (i) the actual pre-regulation expenditure; and (ii) the amount consumers would need to spend after the regulation to obtain the pre-homogenisation consumer surplus if prices did not change.
- 6.20 Figure 5 illustrates the VE on consumer welfare.

Figure 5: Variety effect of increased homogeneity



- 6.21 The right hand side diagram illustrates the demand and the consumer surplus pre-regulation. The left hand side diagram illustrates the change in demand that arises as a result of homogenisation. In this figure, homogenisation directly reduces the valuation of consumers for the product. This is represented as an inward shift of the demand curve.

<sup>53</sup> Formally,  $CV = VE + PE$ .

6.22 Ignoring any price effect, the VE:

- Reduces consumption from  $Q_0$  to  $Q_0^{VB}$ . This is only a partial effect of increased homogeneity. As discussed below, increased homogeneity also increases consumption through a price reduction (PE). As I show later using the Salop model, the sum effect of increased homogeneity is an increase in consumption.
- Reduces consumer welfare by the area B.

**The price effect**

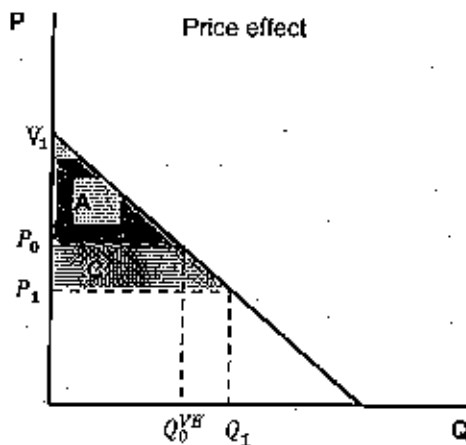
6.23 By changing the competitive interaction among manufacturers, increased homogeneity also affects prices. The PE represents the change in consumer welfare due to the price reaction of manufacturers to increased homogeneity. The PE can be expressed formally as:

$$PE = (E(P_0, V_1, CS_0) - E(P_1, V_1, CS_0))$$

6.24 The PE is the difference between (i) the amount consumers would need to spend after the regulation to obtain the pre-homogenisation consumer surplus if prices did not change, and (ii) the amount consumers would need to spend after the regulation to obtain the pre-homogenisation consumer surplus (considering that prices will change).

6.25 The PE on consumer welfare is shown in Figure 6, where I assume that prices reduce from  $P_0$  to  $P_1$  following the regulation.

**Figure 6: Price effect of increased homogeneity**



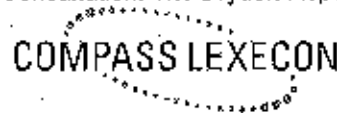
6.26 Most economic models of product differentiation predict that increased homogeneity reduces prices. This can be explained as follows.

- 6.27 A manufacturer takes into account two factors for its pricing decision: the marginal benefit and the marginal cost of increasing the price of its product.
- The marginal benefit is approximately the increase in revenues from the customers that keep buying its product.
  - The marginal cost is the lost profits on customers that decide to switch to other products.
- 6.28 If products become more homogeneous more customers would switch away after a price increase, which implies that the marginal cost of increasing prices is higher. Therefore homogenisation produces lower prices.
- 6.29 In Figure 6 above, the PE:
- Increases consumption from  $Q_0^{VE}$  to  $Q_1$ ; and
  - Increases consumer welfare by the area C.
- 6.30 The overall effect of increasing homogeneity on consumer surplus (combining the VE and the PE) is thus C – B.
- 6.31 This reflects the fact that consumers are made worse off from the reduction in variety (keeping prices unchanged), but are made better off by the reduction in prices due to more intense competition between homogeneous products.
- 6.32 In what follows, I analyse the relative size of these effects using a standard economic model of competition with product differentiation. This model allows me to isolate the VE and the PE and also to come to conclusions about the overall effects of increased homogeneity on prices, quantities, consumer surplus and producer surplus (profits).

### Salop model

- 6.33 Hotelling (1929)<sup>54</sup> developed a model of duopoly with horizontal product differentiation, where the degree of differentiation between the products is captured by the distance between these two products in the product space. The similarity with the Lancaster framework I presented in the previous section is stark. The only difference is that, in Hotelling, products are only differentiated along one characteristic.

<sup>54</sup> See Hotelling, H. (1929) "Stability in Competition," *Economic Journal*, Vol. 39.



- 6.34 Salop (1979) is a generalisation of the Hotelling model and allows for the analysis of industries characterised by more than two competitors. In what follows I analyse the effect of increased homogeneity using the Salop model, which allows for more flexibility. The Salop model analyses a market with  $n$  manufacturers, each owning one brand, and each selling one variety of this brand. For the analysis of homogenisation, however, it suffices to use a simpler duopoly model, i.e. the Salop model with  $n = 2$ . This is because the qualitative effects of increasing homogeneity do not depend on the number of companies competing in the market as long as there are at least two.
- 6.35 In the Salop model, consumers' preferences are characterised as follows. Each consumer has an 'ideal' product. Everything else equal – consumers prefer to consume the product that is closest to his 'ideal' product.
- 6.36 In the traditional Salop model, each consumer has a unit inelastic demand. This means that he only consumes one unit of the product he decides to buy. In this set-up therefore total demand is constant (i.e. it does not depend on prices) and competition determines how the demand is split among suppliers.<sup>56</sup>
- 6.37 As the effect of homogenisation on total demand is relevant for the assessment of the economic effects of standardised packaging, I have modified the Salop model to include endogenous quantity choice so that I can use the model to examine the implications for quantity consumed.
- 6.38 In this model, each consumer incurs a cost of buying a good that is far from his 'ideal' product. This is modelled as a transportation cost: the farther the purchased good is from the 'ideal' good, the larger the cost. This cost can thus be interpreted as a 'disutility' of consuming a good for which the consumer has low valuation.
- 6.39 Consumers take two decisions:
- First, they decide which product to buy, based on their preferences and on prices.
  - Second, they decide how much of that product to buy, based on its price.
- 6.40 Increased homogeneity is analysed in this model by imposing a maximum distance among the products. When products lie closer in the product space, they are more similar in the eyes of consumers (i.e. consumers incur a similar transportation cost to buy one or the other product).
- 6.41 I have summarised the effects of homogenisation in this model below, before any offsetting tax increase is introduced. The more detailed analysis is presented in Annex C.

<sup>56</sup> I note that this aspect of the model has been relaxed in my analysis of the effects of standardised packaging. The model employed allows consumers to decide both which brand to consume, and how much. For more discussion see Annex C.

#### Variety effect

- 6.42 When price effects are ignored, increasing homogeneity reduces consumer surplus. The intuition is as follows.
- 6.43 Increasing homogeneity implies that products are re-allocated in the product space. A reallocation of the products implies that:
- Some consumers are better off. These are consumers whose 'ideal' product lies closer to the re-allocated products than it lies to products before the re-allocation.
  - Some consumers are worse off. These are consumers whose 'ideal' product lies further from the re-allocated products than it lies to products before the re-allocation.
- 6.44 The total disutility of consumers who are worse off is larger than the total utility of consumers who are better off. Intuitively this is because the market appetite for variety is less satisfied when products are more homogeneous.
- 6.45 While the VE reduces consumer surplus, it does not have any effect on total consumption, as the decision of how much to consume is predicated only on the price level which, by construction, is not considered when analysing the VE.
- 6.46 By the nature of tobacco products, this is realistic: reducing horizontal product differentiation has a direct negative effect on consumer welfare for the reason explained above, but is not expected to change their smoking behaviour. However, a price increase (decrease) may induce smokers to scale down (scale up) consumption as a result of budget constraints.

#### Price effect

- 6.47 This model predicts that prices decrease as homogeneity increases. This is a standard result of economic theory. At the extreme, when all ability to differentiate is removed and products become identical, the firms compete down to marginal costs.<sup>56</sup>
- 6.48 The reduction in prices produces an increase in consumption, leading to a gain in consumer welfare.

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<sup>56</sup> Identical products can only differentiate themselves via their prices. As a result, whichever product undercuts the other in price, even if only marginally, captures the entire available market. Thus firms compete down to their minimum price, the marginal cost of producing the good.

**Overall effect on prices, quantities, consumer surplus and profits**

- 6.49 Finally, I can use the Salop model to analyse the overall effect (combining the VE and PE) of homogenisation on prices, quantities, consumer surplus and producer surplus (profits), before any offsetting tax increase is introduced.
- 6.50 **Prices.** As discussed above, since standardised packaging reduces companies' ability to differentiate their products, price competition intensifies leading to a price reduction.
- 6.51 **Quantities.** In the modified Salop model, consumption increases following the decrease in prices.
- 6.52 **Consumer surplus.** Homogenisation produces two opposite effects on consumer surplus.
- The VE reduces consumer surplus due to an increase in the expected distance between consumers' ideal products and the products supplied in the market.
  - The PE increases consumer surplus by boosting consumption.

Overall, the change in consumer surplus in response to an increase in homogeneity is ambiguous. As differentiation decreases, consumers incur a 'disutility' of consuming less differentiated goods for which they have low valuation. This disutility is modelled as a transportation cost that each consumer incurs when the purchased good is far from the 'ideal' good. On the other hand, the price decrease that arises from more intense competition boosts consumption increasing consumer surplus but undermining the stated health objective. If the transportation cost is high (meaning that consumers have strong preferences for the product they consume before the regulation), the variety effect dominates and surplus falls. If it is low, the price effect dominates.

- 6.53 **Profits.** Profits decrease. This is the consequence of more intense price competition. The decrease in profits following homogenisation is intuitive: if companies were able to increase profits by lowering prices they would have done it even in the absence of homogenisation.

- 6.54 **Offsetting tax changes.** The preceding analysis assumes no regulatory response to the predicted decrease in price. To the extent that tax duties increase (for a more detailed discussion, see my analysis in Section 10) this would unambiguously reduce consumer welfare. This is because consumers have two options. First, they could turn to legitimate cross-border trade or illicit trade. However, this must offer lower consumer surplus, otherwise they would already have chosen this option pre-regulation.<sup>57</sup> Second, they could pay the same for an inferior product (i.e. pay the pre-regulation price for the homogenised product). Furthermore, with an offsetting tax increase the incentives for illicit trade and cross-border trade will be unambiguously higher (since legitimate trade in the UK will offer a homogenised product for the same price and is therefore unambiguously inferior to what was available before). Finally, firms' profits will remain lower due to the increased intensity of price competition and would be further suppressed by legitimate cross-border shopping and illicit trade.

### Conclusions

- 6.55 In this section I have shown that homogenisation makes consumers worse off by reducing the variety of products but better off due to the lower prices that result from the fiercer competition that arises when products are more similar to each other.
- 6.56 I have used a model of competition to analyse the overall effects of homogenisation (i.e. analysing the VE and PE together). I find that before any offsetting tax increases consumption increases, contrary to the health objectives of the standardised packaging initiative, that firm profits decrease, and that consumer surplus can increase or decrease, implying a potential distortion of competition in the market, as defined in paragraphs 4.11-4.22.
- 6.57 Moreover, since these effects are incremental over the effects of existing regulations, including the yet-to-be implemented TPD2 and the small retail store display ban, they are more significant than they would be in the absence of these existing regulations.
- 6.58 Any offsetting tax increase would unambiguously reduce consumer welfare, as consumers either turn to legitimate cross-border trade or illicit trade or pay the same as the pre-regulation level for an inferior product (each of these options offering lower utility than consumers would obtain absent the regulation).

<sup>57</sup> This result comes from the economic concept of revealed preference: if a consumer chooses option A over option B when both options are available, we can infer that option A offers higher consumer surplus.

Section 7

## Static effects of increasing vertical homogeneity

- 7.1 In Section 5 I have defined products as a collection of characteristics, and explained that consumers care about the characteristics embedded in the products rather than the products themselves.
- 7.2 I have then shown that consumers have different preferences over these characteristics, so that, for instance, some consumers prefer more strongly tasting cigarettes than others. I have explained that different preferences give rise to horizontal product differentiation. I have then analysed the effects of homogenisation, i.e. a reduction in horizontal product differentiation in Section 6.
- 7.3 In this section, I analyse the effects of standardised packaging on vertical product differentiation. Vertical product differentiation means that all consumers have the same preferences along a certain characteristic, which is usually associated with quality. For instance, everybody prefers faster microprocessors to slower microprocessors, or safer cars to less safe cars.
- 7.4 In the case of cigarettes, smokers see premium brands as more valuable than non-premium brands. As a result, if two varieties had the same characteristics (e.g. in terms of taste, nicotine content, etc.) and the same price, but one is premium brand and the other is non-premium brand, all smokers would buy the premium brand.
- 7.5 As discussed in Section 5, standardised packaging severely restricts the scope for branding. Reduced branding affects smokers' perception of the quality difference between premium and other brands. In particular, I expect that manufacturers' ability to differentiate premium from other brands decreases. Thus, standardised packaging directly reduces the scope for manufacturers to compete in the quality dimension. Moreover, these effects should be understood as incremental over the effects of existing regulations.



7.6 In what follows,

- I first discuss the analytical framework I use to discuss the effects of reducing vertical differentiation. This framework is essentially an extension of the framework I used in Section 5 and Section 6 to analyse horizontal differentiation.
- I then use this framework to decompose the total effect in a 'quality effect' and a 'price effect'.
- I finally discuss these two effects, using an economic model of vertical differentiation.

7.7 As in my analysis of reduced horizontal product differentiation, I conduct the analysis of reduced vertical product differentiation in two steps. First, I analyse the effect of the standardised packaging regulation before any offsetting tax increase (i.e. a tax increase to restore prices to their pre-regulation level). Second, I analyse the effect of standardised packaging after an offsetting tax increase (i.e. with prices restored to their pre-regulation level). Since I understand Chantler and the Impact Assessment envisage such a tax increase, I view the first step as an intermediate stage of the analysis and the second step as a prediction of the likely outcome of the regulation.

7.8 At the first step, I show that reduced vertical product differentiation produces more intense price competition which boosts consumption, contrary to the health objectives stated in the Department of Health's Impact Assessment.<sup>58</sup> The effect on consumer surplus is ambiguous, and producer surplus is reduced with consequential negative impacts on investment in innovation and quality. Moreover, these effects are incremental over the effects of existing regulations, and therefore more significant than they would be in the absence of these existing regulations.

7.9 At the second step, I show that any offsetting tax increase would unambiguously reduce consumer welfare, as consumers either turn to legitimate cross-border trade or illicit trade or pay the same as the pre-regulation level for an inferior product (each of these options offering lower utility than consumers would obtain absent the regulation). Firms' profits will remain lower due to the increased intensity of price competition and would be further suppressed by legitimate cross-border shopping and illicit trade.

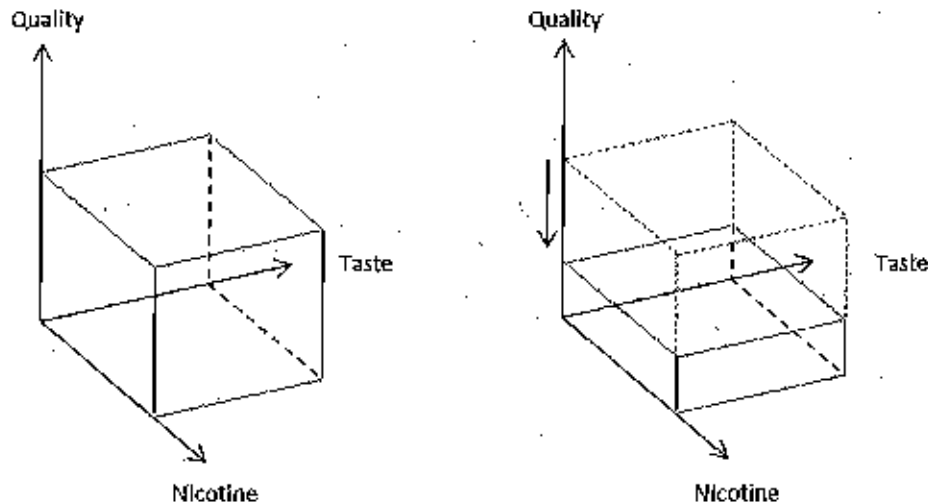
### **Analytical framework**

7.10 In order to analyse the impact of standardised packing on vertical differentiation, I use the same analytical framework that I have used in Section 5 and Section 6. In particular, I extend that framework to allow for products to be differentiated along a quality characteristic. This is shown in Figure 7.

<sup>58</sup> See Impact Assessment, p. 1.

- 7.11 The left hand side diagram illustrates the market before the implementation of standardised packaging. Products are differentiated along three characteristics, and the product space is represented as a box. The base of the product space represents horizontal differentiation: cigarettes are differentiated due to different levels of nicotine content and to different taste strengths, and people have different preferences over these two characteristics.
- 7.12 However, in Figure 7, cigarettes are also differentiated by a quality characteristic (the vertical axis). Quality increases as we go from 'non-premium' to 'premium' brands. All consumers value quality, and therefore the consumers' 'ideal' products sit in the top rectangle of the product space: for any given level of taste and nicotine content, smokers prefer premium to other lower quality brands.

Figure 7: Change In the degree of vertical product differentiation



- 7.13 The effect of standardised packaging is to reduce the smokers' awareness of the product quality. I refer to this effect as "increased vertical homogeneity" (or "vertical homogenisation"). This is represented on the right hand side diagram by a compression of the product space towards lower perceived quality.

7.14 Vertical homogenisation has three effects:

- **Short-term quality effect.** This is the direct effect on consumer surplus that arises from a reduction in smokers' valuation of premium brands.
- **Price effect.** The reduction in vertical differentiation affects the competitive interaction among businesses and thus their pricing incentives. In particular, since the ability to compete in quality is reduced, higher-quality brands would be priced more aggressively.
- **Long-term quality effect.** The above effects may reduce the profitability for companies of investing in higher-quality brands. As a result, companies may be discouraged from investing in quality.

7.15 The first two effects are the equivalent of the 'variety effect' and the 'price effect' in the horizontal differentiation framework. I address both these effects in this section.

7.16 The third effect is a dynamic effect. I only address it partially in this section.<sup>59</sup>

7.17 I analyse the short-term quality effect (henceforth 'quality effect') and the price effect in the next subsection.

### The 'quality effect' and 'price effect' of increased vertical homogeneity

7.18 In order to measure the effect of increased vertical homogeneity on consumer surplus I again use the concept of Compensating Variation ('CV'). This represents the negative of the minimum compensation that consumers would be willing to accept to allow vertical homogenisation or, in other words, represents the change in consumer welfare produced by vertical homogenisation. The CV can be expressed as follows:

$$CV = (E(P_0, k_0, CS_0) - E(P_1, k_1, CS_0))$$

7.19 This expression represents the difference between two levels of expenditure: (i) consumers' total level of expenditure before vertical homogenisation (the first term on the right hand side) and (ii) the level of expenditure consumers would need to have after vertical homogenisation in order to achieve the pre-regulation<sup>60</sup> level of consumer surplus (the second term on the right hand side).

<sup>59</sup> In particular, I analyse the effect of reducing vertical homogenisation on the profitability of higher-quality products. I then use this result to fully analyse the 'long-term quality effect' in Section 9.

<sup>60</sup> In this section I refer to "regulation" as increased vertical homogenisation.

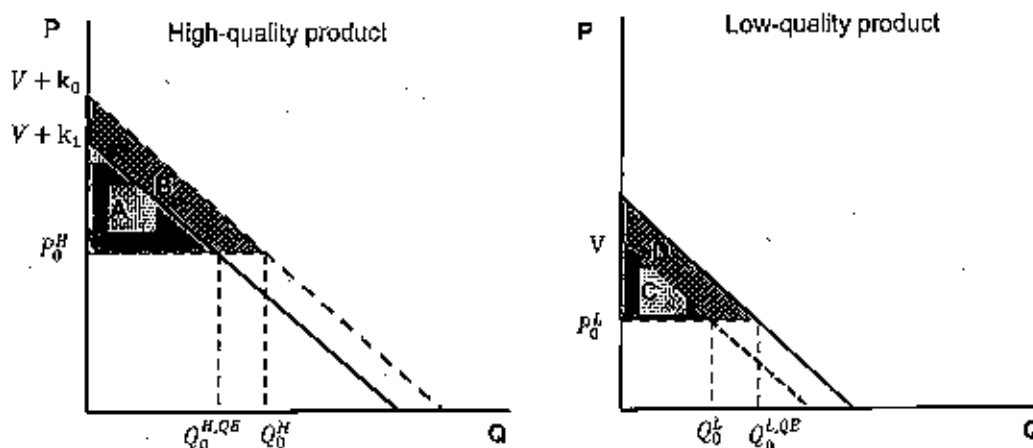
- 7.20 The first term on the right-hand side of the expression above (i.e.  $E(P_0, k_0, CS_0)$ ) represents the pre-regulation actual expenditure ( $E$ ) of consumers. In this term,  $P_0$  represents the pre-regulation prices of all products;  $k_0$  represents the pre-regulation 'quality premium', i.e. the extra value that consumers attach to the high-quality product; and  $CS_0$  represents the pre-regulation consumer surplus.
- 7.21 The second term on the right-hand side (i.e.  $E(P_1, k_1, CS_0)$ ) represents the amount consumers would have to spend after the regulation has changed prices ( $P_1$ ) and the quality premium ( $k_1$ ), in order to obtain the same level of consumer surplus they enjoyed before the regulation ( $CS_0$ ). I assume that the regulation reduces the quality premium (i.e.,  $k_1 < k_0$ ).
- 7.22 If the second term is larger than the first term, this implies that consumers spend less money before the regulation than they will need to spend after the regulation to achieve the same level of consumer surplus as they receive before the regulation. The difference in expenditure levels is therefore the monetary compensation that would allow consumers to keep their welfare unchanged following the regulation. In other words, the difference in the expenditure levels represents the change in consumer welfare produced by the regulation.
- 7.23 I again decompose the CV into two parts: a quality effect ("QE") and a price effect ("PE").<sup>61</sup>

#### The quality effect

- 7.24 For a regulation that increases vertical homogeneity, the QE represents the direct change in consumer welfare due to the reduced perceived value of the high-quality product. The QE abstracts from any effects the regulation may have on prices, and can thus be expressed formally as:
- $$QE = (E(P_0, k_0, CS_0) - E(P_0, k_1, CS_0))$$
- 7.25 The QE is the difference between two levels of expenditure: (i) consumers' total level of expenditure before vertical homogenisation; and (ii) the amount consumers would have to spend after the regulation in order to obtain the pre-regulation consumer surplus if prices do not change.
- 7.26 Figure 8 illustrates the VE on welfare.

<sup>61</sup> Formally,  $CV = QE + PE$ .

Figure 8: Quality effect of increased vertical homogeneity



- 7.27 The left hand side diagram illustrates the market for the high-quality product. Initially, the consumer surplus is represented by the sum of the areas  $A$  and  $B$ . Vertical homogenisation directly reduces the valuation of consumers for the high-quality product, thus decreasing the demand for this product over lower quality products. This is represented as an inward shift of the demand curve. Post-regulation, the consumer surplus is reduced to the area  $A$ .
- 7.28 The right hand side diagram illustrates the market for the low-quality good. The initial consumer surplus is  $C$ . After vertical homogenisation, some consumers may be willing to substitute the high-quality with the low-quality product. If this happens, the demand for the low-quality good increases, and the consumer surplus increases to  $C + D$ .
- 7.29 Ignoring any price effect, the QE reduces consumer surplus by  $B - D$ .

#### The price effect

- 7.30 By restricting competition in the quality dimension and causing vertical homogenisation, standardised packaging also changes the competitive interaction between manufacturers in the remaining dimension of competition (price). The PE represents the change in consumer welfare due to the price reaction of manufacturers to increased vertical homogeneity. The PE can be expressed formally as:

$$PE = (E(P_0, k_1, CS_0) - E(P_1, k_1, CS_0))$$

- 7.31 The PE is the difference between (i) the amount consumers would need to spend after the regulation to obtain the pre-regulation level of consumer surplus if prices did not change; and (ii) the amount consumers would need to spend after the regulation in order to obtain the pre-regulation consumer surplus (considering that prices change).
- 7.32 The PE on welfare is shown in Figure 9.

### **Motta model of vertical differentiation**

- 7.38 The model has been developed with the purpose of analysing the degree of vertical differentiation that markets provide under different market structures. For clarity, the model has not been used by Prof. Motta to analyse the welfare effects of an exogenous change in vertical differentiation. However, I find this model useful for the purpose of this report, because – contrary to most models of vertical differentiation – it allows for an analysis of the impact of quality on consumption.
- 7.39 In this model, two companies compete in the market. One of them sells a high quality product, and the other sells a low-quality product. Consumers have different willingness to pay for quality, for instance because they have different levels of income.
- 7.40 All consumers value the high-quality product more than the low-quality product. If the two products had the same price, all consumers would only buy the high-quality product. In equilibrium, the high quality product is more expensive than the low-quality product, and both are consumed.
- 7.41 Consumers may also decide not to buy any product in the legal market. This happens for consumers who have a low valuation of the products, if the price of the low-quality products is too high with respect to its quality. I note, however, that while these consumers may leave the legal market, this exit should not be construed as a cessation of consumption because they may still purchase in the illicit market.
- 7.42 I have summarised the effects of increasing vertical homogeneity (i.e. reducing the quality of the high-quality product), before any offsetting tax increase is introduced, below. The more detailed analysis of the model is presented in Annex D.

#### **Quality effect**

- 7.43 When price effects are ignored, increasing vertical homogeneity decreases consumer surplus. The intuition is as follows.
- 7.44 Increasing homogeneity lowers consumers' valuation of the high-quality good. This reduces the utility of consumers who, before the regulation, were consuming the high-quality good.
- Consumers who keep buying the high-quality good are worse off because their valuation of this product is lower.
  - Consumers who switch to the low-quality good are worse off by revealed preferences: they preferred the high-quality to the low-quality good before the regulation, but they switch to the low-quality good after the regulation.
- 7.45 The QE does not have any impact on the utility of consumers who, before the regulation, were consuming the low-quality good.

7.46 Overall, thus, the QE reduces consumer surplus and makes some customers switch from the high-quality to the low-quality product. Below I discuss how prices decrease as a result of intensified competition between the high- and the low-quality good, boosting consumption.

#### Price effect

7.47 As noted above, by restricting competition in the quality dimension and causing vertical homogenisation, standardised packaging also changes the competitive interaction between manufacturers in the remaining dimension of competition (price).

7.48 A reduction of the quality premium:

- Reduces the price of the high-quality product. This is a direct consequence of the fact that this product is less valuable.
- Reduces the price of the low-quality product. This is because price competition intensifies after the high-quality product partially loses its quality edge.

7.49 A reduction in the price of the low-quality product increases consumption by attracting new customers to the market.<sup>83</sup>

7.50 The PE thus increases consumer welfare, since it decreases the price of both products and it increases total consumption.

#### Overall effect on prices, quantities, consumer surplus and profits

7.51 The overall effect (i.e. the combination of the QE and the PE) of increasing vertical homogeneity on prices, quantities, consumer surplus and producer surplus (profits), before any offsetting tax increase is introduced, is as follows.

7.52 **Prices.** As discussed above the prices of both the high-quality and the low-quality product decrease. This is because the high-quality product becomes more similar to the low-quality products, which intensifies competition.

7.53 **Quantities.** The overall consumption increases. This is the result of the fact that prices decrease.

7.54 **Consumer surplus.** Consumer welfare decreases via the negative QE (i.e. the loss of quality) and increases via the positive PE (i.e. the reduction in prices which increases consumption). The overall effect is ambiguous.

7.55 **Profits.** Profits of both companies decrease due to price competition being more intense as a result of standardised packaging suppressing vertical differentiation.

<sup>83</sup> While not captured by the model, I would expect that lower prices also increase consumption of existing consumers.

- 7.56 As discussed more in depth in Section 8, if standardised packaging reduces the profitability of offering high-quality products, businesses may also reduce their investments in quality.
- 7.57 **Offsetting tax changes.** The preceding analysis assumes no regulatory response to the predicted decrease in price. To the extent that tax duties increase (for a more detailed discussion, see my analysis in Section 10) this would unambiguously reduce consumer welfare. This is because consumers have two options. First, they could turn to legitimate cross-border trade or illicit trade. However, this must offer lower consumer surplus, otherwise they would already have chosen this option pre-regulation.<sup>64</sup> Second, they could pay the same for an inferior product (i.e. pay the pre-regulation price for the homogenised product). Furthermore, with an offsetting tax increase the incentives for illicit trade and cross-border trade will be unambiguously higher (since legitimate trade in the UK will offer a homogenised product for the same price and is therefore unambiguously inferior to what was available before). Firms' profits will remain lower due to the increased intensity of price competition and would be further suppressed by legitimate cross-border shopping and illicit trade.

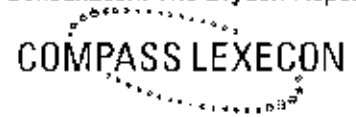
### Conclusions

- 7.58 In this section I have shown that increasing vertical homogeneity increases total consumption, contrary to the stated health objectives of standardised packaging as articulated by the Department of Health's Impact Assessment.<sup>65</sup>
- 7.59 I have used a model of competition to analyse the overall effects of vertical homogenisation (i.e. analysing the QE and PE together). I find that, before any offsetting tax increases, consumption increases, contrary to the health objectives of the standardised packaging initiative, that firm profits decrease, and that consumer surplus can increase or decrease, implying a potential distortion of competition in the market, as defined in paragraphs 4.11-4.22
- 7.60 Moreover, since these effects are incremental over the effects of existing regulations, including the yet-to-be implemented TPD2 and small retail store display ban, they are more significant than they would be in the absence of these existing regulations.

<sup>64</sup> As noted previously, this result comes from the economic concept of revealed preference: If a consumer chooses option A over option B when both options are available, we can infer that option A offers higher consumer surplus.

<sup>65</sup> See Impact Assessment, p. 1.





7.61 Finally, any offsetting tax increase would unambiguously reduce consumer welfare, as consumers either turn to legitimate cross-border trade or illicit trade or pay the same as the pre-regulation level for an inferior product (each of these options offering lower utility than consumers would obtain absent the regulation).



Section 8

## Dynamic effects

8.1 In this section I discuss the impact of standardised packaging on various other market outcomes, in particular the level of innovation, barriers to entry and illicit trade. I have labelled these effects "dynamic" as they are not captured by the static models of competition analysed in the previous sections.

### Innovation

8.2 Innovation can take the form of product innovation (producing new varieties) or process innovation (reducing costs of production).

8.3 The level of innovation taking place within an industry will depend on the ability and incentives of firms to invest in innovation.

#### *Ability to Invest*

8.4 There is a well-established literature in corporate finance that examines the relationship between cash flows and investment levels.

8.5 According to this literature, if capital markets are imperfect so that creditors have limited information on the quality of borrowers and their repayment capacity, internal finance constitutes the cheapest financing means, as the lack of perfect information regarding the financial capacity of borrowers makes financing investments through credit more expensive than using internal capital flows. Therefore, cash flows constitute the primary source of financing.

8.6 The empirical literature shows ample evidence of a positive and significant impact of cash flows on investment. Holding investment opportunities constant, firms with more cash flows invest more.

8.7 In previous sections, I showed that the considered regulation can be expected to cause profits to fall.<sup>66</sup> Therefore, I would expect cash flows to be lower and innovation, both product and process innovation, to be lower as a result.

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<sup>66</sup> See paragraph 6.56 and paragraph 7.59.

*Incentives to invest*

- 8.8 Plainly, standardised packaging will severely restrict the incentives to invest in all aspects of products that it regulates, such as branding and aspects of packaging. It will also reduce the incentives to innovate in branding due to the diminished role of brand.
- 8.9 This is because it becomes nearly impossible for firms to communicate to consumers the existence of a novel innovation due to the strict regulation of standardised packaging.<sup>67</sup>
- 8.10 Standardised packaging could, however, increase the incentives to invest in process innovation. This is because of my finding that price competition will be fiercer as a result of increased horizontal product homogeneity caused by standardised packaging.<sup>68</sup> Process innovations that enable a firm to reduce its marginal costs would therefore be more rewarding and the incentives to invest in process R&D correspondingly greater.<sup>69</sup> However, such process R&D by reducing marginal costs would reduce prices further and increase quantities consumed. This would be contrary to the stated health objective of standardised packaging as articulated by the Department of Health's Impact Assessment.<sup>70</sup>

*Conclusion*

- 8.11 The regulations within standardised packaging have various implications for innovation over and above, and thus potentially more significant than, TPD2. Product innovation would be lower because (i) firms would have a lower ability to invest due to having reduced cash flows from which to fund R&D and (ii) firms would have a reduced incentive to invest as product innovations would be impossible to commercialise where the new products/product features are contrary to the standardised packaging regulation. This lower investment would reduce consumer welfare.

<sup>67</sup> Chantler noted that there is evidence that many product innovations were introduced just before the launch of plain packaging in Australia, suggesting that firms recognised the necessity of branding, and were seeking to establish their differentiation while they were still able (Chantler (2014), page 46).

<sup>68</sup> See paragraphs 6.27 to 6.28 for an explanation, and paragraph 6.56 for the result.

<sup>69</sup> This is because a reduction in differentiation increases the market share a firm can gain from a marginal reduction in price, and thus increases profitability of such innovations. To see this, consider a case where firms previously share the market by competing prices down to marginal costs. If a process innovation allows one firm to reduce marginal costs, this firm captures the entire market.

<sup>70</sup> See Impact Assessment, p. 1.

- 8.12 Firms would also have a lower ability to engage in process innovation as they would have a lower ability to invest due to having reduced cash flows from which to fund R&D. Set against that, firms would have increased incentives to engage in process R&D due to intensified price competition. If the incentive effect dominates the ability effect, process innovation could increase. However, this would lead to a reduction in costs and in turn to a reduction in prices and thus to an increase in consumption, contrary to the health objectives of standardised packaging.

### Entry and exit

- 8.13 In principle, the imposition of standardised packaging regulation could have an impact on entry.
- 8.14 However, given that the cigarette market in the United Kingdom has been shrinking over at least the last decade, while the issue of entry is a complex question, I consider entry to be relatively unimportant for the overall dynamics of this market.<sup>71</sup> In any case, I consider the implications for entry are complicated and it would be hard to come to clear conclusions. Inter alia, entry may be harder due to it being more difficult (or impossible) for entrants to communicate their new product to consumers.
- 8.15 Therefore, I do not discuss the effects of standardised packaging on entry and instead focus on the more relevant effects of standardised packaging on market exit.
- 8.16 As discussed in Section 6 and Section 7, increased homogeneity is likely to severely restrict brand and quality competition and to intensify price competition, producing a commodification of tobacco products. Scale economies would thus become more important, increasing the risk of exit for smaller, relatively inefficient players.

### Illicit trade and legitimate cross-border trade

- 8.17 As I noted in discussing the status quo, the UK cigarette market has a high level of illicit trade.<sup>72</sup>
- 8.18 I would expect the level of illicit trade to depend on the ability and the incentives of those engaged in illicit trade to conduct such trade. The regulations I have been asked to consider only affect the incentives for illicit trade.

<sup>71</sup> See <http://www.the-tma.org.uk/tma-publications-research/facts-figures/uk-cigarette-consumption>.

<sup>72</sup> See Footnote 29.

*Incentives to trade illicitly*

- 8.19 The incentive to engage in illicit trade will directly increase as a result of standardised packaging. By suppressing the role of brand, standardised packaging will increase the rewards available to brands with illicit branding since they will capture more of the demand from smokers who have a preference for highly branded packs. Moreover, as a result of suppressing the role of brand, standardised packaging will also make cheap whites a closer substitute to legal cigarettes. This will increase the total rewards available to illicit trade in unbranded cigarettes.
- 8.20 On the other hand, as noted above, I have found that the increased horizontal homogeneity arising from standardised packaging will have the effect of reducing prices. Directionally, this would reduce the incentives on illicit traders because the profit margins available would be less. However, since illicit traders do not pay tax, the effect on the margin they can capture is likely to be small and I would expect the other effects above, which affect the size of the demand they can capture, to dominate.
- 8.21 Moreover, if taxes are increased to offset any reduction in prices that would otherwise occur any possible reduction in incentives as a result of lower prices will not materialise.

*Cross-border trade*

- 8.22 As explained in the previous sections of this report, given the restrictions to branding that standardised packaging presents, the nature of competition within the UK will change and become focused on price. This can be expected to have an impact on patterns of trade both within the UK and between the UK and Member States. Whilst branded packaging will no longer be available for sale legitimately in the UK, it will be available legitimately in EU Member States that have not adopted standardised packaging measures. This will lead to irregular patterns of sales and distortion of how competition would otherwise take place for the sale of cigarettes: the level of reduced ability to differentiate in the UK – with the resulting increase in price-based competition – will not necessarily be replicated in other Member States.
- 8.23 I also note that standardised packaging would increase the incentives of consumers to engage in legitimate cross-border trade to the extent that they valued the packaging itself. UK consumers may bring an unlimited amount of cigarettes back into the UK from other EU Member States, provided they transport the cigarettes themselves, the cigarettes are for personal use or a gift, and the duty and tax has been paid on the cigarettes in the Member State where they were acquired.<sup>73</sup>

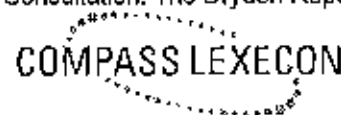
<sup>73</sup> <http://www.hmrc.gov.uk/customs/arriv/ing/arriv/ingeu.htm>

- 8.24 A significant number of consumers seeking branded packets of cigarettes could therefore potentially result in a significant increase in cross-border shopping. In this regard I note that 90,478 coaches, 2,206,278 road haulage vehicles, 2,471,193 passenger cars and 12,753,343 passengers passed through the port of Dover in 2013.<sup>74</sup> Given this significant number of people already passing through Dover alone, the potential exists for a large number of consumers to increase their cross-border shopping levels, resulting in further distortion of current levels of trade in cigarettes between the UK and other Member States

*Conclusions*

- 8.25 The regulations within standardised packaging increase incentives to engage in illicit trade and legitimate cross-border trade and therefore, all else equal, I would expect these forms of trade to increase.

<sup>74</sup> <http://www.doverport.co.uk/about/performance/>



## Section 9

## Dr. Padilla's simulation papers

- 9.1 The next two sections of my report present empirical evidence on the potential magnitude of price reductions resulting from standardised packaging and the implied magnitude of tax increases to offset this.
- 9.2 In this section I summarise the empirical simulation results of Dr. Jorge Padilla's<sup>75</sup> two 2010 studies of the likely effects of standardised packaging on prices in the UK and Australian cigarette markets.<sup>76</sup>

### Summary

- 9.3 Padilla observes that plain packaging would remove a crucial method by which cigarette suppliers are able to distinguish their brands from those of their competitors. Moreover, given the existing level of regulation of branding for cigarettes, he notes packaging is the most important currently permissible method of differentiation.<sup>77</sup>
- 9.4 He finds that in the absence of the ability to differentiate brands via packaging existing suppliers would be forced to compete to a greater extent on prices, resulting in a price reduction of between 4.4% and 14.1% in the UK,<sup>78</sup> and 4.8% to 14.8% in Australia.<sup>79</sup>
- 9.5 Moreover, such a price reduction would have the effect of increasing sales and consumption of cigarettes. Padilla estimates the increase in quantity consumed to be between 2.2% and 10.6% in the UK,<sup>80</sup> and 2.6% to 11.1% in Australia.<sup>81</sup>

<sup>75</sup> Dr. Jorge Padilla is a colleague of mine at Compass Lexecon, and the head of Compass Lexecon Europe.

<sup>76</sup> Padilla (2010a), "The impact of plain packaging of cigarettes in UK: a simulation exercise," and Padilla (2010b) "The Impact of plain packaging of cigarettes in Australia: a simulation exercise." In what follows I consider the 'no entry' case in Padilla's analysis.

<sup>77</sup> See Padilla (2010a), p. 1.

<sup>78</sup> See Padilla (2010a), p. 15, Table 3.

<sup>79</sup> See Padilla (2010b), p. 15, Table 3.

<sup>80</sup> See Padilla (2010a), p. 16, Table 4.

### Theoretical framework

- 9.6 Padilla's theoretical framework is entirely consistent with the one described in the theoretical part of my report.
- 9.7 Padilla establishes that economic theory distinguishes two primary categories of products: homogeneous goods, where, in the eyes of a consumer, one variety of the good is completely substitutable with any other, and heterogeneous or differentiated goods, where consumers do not view the products of any one supplier as identical with the products of any other.<sup>82</sup>
- 9.8 This differentiation, Padilla writes, permits firms to charge a premium. This is because a consumer is less likely to switch between products in the face of a price increase, as different brands are viewed as not interchangeable. This phenomenon has been extensively documented in the economics literature.<sup>83</sup>
- 9.9 The paper then notes that the plain packaging initiative serves to reduce this differentiation in brands, eroding the ability of suppliers to charge premiums for their respective products. This results in a reduction in prices.<sup>84</sup>

### Empirical approach

- 9.10 Padilla's simulation exercise utilises a calibrated model of economic behaviour to generate the predictions of the impact of the plain packaging intervention on the market for cigarettes. Such a model necessarily relies on certain data and assumptions to create predictions. I outline and discuss these assumptions below.

#### *Structure of substitutability*

- 9.11 Cigarette brands are perceived as highly differentiated by end consumers. Thus, from the perspective of these consumers, brands may be placed into groups, in this case corresponding to well-recognised vertical brand categories.<sup>85</sup>

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<sup>81</sup> See Padilla (2010b), p. 15, Table 4.

<sup>82</sup> See Padilla (2010a), p. 2.

<sup>83</sup> For seminal work on this topic see: Hotelling (1929) "Stability In Competition," and Salop (1979) "Monopolistic Competition with Outside Goods."

<sup>84</sup> See Padilla (2010a), p.2.

<sup>85</sup> See Padilla (2010a), p. 9.



- 9.12 It is assumed that consumers can differentiate between products in different categories. This is no different than assuming that cigarette smokers are perceptive of differences between premium and low quality brands.<sup>86,87</sup>

*Bertrand competition*

- 9.13 The second assumption is that firms compete in prices using standard models of oligopolistic competition. In Padilla's model, firms set the prices of their brands to maximise profits, taking into account the expected non-collusive strategies of their rivals. An equilibrium occurs in such a model when no one firm has a profitable price deviation available to it.<sup>88</sup>

*Elasticity*

- 9.14 A further assumption is made regarding how consumers react to changes in price. This effect is referred to as the consumers' own-price elasticity of demand, and the degree of substitutability between brands is termed the cross-price elasticity of demand.
- 9.15 Padilla's simulations are run for two possible sets of own-price elasticities, a lower bound of -0.5, and an upper bound of -1.0. These values, Dr. Padilla notes, are in line with existing empirical work on estimating this parameter.<sup>89</sup>
- 9.16 The simulation is also similarly conducted for 'high' and 'low' values of cross-price elasticities governing substitutability between brands.

*Nested logit specification*

- 9.17 Lastly, Padilla's simulation uses an econometric model known as a nested logit model.<sup>90</sup> In such a model, products are placed into specific groupings, nests, in this case corresponding to vertical categories of cigarettes in the market (premium, low-quality, etc). For a given consumer, the utilities of consuming goods in the same nest are correlated. Thus in response to price changes, consumers are more likely to substitute first within their nest of choice, before considering products elsewhere.

<sup>86</sup> See *Impact Assessment*, paragraph 263, as well as Scheffels (2008).

<sup>87</sup> I note that this is an assumption that is well supported in the literature. For example, see Scheffels (2008).

<sup>88</sup> See Padilla (2010a) p. 9.

<sup>89</sup> For example, see Cogan and Viscusi (2003) "Principles for cigarette taxation in Africa"

<sup>90</sup> See Padilla (2010a) Appendix 2.

- 9.18 As Padilla notes, this is a commonly employed statistical model in the empirical economic literature.<sup>91</sup>

## Results

- 9.19 Padilla's results yield a range of values, corresponding to differing combinations of parameter assumptions. These have been reproduced in Table 1 below.<sup>92</sup>
- 9.20 When the price-elasticity of demand for consumers is considered to be large and there is only an average increase in within-nest substitutability resulting from the legislation, Padilla's simulation estimates the lower bound of the magnitude of the expected price change: a range of -4.4% to -6.9%.
- 9.21 When the price-elasticity of demand is large, the increase in within-nest substitution is large, the expected price change is maximal, in the range of -7.2% to -14.1%.

**Table 1: Estimated price impact of plain packaging**

Market elasticity of demand	Increase of within-nest substitutability	Change in weighted average price (%)		
		Min	Mean	Max
-0.5	Average	-7.0%	-6.2%	-4.7%
-1.0	Large	-13.8%	-11.8%	-7.4%
-0.5	Average	-6.9%	-6.0%	-4.4%
-1.0	Large	-14.1%	-11.8%	-7.2%

Source: Padilla (2010a) "The Impact of Plain Packaging of Cigarettes in UK: A Simulation Exercise," Table 3.

- 9.22 Table 2 below gives the corresponding predicted changes in quantity consumed for given parameter combinations.<sup>93</sup> If the price-elasticity of demand is low and there is only an average increase in intra-nest substitutability, Padilla predicts a minimum increase in consumption in the range of 2.2% to 3.1%.
- 9.23 If the price-elasticity of demand is high, however, and there is a large change from plain packaging to intra-nest substitutability, then consumption could increase by up to 7.4% to 10.6%.

<sup>91</sup> See Padilla (2010a), p. 9, footnote 27.

<sup>92</sup> For original see Padilla (2010a), p. 15.

<sup>93</sup> For original see Padilla (2010a), p. 16.

Table 2: Estimated quantity impact of plain packaging

Market elasticity of demand	Increase of within-nest substitutability	Change in weighted average price (%)		
		Min.	Mean	Max.
-0.5	Average	2.2%	2.8%	3.1%
-1.0	Large	3.6%	4.3%	5.1%
-0.5	Average	4.5%	5.3%	6.2%
-1.0	Large	7.4%	9.0%	10.6%

Source: Padilla (2010a) "The Impact of Plain Packaging of Cigarettes in UK: A Simulation Exercise," Table 4.

### Observations of the Padilla model

- 9.24 I note that Padilla's simulation work is consistent with the predictions of my theoretical work outlined in Section 6 and Section 7.
- 9.25 Within the framework of Padilla's model, nests are arranged by vertical categories of cigarettes, from premium to super-low quality. In this context, intra-nest substitution in response to the implementation of plain packaging exactly analogous to the vertical effects analysed in Section 7.
- 9.26 Correspondingly, Padilla's paper supports the conclusion of a price decrease and consumption increase following the implementation of plain packaging.
- 9.27 Moreover, Padilla's inter-nest substitution is equivalent to the horizontal effects considered in Section 6.
- 9.28 These two notions are intimately related by the parameter  $\sigma$ , governing the correlation of valuations across products within the same nest in Padilla's model. When  $\sigma = 1$  there is perfect correlation in preferences between products in the same grouping, rendering them perfectly substitutable. In this case the effects of plain packaging are vertical, and Padilla's model considers a related problem to what is presented in Section 7.
- 9.29 When  $\sigma = 0$  there is no correlation of preferences within categories, and, as such, consumers are just as likely to substitute within-nest as cross-nest in response to a price increase. In this case, the effects of plain packaging are exclusively horizontal, and Padilla's model studies a similar problem to that discussed in Section 6.
- 9.30 For values  $0 < \sigma < 1$ , then, Padilla's model combines the analysis presented in the prior sections.

- 9.31 I observe that Padilla's results are fully consistent with the theoretical work presented in Section 6 and Section 7. As outlined above, Padilla's model is a combination of the vertical and horizontal models previously discussed. Both of these theoretical models predict decreasing prices and increasing consumption. Padilla's work, then, gives a rigorous empirical estimate as to the magnitude of these effects in the UK market.<sup>94</sup>

### Conclusion

- 9.32 Padilla finds that in the absence of the ability to differentiate brands via packaging existing suppliers would be forced to compete to a greater extent on prices, resulting in a price reduction of between 4.4% and 14.1% in the UK<sup>95</sup>, and 4.8% to 14.8% in Australia.<sup>96</sup>
- 9.33 Moreover, such a price reduction would have the effect of increasing sales and consumption of cigarettes. Padilla estimates the increase in quantity consumed to be between 2.2% and 10.6% in the UK,<sup>97</sup> and 2.6% to 11.1% in Australia.<sup>98</sup>

<sup>94</sup> Chantler and the Impact Assessment cited a paper providing a critique of Padilla's estimates (Reed (2011) "Analysis and review of J. Padilla, "The impact of plain packaging of cigarettes in the UK: a simulation exercise," cited in the Impact Assessment, at para. 245). I note that (i) Reed did not advance any alternative estimation of the effect of standardised packaging and (ii) neither Chantler nor the IA addressed any of Reed's points. More generally, Reed's views do not present a coherent alternative view; e.g. he argues that higher prices may be associated with higher demand. If this was the case, however, the approach of taxing tobacco products more heavily would be misconceived.

<sup>95</sup> See Padilla (2010a), p. 15, Table 3.

<sup>96</sup> See Padilla (2010b), p. 15, Table 3.

<sup>97</sup> See Padilla (2010a), p. 16, Table 4.

<sup>98</sup> See Padilla (2010b), p. 15, Table 4.

## Section 10

## Taxation

- 10.1 As set out in the previous section, Padilla projects that the implementation of plain packaging would result in an anticipated price decrease in the cigarette market of between 4.4% and 14.1% in the UK.<sup>99</sup>
- 10.2 Both Chanler's report, as well as the Department of Health's Impact Assessment indicate that it would be possible to offset price reductions through a commensurate countervailing tax increase.
- 10.3 To offset the expected price effect of the plain packaging initiative indicated above, a tax increase on the sale of cigarettes sufficient to increase price between 4.6% and 16.4% would be necessary.<sup>100</sup>
- 10.4 In this section, I consider the scale of tax increase required to bring about such an increase in price and its implications for tax incidence of cigarettes in the UK.

## Historical summary

- 10.5 In the United Kingdom, cigarette taxes take two forms, an ad valorem percentage levied on the price of a pack, as well as a flat tax per thousand cigarettes.
- 10.6 Since at least 2005, the tax based upon the percentage of the retail price has remained constant in every year barring 2008 and 2011, whereas the flat tax per thousand cigarettes has increased every year. In 2011, the percentage tax dropped from 24% of retail price to 16.5%, but the flat tax increased from £119.03 per thousand cigarettes to £154.95.<sup>101</sup>

<sup>99</sup> To calculate the necessary magnitude of the price raise to undo the price effect of plain packaging, I make the following note: for a price of £100, a 4.4% decrease yields a decreased price of £95.8. This requires an increase of 4.6% to once again be £100. Similarly, a 14.1% decrease yields a decreased price of £85.9, which in turn requires a 16.4% increase to return the price to £100.

<sup>100</sup> See footnote 97.

<sup>101</sup> See <https://www.uktradeinfo.com/Statistics/Tax%20and%20Duty%20Bulletins/Tobacco0614.xls>

- 10.7 Table 3 below gives the recommended retail price for a carton of cigarettes in pounds sterling for the Most Popular Price Category (MPPC), as reported by the UK Tobacco Manufacturers' Association, as well as degree to which that price is made up by tax ('tax incidence').

**Table 3: Cigarette prices and tax (2004-present) (nominal terms)**

Date	Recommended Retail Price (RRP) (£ per 20)	Of which tax (£ per 20)	Tax incidence (%)	Annual change in RRP (%)	Annual change in tax (%)
2004	4.65	3.65	78%	--	--
2005	4.82	3.77	78%	3.7%	3.3%
2006	5.05	3.91	77%	4.8%	3.7%
2007	5.33	4.07	76%	5.5%	4.1%
2008	5.44	4.18	77%	2.1%	2.7%
2009	5.67	4.34	77%	4.2%	3.8%
2010	6.13	4.67	77%	6.1%	7.6%
2011	6.63	5.08	77%	8.2%	8.8%
2012	7.09	5.45	77%	6.9%	7.3%
2013	7.72	5.91	77%	8.9%	8.4%
Present	7.98	6.17	77%	3.4%	4.4%
Min.	-	-	76%	2.1%	2.7%
Mean	-	-	77%	5.6%	5.4%
Max.	-	-	78%	8.9%	8.8%

Note: Variation in Recommended Retail Price due to both tax and manufacturing cost fluctuations.  
Source: UK Tobacco Manufacturers' Association<sup>102</sup>

- 10.8 The average annual tax increase on cigarettes has been approximately 5.4% in nominal terms. The average annual increase in price has been approximately 5.6% in nominal terms.

<sup>102</sup>

<http://www.the-ima.org.uk/ima-publications-research/facts-figures/uk-cigarette-prices/>



### Necessary magnitude of offsetting tax in perspective

- 10.9 Table 4 below shows the countervailing price increase and necessary change in tax to neutralise the price reductions identified by Padilla.

**Table 4: Change in Incidence resulting from tax increase**

	Price decrease	Countervailing price increase	Necessary change in tax	Resulting Incidence
Min.	-4.4%	4.6%	5.7%	81.7%
Mid.	-9.25%	10.2%	12.0%	86.6%
Max.	-14.1%	16.4%	18.2%	91.4%

Notes: Calculations using 'Present' values from Table 3.<sup>103</sup>  
Source: Compass Lexecon calculations

- 10.10 As Table 4 shows, such an offsetting tax increase would have the result of pushing the tax incidence to between 81.7% and 91.4% from its current level of around 77%. This will increase the incentives for illicit trade.

### Conclusions

- 10.11 I have shown that the countervailing tax to offset the anticipated price reduction would increase the tax incidence on cigarettes to between 81.7% and 91.4% which would have strong implications for illicit trade, which neither Chantler nor the Impact Assessment adequately address.
- 10.12 Lastly, the competitive effects of such a tax are distortionary. Any offsetting tax increase would unambiguously reduce consumer welfare, as consumers either turn to legitimate cross-border trade or illicit trade or pay the same as the pre-regulation level for an inferior product (each of these options offering lower utility than consumers would obtain absent the regulation).
- 10.13 As such I conclude that such an offsetting tax, in the face of the anticipated price decrease resulting from the implementation of standardised packaging, would be strictly detrimental from a consumer surplus standpoint, and would constitute a further distortion of the market for cigarettes beyond that imposed by standardised packaging alone.

<sup>103</sup>

In the above calculations I use the 'Present' RPP and tax of the MPPC of cigarettes as my baseline, varying only according to the range of possible price changes given by Padilla (2010a). To calculate incidence I solve for the fraction of the baseline price the baseline tax plus offsetting tax increase constitutes:

$$\text{Resulting Incidence} = \frac{\text{Baseline Tax} + (\text{Baseline Price}) \cdot (1 - \text{Price Decrease \%}) \cdot (\text{Offsetting Duty Increase \%})}{\text{Baseline Price}}$$

## Section 11

# Critique of Chantler's report and the Impact Assessment

- 11.1 In this section, I revisit the economic arguments of Chantler and the Department of Health's Impact Assessment in light of the analysis set out above.

### Direct competition distortions

- 11.2 Neither Chantler nor the Impact Assessment comprehensively identifies the direct distortive effects of standardised packaging.

### Consumer surplus

- 11.3 Chantler's review does not consider the effects of standardised packaging on consumer welfare; the Department of Health's Impact Assessment does consider consumer welfare, however, dismisses it completely on grounds that envy effects may neutralise the impact of a loss of consumer surplus from branding.
- 11.4 This assumption is implausible as it implies that the aggregate social value of brands in the economy is nil.
- 11.5 It hardly needs saying that this assumption is inconsistent with the generally recognised value of brands in free markets. It is also inconsistent with the theoretical framework presented in this report and the empirical evidence also presented on the role of brands in contributing to consumer surplus in the form of variety effects.

### Prices and quantities

- 11.6 Chantler's report does not contain any meaningful analysis of the effect of the regulation on prices. His suggestion that Padilla's simulation exercise showing lower prices is inconsistent with evidence from JTI on barriers to entry is incorrect. This evidence is consistent because prices will still be lower in a homogenised market with higher barriers to entry than in a differentiated product market.



- 11.7 Chantler relies on Australia to suggest that price effects are not clear, but acknowledges that the Australian evidence has serious limitations and in any case would only relate to the short run.

### **Offsetting taxes**

- 11.8 Both Chantler's report and the Impact Assessment treat the institution of a tax to counteract the anticipated price decrease as a matter of fact but do not consider the increase in tax required or the implications of any such increase.
- 11.9 As seen from Table 4, we estimate that the tax incidence would have to increase from a historic range of 76% to 78% to 81.7% to 91.4%.

### **Dynamic distortions**

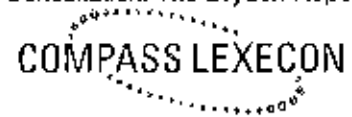
- 11.10 The Impact Assessment claimed that the loss of product innovation would be compensated for by other forms of product innovation. It failed to recognise the very limited scope for this and that, with reduced returns to product innovation, incentives to innovate and invest in products would be less. It also failed to recognise that the ability to invest in product innovation would be reduced by reduced cash flows.
- 11.11 The Impact Assessment correctly indicated that incentives to engage in process innovation would increase. It failed to recognise that this would lead to a further reduction in prices (and thus a further need for compensating tax increases). It also failed to recognise that the ability to invest in process innovation would be reduced by reduced cash flows.



Annex A

## Curriculum vitae

- A.1 Neil Dryden is an Executive Vice President in Compass Lexecon's European competition policy practice, based in the firm's London office. He has worked as a professional economist for over 15 years and during that time he has advised on numerous mergers, agreement cases, dominance cases, damages and market investigations.
- A.2 Neil's significant cases since 2010 include acting as an expert in the pay TV and tobacco cases (both at the Competition Appeal Tribunal), and advising in outdoor advertising (OFT), Sports Direct/JJB (Competition Commission and Competition Appeal Tribunal), Asda/Netto (OFT) and Level 3/Global Crossing (OFT).
- A.3 In addition to numerous cases in the European Union, Neil has advised on cases in India and South Africa. Neil also has extensive experience in regulatory economics, including a series of projects for the UK postal regulator. Neil has prepared submissions in the context of a number of UK government inquiries including the Barker review of land use planning.
- A.4 Neil has analysed cases in sectors including advertising, banking and financial services; chemicals, energy, FMCG, grocery retailing, healthcare, manufacturing, media and broadcasting, mining, petroleum, pharmaceuticals, postal services, publishing, scientific instruments, sports, technology, telecommunications, tobacco, transport, and water.
- A.5 Neil was educated at Oxford University where he obtained a B.A. in Philosophy, Politics and Economics (first class) and an M.Phil. in Economics, and held a college lectureship for two years. At King's College, London, he obtained a postgraduate diploma in EC competition law (with distinction). Neil co-authored "What makes firms perform well?" published in the European Economic Review.
- A.6 Prior to joining Compass Lexecon, Neil worked as a Director at LECG and prior to that as an Associate Director in NERA's European competition policy practice for seven years. Neil spent the first six years of his career in Arthur Andersen's economic and financial consulting practice, where he was a Senior Manager.
- A.7 My full CV can be found at <http://www.compasslexecon.com/professionals/bio?id=209>.



Annex B

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## Annex C

## Salop model

- C.1 The spatial competition models of Hotelling and Salop provide a clear geometric interpretation of the role of product variety and differentiation in price setting behaviour by firms. In both these models, there exists a simple geometric figure, be it a line or circle, with a fixed volume of customers representing the constant market demand, distributed uniformly along its length. The most intuitive interpretation for this demand is that consumers live along a road (line), or around a lake (circle).
- C.2 Firms differentiate their products by placing them at points along this figure. Customers then make a choice as to which product to purchase based solely on minimizing their costs, where both the transport costs to traverse 'to' the product, and the product's price itself are considered.
- C.3 The model can be interpreted as follows: products are differentiated along one characteristic, and each consumer has an ideal product in terms of that characteristic. The closer (i.e. the more similar) the product(s) supplied in the market to the consumer's ideal product, the higher the consumer surplus, everything else equal.
- C.4 In such a world, product differentiation is given a strong visual interpretation: the closer two products lie along the curve, the less of a price discount it would take to induce consumer substitution away from one to the other. Effectively, distance in the Salop-Hotelling world captures the degree of substitutability between two products.
- C.5 The original spatial competition model is due to Hotelling (1929), where consumers are distributed uniformly along a line. In this model, two stores compete for customers by choosing their location and the price of their products. Customers face increasing transportation costs, inducing them to buy from the cheapest store, if stores have the same prices.
- C.6 The Hotelling model becomes however analytically non-tractable for the analysis of an oligopoly.<sup>104</sup> This is because the line along which consumers are distributed has two end points, which creates an asymmetry between (i) the two stores located at the extremes and

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See for instance Brenner, S. (2005) "Hotelling games with three, four, and more players", *Journal of Regional Science*, Vol. 45, No. 4.

(II) the rest of the stores that are located internally: each of the former only competes with one store (the one next to it), while each of the latter competes with two stores (the one to its left and the one to its right). Apart from making the solution analytically intractable, this asymmetry also implies that the two types of stores have different market power and different profits, something that would be difficult to justify in a model of the tobacco industry.

C.7 These issues are resolved in Salop (1979) model, where consumers are distributed along a circle. In this model, each company first chooses where to locate on the circle, and then chooses the prices of its product. It has been shown<sup>105</sup> that in this model, and under the assumption of symmetric cost structures, firms

- Locate themselves equidistantly along the circle's perimeter, thus maximising product differentiation; and
- Set prices symmetrically.

#### The extended Salop model

C.8 The standard Salop model, however, is uninteresting in this context because it assumes that each consumer only consumes one unit of the product variety he chooses to acquire. In this sense the model is of limited applicability to the case at hand because consumers only choose what cigarette variety to buy (e.g. Lucky Strike regular or Camel regular) but do not decide how much to smoke. I have, therefore, modified the model to include an endogenous consumption choice made by consumers.

C.9 For expositional simplicity, I analyse the duopoly case where each company supplies one product. I will then also analyse the case with  $n > 2$  products.

#### Consumers

C.10 Each consumer on the circle of perimeter 1, maximises utility:

$$U(q_i) = \log(q_i) - p_i q_i - t(x - i)^2$$

<sup>105</sup>

See D'Aspremont et al (1979), Economides (1989)

Utility depends on:

- The volume of consumption ( $q_i$ ), where the sub-index  $i$  indicates the product variety.<sup>108</sup>
- The expenditure ( $p_i q_i$ ), where  $p_i$  represents the price of product variety  $i$ .
- The 'disutility' of consuming a product variety that is different from the consumer's ideal variety ( $t(x - i)^2$ ). This is a function of the distance between the consumer's ideal product ( $x$ ) and the location of the product he consumes ( $i$ ). The parameter  $t > 0$  is a scale parameter, meaning that it determines the magnitude of the transportation cost for any given distance.

- C.11 Each consumer first chooses which product to buy, and then chooses how much to consume.

*Product choice*

- C.12 When choosing which product to buy, each consumer compares the utility he obtains by consuming each of the two products. He then buys the product that provides him with higher utility. For instance, a consumer located at  $x$  chooses to buy product  $i$  if  $U(q_i) > U(q_j)$ :

$$\log(q_i) - p_i q_i - t(x - i)^2 > \log(q_j) - p_j q_j - t(j - x)^2$$

*Consumption choice*

- C.13 Consumers choose consumption ( $q$ ) to maximise utility. In the example above, consumer  $x$  solves:

$$\max_{q_i} U(q_i) = \log(q_i) - p_i q_i - t(x - i)^2$$

- C.14 The solution to this problem is  $q_i = \frac{1}{p_i}$ , which implies that consumption is lower when prices are higher.

**Firms**

- C.15 Firms take two decisions: they first choose where to locate their products (i.e. they choose product differentiation) and then choose the price of their products. I solve the problem by backward induction, i.e. I solve the pricing problem first and the location problem last.

*Choice of price*

- C.16 In order to choose the price that maximises its profits, each company must first compute the demand for its product. As shown below, this demand depends on the location of the two

<sup>108</sup> As is common in both mathematical and economic literature,  $\log$  is taken to be the natural log unless otherwise specified.



companies and on the price of the two products.

C.17 For the moment I work under assumption that the two companies are located at an unspecified distance  $\lambda \in [0, 1/2]$  from each other. In other words I do not make any specific assumption about their location in the circle.

C.18 Total demand for each firm is composed of the sum of demands in two intervals: one of length  $\lambda$ , and one of length  $1 - \lambda$ . In the interval of length  $\lambda$ , a consumer located at  $x$  is indifferent between the two products if the utility he obtains from the consumption of one product is the same as the utility he obtains from the consumption of the other product:

$$\log(q_i) - p_i q_i - t x^2 = \log(q_j) - p_j q_j - t(\lambda - x)^2$$

where  $x \in (0, \lambda)$ ,  $j \neq i = 1, 2$ , and I have normalised for simplicity the location of product  $i$  at point 0.<sup>107</sup>

C.19 In the interval of length  $1 - \lambda$ , an agent at location  $y$  is indifferent between the two products if:

$$\log(q_i) - p_i q_i - t y^2 = \log(q_j) - p_j q_j - t(1 - \lambda - y)^2$$

and  $y \in (0, 1 - \lambda)$ .

C.20 These yield demands<sup>108</sup>  $x$  and  $y$  for each firm on each respective interval:

$$x_i = \frac{\log(q_i) - \log(q_j) + (p_j q_j - p_i q_i) + t \lambda^2}{2 \lambda t}$$

$$y_i = \frac{\log(q_i) - \log(q_j) + (p_j q_j - p_i q_i) + t(1 - \lambda)^2}{2(1 - \lambda)t}$$

and for each  $i$ , total demand  $D_i = (x_i + y_i)q_i$ . Therefore, each firm seeks to maximise profits:

$$\max_{p_i} \pi_i = (p_i - c)D_i$$

where  $c$  is the marginal cost of production, which I assume is equal for the two companies.

C.21 Differentiating with respect to  $p_i$  and imposing symmetry  $p_i = p_j$ , I obtain that each company serves half of the market:  $x_i + y_i = \frac{1}{2}$ . The optimal price is:

$$p_i^* = p_j^* = p^* = (1 + t\lambda(1 - \lambda))c$$

<sup>107</sup> This is without loss of generality, because only the distance between products matters, while their exact location is irrelevant.

<sup>108</sup> Technically  $x$  and  $y$  are the distance of the indifferent consumers from each good. However, since there is a uniform density of consumers along the circle, these are the proportions of the total market demand each firm faces.

#### *Choice of location*

- C.22 Each company chooses the location (i.e. the product differentiation) that maximises its profits. In equilibrium, profits are given by:

$$\pi_i^* = (p_i^* - c) \frac{q_i^*}{2} = p_i^* q_i^* - c q_i^* = \frac{1}{2} \left( 1 - \frac{1}{(1 + t\lambda(1 - \lambda))} \right)$$

- C.23 Therefore profits are continuously increasing in the product differentiation parameter  $\lambda$ , for  $\lambda \in [0, 1/2]$ . It follows that the two companies choose maximum differentiation i.e.  $\lambda = 1/2$ .
- C.24 Using this set-up, I analyse the effects of standardised packaging on the market equilibrium.

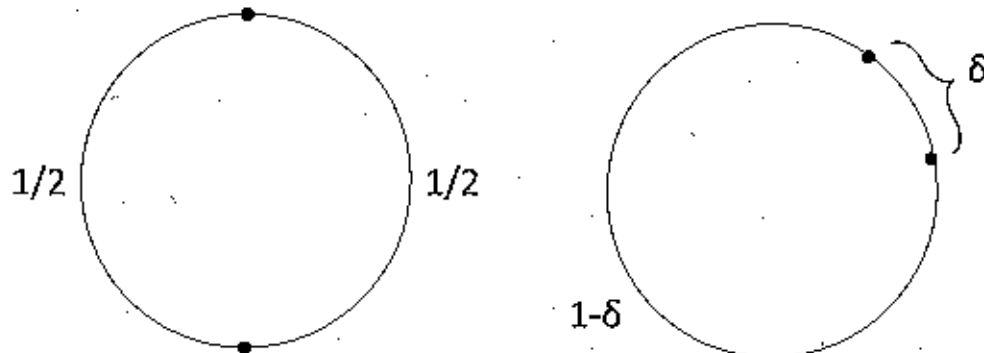
#### **Increased homogeneity**

- C.25 The most reasonable representation of an exogenous decrease in product differentiation (i.e. distance) in the Salop model is to impose a maximum distance,  $\delta$ , between products along the perimeter of the circle.

#### **Variety effect**

- C.26 Before the imposition of a maximum differentiation, companies locate opposite to each other along the circle, as discussed above. The distance between two companies is thus  $\frac{1}{2}$ . After the regulation, companies locate at a distance  $\delta$  from each other. This is because, as shown above, companies choose to locate at the maximum available differentiation. However, I do not impose the exact location of the two companies on the circle. This is shown in Figure 10 below where the left-hand side diagram represents the pre-regulation market, and the right-hand side diagram represents the post-regulation market. The two points on the circle represent the locations of the two companies:

Figure 10: Increased homogeneity in the Salop model



- C.27 The regulation has a direct variety effect on consumer welfare: total transport costs go up: the expected utility of the average consumer is:

$$\mathbb{E}(U) = \mathbb{E}(\log(q) - tx^2 - pq) = \log(q) - t\mathbb{E}(x^2) - pq$$

where the second equality comes from the linearity of the expectations operator and  $x$  is the distance to the product of choice.

- C.28 The expected value of the transportation cost  $tx^2$ , is  $1/48$  in the unregulated case:

$$t\mathbb{E}(x^2) = 4t \int_0^{1/4} x^2 dx = \frac{t}{48}$$

- C.29 However, constraining the maximal distance firms may locate in space, the expected value of the transportation cost becomes:

$$t\mathbb{E}(x^2) = 2t \int_0^{\delta/2} x^2 dx + 2t \int_{\delta/2}^{1-\delta} x^2 dx = \frac{t}{12} (\delta^3 + (1-\delta)^3)$$

- C.30 Thus, for any  $\delta < 1/2$ ,<sup>108</sup> the expected transportation cost strictly increases if the distance  $\delta$  among the two firms decreases. Increasing homogeneity thus has the direct effect of strictly reducing consumer surplus.

#### Price effect

- C.31 Since, as shown above, consumption decreases when prices go up, increased homogeneity also leads to more consumption. Thus the price effect increases consumer surplus through a boost in consumption.

<sup>108</sup>

I restrict attention to  $\delta < 1/2$ , because if  $\delta \geq 1/2$  the regulation does not affect the market equilibrium.

**Overall effect on prices, quantities, consumer surplus and profits***Prices*

- C.32 As seen above, in the Salop model with endogenous quantity selection, prices are increasing in  $\delta$ , thus, the implementation of standardised packaging, leading to a reduction in  $\delta$ , will lead to a fall in equilibrium prices in the model.

*Quantities*

- C.33 Since, in the original Salop model, total consumption is exogenously fixed, I have extended the model to include endogenous consumption. As seen above, consumption increases as prices decrease. As a result, according to this model, the regulations of standardised packaging that decrease product differentiation will lead to an increase in cigarette consumption.

*Consumer surplus*

- C.34 As shown above, the expected transport cost for a given consumer is  $\frac{t}{12}(\delta^3 + (1-\delta)^3)$ . This allows us to express the total consumer welfare as:

$$\mathbb{E}(U) = \log(c + ct\delta(1-\delta)) - \frac{c - ct\delta(1-\delta)}{c - ct\delta(1-\delta)} - t \left( \frac{\delta^3 + (1-\delta)^3}{12} \right)$$

where the second term on the right-hand side represents consumer's expenditure, i.e. price times quantity. Since  $q = 1/p$ , this term equals 1.

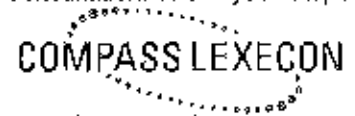
- C.35 In order to analyse the effect of increased homogeneity on consumer welfare, I take the derivative of  $\mathbb{E}(U)$  with respect to  $\delta$ . The sign of this derivative depends upon the relative magnitudes of the parameters of the model. There are two offsetting effects following increased homogeneity: expected transport costs rise, producing a negative variety effect and prices decrease, producing a positive price effect. If per unit transport costs are high, meaning that smokers have strong preferences for their favourite brand/variety, the negative variety effects of reducing differentiation dominate and consumer surplus decreases. If per unit transport costs are low, then the price effect dominates and consumer surplus rises.

*Profits*

- C.36 As shown above, equilibrium profits are defined as  $\pi_1^* = 1 - \frac{1}{(1+t\delta(1-\delta))c}$ . Therefore profits are increasing in  $\delta$ , meaning that increasing homogeneity (lower  $\delta$ ) reduces profits. This result is intuitive, because price competition becomes more intense as a result of increased homogeneity.

**Conclusions**

- C.37 I have used an extended version of the Salop model that takes into account the consumption



choice of consumers. In this model, increased homogeneity (i.e. less product differentiation) induces a drop in prices, a rise in consumption, an ambiguous change in consumer surplus, and a decrease in profits.

## Annex D

## Motta model of vertical differentiation

- D.1 In this Annex I use a model of vertical differentiation developed by Professor Massimo Motta.<sup>110</sup> As explained in the report, while Professor Motta does not use this model to capture the effect of an exogenous reduction in vertical differentiation, his model features certain characteristics that make it suitable for such analysis.

### The model

- D.2 In this model, a single product is supplied in two versions: a high-quality and a low-quality version. Each quality is supplied by a different manufacturer, implying that manufacturers compete both in quality and in price.<sup>111</sup>

### Consumers

- D.3 Consumers differ in their valuation of the product. Formally this is reflected by ordering consumers from the lowest to the highest valuation along an interval  $[\underline{\theta}, \bar{\theta}]$ .
- D.4 The utility of consumer  $\theta \in [\underline{\theta}, \bar{\theta}]$  when he consumes quality  $i \in \{L, H\}$  is:

$$U(\theta, i) = \theta k_i - p_i$$

where  $i$  indicates the low ( $L$ ) or high ( $H$ ) quality consumed,  $k_i$  and  $p_i$  represent the quality and price of quality  $i$ , respectively. Since the quality of the high-quality product is higher than the quality of the low-quality product, i.e.  $k_H > k_L$ , if these two products had the same price nobody would buy the low-quality product.

<sup>110</sup> See Motta, M. (1993), "Endogenous Quality Choice: Price vs. Quantity Competition", *Journal of Industrial Economics*, Vol. 41.

<sup>111</sup> Professor Motta considers two games, one in which producers compete in price and one in which they compete in quantities. Without further note I will be referring exclusively to the price competition model as this is in line with how competition takes place in the tobacco industry.

- D.5 Consumers take the price and quality of each product as given, and decide:
- Whether to consume at all. Consumer  $\theta$  only consumes if consumption produces a positive utility, i.e. if  $U(\theta, i) > 0$  for some  $i \in \{L, H\}$ .
  - Which variety to consume. In particular he compares the utility he obtains by consuming each variety, and chooses the variety that produces the higher consumer surplus. Formally, he chooses variety  $i$  if  $U(\theta, i) > U(\theta, j)$  with  $j \neq i$ , and  $i, j \in \{L, H\}$ .

- D.6 Each consumer then only consumes one unit of the product he chooses to buy (if any).

#### Firms

- D.7 I take qualities as initially fixed, and only consider price competition. I then analyse the effect of an exogenous decrease in the quality of the high-quality good.
- D.8 In order to compute the optimal price for its product variety, each manufacturer first needs to compute the demand for its product.
- D.9 Similarly to the model of horizontal competition discussed in Annex C, this is done by first finding the consumer who is indifferent between the high quality and low quality product. This consumer is denoted  $\theta^*$ :

$$\theta^* = \frac{p_H - p_L}{k_H - k_L}$$

Consumers who value the product more than  $\theta^*$  (i.e. for  $\theta > \theta^*$ ) buy the high-quality product.

- D.10 Also, in this model, there is a 'minimal consumer type' who is just indifferent between purchasing the low-quality good and not buying at all, denoted  $\theta_{min}$ :

$$\theta_{min} = \frac{p_L}{k_L}$$

- D.11 Consumers who value the product less than  $\theta_{min}$  (i.e. for  $\theta < \theta_{min}$ ) would obtain a negative consumer surplus from buying the product. They are thus better off not buying any product.
- D.12 The demand for the high-quality product is thus  $\bar{\theta} - \theta^*$ , while the demand for the low-quality product is  $\theta^* - \theta_{min}$ , and a proportion  $\theta_{min} - \underline{\theta}$  of the consumers does not buy any product. It can be assumed, without loss of generality that  $\underline{\theta} = 0$  and  $\bar{\theta} = 1$ .
- D.13 Solving for profit maximization, the optimal pricing rules for the producer of the high quality good and the low quality good are given by:

$$p_H = \frac{k_H(2k_H - 2k_L)}{4k_H - k_L}$$

$$p_L = \frac{(k_H - k_L)k_L}{4k_H - k_L}$$

D.14 This implies quantities demanded to the high and low type producing firms of:

$$q_H = \frac{2k_H}{4k_H - k_L}$$

$$q_L = \frac{k_H}{(4k_H - k_L)}$$

$$q_{\text{Total}} = \frac{3k_H}{(4k_H - k_L)}$$

#### Quality effect

- D.15 The effect of regulation in such a market is to reduce  $k_H$ , effectively reducing the degree of vertical differentiation. This is analogous to the compression of product space in the horizontal differentiation model.
- D.16 As  $k_H$  decreases, some consumers switch from the high-quality to the low-quality good (i.e.  $\theta^*$  moves to the right). This means that these consumers are rendered strictly worse off. Furthermore, consumers who previously consumed the high quality good and still do are worse off because they now receive less utility from the reduced quality of the high-quality product.
- D.17 Consumers who always consumed the low quality product are untouched.
- D.18 Thus the net result of the quality effect is to reduce welfare for all original high-quality type consumers, and to reduce overall welfare.

#### Price effect

- D.19 As  $k_H$  is reduced, the high-quality manufacturer reduces the price of its product. In essence, since quality competition is reduced, price competition is enhanced. This is similar to the increased homogeneity in the horizontal differentiation model.
- D.20 As a result of the more intense price competition, the manufacturer of the low-quality good also reduces the price of its product. This strictly increases consumer surplus, and lowers  $\theta_{min}$ , increasing aggregate consumption.
- D.21 The price decrease and the associated increase in consumption have a positive effect on consumer welfare, where consumer welfare is measured by:

$$CS = \int_{\theta_{min}}^{\theta^*} k_L \theta - p_L d\theta + \int_{\theta^*}^{\bar{\theta}} k_H \theta - p_H d\theta$$



### Overall effect on prices, quantities, consumer surplus and profits

#### Prices

- D.22 As seen above, as the quality of the high-quality good decreases, prices are forced down as firms, less able to differentiate themselves in physical characteristics, intensify price competition.

#### Quantities

- D.23 Consumers in the Motta model are simplistic and each consumes a fixed unit quantity of whatever good they decide upon. However, a decrease in quality in the market lowers all prices, which induces an expansion of the market (agents who previously found it unprofitable to consume the low quality good may now find consumption palatable at the lower price).
- D.24 Consumption thus increases.

#### Consumer surplus

- D.25 Reducing  $k_H$  reduces consumer surplus via the QE and increases it via the PE. The total effect on consumer surplus is ambiguous.

#### Profits

- D.26 A decrease in the quality of the high-quality good reduces both the profits of the high-quality good and total market profits:

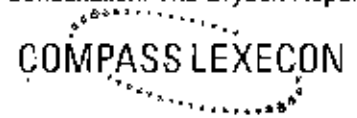
$$\frac{d\pi_{\text{Total}}}{dk_H} = 16k_H^3 - 12k_H^2k_L + 10k_Hk_L^2 + k_L^3 > 0$$

$$\frac{d\pi_H}{dk_H} = \frac{4k_H(4k_H^2 - 3k_Hk_L + 2k_L^2)}{(4k_H - k_L)^3} > 0$$

- D.27 Profits decrease because price competition intensifies.

### Conclusions

- D.28 The Motta model allows for the analysis of the change in market equilibrium following a decrease in vertical differentiation due to a reduction in the quality of the higher-quality product.
- D.29 First, lower average quality produces a direct loss of consumer surplus.
- D.30 Second, since quality differentiation is weaker, price competition intensifies, making both the high-quality and the low-quality good cheaper.
- D.31 Lower prices imply an increase in consumption. The overall effect on consumer welfare is



ambiguous.

D.32 Finally more intense price competition reduces profits.

## Annex E

## Empirical literature on new product introductions

### Hausman (1996)<sup>112</sup>

- E.1 This study examines the impact of the introduction of Apple-Cinnamon Cheerios, a new breakfast cereal produced by General Mills. Hausman uses sales data from seven major US cities to estimate the demand system for breakfast cereals, and uses the resulting demand system to estimate the consumer surplus using the framework shown above.
- E.2 Hausman notes that the introduction of Apple-Cinnamon Cheerios induces an increase in price from General Mills' other related (Cheerios) brands, ranging from 0.3-3.0% brand to brand.
- E.3 After adjusting for the fact that General Mills owns several other cereal brands which will be priced higher after the introduction of the Apple-Cinnamon Cheerios,<sup>113</sup> Hausman estimates that the net gain in consumer surplus from the new product is around \$27,000 per city per week. This equates to total annual gain in consumer surplus of \$66.8 million, or around 27 cents per person.
- E.4 He lastly observes that the price effect of the introduction of a new good is diminishing in the welfare-increasing effects of the introduction in industries characterised by imperfect competition, and thus all differentiated product industries. This is because the introduction of a new product in such a market may permit multiproduct firms to raise the prices of their other brands. He notes, however, that new brand introduction should almost always be considered economically positive, given its "significant welfare increasing effects".<sup>114</sup>

<sup>112</sup> See Hausman, J. (1996) "Valuation of new goods under perfect and imperfect competition" in Timothy Bresnahan and Robert Gorgon (eds.) *The Economics of New Goods*, University of Chicago Press.

<sup>113</sup> This is because some of the diversion from any increase in prices for the existing products will now be to the new Cheerio product.

<sup>114</sup> See Hausman (1996) "Valuation of new goods under perfect and imperfect competition" in Timothy Bresnahan and Robert Gorgon (eds.) *The Economics of New Goods*, University of Chicago Press, p. 235

**Hausman, Pakes and Rosston (1997)** <sup>115</sup>

- E.5 The authors apply the same framework shown above to introduction of voice messaging services offered on fixed lines in the US and the introduction of mobile telephony in the US. The authors note that examining telecoms services in this way has different implications to, for example, the similar study on breakfast cereals, since the introduction of these services is heavily dependent on regulatory policy.
- E.6 The estimate of the consumer surplus arising from voice messaging services is based on data on demand and prices for the period 1991-1994. The authors estimate that, depending on the functional form of the demand curve assumed, the consumer surplus gain from the introduction of voice messaging services in the US is within the range \$480 million and \$2.1 billion per year, with the most likely estimates around \$1.2 billion.
- E.7 A similar analysis for mobile telephony based on price and subscriber data from the period 1989-1993 estimates the net gain in consumer welfare of \$49.8 billion per year. A lower bound figure for consumer surplus, based on conservative functional forms, is a net gain of \$24.2 billion per year.

**Hausman and Leonard (2002)** <sup>116</sup>

- E.8 The authors of this paper carry out an estimation of the net welfare gain to consumers from the introduction of *Kleenex Bath Tissue*, a new tissue product manufactured by Kimberly-Clark. The analysis is based on scanner data from 30 US cities during the period January 1992-September 1995.
- E.9 The authors estimate that, in total over all 30 cities, the introduction of the new product resulted in net consumer surplus gain from the variety effect of \$33.4 million. Summing both variety effect and indirect price effect implies a total net consumer surplus gain of \$69.2 million.
- E.10 The consumer surplus gain from the new product varied significantly between different cities. The city with the smallest relative impact saw consumer surplus gain of around \$200,000, 1.2% of the total expenditure on tissues in that city. The city with the largest impact had a consumer surplus gain of \$3.4 million, 17.9% of the total expenditure on tissues.
- E.11 Their analysis indicated a price effect of -0.7% to -3.6% across different competitors in the market, inducing a total consumer surplus gain of approximately \$35.8 million, and a total variety effect of approximately \$33.4 million.

<sup>115</sup> See Hausman, J., Pakes, A. and Rosston, G. (1997) "Valuing the effect of regulation on new services in telecommunications", *Brookings Papers on Economic Activity: Microeconomics*.

<sup>116</sup> See Hausman, J. and Leonard G. (2002) "The competitive effects of a new product introduction: a case study", *Journal of Industrial Economics* 50, Vol.3.

**Petrin (2002)**<sup>117</sup>

- E.12 Petrin examines the introduction of the minivan by Chrysler into the domestic automobile market.
- E.13 Petrin shows that prices vary considerably from firm to firm with decreases ranging from -0.9% to -1.5% for GM and Ford products, and increases in Chrysler's own prices, as well as those of Volkswagen and AMC ranging from 1.08% to 3.10%.
- E.14 Total compensating variation from the introduction was approximately \$2.9B over the first five years from 1984 to 1989.

**Brynjolfsson, Smit, and Hu (2003)**<sup>118</sup>

- E.15 The authors study the variety effects of modern online book retailing. They note that shelf space constraints in conventional book stores are a strict limit on the volume of product, and thus variety available to offer, but this is effectively limitless in online retailing.
- E.16 They estimate that online book stores have increased consumer welfare strictly through variety effects by approximately \$731 million to \$1.03 billion in the year 2000 alone (with standard errors of \$46.7 and \$65.8 million respectively).
- E.17 They calculate the corresponding price effect to have increased consumer surplus by between \$100.5 million and \$103.3 million.
- E.18 They conclude:

*"While lower prices due to increased market efficiency in Internet book markets provide significant benefits to consumers, we find that the increased online availability of previously hard-to-find products represents a positive impact on consumer welfare that is seven to ten times larger."*

**Goolsbee and Petrin (2004)**<sup>119</sup>

- E.19 Goolsbee and Petrin (2004) examined the impact of the entry of satellite TV in the US on consumer welfare.

<sup>117</sup> See Petrin, A. (2002) "Quantifying the Benefits of New Products: The Case of the Minivan" *Journal of Political Economy* Vol. 110 No. 4.

<sup>118</sup> See Brynjolfsson, E., Smith, M., and Hu Y. (2003) "Consumer surplus in the digital economy: estimating the value of increased product variety at online bookstores", *Management Science* Vol. 4, No. 11.

<sup>119</sup> See Goolsbee, A. and Petrin, A. (2004) "The consumer gains from direct broadcast satellites and the competition with cable TV", *Econometrica* Vol. 72 No. 2.

- E.20 Direct broadcast satellite ("DBS") TV was introduced into the US pay TV market at the end of 1994. By 2001, it had gained 16.1 million subscribers compared to 69.0 million subscribers on cable TV (market share of 18.9%), the only other pay TV technology available in the US.
- E.21 The authors attempt to estimate the impact of the introduction of DBS TV on consumer welfare based on the market conditions in 2001. The authors summarise their approach as follows:
- "Our base level of welfare is that achieved by households in 2001 with DBS available as an alternative. We ask how much income would have to change for a household to achieve that same utility level in 2001 with DBS not available (i.e. the compensating variation)."*<sup>120</sup>
- E.22 The impact of the entry of DBS TV on consumer welfare is positive both for consumers who switch to satellite TV and consumers who continue to subscribe to cable TV:
- "Welfare increases for satellite consumers for two reasons. First, at the observed 2001 prices and characteristics, DBS consumers' willingness to pay for satellite exceeds the price. Second, [...] without DBS, almost all of these satellite consumers would subscribe to cable at both a higher price and a lower quality than that observed in 2001. Similarly for cable customers, surplus increases because they pay both lower prices and get higher quality cable than they would have without DBS entry."*
- E.23 The data for the analysis is taken from a consumer survey conducted by Forrester Research, a market research company. The sample includes around 30,000 households in 317 cable franchise areas. This has been supplemented with data on the cable TV offerings that these households would have access to, taken from a dataset of cable TV product characteristics taken from an industry publication. Both sources are based on 2001 data.
- E.24 The authors find that if cable prices and characteristics are held constant, the consumer welfare gain from the availability of satellite TV for the satellite TV subscribers themselves is \$127 per subscriber per year.
- E.25 These are not the only benefits accruing to the satellite TV subscribers. Accounting for the negative impact of the availability of satellite TV on cable TV prices increases the consumer welfare gain for satellite TV subscribers to \$175 per subscriber per year.
- E.26 Finally, accounting for the impact of satellite TV on cable TV prices and product quality increases the consumer benefits for satellite subscribers to \$190 per subscriber per year.
- E.27 For cable TV subscribers, the impact of satellite TV on cable TV prices increases consumer surplus by \$4 per subscriber per month, while the positive impact on product quality

120

See ibid. p.375.

increases consumer surplus by \$1 per subscriber per month.

- E.28 The aggregate price effect calculated leads to a net increase in consumer surplus of about \$3.3 billion for consumers that stay with cable; furthermore, the entrance of satellite TV induces quality improvements in cable worth approximately another \$800-900 million, for an aggregate welfare gain of approximately \$4 billion per year for cable consumers.

**Hausman and Leibtag (2007)** <sup>121</sup>

- E.29 The authors of this paper calculate estimates of the impact of the entry of Wal-Mart into local areas. The authors note that the indirect price effects resulting from the entry of Wal-Mart into local markets is well-documented, with other local retailers dropping prices significantly in response to Wal-Mart's entry.
- E.30 The analysis is based on food sales data from 34 local markets in the US.
- E.31 The authors find that on average, the variety effect arising from the entry of Wal-Mart amounts to 20.2% of the average household expenditure on food, with a range of 9.6% to 32.7% observed in the sample of local areas. The indirect price effect amounts to 4.8% of household expenditure on food on average, with a range of 1.3% to 7.3%.
- E.32 Added together, this implies that entry of Wal-Mart into an area results in consumer welfare gain amounting to around 25% of total food expenditure.

<sup>121</sup>

See Hausman, J. and Leibtag, E. (2007) "Consumer benefits from increased competition in shopping outlets: measuring the effect of Wal-Mart", *Journal of Applied Econometrics* 22.

**Statement of Stuart Crookshank OBE on the  
Likely Impact of Standardised Packaging on the  
Illicit Tobacco Trade in The United Kingdom.**

**30 July 2014**



1. I retired from HM Revenue and Customs ("HMRC") on 30 April 2012 after nearly 40 years of service. I joined HM Customs and Excise ("HMCE") (later renamed HMRC) in August 1972 as an Officer working on the new tax then about to be introduced – VAT. I became a Customs Investigator in 1974 dealing with smuggling cases, including tobacco and serious betting fraud. Between then and 1999 I was employed in Investigation and rose to the rank of Assistant Collector (Fraud), at one time managing over 250 staff including Investigators, Intelligence Officers and front-line anti-smuggling Officers. These staff were based at Waterloo International, Tilbury docks and London City Airport. The seizure of illicit tobacco and the investigation and intelligence-gathering associated with tobacco offences was one of my key areas of responsibility. In 1999 I was seconded into HQ and became Deputy Head of Operational Anti-Smuggling where my role was to co-ordinate the national implementation of the new anti-smuggling tobacco strategy, targeted primarily at cross-border shopping.
2. I also devised and implemented some strategies of my own. These included the creation of a national 120-strong anti-tobacco smuggling 'Strike Force' targeting ports, airports and inland 'hotspots'. Between 2001 and 2003 I managed these anti-tobacco smuggling teams and became Head of Gatwick Customs. During this time I sat on a number of tobacco strategy Boards and devised and implemented strategies for dealing with tobacco smugglers bringing in cigarettes through the airport.
3. Between 2004 and 2006 I was made Head of Operations for all the London airports (including Heathrow, Gatwick, Stansted, Luton and City Airport). I also kept my responsibilities for tobacco delivery and sat on a number of strategy groups. In 2005 I was awarded an OBE for my services to HMCE (the last to be awarded for that Department). In 2006 I was appointed Head of Intelligence for the Department's (now HMRC) Informant Handling Intelligence and Case Development Teams, where again one of my key priorities was tobacco. In 2009 I was approached to head up the new HMRC Inland Detection Team – this consisted of 342 staff committed to the tackling of inland tobacco and alcohol smuggling throughout the UK. I was the Assistant Director responsible for devising and implementing the strategies for tackling tobacco smuggling inland, which included coordinating media activity for our customer hotline and targeting and managing inland detection officers on blitz exercises throughout the UK mainland.
4. In my last six months in the Department I was seconded into ECSM (Excise, Customs, Stamps and Money) Directorate which, amongst other things, holds the tobacco policy for HMRC. One of the initiatives that I introduced was, where appropriate, the revocation of alcohol licences for international shops found with illicit cigarettes. I also attended a number of 'tobacco' conferences, representing HMRC and making presentations, and liaised closely with senior police and Department of Trading Standards ("DTS") colleagues. In addition I also represented HMRC on national and local media on all matters concerning inland tobacco and alcohol smuggling.

5. I have read the Department of Health 2012 'Consultation on standardised packaging of tobacco products' ("2012 Consultation") and the associated Impact Assessment ("2012 IA") and the Department of Health June 2014 'Consultation on the introduction of regulations for standardised packaging of tobacco products' ("2014 Consultation") and the associated Impact Assessment ("2014 IA"). I have also read the Report of the Independent Review undertaken by Sir Cyril Chantler on 'Standardised packaging of tobacco' dated April 2014 ("Chantler Report"), including the notes of Sir Chantler's meetings with Andrew Leggett, Deputy Director, and Judith Kelly, Tobacco Strategy and Policy Team, HMRC on 20 January 2014 and 7 March 2014.
6. I have been engaged by British American Tobacco UK Limited for my opinions on the subjects I address in this statement. Set out below are my observations on the illicit trade of tobacco products in the UK and the likely impact of standardised packaging on the illicit trade, based on my many years of experience in tackling the illicit tobacco market in the UK.
7. At the outset, it is important to detail what I understand to be the illicit UK tobacco market. This falls into three categories:
  - a. Illicit cross-border shopping: legal branded cigarettes purchased overseas and brought back into the UK which are not for personal consumption or above personal allowances;
  - b. Counterfeits: copies of branded well-known legal cigarettes, manufactured cheaply in the Far East and smuggled normally by containers into the UK; and
  - c. Cheap whites: branded local (eastern European) manufactured cigarettes smuggled into the UK from Europe.
8. A summary of my main conclusions are:
  - a. I believe that the actual scale of the illicit market in the UK is substantially higher than the figures provided by HMRC which are cited in the Department of Health Impact Assessments and the Chantler Report. Today's illicit market has changed. It is now predominantly made up of 'cheap whites' and counterfeits, of which there is currently no reliable measure. Judith Kelly, Tobacco Strategy and Policy Team, HMRC stated at her meeting with Sir Cyril Chantler on 20 January 2014: "*[r]ecent trends also showed that the risk from illicit white cigarettes was overtaking counterfeit, partly because these were cheaper, of an acceptable quality to consumers, and could be made to order*".
  - b. The illicit trade of tobacco is a major concern to society in terms of lost revenue, undermining public health attempts to reduce smoking prevalence and financing organised crime. The recent UK Home Affairs Committee Report on Tobacco Smuggling notes: "*[t]obacco*

*smuggling is associated with organised crime, including the smuggling of controlled drugs, weapons and human beings."*

- c. There is a well-established infrastructure, supply lines and market for illicit cigarettes in the UK. It is neither difficult nor high risk for consumers to obtain illicit cigarettes. Illicit cigarettes, in particular cheap whites and, to a lesser extent, counterfeits, are now being increasingly sold through international shops which are found in growing numbers throughout the towns and cities of the UK. Judith Kelly, Tobacco Strategy and Policy Team, HMRC stated at her meeting with Sir Cyril Chantler on 7 March 2014 that: *"the EU rates the UK as the number 1 destination for illicit tobacco."*
- d. If standardised packaging were to be introduced in the UK, based on my experience I believe that counterfeiters would be able to copy this standardised packaging with ease and at a reduced cost. However, they may well not bother replicating standardised packaging but instead continue to replicate branded packaging. There is already a market for branded counterfeit cigarettes and, if anything, this market will only increase on the introduction of standardised packaging.
- e. International shops provide an easy, accessible and reliable source of illicit cheap whites. In my view standardised packaging will only make this situation worse. The cheap white producers will quickly fill any demand for cheap branded cigarettes. In my opinion, standardised packaging will create a further opportunity for cheap white operators to sell into the market.
- f. An assumption that the illicit market in the UK is being effectively combatted is in my view over optimistic and reflects a lack of understanding of the illicit market in the UK. It cannot be expected that the illicit market particularly cheap white cigarettes will be contained by enforcement unless the Government commits significant additional resources and makes widespread changes to the current enforcement regime to contain any growth in the illicit market in the future.
- g. In my opinion based on nearly forty years of experience, standardised packaging runs the very real risk of incentivising the illicit market and driving currently compliant tax-paying smokers down the non-compliant illicit route. If there is a stigma attached to smoking standardised packaged cigarettes or consumers are no longer prepared to pay the price of legal cigarettes, it will not be difficult for consumers to switch to branded cheap white or counterfeit cigarettes which have the added attraction in these austere times of cost savings as well.
- h. HMRC asserts that the introduction of standardised packaging will not create any new risks. This is correct in the sense that standardised packaging will not create any new methods for smuggling tobacco products or impact on current detection methods. However, the point

is that standardised packaging will further incentivise the existing very lucrative, particularly cheap whites, illicit market which HMRC acknowledges it cannot currently accurately assess.

- i. The 2014 IA recognises that there is a risk that standardised packaging could increase the demand for and supply of illicit tobacco. In these circumstances, the proposal in the 2014 IA to simply monitor the impact of standardised packaging on the illicit market ignores the issue and risks creating a much worse situation that will undermine public health and support organised crime in the current environment where there is a well-established illicit market and already established supply lines. Given this and the current lack of priority, resourcing and an effective approach to deterring and disrupting the illicit market, I cannot see how the Government can justify taking the unquantifiable and unknown risk of potentially increasing criminality and reducing revenues collected by the Treasury by introducing standardised packaging.

#### A. The Size of the Illicit Market

9. I am not at all sure it is possible to ascertain the true extent of the current illicit market especially cheap whites. However, in my view the figure of 9 per cent cited in the 2014 IA and the Chantler Report for the illicit cigarette market, which are based on the midpoint of HMRC estimates, are incomplete and the figures should be substantially higher. Today's illicit market has changed. It is now predominantly made up of cheap whites and, to a lesser extent, counterfeits, of which there is currently no reliable measure. As noted above, Judith Kelly, Tobacco Strategy and Policy Team, HMRC stated at her meeting with Sir Cyril Chantler on 20 January 2014: "*[r]ecent trends also showed that the risk from illicit white cigarettes was overtaking counterfeit, partly because these were cheaper, of an acceptable quality to consumers, and could be made to order*".
10. The entire supply chain for cheap whites and counterfeit cigarettes is illicit from the moment the cigarettes leave the factory to the minute they are sold 'under the retail counter'. This consequently means that HMRC cannot produce reliable figures for the level of tobacco-smuggling in the UK as it has no way of measuring this predominant section of the illicit market.
11. Given my experience during 2009-2012 of the change in the illicit market and the amount of seizures of cheap whites and counterfeit cigarettes, I believe that the actual scale of the illicit market is most likely substantially higher than the figures provided by HMRC which are cited in the 2014 IA and the Chantler Report. I note that the National Audit Office Report on 'Progress in tackling tobacco smuggling' dated 6 June 2013 ("NAO Report"), which is not referred to in the Chantler Report or the 2014 IA, recognises the uncertainty around the HMRC estimates and reports a range of estimates, including industry figures and figures provided by KPMG which suggest an increase in non-UK duty paid consumption to 21 per cent and 19.2 per cent respectively in 2012. Judith Kelly, Tobacco Strategy and Policy Team, HMRC also stated

at her meeting with Sir Cyril Chantler on 7 March 2014 that: *"the EU rates the UK as the number 1 destination for illicit tobacco so the threat to the UK remains high"*.

## **B. The Impact of Illicit Trade**

12. The illicit trade of tobacco is a major concern to society not only in terms of loss revenue but also in undermining public health attempts to reduce smoking prevalence and financing organised crime. HMRC has noted that: *"[i]llicit tobacco makes smoking more affordable. Unregulated distribution networks associated with smuggling make tobacco more accessible to children and young people and perpetuate health inequalities across socio-economic groups"* and: *"[t]obacco fraud remains one of the main pillars of organised criminal activity in the UK"* (HMRC, *Tackling Tobacco Smuggling—building on our successes, A renewed strategy for HM Revenue and Customs and the UK Border Agency* (2011), at pp.2 & 8). The Home Affairs Committee First Report of Session 2014-15 on Tobacco Smuggling dated June 2014 (*"Home Affairs Committee Report"*) notes (at paragraph 6): *"[t]obacco smuggling is associated with organised crime, including the smuggling of controlled drugs, weapons and human beings"*. Counterfeit cigarettes also raise quality concerns with some counterfeit cigarettes having been shown to contain increased levels of tar, nicotine and arsenic.

## **C. The Nature of the Illicit Market**

13. It is important to understand that the illicit cigarette market in the UK is no longer as covert and secretive as it used to be. Cheap whites and, to a lesser extent, counterfeits are readily available and accessible through international shops, which are now prolific throughout the UK mainland.
14. The Chantler Report states that: *"[t]ypically illicit cigarettes are bought from friends, family and colleagues or through known illicit routes, such as destination shops like "fag houses" or approaches in pubs or clubs. Only about 20% of illicit is purchased from local shops, and at prices that make clear that it is not tax-paid legal product."* I do not know where the figure of 20 per cent for purchases in local shops is derived from but this is not consistent with what I saw when I was the Head of HMRC's Inland Detection teams in 2009-2012 where the highest risk for supplying illicit tobacco were international retail shops situated in many high streets.
15. While historically the majority of illicit products were sold in pubs or clubs at the workplace or on street corners, this is no longer the case. Instead, illicit cigarettes, in particular cheap whites and counterfeits, are now being sold largely through international shops which are found in increasingly large numbers throughout the towns and cities of the UK. A reason for this shift is that pubs and clubs are licensed, and therefore controlled, and the penalties on pubs and clubs for being caught selling illicit tobacco are significant, including loss of their alcohol licence which would shut them down. These international shops not only provide a ready source of cheap cigarettes but they are often

unregulated and in effect uncontrolled, open all hours and very 'user' friendly. It is neither difficult nor high risk for consumers to obtain illicit cigarettes.

(i) *Counterfeit Cigarettes*

16. In 2001/2002 counterfeit cigarettes were beginning to make in-roads into the UK cigarette market. These products, manufactured in the Far East, were smuggled in huge quantities into the UK (6 million at a time in containers through Felixstowe) and sold through organised crime networks onto the streets of the UK. The best example of this was Holloway Road in London where Eastern Europeans and asylum seekers of various nationalities would sell counterfeit cigarettes a pack at a time quite openly outside supermarkets on street corners. Seeing as they are entirely illicit, from manufacture to final sale, it is inevitably very difficult to ascertain the true extent of the illicit counterfeit market in the UK. It is also very difficult to obtain quality intelligence about the true extent of the counterfeit (and illicit white) market because of the culture of 'secrecy and family' of the smuggling groups involved in this business. This was very evident during my time as Head of Intelligence when quality intelligence on counterfeit cigarette smuggling was hard to come by. Technology initially proved very valuable and scanners introduced into major container ports and airports produced impressive seizures of counterfeit cigarettes. Such technology and deployment of overseas liaison officers has had some impact on countering large scale importation of counterfeit cigarettes. However, the nature of cigarette smuggling has changed with cheap whites in particular being smuggled from Europe little and often, which is much harder to detect. As outlined by Jim Hara Director General, Business Tax, HMRC at paragraph 11 of the Home Affairs Committee Report: *"There has been a move away from use of the postal channel and the use of large consignments through containers, as consignments are fragmented into smaller values"*. Mr Hara also stated in his oral evidence before the Home Affairs Committee that it is *"increasingly difficult"* to make seizures because smugglers are *"bringing them [illicit cigarettes] over the border in smaller values"*.
17. If standardised packaging were to be introduced in the UK, based on my experience counterfeiters will be able to copy this standardised packaging with ease and at a reduced cost. Rather than having to copy numerous different packages to mirror genuine brands as is currently the case, counterfeiters will merely have to produce one standard package and then change the brand name for different consignments.
18. However, counterfeiters may well not bother replicating standardised packaging but instead continue to replicate branded packaging. There is already a market for branded counterfeit cigarettes; if anything, this market will only increase on the introduction of standardised packaging as people who previously bought genuine cigarettes and prefer branded packages to standardised packages could be pushed to the illicit market which is already accessible. Therefore people wanting to buy branded packs as normal will buy counterfeit branded packs. On the other hand, if the counterfeiters do

replicate standardised packaging this will only add to the profits of the counterfeit cigarette producers by reducing their costs.

19. The Chantler Report states (at page 35) that hardly any counterfeit standardised packages have been found in Australia, where standardised packaging has already been introduced. Whether this is the case or not, the UK is a different market to Australia. Australia does not have the availability of counterfeit cigarettes (and cheap whites) from the EU in the same way as the UK does. Counterfeit cigarettes would need to be flown into Australia or brought in by ship whereas in 2013, in Dover alone, there was an average of approximately 6770 tourist cars, 248 coaches and 6046 trucks passing through the port every day. The total number of passengers for the year was 12,753,343.<sup>1</sup> In addition, the fact that the UK (and particularly London) has an extremely multicultural society means that there already is a thriving market here for counterfeits and cheap whites as brands of choice, as outlined below.

(ii) *Cheap Whites*

20. In 2009-2012, as the Head of HMRC's Inland Detection Department, I noticed a shift in the illicit market, highlighted by the actual seizures that were being made. There was a major increase in cheap white cigarettes. The Home Affairs Committee Report notes that in: "2012-13 most large seizures were of illicit whites". These cigarettes use better quality tobacco, unlike the cheap tobacco used in counterfeiters' sweat shops. In addition they come with packaging that is very similar to some legal brands in the UK; for example a cheap white pack of 'Raquel' looks like a legal 'Marlboro Lights' pack, a cheap white pack of 'Jin Ling' looks similar to a legal 'Camel' pack and there are several other such instances. These cheap whites sell for half the price of UK tax-paid cigarettes and not only do they offer a cheaper product but for many smokers they are becoming a brand of choice. HMRC have noted that along with counterfeits, illicit whites "represent the most significant threat to legitimate trade and tobacco revenues in the UK from large scale organised criminality" (HMRC, *Tackling Tobacco Smuggling—building on our successes, A renewed strategy for HM Revenue and Customs and the UK Border Agency* (2011), at p7). Indeed some counterfeiters are actually counterfeiting cheap whites as the cheap white market is so prevalent.
21. The supply chains for cheap whites were also proving different to those for both cross border shopping and, to a lesser extent, counterfeits. As noted above, the vast majority of cheap whites were not sold in pubs or clubs, at the workplace or on street corners. Instead, cheap whites were being sold largely through international shops which can now be found in large numbers throughout the towns and cities of the UK. International shops can be described, in the main, as those shops selling Eastern European products to supply that particular market in the local area.

<sup>1</sup> <http://www.doverport.co.uk/?page=AnnualTrafficStatistics>

22. In 2009-2012 we would from time to time receive information that these international shops were selling smuggled goods. This resulted in the relevant shop being placed under observation and sometimes being subjected to a raid to seize the goods. I specifically remember conducting raids on international shops in Boston in Lincolnshire, Portsmouth in Hampshire, and Chatham during this period. The hit rate for finding illicit cigarettes in international shops during raids in 2009-2012 was nearly 100 per cent. In one town visited by HMRC Inland Detection Officers, all six international shops were found to have illicit cheap whites for sale covertly at £3-£3.50 per pack of 20 compared to £6-£7 or more for a pack of legal cigarettes. These shops rarely hold large stocks of illicit cigarettes but nearly all those visited during the raids conducted in 2009-2012 held some, often enough for 3-4 days' sales. Packs of these cigarettes were usually stored under the counter and at the back of the shop. In one particular raid we found that the shop had a false shelf under the counter. The proprietors I spoke to all came up with the same answer when asked who supplied the illicit cigarettes: an Eastern European in a transit van on a regular basis.
23. While observing these shops I saw school children coming into the shops and buying single cigarettes. Children cannot generally afford packs of cigarettes so they buy single cigarettes. This also has the added advantage that they will not be caught with a pack of cigarettes at school. Standardised packaging will have no impact on this scenario, which is something that isn't considered in the Chantler Report or the 2014 IA.
24. These international shops provide an easy, accessible and reliable source of illicit (mainly cheap white) cigarettes. The infrastructure and supply lines for smuggling these products are well established and these cigarettes are for many already a brand of choice. In my view standardised packaging will only make this situation worse. The cheap white producers will quickly supply any increasing demand, be that a standardised packaged cigarette or the current cheap white packaged cigarette. If consumers are put off by standardised packaging, cheap whites offer an alternative cheaper branded pack. In my opinion, standardised packaging will create a further opportunity for cheap white operators to sell into the market.

*(iii) Smuggled Hand Rolled Tobacco (HRT)*

25. The market penetration of smuggled HRT has remained at around 45 to 50 per cent over the last 10 years, with counterfeit HRT (in branded packaging) maintaining its predominance because of the price. The illegal supply chains for illicit HRT have remained fairly static with the largely ethnic smuggling organisations unchanged and the customer base contained within lower social economic classes. Interestingly, as far as I am aware, international shops have not provided many HRT seizures. Again, in my view, standardised packaging will only push HRT smokers who are put off by standardised packaging into the illicit counterfeit market.

**D. Enforcement**



26. The Chantler Report states (at page 36):

*"Many high tax jurisdictions, including the UK, have already demonstrated that an effective enforcement regime and appropriate sanctions can keep illicit to low levels. Illicit tobacco is not a normal market – more people would buy illicit cigarettes today if they could, but they cannot because supply is limited by effective enforcement".*

27. This assumption that the illicit market is being effectively combatted is in my view over optimistic.

28. The NAO Report examining HMRC's progress in tackling tobacco smuggling makes it clear that HMRC does not have an effective integrated approach to deterring and disrupting the illicit market within the UK. The NAO Report also concludes that HMRC did not meet its targets in 2012-13 and lacks a timely and comprehensive assessment of the impact of its strategy on the scale and nature of tobacco smuggling. Similarly, the recent Home Affairs Committee Report also concluded that the Government was not doing enough to combat the illicit tobacco trade, concluding that:

*"We are worried that not enough is being done by the Government and its appropriate agencies to combat the problem of tobacco smuggling at source"*

and:

*"over the last three years the numbers of prosecutions and convictions for organised crime cases involving tobacco have fallen. We do not believe that these numbers are decreasing due to the reduction in this type of crime and are deeply concerned that these figures may indicate a reduction in enforcement action."*

29. Effective enforcement of the illicit tobacco market is extremely difficult. It requires a committed and co-ordinated approach between HMRC, Border Force and the DTS. Currently, with reduced budgets and competing priorities there is not, I suggest, an effective enforcement approach for tackling inland illicit tobacco.

30. The NAO Report states (at paragraph 16) that HMRC's *"approach to deterring and disrupting the distribution of illicit tobacco within the UK is not yet effectively integrated"*, i.e. HMRC needs to develop its approach on tobacco inland. I am in full agreement with this statement. During my time as Head of Inland Detection I had 342 full-time inland investigators concentrating on illicit tobacco but this team has now been disbanded and the investigators shifted into multi-functional teams with competing priorities, such as income tax. Investigators are expensive as they work seven days a week and need special training so they are allocated to the prevailing priority areas.

31. With cuts to the HMRC budget there is also no media support for intelligence gathering. During my time as Head of Inland Detection most intelligence-based seizures originated from media-based campaigns which promoted the Customs Hotline. Success usually resulted from the police, the DTS, the Department of Health and HMRC all working together; the Customs Hotline was often the key to this success. Now the HMRC budget has been cut there is no media support – the Customs Hotline is still there but people are not actively encouraged to use it. This is also picked up on in paragraphs 30-31 of the Home Affairs Committee Report which suggests that free media should be used to broaden the knowledge and awareness of enforcement actions and penalties.

32. The separation of the policy side and border enforcement side in 2007 has also resulted in the responsibility for enforcing policy on illicit cigarettes falling on a department that does not set the border policy. While HMRC is responsible for setting policy on illicit tobacco and accountable for revenue collection, it is in fact Border Force that enforces these policies. This is not effective. Border Force's priority is currently immigration and with limited resources its front line officers are not solely focused on illicit tobacco. The Home Affairs Committee Report notes at p3: "*John Vine CBE QPM, the Independent Chief Inspector of Borders and Immigration scrutinised Border Force freight operations between March and July 2013. He concluded that there had been a breakdown in communication between Border Force and HMRC at an operational level.*" This is again picked up in paragraph 22 of the Home Affairs Committee Report which states that:

*"HMRC and Border Force must continue to strengthen the lines of communication between the two organisations, to ensure that relevant and up-to-date information is passed between teams. In particular, it is vital that referrals be made to HMRC in all cases of seizures where it appears that there might be scope for sanctions to be imposed. HMRC and Border Force should create a platform where effective examples of joint working with local police forces and partner agencies such as Trading Standards across the UK can be accessed for training and in order to share good practice. Without sharing information, raising prosecution and arrest rates for tobacco smuggling will be more difficult, if not impossible."*

33. As noted above, many of the international shops selling illicit tobacco are unregulated unless they sell alcohol. If the shop does sell alcohol then it is regulated by the DTS. The DTS is appointed and funded by local councils and it has also been subjected to substantial budget cuts.<sup>2</sup> When I was working at HMRC I was told by DTS Officers that alcohol and tobacco were not a priority; the priorities were instead counterfeit toys, food and hygiene, i.e. scams on the public. As illicit cigarettes are not in the public eye in the same

<sup>2</sup> See e.g. "40% cut in trading standards will devastate vulnerable consumers", 07 April 2014, <http://www.tradingstandards.gov.uk/extra/news-item.cfm/newsid/1464>

way as faulty goods, for example, the approach is often taken that they are less of a problem.

34. Jim Harra, the Director General, Business Tax, HMRC stated in his evidence before the Home Affairs Committee, in response to a question regarding whether plain packaging is going to be more difficult:

*"First of all, there is a real dearth of data that enable you to predict what the impact of standardised packaging will be on smuggling. Only one major country has introduced it—Australia. We are collaborating very closely with them to learn the lessons, even though there may not be direct parallels with the UK. Our assessment is that it is not going to create any new risks for us but it could well change the profile of the illicit market, and we would have to respond to any changes in that market in that way, but we do not think any new risk is created."*

35. I agree that the introduction of standardised packaging will not create new risks in terms of how tobacco products are smuggled or detection methods. However, this misses the point. The point is that there is a very high current risk which I believe will be exacerbated by the introduction of standardised packaging requirements, making a bad situation worse. The infrastructure, supply lines and market for counterfeit and cheap whites is already in place so the introduction of standardised packaging will not create a new market but risks incentivising that existing illicit market. As Mr Hara noted, standardised packaging could well change the profile of the illicit market and there is a dearth of data to enable a prediction of what the impact of standardised packaging will be on this highly organised profitable but illegal trade.

36. Judith Kelly, Tobacco Strategy and Policy Team, HMRC stated in her meeting with Sir Cyril Chantler on 7 March 2014 that: *"HMRC does not have any data to quantify the particular risk from counterfeit product and is unable to assess the impact of Standardised Packaging on the degree of counterfeiting."* Mrs Kelly and Andrew Leggett, Deputy Director, HMRC also concluded that: *"standardised packaging probably does enhance and diversify the existing risks the UK faces but it is very difficult to quantify any changes in risk because there is such a lack of good data. HMRC have effective enforcement responses available to counter these risks."* I agree with the first part of this statement, but I do not agree that HMRC has effective enforcement responses available to counter these risks. Firstly, as acknowledged, HMRC does not even know what the actual risk really is. Further, as noted above, both the NAO Report and the Home Affairs Committee Report concluded that HMRC does not currently have an effective approach to deterring and disrupting the illicit market successfully within the UK.

#### **E. The 2014 IA**

37. The 2014 IA recognises the risk that standardised packaging will increase the illicit market, stating that: *"There is a risk that the intervention may*

*unintentionally encourage smokers who want branded tobacco to seek it from places where it is still available ... standardised packaging could increase the demand for and supply of illicit tobacco".* The 2014 IA also concludes that *"there is likely to be an increase in the UK duty unpaid segment but we have no means of quantification."* However, the 2014 IA provides no proposal for dealing with this increased risk. Instead the 2014 IA proposes to monitor the impact on the illicit market on the basis that *"[m]itigating action could however be taken if the intervention causes an increase in the illicit tobacco market."* It is also stated that: *"[t]o mitigate any increase in illicit trade would require additional resources devoted to reducing the demand, and intercepting the supply of illicit tobacco products which would increase costs and the additional funding required cannot be guaranteed or assumed."* This is not a proposal to address the issue at all, but essentially amounts to ignoring the issue and hoping for the best. There is no proposed measure to mitigate the risk.

38. In only proposing to monitor the impact of standardised packaging on the illicit market, the Department of Health is wrongly disregarding the very real consequences that the introduction of standardised packaging could have, particularly when it is acknowledged that additional resources and funding cannot be assumed or guaranteed. Without an effective inland enforcement regime in place this will incentivise the illicit market and risks providing further support to the recognised criminality associated with the illicit market.
39. Judith Kelly, Tobacco Strategy and Policy Team, HMRC also stated in her meeting with Sir Cyril Chantler on 7 March 2014 that *"there was a risk that once an individual began to purchase illicit product they would consume more due to relatively low cost"*, i.e. once a smoker moves to the illicit market they are unlikely to return to genuine brands. Accordingly, the Government cannot assume that they will be able to subsequently undo the effect that standardised packing has on the illicit market. Indeed there is not even any commitment from the Government to provide any additional resources to tackle this threat.

## **F. Conclusion**

40. In my opinion based on nearly forty years of experience, standardised packaging runs the very real risk of incentivising the illicit market and driving currently compliant tax-paying smokers down the non-compliant illicit route. As set out above, international shops provide an easy, accessible and reliable source of illicit (mainly cheap white) cigarettes. Both legal and illicit cigarettes are currently available from the same source on the High Street. If there is a stigma attached to smoking standardised packaged cigarettes or consumers are no longer prepared to pay the price of legal cigarettes, it will not be difficult for consumers to switch to cheap white or counterfeit brands which have the added attraction in these austere times of cost savings as well. There is no evidence to suggest that smokers are at all put off by smoking a non-UK duty paid branded cigarette, as the increase in seizures of cigarettes manufactured for an overseas market (e.g., L&M cigarettes, a brand that is popular in Poland) tends to indicate.

41. Furthermore standardised packaging will almost certainly be welcomed by the HRT and cigarette counterfeiters and the cheap white manufacturers as either they will be able to copy this standardised packaging with ease and at a reduced cost or they will continue to produce branded products which appeal to those smokers put off by standardised packaging.
42. It goes without saying, of course, that any move nudging smokers into the illicit market either through cost, branding or increased availability will have potentially significant positive implications for organised crime but negative ones for the Treasury with few obvious health advantages to compensate.
43. Law enforcement is already challenged and it cannot be expected without significant additional resources to contain any potential growth in the illicit market in the future. The Government cannot rely on enforcement reducing the risk that introducing standardised packaging will have on the illicit market if it does not at the same time provide more resources for enforcement, more frontline officers, more customs officers inland to control the international shops and supply chains together with a tobacco licensing regime, more DTS officers, a publicity campaign to provide intelligence to tackle the problem and robust sanctions procedures including prosecutions. Given the current lack of priority, resourcing and an effective approach to deterring and disrupting the illicit market within the UK, I cannot see how the Government can justify taking the unquantifiable risk of increasing criminality and reducing revenues collected by the Treasury and thereby not meeting Sir Cyril Chantler's proposed response to the increased risk to the illicit market which is to have an effective enforcement regime and appropriate sanctions.



Stuart Crookshank OBE

**The Role of Trademarks and the Brands They Represent  
Report of Ronald J. Faber, Ph.D.**

### Background and Qualifications

1. I am a Professor Emeritus of Mass Communication in the School of Journalism and Mass Communication at the University of Minnesota. I received my Ph.D. in Mass Communication from the University of Wisconsin in 1979. I began my teaching career in the Advertising Department at the University of Texas and moved to the University of Minnesota in 1987. Throughout my career, I have taught and conducted research in advertising, marketing, mass communications and consumer behavior. The courses I have taught include Psychology of Advertising, Advertising Management and Advertising Campaigns at the undergraduate level and Advertising Theory, Mass Communication Theory, Advertising Research and seminars in various advertising and strategic communication topics at the graduate level.
2. I am an active member of the American Academy of Advertising (AAA). I received the AAA's Ivan L. Preston Outstanding Contribution to Research Award and I was elected a Fellow of the American Academy of Advertising in 2007 for my contributions to the field of advertising. My research has been published in the leading scientific journals in marketing, advertising, and consumer behavior.
3. I actively review research manuscripts for several journals. I am a former Editor of the *Journal of Advertising*, and I currently serve on the Editorial Review Boards of several journals, including the *International Journal of Advertising*, the *Journal of Interactive Advertising*, the *Journal of Current Issues and Research in Advertising*, and the *Journal of Consumer Policy*. I am also a member of the Senior Advisory Board for the *Journal of Advertising*, a former member of the Policy Board of the *Journal of Consumer Research*, and currently serve on the James Webb Young Advisory Board for the Advertising Department of the University of Illinois.
4. Along with reviewing academic research, I have also served as a judge for professional advertising campaigns. For several years, I was a final round judge for the Effie Awards (the major awards for advertising effectiveness in the United States (U.S.)) and was a member of the Board for the Advertising and Marketing Effectiveness Award.
5. The professional and academic experience set out above frequently involves considerations of how trademarks and branding are used in conjunction with broader marketing campaigns.

### Scope and Summary of Opinions

6. I have been asked to review the United Kingdom (U.K.) Department of Health (June 2014) Impact Assessment on the Standardised Packaging of Tobacco Products and the report of Sir Cyril Chantler on standardized packaging of tobacco products, and to comment on the impact that standardized packaging would likely have on trademarks and the brands that they represent. I have considered this in the context of the existing situation in the U.K. where branding is already extremely limited. I understand that warnings have appeared on cigarette packs in the U.K. since 1971 and pictorial warnings are now required on

all tobacco products. Tobacco advertising on TV or radio has been banned since the 1990s and the Tobacco Advertising and Promotion Act of 2002 prohibited all forms of tobacco advertising including that in print media, on billboards, by direct mail or through sponsorship. The display of tobacco products is prohibited in large shops and this will extend to all shops by early April 2015. Tobacco sales through vending machines is prohibited and it is an offence for any retailer to sell tobacco products to anyone below the age of 18. As a result, standardized packaging would take place in an environment where brand communication is already extremely limited and where the tobacco market in the U.K. is a mature and declining one. I understand that the standardized packaging proposed in the U.K. would prevent the use of any color, brand or trade dress and instead only allow the brand name to be used when set in a standard font.

7. Based on my expertise in advertising, marketing, mass communication and consumer behavior, I conclude that:
  - Trademarks are a key element in branding a product and perform valuable functions for both consumers and the brand manufacturers. They serve to help consumers identify brands and distinguish between competing brands. They aid consumers in selecting preferred brands over other alternatives. From a manufacturer's perspective, trademarks are a key element in developing and maintaining brand equity and "goodwill". This allows a company to enhance market share, achieve and maintain brand loyalty and command a premium price for its products.
  - In the current regulatory environment in the U.K., packaging is among the last remaining branding elements that can be used to differentiate between competing brands. Standardized packaging would prohibit the use of all trademark elements on tobacco products and packages. This will limit adult consumers' ability to distinguish and identify preferred brands and adversely impact the ability of tobacco companies to successfully sell their brands, but will not serve to reduce primary demand. This change in trademarked packaging will also adversely affect the goodwill and brand equity a company has cultivated over years of investment.
  - This reduction of goodwill and brand equity can affect the prices brands can charge and lead to lower prices. Pushing brands to compete on lower prices may lead consumers to shift towards cheaper, lower quality tobacco products. Thus, the primary impact standardized packaging is likely to have is to harm the ability of brands to compete in the marketplace.

#### **Role of Trademarks and Brands**

8. Trademarks are a critical way in which brands identify themselves and distinguish themselves from other brands. According to the U.K. Trade Marks Act 1994 (the Act), a trade mark is defined as: "any sign capable of being represented graphically which is capable of distinguishing goods or services of one undertaking from those of other undertakings". The Act also states that registration of a trade mark confers a property right on the proprietor of the



registered trade mark and that the proprietor has the rights and remedies provided by the Act.<sup>1</sup>

9. Examples of marks used to distinguish pottery and other goods dates back at least as far as 1300 B.C.<sup>2</sup> Brand marks were used to differentiate the work of a particular artisan or group. These marks provided a quick and easy way for consumers to determine the quality of workmanship, and the attributes and characteristics (e.g. – specific types of clay, dye or finishing process used) associated with a specific mark.
10. Today, a trademark can include a brand name as well as highly recognizable elements of a brand such as a symbol, logo, design or distinctive coloring or lettering.<sup>3</sup> Trademarks are a key element in branding a product and perform several valuable functions for consumers:
  - Trademarks help to make identification of a brand easy for consumers and serve to distinguish different brands of goods and services;
  - Trademarks signal the source or origin of the product and symbolize a brand's quality or characteristics. By clearly identifying the brand, the trademark also serves to guarantee that the branded product will measure up to expectations;
  - Trademarks help consumers to process and store information about a brand; and
  - Trademarks are essential in forming and maintaining brand loyalty among consumers.
11. For consumers, trademarks and the brands they represent serve as a shorthand device to store information and simplify product decisions. Logos, distinctive colors or fonts can all serve to make a brand easily and quickly identifiable to consumers.
12. For firms, trademarks are essential to allow manufacturers to compete. They provide a means of distinguishing one brand from others, thus allowing a firm to benefit from investments in the brand. Trademarks and the brands they represent are extremely valuable legal properties that can be bought and sold and can provide sustained future revenues.<sup>4</sup>

#### **Trademarks and Brands Assist Consumers to Make Informed Choices**

13. It is important to recognize that the basic goal of most branding efforts is to help differentiate one brand from other competitive brands. One of the most central and important distinctions made in marketing and promotions is between primary demand and secondary or selective demand. Primary demand involves trying to create or increase sales for an entire category of products. Selective demand

<sup>1</sup> Trade Marks Act 1994 online at: [www.ipo.gov.uk](http://www.ipo.gov.uk) accessed July 11, 2014.

<sup>2</sup> Kevin Lane Keller, *Strategic Brand Management* (3<sup>rd</sup> ed. 2008).

<sup>3</sup> Philip Kotler & Gary Armstrong, *Principles of Marketing* (4th ed. 1989).

<sup>4</sup> Keller (2008).

involves promotion for a specific brand or company within the broader product category. Typically, primary demand is a goal only in the early development and introductory stage of a new product category. At this stage, many people do not know about the product and consumers need to be informed about what it is and why it may be desirable. Much of the goal of generating primary demand is to educate people about the product, what it does, how it works, and why they might want it.

14. Once a product is well-known, the focus of brand communication is on how one brand differs from the competition and why the consumer would want this particular brand rather than other brands. It no longer serves to influence primary demand. Indeed, this lack of impact on primary demand has been found to be true for advertising, which can communicate a far more extensive brand message than can be done with just a package or trademark. For example, after reviewing advertising and sales data for 10 major product categories of frequently purchased package goods in Britain, Jones concluded, "significant and often increasing expenditures on advertising have been unable to generate category growth, or even to arrest decline."<sup>5</sup> Similar findings have been reported looking over a wide range of mature products in the U.S.<sup>6</sup> Cigarettes are an example of a mature product category and indeed, in many countries the tobacco market has moved through the maturity stage and is into decline at this time. Therefore, it is not surprising that a meta-analysis of studies that specifically examined cigarette advertising and total cigarette sales in the U.K., similarly concluded that advertising does not affect total sales.<sup>7</sup>
15. In a mature market like tobacco, trademarks and the brands that they represent are important to consumers because they help people who want a specific product to make informed decisions about which brand to buy i.e. selective demand. Once people have tried a brand, they may determine that they like it and buying it in the future will ensure that they are making a satisfactory product choice. Trademarked elements of a brand such as symbols, logos, designs or distinctive coloring or lettering can help people to identify and remember the brand. Consumers learn that a good identified by a specific trademarked symbol, design characteristic or brand can be relied upon to come from a particular source and have a given standard of quality and reliability.
16. Some consumers may also use high awareness or visibility of a trademarked product as an indication that this brand is high quality because if many other people are using it, it must be good quality.<sup>8</sup> Here, the visibility of brands through

<sup>5</sup> John Paul Jones, "Macroeconomic Effects: The Influence of Advertising on Overall Sales Levels," In John Paul Jones (ed.) *How Advertising Works* (1998) p. 328.

<sup>6</sup> Mark S. Albion & Paul W. Ferris, *The Advertising Controversy: Evidence on the Economic Effects of Advertising* (1981).

<sup>7</sup> Martyn Duffy, "Econometric Studies of Advertising, Advertising Restrictions and Cigarette Demand: A Survey," *International Journal of Advertising*, (1996).

<sup>8</sup> Wayne D. Hoyer & Steven P. Brown, "Effects of Brand Awareness on Choice for a Common, Repeat-Purchase Product," *Journal of Consumer Research*, (Sept., 1990).

their trademarks can help people to identify brands that are perceived of as high quality.

17. Moreover, brands not only assist consumers directly but also indirectly as they serve to encourage companies to maintain or improve the quality of their brands.<sup>9</sup> Central planners in the Soviet Union, for example, found that requiring manufacturers of consumer goods to imprint production marks on goods helped to prevent deteriorating quality.<sup>10</sup>
18. Trademarks and the brands they represent "signals to the customer the source of the product, and protects both the customer and the producer from competitors who would attempt to provide products that appear to be identical."<sup>11</sup> This can be very important because physical similarities between brands can lead consumers to misattribute the origin or source of a brand or lead consumers to rate brand attributes and quality similarly.<sup>12</sup> For this reason, there is a lot of concern by trademark and brand owners about the brand confusion that can be caused by look alike or counterfeit brands.

#### **Trademarks Protect the Goodwill and Equity of a Brand**

19. A distinctive trademark protects the goodwill and equity of a brand. Aaker defines brand equity as "a set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and/or to that firm's customers."<sup>13</sup> In other words, it is the non-objective elements associated with a good or service from a particular company that makes it more or less preferred as a brand choice. Brand equity can be seen as the difference in consumer responses to a given brand as compared to their responses to a version of the exact same good or service that was unnamed or given a fictitious name.<sup>14</sup> If the brand name or symbol is changed, brand equity can be affected.<sup>15</sup>
20. Brands with high equity and goodwill can command premium prices over less popular or generic equivalent brands.<sup>16</sup> Aaker reported that American Motors showed people a model of a car without any brand name and asked them to indicate what they would pay for it.<sup>17</sup> The same question was then asked for a model with their brand name on it. People were willing to pay \$3000 more for

<sup>9</sup> George Miaoullis & Nancy D'Amato, "Consumer Confusion & Trademark Infringement," *Journal of Marketing* (April, 1978).

<sup>10</sup> Ricky Wilke & Judith Lynne Zaichkowsky, "Brand Imitation and Its Effects on Innovation, Competition and Brand Equity," *Business Horizons* (Nov.-Dec. 1999).

<sup>11</sup> David A. Aaker, *Managing Brand Equity* (1991) at 7.

<sup>12</sup> Loken et al. (1986).

<sup>13</sup> Aaker (1991) at 15.

<sup>14</sup> Kusum L. Ailawadi, Donald R. Lehmann & Scott A. Neslin, "Revenue Premium as an Outcome Measure of Brand Equity," *Journal of Marketing* (Oct. 2003); Keller (2008).

<sup>15</sup> Aaker (1991).

<sup>16</sup> Ailawadi et al. (2003); Keller & Lehmann (2006).

<sup>17</sup> Aaker (1991).

the one with the brand name. This ability to charge a premium price further enhances a firm's profitability and shareholder value.

21. For many companies, brands are their most valuable and sustainable asset.<sup>18</sup> For example, a Forbes magazine article indicated that PepsiCo had a total market value of approximately \$86.8 billion. However, only \$6.5 billion of that was from tangible assets. The majority of the value (approximately \$56.1 billion) instead came from the intangible asset of the value of their trademarked brands.<sup>19</sup>

#### **Trademarks and the Brands they Represent Contribute to the Efficient Functioning of the Market**

22. Trademarks and the brands they represent are also important because they contribute to the efficient functioning of the market. They help companies compete based on product distinctions, rather than price. Brands that are unable to differentiate their products are left with little alternative but to compete on the basis of price. Lower prices further reduce or eliminate incentives to ensure high quality products.
23. Trademarks and brands also benefit the market structure by assisting new entrants into the marketplace by allowing them to differentiate themselves from their competitors. Without a way to effectively differentiate a new brand, about the only way to encourage trial is to compete on price. Standardized packaging may, therefore, have the effect of making it difficult for manufacturers to introduce niche products and innovations, especially in light of the advertising and display bans that are already in place in relation to tobacco products in the UK.

#### **Importance of Package Design**

24. A brand's packaging is extremely important in forming brand identity in the mind of the consumer. The package elements include the trademarks, colours, text and graphic elements. Taken together these elements constitute the "trade dress" of the package (i.e., the overall look and feel of the package).
25. Stella Artois and Beck's are imported beers that sell well in the U.K. Seeing each of them helps trigger recognition of the brand, as well as its origins and preceptions of its quality.

<sup>18</sup> Oliver Hupp & Ken Powaga, "Using Consumer Attitudes to Value Brands: Evaluation of the Financial Value of Brands," *Journal of Advertising Research* (September 2004).

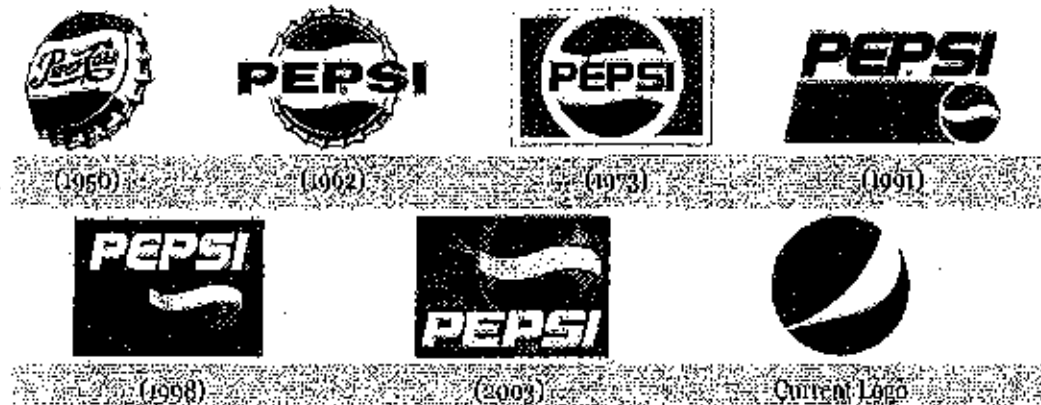
<sup>19</sup> Cecily Fluke & Kurt Badenhausen, "Power Brands - Beyond the Balance Sheet," *Forbes* (April 19, 2004) (online at <http://www.forbes.com/forbes/2004/0419/059.html> - accessed Oct. 7, 2013).



26. Note that the two brands have a number of package elements in common. Both have labels featuring the color red and use an oval shaped design. The brand names appear in capital letters across the center of the labels. Each label appears on a green bottle. Yet we can very quickly distinguish these brands. This points out the fact that the identity of a brand and the trade dress of a package typically involve the overall look and arrangement of the package elements in a holistic manner and not just specific individual elements.<sup>20</sup> Changes in the holistic package can affect brand recognition and weaken brand equity.<sup>21</sup>
27. The value of image consistency to a brand can be seen in the care brands take not to change their packaging, logos or colors too drastically at any point in time. Instead, they choose to make small gradual changes so consumers will not be upset or confused. They hope to keep the change below what is known as the "just noticeable difference" level (JND). Brands like Michelin tires, Pepsi, BMW, Shell gasoline and Campbells soup have all made several modifications to their trade characters, logos, fonts and packages over the years to remain contemporary (see Pepsi example below). However, each time the goal is to make the change small and gradual so as not to confuse consumers or risk losing their historical brand equity.

<sup>20</sup> Ulrich R. Orth & Keven Malkewitz, "Holistic Package Design and Consumer Brand Impressions," *Journal of Marketing* (May 2008).

<sup>21</sup> Herbert M. Meyers & Murray J. Lubliner, *The Marketer's Guide to Successful Package Design* (1998).



28. Tropicana Orange Juice learned the hard way just how strong an attachment people have to packaging and logos.<sup>22</sup> Tropicana changed their old package featuring a graphic of an orange with a straw through it for a newer, more contemporary look. The result was a huge public outcry. Tropicana eventually had to bow to public demand and brought back its old packaging. More recently, Gap tried to change its logo. However, outpourings of anger on social media led them to go back to their old logo. People feel passionately about trademarks and the brands they represent. The trade dress of the packaging can make up an important part of brand equity and provide a strong competitive advantage.
29. The U.K. government appears to recognize the importance of packaging to a brand. In a section on look-a-like brands on its Intellectual Property Office website, it states:

"Look-a-like items are items that look like a well known brand. The product may have very similar packaging; same size, same type and shape of container and very similar graphics and or a similar brand name as that of a brand leader and therefore may benefit from another product's reputation.

The role played by packaging in communicating brands values is receiving considerable attention in the context of brand look-a-likes. The increasing number of retail products which take on the visual appearance of the brand leaders is causing great concern for the manufacturers of branded products.

The government supports investment in distinctive branding for products and recognises the value that such brands have in helping consumers to quickly identify quality products and make informed choices in a busy market. We, therefore, support reasonable measures which prevent parties taking unfair advantage of the investment made

<sup>22</sup> Stuart Elliott, "Tropicana Discovers Some Buyers Are Passionate about Packaging," *New York Times*, B-6, Feb. 23, 2009, online at <http://www.nytimes.com/2009/02/23/business/media/23adcol.html?pagewanted=all>.

in developing distinctive branding with a reputation amongst the public."<sup>23</sup>

30. Brands try to minimize changes to their packaging and trademarks in order to avoid creating consumer confusion and harming brand equity. Standardized packaging will harm the ability of brand owners to use their trademarks to effectively perform their functions of distinguishing between products and identifying the commercial origin and the quality of the underlying product.
31. Consumers expect high equity brands to be different from other brands, even if these differences are perceptual rather than substantive. Standardized packaging will eliminate the visual differences between brands and make the packages all look the same. When brand packages look similar, consumers think of the brands as being similar and this can diminish brand equity.<sup>24</sup> As a result, brand value will drop and this would lead to a brand's ability to command a premium price disappearing.<sup>25</sup>
32. There would be little opportunity for new brands, brand extensions or brand innovations to be noticed by smokers. Brand awareness is a necessary, but not sufficient condition for building brand equity and achieving success for a new brand or an existing brand with a new innovation. Brand awareness generally requires frequent exposure to the brand name along with an indication of what type of product it is. For this reason, attempts to achieve brand awareness generally utilize advertising. Other promotional activities such as point-of-purchase displays and sponsorship can also help to enhance brand awareness. However, all of these standard approaches to developing brand awareness are already prohibited for tobacco brands in the U.K. Thus, the ability for a new brand to enter the market is already extremely limited.
33. Manufacturers of existing brands can use trademarks and packaging to help communicate features of new products or innovations to customers. They may use mostly the same packaging colors and symbols as their existing brands to show that the new innovation is from the same company. For example, when Colgate introduces Colgate Whitening or Colgate Cavity Protection, it uses a similar package with many of the same design elements, but with a distinct section (see examples below). Generally these manufacturers also use large advertising budgets along with package design or trademarks to make consumers aware of the new innovation. Without the benefit of recognized trademark and packaging elements, as well as the prohibition of the use of advertising and other promotional strategies, manufacturers cannot effectively communicate these niche products and innovations to consumers while, at the same time, making it clear that the brand extension is part of the brand family and has the basic attributes and quality associated with the specific brand.

<sup>23</sup> Intellectual Property Office, "Look-a-like packaging" online at <http://www.ipo.gov.uk/e-policy-lookalike.htm> (accessed July 15, 2014)

<sup>24</sup> Foxman et al. (1992); Misaoulis & D'Amato (1978).

<sup>25</sup> Rajesh Iyer & James A. Muncy, "The Role of Brand Parity in Developing Loyal Customers," *Journal of Advertising Research* (June 2005).



34. Similarly, it would be unlikely that any new brands would enter the tobacco market unless they were to do so by undercutting prices. Novel packaging helps new brands to be noticed by consumers. Standardized packaging, along with all of the other restrictions on tobacco sales and promotion in the U.K. will make it extremely difficult, if not impossible, for a new brand to enter the market.
35. Ultimately, all cigarette brands, even the leading brands, would likely be damaged if distinctive packaging elements and trademarks are no longer allowed. As a result, all brands may begin to be perceived as equivalent to each other. If brands are seen this way, they will no longer be able to demand a premium price. Without the value proposition provided by brands, smokers will likely navigate towards low value tobacco products. The focus on pricing will also likely result in lower prices, a result which could also lead to increased purchases and consumption since price has been found to be an extremely important factor in smoking consumption.<sup>26</sup>
36. Standardized packaging is also likely to benefit the counterfeit and illicit trade, since it would be cheaper and easier for counterfeiters to copy the new standardized packages and more difficult for consumers and retailers to identify legitimate products.

### Conclusion

37. Trademarks, brand marks, distinctive brand colors and other elements of trade dress play a fundamental role for both consumers and brand manufacturers. They help consumers distinguish between brands and more easily recognize the source of a product. These visual elements can help consumers more easily store brand information in their memory and avoid confusion. As a result, consumers are better able to select their preferred brands in future brand choice situations.
38. Trademarks and brand symbols are also important components of brand equity for the company.<sup>27</sup> This is important for the manufacturers since brand equity can promote and maintain brand loyalty, allow the company to command a premium price and protect it from price discounting by competitors. This is a major reason why brands are careful to make small gradual changes in brand colors, symbols or packaging rather than risking consumer confusion or displeasure by making more abrupt changes.

<sup>26</sup> WHO Technical Manual on Tobacco Tax Administration (2011).

<sup>27</sup> Aaker (1991).



39. Standardized packaging would prohibit the use of all trademarks, except word marks that could only be used in a standardized size, color and font. As a result, it will be harder for consumers to identify and find brands that they prefer. It will lead to consumer confusion since all packs will look very similar. This will result in making it more difficult for newer brands to enter the marketplace and for smaller brands to compete against established leading brands.
40. Over time, brand equity will diminish for all brands and the perception of all brands as being generic equivalents will grow. As a result, the only avenue available for brands to differentiate and compete will be on the basis of lowest price. Pushing brands to compete on lower prices could also lead to increased consumption since price has been found to be an extremely important factor in smoking consumption.

  
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Ronald J. Faber

*1 Aug. 2014*  
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(date)