

Product Safety and Telecommunications Infrastructure (PSTI) Bill

Lead department	Department for Digital, Culture, Media and Sport
Summary of proposal	To mandate retailers to only sell consumer connected products that adhere to a minimum security baseline and to update the Electronic Communications Code (ECC) to allow for the completion of agreements of ECC rights and the efficient use of those rights.
Submission type	Impact assessment (IA) – 21/05/21
Legislation type	Primary legislation
Implementation date	2022
Policy stage	Final
RPC reference	RPC-DCMS-4353(3)
Opinion type	Formal
Date of issue	25 April 2022

RPC opinion

Rating¹	RPC opinion
Fit for purpose	<p>The RPC has updated its opinion² on the IA for the regulation of consumer connected product cyber security to include the Department’s submission of the de minimis assessment (DMA) on the reforms to the ECC, both of which were included in the PSTI Bill. This is in accordance with the RPC scrutiny of primary legislation IAs. In doing so, it reflects the changes made to the combined equivalent annual net direct cost to business (EANDCB) and business impact target (BIT) score for the PSTI Bill, which the RPC validates.</p> <p>In relation to the consumer connected product cyber security IA, after the Department’s response to the RPC’s initial review, the RPC now considers the calculation of its EANDCB and assessment of the impacts on small and micro businesses (SMBs) to be fit for purpose. Overall, the combination of the IA for the regulation of consumer connected</p>

¹ The RPC opinion rating is based only on the robustness of the EANDCB and quality of the SaMBA, as set out in the [Better Regulation Framework](#). The RPC rating is fit for purpose or not fit for purpose.

² The RPC issued a fit for purpose opinion on the IA for the regulation of consumer connected product cyber security under the RPC reference, RPC-DCMS-4353(2) on 23 June 2021.

product cyber security and the DMA on the reforms to the ECC are of a good standard and identify impacts with good use of evidence and analysis. However, the Department should strengthen the impacts on consumers when appraising the ECC.

Business impact target assessment³

	Department assessment	RPC validated
Classification	Qualifying regulatory provision	Qualifying regulatory provision
EANDCB	£23.9 million (initial IA estimate) £24.8 million (final IA estimate - combined PSTI Bill)	£24.8 million (2019 prices, 2020 pv)
BIT score	£124.0 million	£124.0 million
Business net present value	£1,263.2 million	
Overall net present value	£6,823.8 million	

³ The EANDCB (previously, £23.9 million) and the BIT score (previously, £119.5 million) have been updated to reflect the combined impacts of the policies in the PSTI Bill and for inflation. The DMA for the reforms to ECC presents the impacts in 2021 prices and 2023 present value (pv) base year. The Department has provided revised figures for validation in 2019 prices and 2020 pv base year for the EANDCB (now, £0.9 million), business present value (now, £16.3 million) and overall present value (now, £16.3 million).

RPC summary

Category	Quality	RPC comments
EANDCB	Green	The Department has appropriately reviewed the impacts associated with all the policy options considered in both the IA and DMA. The RPC commends the clear structure set out in the IA and DMA. The key monetised impacts include familiarisation costs, costs associated with implementing a declaration of conformity, costs associated with the disposal of non-compliant products, costs related to the Alternative Dispute Resolution (ADR) process and cost savings in renewing leases.
Small and micro business assessment (SaMBA)	Green	The IA acknowledges that it is possible that small manufacturers will be disproportionately affected by the introduction of the minimum security baseline. The IA now provides justification for non-exemption and provides some details on mitigation for SMBs. The DMA notes the challenges in obtaining evidence but provides a narrative to suggest SMB site providers will not be disproportionately affected by the amendments to the ECC. The Department would benefit from considering how to improve the evidence base on the SMB population and impacts on SMBs.
Rationale and options	Satisfactory	The rationale for intervention is clearly set out in the IA on government's intention to ensure that the UK is one of the most secure places for online products and services and considers a range of options including alternatives to regulation. The IA makes good use of recent policy developments and international evidence.
Cost-benefit analysis	Satisfactory	The IA could better define the market and the consumer for internet connected products as the connected products industry appears to be loosely specified. The RPC recognises that it may be difficult to identify the boundaries among products used by self-employed, larger businesses, consumers as individuals and households and civil society organisations but the different types of users should be acknowledged. The IA could usefully consider how the market has changed due to the COVID pandemic and the increase in working from home. The Department should that the DMA correctly excludes transfer payments from the calculation of the overall NPV.
Wider impacts	Satisfactory	The IA analyses different impacts, including potential trade impacts, innovation impacts as well

as equity/distributional impacts of implementing the minimum security baseline. The Department could improve the DMA by considering the locational impacts and impacts on consumers from faster deployment.

Monitoring and evaluation plan	Satisfactory	The RPC commends the Department for committing to a review process in 2.5 years to allow for understanding of innovation in these products rather than waiting for the standard 5 years to evaluate. The IA should however provide a clearer template of potential indicators of success of the policy objectives.
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Response to initial review for the consumer connected product cyber security element of the bill IA

As originally submitted, this IA was not fit for purpose due to issues with both the EANDCB and SaMBA.

The EANDCB previously included benefits to businesses as users of consumer connected products and the reduced cost of cyber-crime enabled by securely connected products. The RPC considered these impacts to be indirect because they are outside of the market being regulated and are not generally immediate and unavoidable, as they rely on those businesses updating their products after the regulation has been introduced and as a result experiencing a reduction in cyber-attacks. The IA has now been amended and identifies these benefits as indirect. The IA also includes costs of disposing of non-compliant goods as direct costs (costs which it had previously omitted). The EANDCB now includes non-wage labour costs for all estimates relating to staff time.

The IA also justifies why it uses revenue data to split businesses into different size categories rather than the standard approach of using number of employees to define small and micro businesses, as revenue data is available through the Internet of Things (IoT) UK database which is more relevant to this market.

The IA states that small manufacturers will be disproportionately affected by the introduction of a minimum security baseline. This is due to the majority of direct costs identified as being fixed costs, making up a higher proportion of turnover for SMBs relative to larger manufacturers. The SaMBA previously did not include any exemptions to SMBs or explain why an exemption would not be appropriate. The IA now provides an explanation on why an exemption would not be appropriate; exempting 'small' businesses from the proposed legislation will directly leave a significant proportion of the market vulnerable to cyber-threats, reducing the effectiveness of the proposed policy and leaving consumers vulnerable. It also provides possible mitigations for small businesses, including transition periods, informative publications and an assurance scheme.

Summary of proposal

The PSTI Bill contains two elements for consideration: the regulation of consumer connected product cyber security and reforms to the Electronic Communications Code (ECC).

The policy is to mandate retailers to only sell consumer connected products that adhere to a minimum security baseline, with this baseline initially aligning to the top three guidelines set out in the Code of Practice for IoT security. The objective is to reduce the risk to consumers, networks, businesses and infrastructure of the range of possible harms that may arise from vulnerabilities and inadequate security measures in consumer connected products. The IA states that the proposal is intended to:

- Protect consumers, networks, businesses and infrastructure from harm. Insecure connected products can be used by hostile actors to steal data, seize control of equipment and cause other harms;
- Enable emerging tech to grow and flourish by improving security, and increasing consumer confidence;
- Demonstrate the UK's continued global leadership in cyber security. The code of practice published in 2018 has been adopted by many countries across the world and has influenced the development of international standards. The UK hopes to lead the way to ensure that standards are applied and enforced.

The ECC is the legal framework underpinning the rights of digital network operators to install, maintain and upgrade communications networks on public and private land. The ECC was substantially reformed in 2017 to address the change in demand for digital services since its inception in 1984. The Government is seeking to make amendments to address issues involving (i) obtaining and using ECC rights; (ii) upgrading and sharing; (iii) renewing expired agreements, by:

1. Introducing an Alternative Dispute Resolution (ADR) process and an alternative process for operators to acquire Code rights in cases involving non-responsive or unidentifiable site providers.
2. Introducing automatic rights to upgrade and share underground fixed apparatus installed before 2017 and accessible from public land and amending the ECC to make clear that an operator can seek additional rights.
3. Introducing reforms to bring more renewals of leases under the ECC, introducing a mechanism allowing the parties to seek "interim orders" from the Tribunal pending a final determination of the case, including "interim rent" pending agreement on new terms, and aligning the processes for renewals with the equivalent mechanisms for new agreements.

EANDCB

Transitional and familiarisation costs

The IA has appropriately reviewed the costs associated with all the policy options considered. The RPC commends the clear structure set out. The key monetised costs include familiarisation costs, costs associated with implementing a declaration of conformity, as well as costs associated with the disposal of non-compliant products.

The transitional costs identified are considered likely to affect both manufacturers and distributors of consumer connected products. Ongoing costs include self-assessments costs as well as costs associated with the implementing the security requirements that comprise the initial minimum security baseline, which affects manufacturers.

Missing costs

The EANDCB had previously excluded costs of disposing of non-compliant goods. The Department have now amended their approach and included these costs in the

EANDCB. It has also included some overhead (non-wage labour) costs that were previously missing.

Reforms to the ECC

The Department has identified and correctly classified the direct and indirect impacts of the reforms, the latter together with transfer impacts are excluded from the calculation of the EANDCB. The key monetised direct impacts of the proposal include cost savings in renewing expired leases for mobile sites, familiarisation costs for operators, existing site providers and real estate market and costs associated with the ADR.

The RPC validates the combined EANDCB of the proposal as £24.8 million.

SaMBA

Scope

The IA estimates that 69 manufacturers and 3,485 distributors are affected by the policy. 72 per cent of manufacturers and 98 per cent of distributors are SMBs. The IA acknowledges that it is possible for small manufacturers to be disproportionately affected by the preferred policy option (minimum security baseline). This is because the majority of direct costs have been identified as fixed costs, therefore making up a higher proportion of turnover relative to larger manufacturers.

The overall impact of fixed direct costs on small distributors is estimated to be £18.7m (£14.2m in the optimistic scenario and £25.9m in the worst-case scenario). The difference in the impact across scenarios is driven by differences in familiarisation costs.

Exemption(s)

The IA now explains why an exemption for SMBs would not be appropriate, as exempting 'small' businesses from the proposed legislation would directly leave a significant proportion of the market vulnerable to cyber threats, reducing the effectiveness of the proposed policy and leaving consumers vulnerable. It also proposes mitigations for small businesses, including transition periods, informative publications and an assurance scheme.

Reforms to the ECC

The DMA notes there are approximately 36,000 site providers, many of which may be SMBs and cannot be exempt from the proposal. Whilst the DMA highlights the challenges in obtaining evidence on the possible impacts, it provides a narrative to support that SMBs will not be disproportionately affected. The Department should continue to strengthen the evidence base on the structure of the market and the proposal's impacts through engagement and monitoring.

Rationale and options

Rationale

The rationale for intervention is clearly set out in the IA, namely, the government's intention to ensure that the UK is one of the most secure places in the world to live and do business online and is committed to ensure that the majority of online products and services coming into use become 'secure by default'.

To support these aims, the IA states that the government wants to ensure that consumers are able to use network-connectable products as safely as possible. A large number of consumer connected products continue to be sold in the UK without basic cyber security provisions, leaving networks and infrastructure, consumers, and businesses vulnerable to the impacts of cyber security breaches.

The IA clearly sets out the market failures which lead to an underinvestment in basic security measures being built into consumer connected products by manufacturers. These are due to negative externalities of cyber-attacks that are not borne by the manufacturer or consumer. The IA would benefit from further discussions on the successes and failures on regulations and/or standards from around the globe that are similar to this proposal. The inclusion of this would further strengthen the rationale on why this regulation is required.

Options

The IA considers a range of options, including alternatives to regulation which address the problem under consideration sufficiently.

The shortlisted policy interventions include a voluntary security labelling scheme, a mandatory labelling scheme, and a minimum security baseline, which is the preferred option. The RPC considers this to be a good range of options based on the rationale.

The preferred option is legislation to specify a minimum cyber security baseline that key economic actors involved in making and distributing consumer connected products will be obligated to ensure product compliance.

Cost-benefit analysis

The IA should provide a better definition for the market as the consumer connected products industry appears to be loosely specified, these specific aspects require an obligation to collect, monitor and share data, whilst the IA provides some narrative in this area, it is not sufficient. The RPC recognises that it may be difficult to identify the boundaries among products used by the self-employed, larger businesses, civil society organisations, and individuals and households as consumers, but the different types of users should be acknowledged. The IA could usefully consider how the market has changed due to the COVID pandemic and the increase in working from home.

At consultation stage, we advised the Department to use break-even analysis because the benefits were based on highly uncertain assumptions. The IA now includes a break-even analysis but still includes the highly uncertain benefits in its NPV. These benefits arise from an assumed reduction in cyber-attacks. The IA

states that there is an absence of data, linking crime to specific connected consumer products but provides an NCSC statement outlining the challenges with estimating the reduction in the probability of cyber-attacks. The percentage reductions assumed do not appear to be supported by evidence.

The IA refers to non-compliant goods but does not provide detail on how these are identified. The IA would benefit from being more specific about how security risks were and will be identified (i.e. who is responsible for identifying them and what approach is taken).

Reforms to the ECC

The Department should clarify whether the calculation of the overall NPV in Table 10 of the DMA excludes transfer payments.

Wider impacts

The IA has considered the environmental cost of businesses disposing of non-compliant goods and the Department has indicated it will be commissioning further research. The RPC would expect this research to inform and quantify any impacts during the review process, either at the 2.5 year or 5-year review.

The IA analyses the potential trade impacts of both legislative options. It explains that under the preferred option, “UK trade will be largely unaffected” (paragraph 294) due to there being only temporary costs related to the disposal of non-compliant goods. The IA goes on to explain that a general equilibrium model is used to estimate the trade effects of the proposal and that this is based on a Global Trade Analysis Project (GTAP) model. The modelling estimates that initially UK aggregate export volumes would decrease marginally for all product categories in scope of the proposal (e.g. -0.99 per cent for smart electrical equipment), before “phasing out over the longer term”. The IA should consider the implications of the policy on cross-border connection, operation and monitoring of connected goods and explain whether these factors are included in the Department’s modelling.

The IA also considers the impact on innovation and explains that additional costs to industry resulting from the introduction of a minimum security baseline may reduce innovation in the short run. However, it is expected that in the long-run it will lead to increased security and confidence in consumer connected products and is likely to increase demand and bring research and investment into the sector. The IA states that the proposed regulation will incentivise businesses to find innovative and efficient ways to improve security of their products.

The IA also examines the equity/distributional impacts and states the policy for minimum security baseline will help address these impacts, as some users with protected characteristics may be particularly exposed to the risk due to a greater lack of knowledge necessary to make informed decisions. However, the price effects, a price increase due to higher production costs, may disproportionately affect young people (aged 25-34) and those on low income.

The IA fails to discuss the impacts on cyber insurance as a result of this proposal. This proposed regulation could result in either a decrease or an increase for this sector. The increase could be a result of a better understanding of threats that exist to internet connected products. Alternatively, due to the increase in security to these products from the start, consumers may see insurance as not a necessary purchase.

Reforms to the ECC

The DMA on the reforms to the ECC conducts a rural proofing test but analysis of locational impacts could be expanded. For example, whether local monopoly power is different, higher or lower in rural areas compared to urban and suburban areas and whether this then feeds through to proportionately different levels of benefits from implementation of the ECC. The DMA could also strengthen the analysis of the impacts on consumers by, for example, considering the impact on faster deployment on fixed and mobile broadband uptake for areas with poor network coverage.

Monitoring and evaluation plan

The RPC commends the Department for committing to an interim review process in 2.5 years, to allow for understanding of innovation in these products, as well as a standard 5-year post implementation review. The continual review that is outlined is also welcomed as part of future secondary legislation developments. The IA would however, be improved by presenting a clearer framework of possible indicators of policy success and the arrangements for data collection from the outset.

Other comments

The RPC would like to commend the Department for addressing many of the critical points raised in the RPC's informal consultation IA advice issued in April 2019. The IA has been significantly improved and provides a thorough consideration of policy options and cost benefit analysis. We recognise the attention given to providing definitions and defining the market.

Regulatory Policy Committee

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