

Appendix 2

Fixed Odds Betting Terminals, Problem Gambling and Deprivation: A Review of Recent Evidence from the ABB

Howard Reed, Landman Economics

April 2014

Introduction

Landman Economics has been commissioned by the Campaign for Fairer Gambling to review the Association of British Bookmakers' submission to the DCMS Triennial Review in April 2013, *The Truth about Betting Shops and Gaming Machines* (ABB, 2013). This submission makes a number of misleading and/or inaccurate claims about the bookmaking industry, in particular arguing that:

- Betting shops and Fixed Odds Betting Terminals (FOBTs) in betting shops¹ make a substantial contribution to the UK economy, which would be lost if further regulatory restrictions on FOBTs were introduced;
- the potential consequence of a reduction in the maximum stake for FOBTs from £100 to £2 would be "catastrophic";
- there is no link between FOBTs and problem gambling;
- there has been no proliferation of betting shops over the last decade;
- bookmakers do not target vulnerable people in deprived areas.

The purpose of this report is to offer a realistic and accurate assessment of the claims made in the ABB submission. Drawing on a combination of previous academic research and new research using UK survey data, I show that each of the claims in the ABB submission is inaccurate, misleading, and wrong. Section 1 examines research conducted for the ABB on the contribution of betting shops to the UK economy and the potential impact of reducing the maximum stake for FOBTs, while Section 2 looks at the links between FOBTs and problem gambling. Section 3 examines the ABB's arguments relating to proliferation of betting shops and the level of deprivation in each local area of the UK.

In addition to critiquing the ABB's April 2013 submission, Section 3.3 examines new research released by the ABB in April 2014 which claims to show that betting shops are more likely to be related in less deprived areas of the UK. I show that the ABB analysis is based on a flawed methodology; a recent analysis by Geofutures using more reliable data sources and methods finds a clear positive correlation between the location of betting shops and deprivation, with over twice as many FOBTs per head in the least deprived areas of England compared to the most deprived.

¹ FOBTs – also known as "B2 gaming machines" – are electronic terminals situated in betting shops (a maximum of four machines per outlet under current rules).

1 The contribution of betting shops to the UK economy and the potential impact of reducing the maximum stake for FOBTs

The ABB submission cites evidence from the Centre for Economic and Business Research (CEBR) claiming to show that betting shops contribute £3.2 billion to UK GDP, support 100,000 jobs and pay £1 billion in taxes, with between 87% and 99% of the economic benefits "staying local" (ABB 2013, chapter 3). These statistics are then used to argue that lowering the maximum stake for FOBTs will produce large negative impacts on the UK economy. An ABB-commissioned "Regulatory Impact Assessment" (ABB chapter 12) claims that if the level of B2 stake were reduced to £2, the following consequences would ensue:

- 92% of betting shops, and 86% of jobs in betting shops, would be at risk.
- Bookmakers would make a loss of around £59,000 per shop.
- The Treasury would lose £650 million in tax revenue.
- The closure of the loss-making betting shops would add thousands of square feet of empty premises onto the high street.
- Nearly £60 million in business rates would be lost to local councils.
- The loss of 40,000 jobs – mainly among 18-24 year olds and part-time female workers – would add to unemployment rates and increase the Treasury's benefits bill.
- There would be a significant impact on the horseracing and greyhound industries and an increase in activity on the illegal gaming markets.

The ABB's "impact assessment" of the effects of lowering the maximum stake for FOBTs raise two questions. Firstly, is the quoted size of impact realistic? And secondly, do the ABB estimates take into account the overall impact of a lower FOBT stake on the economy as a whole, rather than just the impact on the bookmaking industry? This section of the report explores these questions in turn.

1.1 The impact of reducing the maximum FOBTs stake on the bookmaking industry

Recent research by NERA Economic Consulting published by the Campaign for Fairer Gambling (NERA, 2014) reviews the ABB "impact assessment" and finds that the ABB estimates of the economic impact of reducing the maximum stake for FOBTs are significantly flawed. In particular:

- The ABB assumes a very large reduction in the gross profits from FOBTs, but it has not provided evidence to justify this assumption, and there are reasons to expect a smaller reduction in practice.
- The ABB also ignores the strong likelihood that some of the money no longer spent on FOBTs would switch to over-the-counter² betting (and therefore remain within the betting shop).
- The way the ABB presents its results – simply identifying a large number of shops (and jobs) as being "at risk" – is seriously flawed. It does not indicate that a shop is likely to close in practice, and almost one-third of betting shops *already* fall within the ABB's very wide definition of "at risk".
- Even where betting shops do close as a result of a reduction in the maximum stake for FOBTs, a high proportion of revenues will often transfer to neighbouring betting shops, thus limiting the overall impact on the betting industry.

NERA Consulting's own calculations, based on more realistic assumptions about the reduction in the gross yield from FOBTs and what players will spend this money on instead, and taking account of the likely switch in spending to other LBOs in cases where shops do close, suggest that "the number of shop closures could be between 700 and 1200, which would leave the industry with just 5 to 10 percent fewer shops than there were in 2000, before the introduction of B2 machines... The likely impact on the betting industry is therefore very substantially smaller than that suggested by the ABB's submission." (NERA, 2014, p26)

1.2 The impact of a reduction in the maximum stake for FOBTs on the economy as a whole

A fundamental problem with the ABB "impact assessment" is that it appears to assume that a reduction in the size of the bookmaking industry, due to betting shops closing down, automatically leads to a reduction in the size of the overall UK economy and a loss in Exchequer tax revenues. However, it makes no sense, economically speaking, to consider the impact of increased expenditure on FOBTs on the betting sector in isolation from the rest of the economy. Each pound which a consumer spends on FOBTs (net of winnings) is by definition a pound which is not spent elsewhere in the economy. Hence the question of whether a contraction in the bookmaking industry, and/or a reduction in the number of bookmaking outlets, results in a fall in overall UK economic output or not is really a question about whether the consumer expenditure diverted from FOBTs to other goods and services supports less or more economic activity as a result.

² over-the-counter (OTC) gambling refers to activities such as betting on horseracing and other sporting events.

A recent review of the social and economic impact of gambling in the UK by Forrest (2013) explains this concept very well:

"The number of jobs associated with gambling activities in general and machine gaming in particular is non-trivial. But should the economic and social value of the industry be equated with its arithmetic contribution to GDP or total employment? The answer from economics is 'no'. To be sure, in an austere economic climate such as the UK currently faces, changes in regulation with the potential to eliminate or create jobs in the sector might decrease or increase aggregate employment in the short-run given slack in some local labour markets. But regulatory arrangements are for the long-term and are appropriately designed according to long-run benefits and costs from different policy scenarios. In this context, neither the contribution of gambling to GDP nor its contribution to aggregate employment should be counted as a societal economic benefit. This is because there is no convincing case for believing that the industry creates additional output and additional employment. Everyone faces a budget constraint. In the long-run, the proportion of household income that is spent rather than saved exhibits no strong trend. Therefore, if the gambling industry were permitted to grow by easing of regulatory constraints, it is likely that the increase in consumer expenditure/employment would simply displace expenditure/employment elsewhere in the economy. Similarly, if the industry were forced to contract, expenditure would be expected to be switched to other goods and services, leaving aggregate income and employment in the economy unchanged. Hence, even leaving aside that its share in overall economy activity is modest, it is unconvincing to argue that the current or any future, largest gambling industry would generate benefits at the macroeconomic level." (Forrest, 2013, pp4-5)

Previous research by Landman Economics (2013) on the overall impact of FOBTs on the economy found that an increase of £1bn in consumer spending on FOBTs destroys just over 13,000 jobs in the UK, because consumer expenditure on FOBTs supports very little employment compared with an average basket of consumer spending on goods and services. According to the Landman Economics calculations, the share of wages in Gross Value Added³ (GVA) for FOBTs is only around 10 percent – compared with an average of 49 percent for the UK private sector taken as a whole. This means that a reduction in the number of FOBTs is likely to lead to *increased* economic output and tax revenue, not a decline⁴.

³ Gross Value Added is a measure of economic output used by the Office for National Statistics (ONS).

⁴ It should be noted that the fact that the share of wages in Gross Value Added is so low for FOBTs calls into question the ABB's claim that between 87 and 99 percent of the economic benefits of bookmaking "stay local". As is shown in Section 2, the majority of revenue for bookmaking outlets now comes from FOBTs, and most of the revenues from FOBT gambling accrue to bookmakers' profits rather than the wages of employees working in the bookmaking industry. As the vast majority of LBOs are owned by national chains such as Ladbrokes, William Hill and Betfred, FOBT expenditure is much more likely to be siphoned out of local economies (e.g. to shareholders, or being reinvested into opening new betting shops) than it is to be recirculated in the local economy, as would usually be the case with a locally owned business.

Estimates by NERA (2014) also support the contention that a reduction in spending on FOBTs is likely to lead to increased UK employment. NERA estimates that the weighted average employment intensity in a range of industries that might benefit from additional spending is 22.63 employees per £1 million of output, whereas the equivalent figure for the gambling industry as a whole is 17.55 employees. Applying these averages to NERA's estimated reductions in gross yields arising from the reduction in the maximum FOBT stake to £2, NERA estimates an overall increase in UK employment of between 1,200 and 2,400 jobs.

2 The links between FOBTs and problem gambling

The ABB submission claims that there is no link between the increase in the number of FOBTs since 2000 and an increase in the number of problem gamblers. The ABB cite evidence from a single study using the British Gambling Prevalence Survey (Vaughan Williams *et al*, 2008) to back up this claim. However, the BGPS only started measuring the extent of gambling on FOBTs in the 2007 survey, and so it is unlikely that any robust results on the existence of a link between FOBTs and problem gambling could be derived from 2008 study based on a single wave of the BGPS in any case. The study by Vaughan Williams *et al* therefore represents something of a straw man.

This section contests the claim in the ABB submission by analysing more detailed sources of evidence for the UK and elsewhere. Overall there is reasonably strong evidence of a link between FOBTs and problem gambling based on a wide range of previous research from academic studies (Section 2.1). This is backed up by evidence from recent household survey datasets (Section 2.2).

2.1 Evidence from academic studies across the world

The study by Vaughan Williams *et al* (2008) is just one study; whereas in fact there have been hundreds of studies of the effects of gambling in different countries over the past two decades. A recent systematic review of the social and economic impacts of gambling by a team of academics for the Canadian Consortium for Gambling Research (Williams, Rehm and Stevens, 2011) analysed 492 studies of the effects of gambling, 293 of which were empirical investigations. The large majority of the empirical studies analysed by Williams *et al* were conducted in the United States (62%), with 10% of the studies focusing on electronic gaming machines (EGMs, of which FOBTs are a subcategory). The main findings of this review relating to EGMs were:

- One of the main negative impacts of gambling introduction is an increase in problem gambling and related indices (e.g. bankruptcy, divorce, suicide, treatment numbers). (Williams *et al*, p33)
- Specifically, the Williams *et al* study found that "in Western countries, more problem gamblers report problems with EGMs than any other form of gambling" (Dowling *et al*, 2005). This is related to the fact that they are 'continuous' forms of gambling that offer a much higher frequency of

play/reinforcement (Williams, West and Simpson, 2007; 2008). Thus, EGMs tend to be reliably associated with increased rates of problem gambling and indices related to problem gambling when they are first introduced."

- "EGMs are the least labour intensive form of gambling... thus, when revenue is diverted to EGMs from other businesses it is negatively impacting business sectors that employ more people and thereby creating a net decrease in overall employment" (Williams *et al* 2011, p58). These findings tally with the results reported in Section 1 of this report on the overall relationship between FOBTs and employment in the economy.
- EGMs are economically regressive (in the sense that gamblers on low incomes are likely to spend more on EGMs as a share of income than gamblers on high incomes).
- EGMs are the form of gambling with the greatest potential for decreasing quality of life in impoverished communities. In particular, "negative subjective well-being... [is] reliably associated with the minority of people who have high amounts of expenditure or time on EGMs [ref 265]. The poorer mental health of these individuals also has a negative impact on their families (Williams *et al* 2011, p58).

Overall, then, there is clear evidence from a range of previous studies of a link between electronic gaming machines and problem gambling, as well as a link between increased presence of EGMs and lower quality of life. This evidence directly contradicts the claim in the ABB submission that there is no relationship between EGMs and problem gambling.

2.2 Evidence from UK survey data

The study by Williams *et al* (2011) shows significant adverse effects of gambling on several outcome measures, but has the drawback that very few of the studies examined in the research are UK-specific. Research published in March 2013 by the National Centre for Social Research (NatCen, 2013) uses the two most recent waves of the British Gambling Prevalence Survey (in 2007 and 2010) to examine the characteristics of FOBT users compared with other gamblers as well as the general population. The results from the research show several particular trends:

- There was an increase in the prevalence of FOBT use between 2007 and 2010, with male FOBT use increasing from 4% of the adult population in 2007 to 6% in 2010. (For women, FOBT use was constant at 1%).
- Increased FOBT use between 2007 and 2010 was focused on young men. Among men aged between 16 and 34, past-year prevalence rates for machine gambling increased from 9% in 2007 to 14% in 2010.

- There was an increase between 2007 and 2010 in the proportion of FOBT users from low-income households and also an increase in players from households where the survey respondent was unemployed or in full-time education.
- In both years, a high proportion of FOBT users were very regular gamblers defined as those who gambled on their most frequent activity at least once a week. This proportion increased from 68% in 2007 to 73% in 2010.

Data from the 2010 British Gambling Prevalence Survey suggests that average spend per regular gambler (defined as people who gamble with a frequency of once per month or more) is around three times higher for gamblers using FOBTs (£1,208 per year) than for OTC gamblers (£427 per year).

Landman Economics's own analysis of data from the Living Costs and Food Survey (LCF), the main source of household level survey data on expenditure in the UK) suggests that between 2005-06 and 2009-10, betting expenditure (including expenditure on gaming machines) by the ten percent of households with any gambling expenditure whose weekly expenditure on gambling was largest, increased from 66% of total gambling expenditure to 81% of total gambling expenditure. In other words the heaviest gamblers have become responsible for a greater proportion of total gambling expenditure in recent years. In addition, between 2006 and 2011 the proportion of households in the LCF with any gambling expenditure at all reduced from 14% to 8% of the population. The data suggest that a hard core of heavy gamblers is becoming responsible for a larger and larger proportion of industry revenues.

Statistics from the gambling helpline www.gamcare.org.uk show that in the 2011/12 financial year, 28 percent of calls to the helpline were from gamblers who were experiencing problems as a result of FOBTs or roulette machines (Gamcare 2012, p9). However, the actual figure for FOBT-related problem gambling is much higher than this because there were an additional 17 percent of callers who claimed that they were experiencing problems as a result of fruit or slot machines, but the Gamcare statistics also show that 90 percent of the people making these fruit or slot machine-related calls had played the machines in a betting shop. But given that betting shops do not contain fruit machines, this means that an additional 15 percent of "fruit/slot machine" callers were actually playing FOBTs, meaning that the *total* proportion of FOBT-related calls was 43 percent rather than 28 percent.

The Gamcare statistics for 2012/13 do not include a location breakdown for where problem gambling took place, but the headline figure for FOBT or roulette-machine related calls increased from 28 percent to 32 percent. Thus it seems likely that the total proportion of gamblers who were experiencing problems as a result of FOBTs or roulette machines in 2012/13 (including gamblers misreporting FOBTs as fruit or slot machines) was in excess of 43 percent. In any case, FOBT users were more

likely to call the Gamcare helpline than people involved in any other particular form of gambling were.

In summary, there is clear evidence of a correlation between growth in the number of FOBTs in the UK, an increased incidence of problem gambling, and increased bookmaking industry reliance on 'heavy' gamblers for an ever-greater proportion of industry profits. The ABB submission ignores this evidence and is misleading as a result.

3 Proliferation and deprivation

This section of the report examines the ABB's arguments relating to proliferation of betting shops and the relationship between the density of betting shops and the level of deprivation in each local area of the UK.

3.1 Proliferation of betting shops and FOBTs

The ABB submission claims that "there is no proliferation [of betting shops]; there are currently around 8,700 betting shops in the UK and the number of shops has remained stable for 10 years." However, a detailed analysis of the number of betting shops in the UK shows that overall numbers have been growing – despite a rapid decline in OTC (over-the-counter) betting volumes. Between March 2010 and March 2012 the number of outlets grew from 8,822 to 9,128, an increase of just under 4 percent, before falling slightly to 9,031 outlets in September 2013 (Gambling Commission, 2013). However, Geofutures mapping of the UK as of December 2013 (Ramesh, 2014) shows 9,343 active betting shop premise licences, including some licences at application or grant stage and those licences with a variation. The increase of 312 licences over the Gambling Commission estimates will be attributable to new shops, those that are also in development, relocation of existing shops and some licences no longer trading, and therefore will be a slight over-estimate of the total licences in operation, but it does clearly indicate a surge in new betting shop openings during 2013. This also supports the projections made in the Ladbrokes, William Hill, Coral and Paddy Power Annual Reports in 2012 of 250 new shop openings during 2013. The number of 8,700 betting shops cited by the ABB is a clear underestimate which ignores the recent upward trend in shop numbers.

Furthermore, the growth in the number of FOBTs has been much faster than the growth in the number of betting shops. Industry statistics from the Gambling Commission show that in the four years between 2008/09 and 2011/12, the number of B2 gambling machines (FOBTs) in betting shops in the UK increased from 31,439 to 33,209 – a rate of growth of around 1.4% per year. Meanwhile, the Gross Gambling Yield (GGY)⁵ from FOBTs increased from £1,051 million to £1,547 million – a rate of growth of around 10% per year (around 7% per year in real terms). This implies that each machine is being played more intensively even as the number of machines increases.

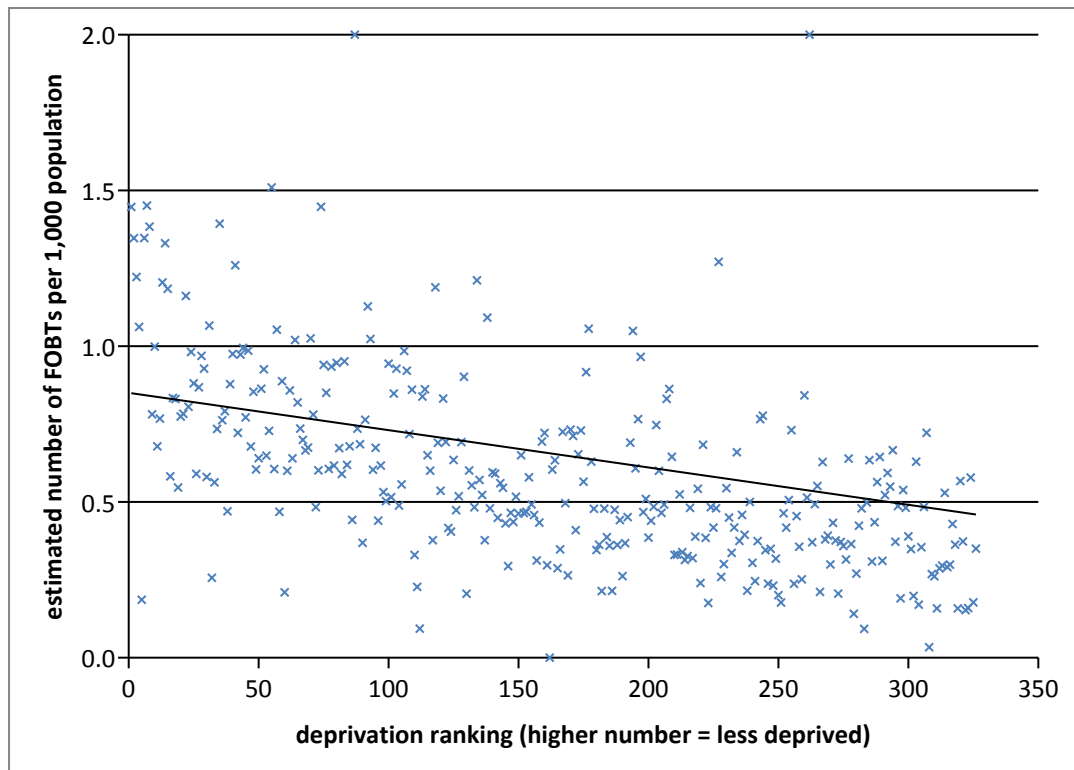
⁵ Gross Gambling Yield is defined by the Gambling Commission (2013) as "the amount retained by operators after the payment of winnings but before the deduction of the costs of the operation".

In the financial year 2008/09, OTC betting accounted for a higher proportion of industry revenues for the (off-line) betting sector than FOBTs: Gross Gambling Yield from OTC betting was £1.66bn whereas Gross Gambling Yield from FOBTs was £1.05bn. By 2012/13, the situation had reversed: GGY from FOBTs, at £1.55 billion was larger than GGY from OTC betting (at £1.48 billion).

3.2 The relationship between number of FOBTs and level of deprivation at the local authority level

The ABB report claims that "bookmakers do not target vulnerable people in deprived areas" but an analysis at the local authority level of the relationship between the number of FOBTs per head of population based on Geofutures mapping of FOBTs in England and the 2010 indices of multiple deprivation for England (Ramesh, 2014) shows a clear relationship - the number of FOBTs per adult is higher on average for more deprived local authorities than it is for less deprived local authorities. The 50 most deprived local authorities in England average 0.90 FOBTs per 1,000 adult population, whereas the 50 least deprived local authorities in England average 0.38 FOBTs per 1,000 adult population – less than half the number of FOBTs per head. Figure 1 below shows a clear trend whereby more deprived local authorities (towards the left hand side of the graph) have more FOBTs per 1,000 adult population than less deprived local authorities (towards the right hand side of the graph).

Figure 1. Index of Multiple Deprivation and number of FOBTs per 1,000 adult population: analysis for local authorities in England



Source: author's calculations using Geofutures mapping data

The ABB submission claims (ABB 2013, Chapter 3) that:

"Bookmakers do not target vulnerable people in deprived areas and any such accusations are both false and offensive. Betting is a high volume low margin leisure product and thus operators will locate more premises in areas with a high density of population."

The analysis here disproves this statement, showing that the number of betting shops in English local authorities is positively correlated with deprivation even controlling for population size.

3.3 New ABB-commissioned research on the relationship between number of LBOs and income

In April 2014 the ABB press-released new research which it commissioned from the Local Data Company claiming to "refute claims that bookies prey on the poor" (SBC News, 2014). The report made the claim that "areas with the highest levels of deprivation have the lowest numbers of betting shops (17%), while least deprived areas have the highest numbers of betting shops (35%)".

However, the Geofutures mapping analysis refutes this by using data on where each betting shop is located. Geofutures divides England into four "deprivation quartiles" each containing approximately a quarter of the adult population, using local authority data. Table 1 below shows the total number of betting shop licences as of December 2013 in each deprivation quartile and the percentage of all betting shop licences in each quartile. Over 34 percent of all betting shops are located in the most deprived quartile compared to only 16 percent in the least deprived quartile. Thus, areas with the highest levels of deprivation have more than twice as many betting shops as areas with the lowest levels of deprivation – **the exact opposite of the ABB result.**

Table 1. Total number and proportion of betting shop licences by deprivation quartile in England, December 2013

Quartile	Number of betting shop licences	Proportion of all betting shop licences in England
Most deprived	2,691	34.2%
2 nd most deprived	2,160	27.5%
3 rd most deprived	1,756	22.3%
Least deprived	1,258	16.0%
Total	7,865	100.0%

It is not clear why the Local Data Company (LDC)'s analysis reaches the opposite conclusions to the Geofutures analysis, but one potential drawback of the Local Data Company research is that it is not clear whether the "areas with the highest levels of deprivation" and the "least deprived areas" which they analyse have the same overall population. Notes supplied to Gambling Insider magazine by the ABB suggest that the LDC analysis used population data from urban areas only, rather than total population by local authority. This is likely to mean that the overall size of population (including people living outside urban areas) in the "least deprived areas" measured by LDC is much higher than the overall population in the most deprived areas. Without correcting the data for population size in the manner used by the Geofutures analysis, the figures for the proportions of betting shops in the most deprived and least deprived areas cited by LDC are potentially misleading. By

contrast, the Geofutures analysis counts the whole population and so is able to divide the population into deprived and non-deprived areas in a much more equal fashion, and so the Geofutures results are much more reliable.

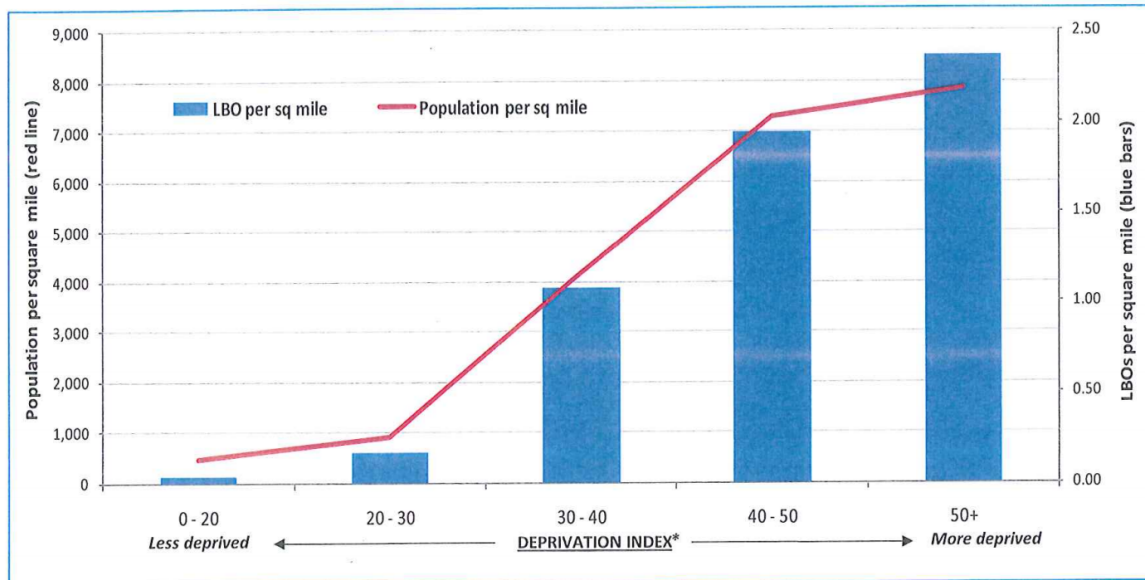
Another claim made in the ABB press release (ABB, 2014) was that "it is a myth that the industry is targeting poor localities... whilst the number of betting shops per square mile is higher in poor areas, so is the population per square mile. The industry is servicing the number of people in localities, not the type of person." In an attempt to illustrate this point the ABB has produced a graph showing two positive relationships:

- (a) a positive correlation between the index of deprivation and the population density in local areas (the red line in Figure 2 below); and
- (b) a positive correlation between the index of deprivation and the number of Licensed Betting Outlets (LBOs) in local areas (the blue bars in Figure 2 below).

The ABB then goes on to argue, on the basis of correlations (a) and (b), that there is no correlation between betting shop density and deprivation *controlling for differences in population density between the most deprived and least deprived areas*. But this argument makes no sense; it is impossible to rule out a correlation between betting shop density and deprivation, controlling for population density, using Figure 2. That would be like saying that (for example), because older people are more likely to smoke, and older people are more likely to be diagnosed with lung cancer, then there is no relationship between smoking and lung cancer controlling for age – a ludicrous claim to make.

A proper analysis of the relationship between the location of betting shops and population deprivation, controlling for population density, was carried out by Geofutures. The analysis of the Geofutures mapping data in Figure 1 and Table 1 above suggests that this is indeed the case – that betting shops and FOBTs are more likely to be located in deprived areas than in non-deprived areas, *taking account of differences in population*. The recent ABB-commissioned research does not refute this finding.

Figure 2. ABB analysis of correlation between deprivation index, population density and betting shop density by local area



4 Conclusion

This report has shown that the ABB's claims in its submission to the DCMS Triennial Review in April 2013 are inaccurate and misleading. In particular:

- The ABB's "impact assessment" of the economic impact of reducing the maximum stake for FOBTs is seriously flawed, and exaggerates the negative impact which a reduction in the maximum stake for FOBTs would have on the betting industry.
- The ABB assumes that a reduction in the number of betting shops in the UK would lead to a reduction in the size of the UK economy and a loss to the Exchequer – whereas in fact, a reduction in the number of FOBTs is likely to lead to *increased* output, employment and tax revenue because expenditure will be switched to other goods and services.
- The ABB submission claims that there is no link between the increase in the number of FOBTs since 2000 and the increase in the number of problem gamblers, but this is based on a highly selective reading of the evidence. A wider review of the evidence for the UK and other countries suggests a clear link between electronic gaming machines and problem gambling. This is backed up by evidence from UK survey data showing an increased incidence of problem gambling and increased bookmaking reliance on 'heavy' gamblers for an ever-greater proportion of industry profits.
- The ABB's argument that "there is no proliferation of betting shops" is at odds with the recent upward trend in the number of betting outlets, as shown by Gambling Commission data.
- The ABB has recently published research claiming to show that areas with the highest level of deprivation have the lowest number of betting shops. However, the methodology for this study appears to be deeply flawed, as it does not control properly for population size in the most deprived areas compared to the least deprived areas. When population size is controlled for (as in the Geofutures analysis outlined in Section 3.2 above) there is a clear *positive* link between deprivation and betting shop density, **not** a negative link as ABB have claimed.

References

- Association of British Bookmakers (2013), *The Truth about Betting Shops and Gaming Machines – ABB submission to DCMS Triennial Review*. ABB, April 2013.
- Association of British Bookmakers (2014), "Gambling Machines in Betting Shops". ABB Press Release, April 2014.
- Dowling, N., Smith, D., & Thomas, T. (2005). Electronic gaming machines: Are they the 'crackcocaine' of gambling? *Addiction*, 100 (1), 33-45
- Forrest, D (2013), "An economic and social review of gambling in Great Britain". *Journal of Gambling Business and Economics*, Vol 7 No 3, pp 1-33.
- Gambling Commission (2013), *Industry Statistics April 2008 to March 2013*. Birmingham: Gambling Commission.
- Gamcare (2012), *Moving in the Right Direction: Statistics 2011/12*.
http://www.gamcare.org.uk/data/files/Statistics_2011-12_web_use_this.pdf
- Gamcare (2013), *Statistics 2012/13*.
http://www.gamcare.org.uk/data/files/GamCare_Annual_Statistics_2012-13.pdf
- Landman Economics (2013), *The Economic Impact of Fixed Odds Betting Terminals*. Campaign for Fairer Gambling, April 2013.
- National Centre for Social Research [NatCen] (2013), *Examining Machine Gambling in the British Gambling Prevalence Survey*. London: NatCen.
- NERA Consulting (2014), *Balancing the Bookies: Review of the Association of British Bookmakers' Impact Assessment*. Campaign for Fairer Gambling, April 2014.
- Ramesh, R (2014), "England's poorest bet £13bn on gambling machines", *The Guardian*, 28 February 2014.
<http://www.theguardian.com/society/2014/feb/28/englands-poorest-spend-gambling-machines>
- SBC News (2014), "Study refutes claims that bookies prey on the poor". SBC News, 14 April 2014.
- Vaughan Williams L, Page L, Parke J and Rigbye J (2008), *British Gambling Prevalence Survey 2007: Secondary Analysis*. UK: Gambling Commission.
- Williams R, Rehm J and Stevens R (2011), *The Social and Economic Impacts of Gambling*. Final Report prepared for the Canadian Consortium for Gambling Research.

Williams, R.J., West, B., and Simpson, R. (2007). "Prevention of problem gambling". In G. Smith, D. Hodgins, and R.J. Williams (eds.), *Research and Measurement Issues in Gambling Studies* pp399-435. San Diego, CA: Elsevier.
<http://hdl.handle.net/10133/414>

Williams, R.J., West, B., and Simpson, R. (2008). *Prevention of Problem Gambling: A Comprehensive Review of the Evidence 2008*. Report prepared for the Ontario Problem Gambling Research Centre, Guelph, Ontario, Canada. Dec 1, 2008.
<http://hdl.handle.net/10133/414>.