

**A UK tobacco levy: The options for raising £500 million per year**

**A research report for ASH by Howard Reed, Landman Economics**

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## Introduction

In its Autumn Statement of December 2014 the UK Government announced a consultation on new proposals to introduce a levy on tobacco manufacturers and importers.<sup>1</sup> This report estimates the rate at which a tobacco levy would need to be set to raise £500 million per year over each of the five years of the next Parliament – tax years 2015-16 to 2019-20 inclusive.

The suggested revenue yield of £500 million from the tobacco levy has been chosen as this would be more than sufficient to fund a comprehensive strategy to reduce youth uptake and encourage adult smokers to quit. Furthermore even assuming, as is likely to be the case, that the industry did not absorb the costs but passed them through to smokers, the increase in price per pack would be supported by a large majority of the public including a majority of smokers if the money raised were used to fund tobacco control.<sup>2</sup>

This report is structured as follows. Section 1 explains the methodology used to calculate the size of the levy required on cigarettes and hand-rolling tobacco [HRT] – the two tobacco products which make up the overwhelming share of the UK tobacco market, including the assumptions made on the impact of the EU Tobacco Products Directive and the impact of standardised packaging for tobacco products in the UK (if introduced). Section 2 presents results for the rates which the tobacco levy would need to be set at, the likely breakdown of levy payments across the tobacco companies operating in the UK, and potential distribution of revenues from the levy across the different countries in the UK to fund tobacco control-related public health activities. Section 3 gives conclusions.

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<sup>1</sup> The consultation document is at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/384769/tobacco\\_levy\\_consultation.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/384769/tobacco_levy_consultation.pdf)

<sup>2</sup> West R (2006) Public support for a tobacco levy. Smoking Toolkit Study.

# 1 Methodology

## Assumptions on pass-through of the levy

This report models the size of tobacco levy required to raise £500 million per year over the 5 tax years 2015-16 to 2019-20 (inclusive) on the assumption that a levy is introduced in April 2015. The results are calculated under two different assumptions about the impact of the levy on the price of cigarettes and HRT:

- a) **"no pass-through"**. This corresponds to the case where the tobacco industry absorbs the entire cost of the levy, with profits reduced while the price of cigarettes and HRT to the consumer is unchanged.
- b) **"full pass-through"**. This corresponds to the case where the full amount of the tobacco levy is passed through to the consumer in the form of higher prices for tobacco. This results in a reduction in consumption of tobacco products (which is not the case under the "no pass-through" scenario, as tobacco product prices are unchanged). The extent to which demand is reduced will depend on the *elasticity of demand* for tobacco products. In this report, based on previous research by Gallet and List (2003) and Langley and Reed (2013) I have assumed that the elasticity of demand is -0.4, meaning that a 1 percent increase in the price of tobacco results in a fall of 0.4 percent in the quantity of tobacco consumed.

## Assumptions on prices and quantities of tobacco sold

For cigarettes, the required size of tobacco levy necessary to raise £500 million is expressed as an increase per stick (cigarette) and per packet of 20 cigarettes in Table 1 below. As HRT is sold by weight rather than number of cigarettes or equivalent, the levy on HRT has been calculated at an equivalent rate to the cigarette levy on the assumption that a typical cigarette contains 0.75 grams of tobacco, based on findings from a recent survey of hand-rolled cigarettes in 18 European countries by Gallus et al (2014).

The research uses the following statistics for the 2013/14 tax year from HMRC's *Tobacco Products Bulletin* for October 2014<sup>3</sup>:

- 35,414 million cigarettes released for consumption;

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<sup>3</sup> <https://www.uktradeinfo.com/Statistics/Tax%20and%20Duty%20Bulletins/Tobacco1014.xls>

- 7.077 million kg of other tobacco products (over 90 percent of which is HRT) released for consumption.

The analysis assumes an average (pre-levy) cost of £7.44 for a pack of 20 cigarettes (based on price data included in the UK Government's Impact Assessment of standardised packaging for tobacco products)<sup>4</sup> and an average pre-levy cost of £8.98 for a 25g packet of HRT (taken from a survey of price comparison websites).

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<sup>4</sup> See Department of Health (2014).

## Assumptions on smoking prevalence

The data on smoking prevalence for this report are taken from the UK Integrated Household Survey. The latest data for 2013 suggest that smoking prevalence for the UK population aged 18 and over is 18.7 percent, down from 19.8 percent in 2012<sup>5</sup>. Based on the current long-run downward trend in smoking prevalence, I assume that prevalence will fall by 0.5 percentage points per year over the five year period.

The EU Tobacco Products Directive (TPD) is due to be implemented in 2016. In line with the assumptions in the European Commission's impact assessment for the TPD<sup>6</sup>, I have assumed that the TPD reduces smoking prevalence in the UK by approximately 0.4 percentage points by 2019-20<sup>7</sup>.

## Additional impacts of standardised packaging

This report also takes into account the introduction of standardised packaging for cigarettes at the same time as the TPD. In line with the UK Government's impact assessment of the effect of introducing standardised packaging<sup>8</sup>, which draws on evidence from the independent review by Sir Cyril Chantler<sup>9</sup>, I have assumed the following:

- Standardised packaging is assumed to be introduced in 2016, at the same time as the TPD;
- Standardised packaging has no impact on the prices which *particular brands* of cigarette or HRT sell for. However, there is assumed to be an impact on *average* cigarette prices due to smokers switching from premium and midprice to economy and ultra-low-price segments of the market. The standardised packaging Impact Assessment suggests that the market share of premium and mid-price brands (taken together) will fall from 26.4% in 2015-16 to 7.3% in 2024-25 if standardised packaging is introduced, compared with

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<sup>5</sup> <http://www.ons.gov.uk/ons/rel/integrated-household-survey/integrated-household-survey/january-to-december-2013/stb-intergrated-household.html>

<sup>6</sup> [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>7</sup> The EC impact assessment of the TPD suggests that the TPD will give rise to a 2.15 percent reduction in the number of smokers in the UK by 2020 (see also Department of Health 2014, para 34). Given current smoking prevalence rates of 18.7 percent, this implies a reduction of around 0.4 percentage *points* in smoking prevalence by 2020.

<sup>8</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>9</sup> *Standardised packaging of tobacco: Report of the independent review undertaken by Sir Cyril Chantler*. [http://www.kcl.ac.uk/health/10035-TSO-2901853-Chantler-Review-ACCESSIBLE.PDF?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=standardised-packaging-of-tobacco-report-of-the-independent-review-undertaken-by-sir-cyril-chantler-pdf](http://www.kcl.ac.uk/health/10035-TSO-2901853-Chantler-Review-ACCESSIBLE.PDF?utm_source=rss&utm_medium=rss&utm_campaign=standardised-packaging-of-tobacco-report-of-the-independent-review-undertaken-by-sir-cyril-chantler-pdf)

a fall from 28.3% in 2015-16 to 15.1% in 2024-25 in the absence of standardised packaging. This results in the average price of cigarettes (in 2014 prices) falling from £7.44 to £7.35 between 2015-16 and 2019-20 if standardised packaging is introduced, compared with a smaller reduction (to £7.40) if standardised packaging is not introduced<sup>10</sup>.

- Standardised packaging reduces smoking prevalence by an additional 0.6 percentage points (over and above the 1 percentage point trend decrease which is already factored into the results in Table 1 above)<sup>11</sup>.
- This 0.6 percentage point decrease takes 2 years to occur (in the first year the policy is introduced, prevalence falls by 0.3 percentage points). In the third and subsequent years, the reduction in prevalence remains at 0.6 percentage points.

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<sup>10</sup> Note that there is a downtrading trend already happening where economy and ULP brands are taking a larger share of the market as time goes on, and this is assumed to continue even in the absence of plain packaging, but the Impact Assessment assumes that plain packaging speeds up the rate of downtrading.

<sup>11</sup> Note that the Impact Assessment for standardised packaging suggests a total reduction of 1 percentage point in smoking prevalence, but 0.4 percentage points of this is due to the Tobacco Products Directive, which is already being taken into consideration in this paper.

## 2 Results

### Estimated size of levy required to raise £500m per year

Table 1 below shows the size of tobacco levy required to raise £500 million per year under the two different modelled scenarios - assuming no pass through and assuming full pass through, and assuming that standardised packaging is introduced.

**Table 1: Size of tobacco levy required to raise £500 million per year – results, including impact of introducing standardised packaging**

All figures in pence

	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Scenario (a): No pass through</b>					
<b>Adult smoking prevalence (%)</b>	17.6	16.7	15.9	15.3	14.7
Cigarette levy (pence per stick)	1.24	1.29	1.34	1.38	1.42
Cigarette levy (per packet of 20)	24.7	25.7	26.8	27.6	28.4
HRT levy (per gramme of tobacco)	1.65	1.72	1.79	1.84	1.89
HRT levy (per 25g packet)	41.2	42.9	44.7	46.0	47.3
<b>Scenario (b): Full pass through</b>					
<b>Adult smoking prevalence (%)</b>	17.4	16.5	15.6	15.1	14.5
Cigarette levy (pence per stick)	1.25	1.30	1.36	1.40	1.44
Cigarette levy (per packet of 20)	25.0	26.0	27.1	27.9	28.7
HRT levy (per gramme of tobacco)	1.67	1.74	1.81	1.86	1.92
HRT levy (per 25g packet)	41.7	43.4	45.2	46.5	47.9

Table 1 shows that on the assumption of no pass through of the levy to consumers, a levy of 24.7 pence per packet of 20 cigarettes would be required to raise £500 million in 2015-16. By 2019-20 the levy would need to increase to 28.4 pence per packet, due to the reduction in smoking prevalence between 2015-16 and 2019-20. On the assumption of full pass-through, the levy required to raise £500 million is

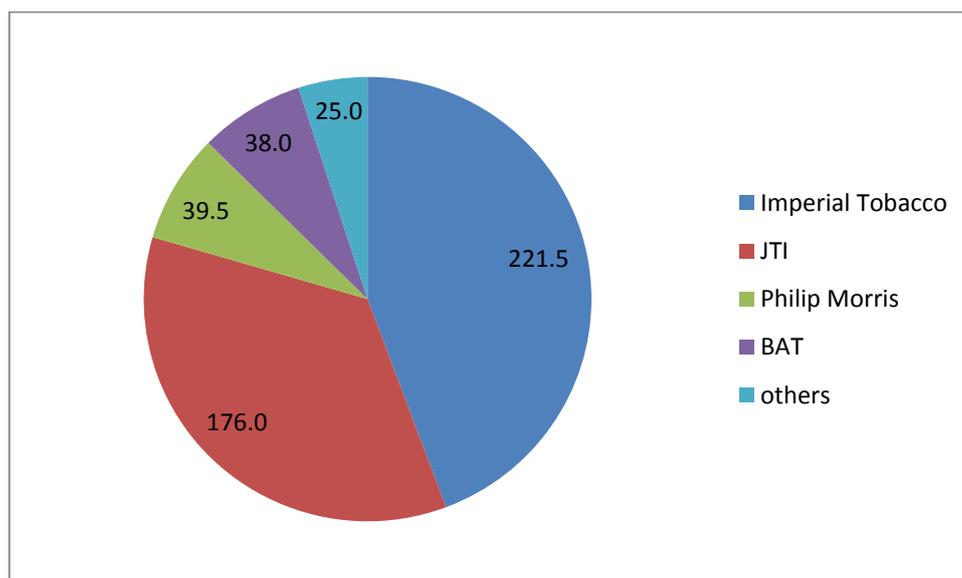
slightly higher, but only by around 0.3 pence per packet of 20 cigarettes. The levy on a 25g packet of HRT is between 41.2 and 41.7 pence per packet in 2015-6 (depending on the assumption on pass-through), rising to between 47.3 and 47.9 pence per packet in 2019-20. Approximately 78 percent of the £500 million annual revenue from the levy would be raised from cigarette sales, with the remaining 22 percent from HRT and other tobacco sales.

### Breakdown of payments by tobacco industry company

The most likely mechanism for payment of the tobacco levy would be as a surcharge to tobacco companies' corporation tax. Based on market share by volume of tobacco products sold in the UK for 2010 (the most recent year for which data has been collated – see Branston and Gilmore, 2014), Figure 1 below shows the distribution of a £500 million annual tobacco levy payment between tobacco companies with sales in the UK. The tobacco sales of Imperial Tobacco and Japan Tobacco International (JTI) amounted to almost 80 percent of the total UK tobacco market; based on market share, Imperial would make the largest levy single contribution (at just over £220 million), followed by JTI with around £175 million. Philip Morris and British American Tobacco (BAT) would also make contributions of just under £40 million each.

**Figure 1. Breakdown of tobacco levy payments by tobacco companies assuming 2010 market shares and a £500m total levy**

All figures in £m



## Suggested allocation of tobacco levy revenues to health services across the UK

An obvious potential use for revenue from a tobacco levy is to fund public health activities relating to tobacco control (including smoking cessation services and advertising campaigns). Public health expenditure, like other health expenditure in the UK, is a devolved competency, with the devolved administrations in Scotland, Wales and Northern Ireland having control over the allocation of NHS spending. Table 3 shows the suggested allocation of £500 million of annual tobacco levy revenue to each country in the UK, based on each country's share of adult smokers in the total UK population. This funding formula would ensure an equal amount of funding per smoker across the four countries of the United Kingdom.

**Table 3. Suggested allocation of revenue from tobacco levy across the countries of the UK**

<b>Country</b>	<b>Proportion of smokers in the UK (%)</b>	<b>Funding allocation (£m)</b>
England	82.5	412.6
Wales	5.1	25.7
Scotland	9.6	47.9
Northern Ireland	2.8	13.8
TOTAL	100.0	500.0

Notes: Statistics for adult smoking prevalence in each country in the UK taken from ONS (2014a), Figure 3. Adult population totals in each country taken from ONS (2014b).

### 3 Conclusions

The calculations in this report suggest that in order to raise £500 million per year in the 2015-16 tax year, a tobacco levy would need to be set at around 25 pence per packet of 20 cigarettes, rising to between 28 and 29 pence per packet by 2019-20 (depending on the assumptions made concerning pass-through of the levy to consumers). Around four-fifths of the total levy payment would come from the two firms with the biggest presence in the UK tobacco market, Imperial and JTI. If the revenues from a tobacco levy were distributed equitably across health service providers in the four countries of the United Kingdom, England would receive around 83 percent of total revenues, compared with 10 percent for Scotland, 5 percent for Wales and 3 percent for Northern Ireland.

## References

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