



# British American Tobacco PLC

## An Analysis of the Group's Pricing Strategy Across its Key Markets

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## *Abstract*

Tobacco products are subject to substantial excise and sales taxes. In most countries these increase over time, but the rate of increase varies between countries and across different types of tobacco products. The tobacco industry is opposed to increases in tobacco taxes, changes in relative tax rates for different tobacco products, and adjustments to excise structures because these adversely affect their profits. However, the tobacco industry can mitigate these shocks by means of its pricing strategies.

This paper investigates how the British American Tobacco Group has reacted to excise tax increases and declining industry volumes in order to maintain profitability in its 31 key markets (i.e. key countries) over the period 2006 to 2019. The Group's most common response to the excise tax increases was to overshift the excise increases. This meant that the retail price was increased by more than the increase in the excise tax. In a scenario of decreasing sales volumes and shifting consumer preferences, it is the relatively price-inelastic demand for the Group's products and its substantial market power which often make this strategy possible and successful. However, even though this strategy is most common, the trading environment differs in each market, which meant that the Group had to sometimes apply different strategies. These strategies include undershifting the tax (especially for cheaper brands), oversupplying the market in anticipation of excise increases, timed price changes, and adjusting product attributes in response to regulatory changes. Furthermore, as traditional combustibles are coming under increased pressure, the Group is developing new product categories.

## **Acknowledgements**

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## 1. Introduction

The global tobacco industry is a significant contributor to the economies of over 100 countries, employing thousands of people in retail, distribution, and manufacturing (although the sector is highly mechanised), and providing tobacco taxes which are a crucial source of revenue to most governments. Although prolonged consumption of tobacco products causes premature death, with the life expectancy for smokers at least 10 years less than for non-smokers (Luijckx *et al.*, 2019), the industry is a major provider of economic activity.

British American Tobacco (BAT) has a tax footprint which extends beyond corporate tax to include import and customs duties and employment taxes. In addition to the taxes that are levied directly on the Group, the Group is obliged to collect taxes for governments, including VAT and other sales taxes, employee taxes, and tobacco excise taxes. In 2019, the total tax contribution (borne and collected) by the Group amounted to £41.4 billion (£39.9 billion and £37.4 billion in 2018 and 2017 respectively). The focus of this study is on tobacco excise taxation and how the Group responds practically to significant increases thereof. In 2019, the Group collected a total tobacco excise tax of £32.4 billion (£31.1 billion and £29 billion in 2018 and 2017 respectively) (BAT, 2017-2019).

When faced with excise tax increases the Group may choose to absorb the tax increase by not increasing retail (net-of tax) prices at all, or by an amount which is less than that of the excise increase – effectively undershifting the tax increase and maintaining or increasing their market share. On the other hand, the Group might employ a pricing strategy which seeks to maintain profitability. This may involve an increase to all retail prices by an amount which exceeds the excise increase (overshifting). Alternatively, a hybrid pricing strategy may be applied, involving both undershifting and overshifting. In this last instance, excise tax increases are undershifted on the Group's Value-for-Money brands, reducing the impact of the tax on retail prices in the low-price segment of the market and maintaining the Group's market share therein. It may also have the effect of barring market entrance to competitors. To maintain profitability, prices for premium (more inelastic) brands are increased by more than the tax rise (overshifted).

The Group may decide to undershift excise increases in a particular market regardless of the product price band (across the board) for two reasons. First, undershifting may be required in high-margin markets where prices are already high and tobacco consumption is decreasing at a faster rate than the global average (WHO, 2019). The second concerns market competition. Market entrants compete on price and therefore the Group may be forced to undershift excise increases in highly competitive markets. Overshifting is not expected in competitive markets, and it is well documented that overshifting is explained by imperfect competition (Delipalla & O'Donnell, 2001; Reny *et al.*, 2012; Tiwary, 2011). In addition, the degree to which excise taxes can be passed on to consumers is conditional on underlying supply and demand price elasticities. Undershifting is expected when the demand curve is more elastic,<sup>1</sup> while an adequately convex curve (i.e. isoelastic) expects overshifting (Nelson & Moran, 2019).

Overshifting, whether across the board or selectively, creates a larger price burden to be borne by consumers than the tax alone would, adding to the debate on the regressive nature of excise taxes. A number of studies have contended that excise taxes are regressive, finding that excise

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<sup>1</sup> The demand curve does not necessarily have to be concave; it can be straight or even mildly convex.

forms a larger fraction of both income and expenditure for low-income households than for middle- or high-income households. Put differently, that the total share of income that low-income households devote to excise taxes compared to their counterparts is indeed unbalanced, and thus that increasing the taxes is regressive (Gonzalez-Rozada *et al.*, 2016). This is indeed true for smokers who do not quit or cut down. Lower income smokers across the world are more likely to quit smoking in response to excise increases (which translate into price increases), in turn ameliorating regressivity.

While overshifting and undershifting (or a strategic selective combination thereof) of excise taxes are the most effective and commonly observed pricing strategies used to retain profit or market share, especially under imperfect market conditions. Other strategies also exist that can be used to minimise or avoid the impact of excise increases.

Stockpiling, referred to as trade-buying from the manufacturer's perspective, is the action of over-supplying the market in anticipation of a tax increase. This effectively increases volumes in one year and reduces them in the next as the stockpile is absorbed. Pre-tax-increase prices are paid on the stockpiled goods, reducing the effectiveness of the tax increase and sheltering industry profits (Ross & Vellios, 2017). Alternatively, deliberately timed price increases may reduce the impact of volume declines by 'buffering' consumers through more gradual price adjustment (Chaloupka *et al.*, 2011). This may involve a partial increase prior to the tax rise, and a partial increase with the tax rise, thereby creating a two-step increase as opposed to a larger one-step rise. A third option is that the industry might pass on the full amount of the increase before the actual tax increase. Its profits will increase and demand will respond downward, causing a decrease in tax revenue. When the tax increase comes into effect, demand will have already responded and the tobacco industry may use this to claim that excise tax increases do not reduce consumption (Hiscock *et al.*, 2018). Timed pricing is implicit and cannot be explicitly observed. Methods may be devised to infer deliberately timed pricing, and future studies may benefit from these. Other strategies include price discrimination, promotions (such as rebates to retailers or discounts on products after a price increase), and lowering producer prices. These may have the effect of retaining lower-income and more price-sensitive consumers, and therefore would add to smoking-related inequalities<sup>2</sup> (IARC<sup>3</sup>, 2011). Finally, Ross & Vellios (2015 and 2017) and Apollonio & Glantz (2020) find that the industry may undermine tax policies by changing product attributes such as weight or length (an empirical example of this is discussed in the section 5).

The BAT Group is a publicly listed company that provides insight to the trading conditions in the various regions (and the markets therein) in which it operates through its annual reports. The strategies described above are legal, but they highlight the importance, for tax authorities, of observing and analysing tobacco industry behaviour in response to excise tax changes given that tax authorities' objective is to maximise revenue and, for some, to reduce the prevalence of smoking. This paper investigates the pricing strategy employed by the Group through its annual reports over a 14-year period.

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<sup>2</sup> There is a strong link between socio-economic group and cigarette smoking. Price-related promotions and/or price discrimination strategies (which are particularly effective for low-income individuals) have the effect of strengthening this relationship (Amos, 2016).

<sup>3</sup> International Agency for Research on Cancer.

## 2. Key Markets

Through its annual reports, the Group provides quantitative profit, tax, and revenue data at a *regional* level. While these figures are interesting, they are not meaningful over time because the Group restructures its regions occasionally, which causes regions to vary in country composition over time. During the period 2006-2019, BAT changed their regional structure four times in an effort to reduce complexity, align and balance the scale of the regions, improve the efficiency of management structures, and take into account various acquisitions. ‘Restructuring and Integration’ costs impact profit trends substantially, to the extent that the Group provides two profit figures in addition to profit after tax. These profit figures are discussed in section 4.

The Group’s most significant (and recent) regional restructuring came after it acquired the not-yet-owned stake (42%) in Reynolds American Inc (Reynolds America or RAI) in 2017. This reduced the number of their principal associate companies to one – ITC Ltd in India (BAT, 2017). And, as of 1 January 2018, the Group simplified its regional structure from four to three regions. These are Europe and North Africa, Americas and Sub-Saharan Africa, and Asia-Pacific and Middle East. The addition of RAI meant that the United States was added as a fourth region.

In 2019, the Group operated in over 200 markets globally, catering to over 150 million customers, covering over 11 million retail points of sale, managing over 47 factories in 44 countries, and employing over 94,000 employees across its subsidiary and associate companies (BAT, 2019). The Group has 31 *key* markets, which are reviewed in every one of the BAT annual reports between 2006-2019, allowing for a matrix of country-specific information. For each of these 31 key markets, BAT typically reports on changes in volumes, market share, excise tax increases, down-trading or illicit trade activities, changes in the product mix, restructuring and integration costs, instances of price competition, market contractions and the reasons thereof, brand performances, and more (see section 3). And, crucial to the study at hand; excise-led price increases, net-of-tax price changes, and profit trends are provided. After the most recent regional structuring, the following are the Group’s key markets in alphabetical order:

Europe and North Africa	Americas and Sub-Saharan Africa	Asia-Pacific and Middle East
1. Belgium	14. Argentina	23. Australia
2. Egypt	15. Brazil	24. Bangladesh
3. France	16. Canada	25. Pakistan
4. Germany	17. Chile	26. Indonesia
5. Italy	18. Japan	27. Malaysia
6. Netherlands	19. Mexico	28. South Korea
7. Poland	20. Nigeria	29. New Zealand
8. Romania	21. South Africa	30. Taiwan
9. Russia	22. Venezuela	31. Vietnam
10. Spain		
11. Switzerland		
12. Turkey		
13. Ukraine		

*Table 1.* BAT Group key markets by the most recent regional structure.  
*Source:* BAT Annual Report 2019

### 3. Method and Data

This study employed a primarily qualitative design, which focussed on analysing annual reports released by the BAT Group. Annual reports are, by construction, not fully complete. They demonstrate the business activities of listed companies in an arrangement of audited financial statements, management discussions, adherence to regulations etc. These are relevant for the end users, namely investors and creditors. For this reason, there may be an incentive for concealing information (Wang *et al.*, 2010). While tobacco businesses do have a documented history of efforts to conceal information from the public (Collin *et al.*, 2004; Maguire & Cambell, 2000; Lee & Collin, 2006; LeGresley & Lee, 2008 and 2017), the study at hand avoids this concern by focusing on the pricing strategy the Group employs, as reported in its annual reports. This is objective and can be inferred down to a country level, year-on-year.

The language applied by the Group in its annual regional reviews requires some interpretation. The company in many instances is explicit about the pricing strategy employed, for example “price increase”, “excise-led price increase” or “industry price increase”. Where the Group refers to “stronger pricing”, “improved pricing”, “better pricing”, “favourable pricing environment”, “stronger prices”, “robust pricing”, “good pricing”, “significant pricing”, or, as is frequently the case in more recent reports, simply “pricing”; it has been assumed the Group is referring to higher pricing and thus overshifting when it is responding to an excise tax increase.

Fourteen Annual Reports (2006-2019) are considered, and the pricing strategy employed by the Group’s 31 key markets is analysed. The time frame and number of markets in question allows for a matrix with a maximum of 434 possible observations per variable being tracked. These variables include changes in volume and market share, illicit trade, down-trading, and years in which *material*<sup>4</sup> excise changes occurred, alongside (net-of-tax) price and excise-led price increases. Additional factors which impact profit, such as adverse/favourable exchange rate movements, competitor pricing, production cost changes, increased marketing investments, and changes to product mixes, are also captured. Lastly, trends in volume and market share across the Group’s Global Drive Brands (which are discussed in the following section) and other large international brands, as well as the dates on which they were launched into the various markets, are also examined.

The Group’s Annual Reports are prepared in accordance with the US Securities Exchange Act of 1934. The data mentioned have been retrieved mostly from the Regional Review section of each report, as well as from sections such as the Chairman’s, Chief Executive’s, and Financial Director’s reviews, and from the Strategic Management and Business Environment sections (the latter addressing principal risks). The financial statements have been used for quantitative particulars, such as profit, revenue, and volumes.

Below are sample excerpts from the 2011 Annual Report, showing how the qualitative secondary data are presented:

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<sup>4</sup> Excise taxes are generally increasing in most countries with an occasional spike or year-of-no-increase. The Group mentions only those excise changes which *materially* impact their profitability in their annual reports. This study focusses on these more consequential excise changes, and how the Group responds practically to these.

From the Regional Review:

In Mexico, industry volumes declined sharply as a result of excise-led price increases at the beginning of 2011, as well as increased purchases by the trade during December 2010 in anticipation of the price increase. Market share was marginally down on last year, while profit was higher, benefiting from increased pricing and lower costs.

From the Risks section:

A number of significant excise shocks have taken place over the past two years, for example in Romania, Turkey, Malaysia, Mexico and Japan. To date, the Group has been able to balance these shocks with its geographic spread, and it continues to develop effective measures to address the risk.

From the Chairman:

Dunhill volumes increased slightly as strong growth in Brazil, Romania and the Gulf Council Countries, and good performances by Malaysia and Russia, were offset by a decline in South Korea which was affected by competitor pricing.

From the Strategic Management section:

Kent performed very strongly in 2011 across all regions. Global volume grew by 10 per cent to a record 67 billion cigarettes. This robust performance has been achieved through share gains in many key markets such as Russia, Ukraine and other eastern European markets. Kent also grew in Japan, Chile and Romania, as well as the Middle East and Vietnam.

From the Financial Director:

The Group's organic revenue growth was also affected by the sale of its Belgium distribution business, Lyfra NV, its withdrawal from distributing phone cards in Brazil and products in Norway and the termination of the Gauloises licence agreement applicable to Germany.

These comments effectively address the same issue from different angles. When used together with previous sub-reports and Group-level particulars, they allow for abstraction of the year-on-year developments which occurred in each individual market.

## **4. Group Level Overview**

### **4.1 Group Products**

The British American Tobacco Group manufactures products in four segments: Combustibles, New Categories, Traditional Oral (TO), and Other, with revenue contributions descending in that order (for 2019 in £m: Combustibles 22,951, New Categories 1,255, TO

1,081, and Other 541). New Categories include Vapour, Tobacco Heating Products (THP), and Modern Oral (MO) (BAT, 2019).

Combustibles remain the company's core business despite a trend of sustained decreasing volumes owing to changing consumer preferences and the reported impact of illicit trade. The Group's Strategic Portfolio consists of eight brands of combustibles, five of which are Global Drive Brands (GDBs), and the remaining three appended to the portfolio following the RAI acquisition. The GDBs are Rothmans, Pall Mall, Lucky Strike, Kent, and Dunhill while RAI Companies' strategic brands comprise Newport, Natural American Spirit, and Camel. In 2019, the Strategic Portfolio contributed £18,793 million in revenue (72.6% of total) (for 2018, GDPs contributed 70% of total revenues for Combustibles) (BAT, 2018 & 2019).

To combat the consumer preference shift away from combustibles, BAT is increasingly investing in the research and development (R&D) of their New Categories products. The Group refers to these as *Next Generation Products* and, as of 2018, *Potentially Reduced Risk Products*. In 2019 the Group hired 1,500 scientists to focus on R&D for Potentially Reduced Risk Products, and, as of 2020, the Group had published 60 peer-reviewed research papers on its new categories range. Expenditure on R&D was £376 million in 2019 (£258 million in 2018) with a focus on products which could provide lower health risks than traditional combustibles (BAT, 2018 & 2019). This study, however, focusses on the Group's Combustibles category.

## 4.2. Group Figures

The figures provided in this section comprise contributions from *all* the Group's product categories. Although the focus of the study is on combustibles, BAT does not provide figures by product category,<sup>5</sup> i.e. Combustibles, New Categories (Vapour, THP and Modern Oral), and Traditional Oral. The Group's first e-cigarette (Vapour) was released in 2013 and the first THP product in 2015, while the 2017 RAI acquisition saw BAT's first significant increase in the size of their modern oral range<sup>6</sup> (BAT, 2013, 2015, 2017). These new products, together with traditional oral products, comprise a relatively small (but increasing) part of Group turnover collectively, reaching a peak share of revenue of 10% in 2019 (BAT, 2019).

The Group reports two profit figures in addition to profit after tax, namely (1) profit from operations and (2) adjusted profit from operations; these, along with volumes and revenues, are provided in table 2. 'Profit from operations' includes restructuring costs, net gains/losses on disposal of business and brands, brand impairments, exceptional credits etc. Profit from operations is distorted by these 'adjusting' items. Therefore, 'adjusted profit' from operations excludes the impact of adjusting items and is the larger of the two amounts. Where the Group reports profit trends in its Regional Reviews section, these relate to adjusted profit from

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<sup>5</sup> In the most recent three annual reports, however, the Group did provide figures by category. The volume of combustibles sold by BAT was 683 billion sticks in 2017, which rose 701 billion sticks in 2018 and dropped to 668 billion sticks in 2019, with the acquisition of RAI in 2017 positively impacting 2018's volumes. Overall, revenue accrued by the combustibles category grew substantially, from £18,166 million in 2017 to £22,072 million in 2018, as a result of pricing and the RAI acquisition. Revenue grew incrementally in 2019 to £22,951.

<sup>6</sup> The R.J. Reynolds Tobacco Company introduced Camel snus, a premium pouched snus product in 2006.

operations, therefore the study at hand focusses on *adjusted* profit from operations in the sections to follow.

	Revenue £m	(1) Profit from Operations £m	(2) Adjusted Profit from Operations £m	Volume bn
2006	9 762	2 622	2 797	689
2007	10 018	2 905	3 003	684
2008	12 122	3 572	3 717	715
2009	14 208	4 101	4 461	724
2010	14 883	4 318	4 984	708
2011	15 399	4 721	5 519	705
2012	15 190	5 412	5 681	694
2013	15 260	5 526	5 820	676
2014	13 971	4 546	5 403	667
2015	13 104	4 557	4 992	663
2016	14 751	4 655	5 480	665
2017	20 292	6 412	7 929	686
2018	24 492	9 313	10 347	708
2019	25 877	9 016	11 130	668

*Table 2.* Group revenues, profits, and volumes

*Source:* BAT Annual Reports 2006-2019.

*Note:* figures include contributions from Vapour (2013-2019), THP (2015-2019) and Modern Oral (2017-2019).

### 4.3. Group Taxation

In 2019 the Group contributed £39,826 million in duty, excise, and other taxes (DE&O taxes) which was nearly seven times the Group's profit after corporate tax. Although DE&O taxes are increasing in absolute terms, the share of DE&O taxes in the Group's gross turnover has remained relatively unchanged over time. It increased at a decreasing rate until 2016 before declining significantly and has been at an all-time low in the most recent two years (BAT, 2006-2019). This confirms that there is an incentive for governments to use excise taxes (and to increase them substantially on a continuing basis) to obtain revenues and achieve public health objectives (Dutkowsky & Sullivan, 2017).

	Gross Turnover £m	Revenue £m	Duty, Excise and Other Taxes £m	Share DE&O in GT
2006	25 503	9 762	15 741	62%
2007	27 104	10 018	17 086	63%
2008	33 921	12 122	21 799	64%
2009	40 713	14 208	26 505	65%
2010	43 855	14 883	28 972	66%
2011	46 123	15 399	30 724	67%
2012	45 872	15 190	30 682	67%
2013	46 185	15 260	30 925	67%
2014	42 506	13 971	28 535	67%
2015	41 000	13 104	27 896	68%
2016	46 887	14 751	32 136	69%
2017	58 072	20 292	37 780	65%
2018	63 045	24 492	38 553	61%
2019	65 703	25 877	39 826	61%

*Table 3.* Group turnover, revenues, DE&O taxes and share of DE&O taxes in gross turnover.

*Source:* BAT Annual Reports 2006-2019.

*Note:* figures include contributions from Vapour (2013-2019), THP (2015-2019) and Modern Oral (2017-2019).

DET – Duty, Excise and Other Taxes

GT – Gross Turnover

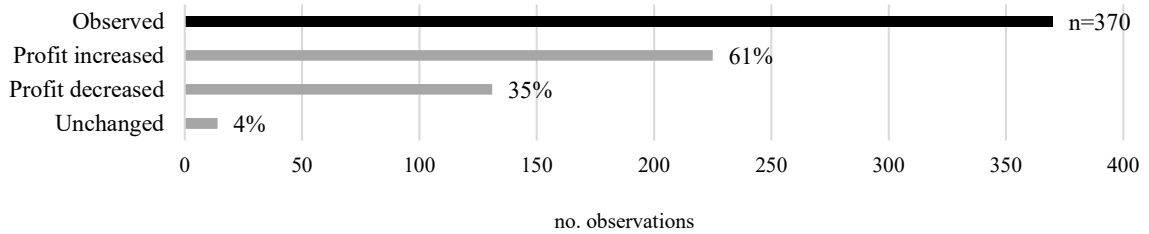
## 5. Pricing Strategy

### 5.1. High Level Overview

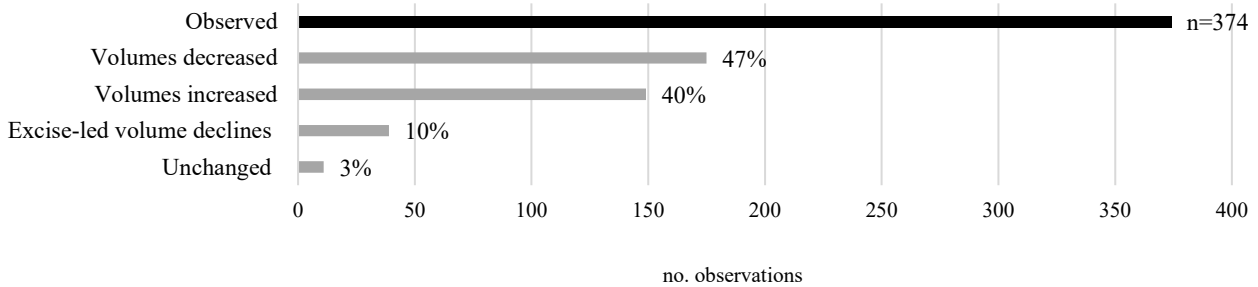
The Group provides profit numbers at a group and regional level. The regional level figures are interesting but not meaningful over time because, while restructurings aim to balance and align regional scales, they cause the country composition of regions to vary, as outlined in section 2. Quantitative profits and volume are not provided at a country level, but profit and volume *trends* are. These, by-country profit and volume trends, are simply referred to as profit and volume trends in this section and are provided in figures 1 and 2.

Profit trends were reported in the Regional Review and other sections for 85% (n=370) of the 434 observations (covering 14 years and 31 countries), with increases in profits reported in 61% (n=225) of these observations, while profit decreased 35% (n=131) of the time. Volume trends were reported 87% (n=374) of the time, with increases reported for 40% (n=149) of the time and decreases reported for 47% (n=175) of the time. Of these decreases in volume, 21% (n=39) were explicitly attributed to increases in the excise tax. Three per cent (n=11) of the time volumes were unchanged from one period to the next.

### Profit Trends Reported



### Volume Trends Reported

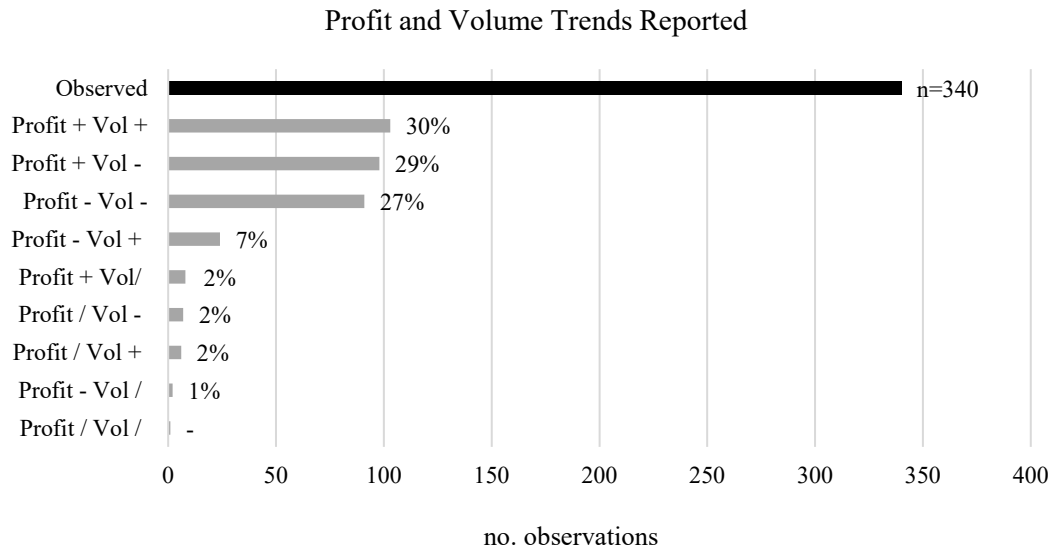


*Figures 1 and 2.* Profit trends reported and volume trends reported, respectively.

*Source:* BAT Annual Reports 2006-2019.

*Note:* Values are as a percentage of the 370 and 374 “observed” observations where profit and volume changes were reported, respectively.

There were 340 observations where both profit and volume trends were reported in a given year and these are provided in Fig. 3. In 34% (n=114) of these, profits increased although volumes declined. Profits rose with rising volumes 30% (n=103) of the time, 27% (n=91) of the 340 observations featured decreased profits and decreased volumes, and in the remaining observations either profit or volume was flat, or both were.



*Figure 3. Profit and volume trends reported.*

*Source:* BAT Annual Reports 2006-2019.

+ : Increased.

- : Decreased.

/ : Unchanged (Flat).

Values are as a percentage of the 340 “observed” observations where and both profit and volume changes were reported.

In 2006 Paul Adams (then Chief Executive) outlined the pricing strategy the Group would adopt over the following decade (covering 10 of the 14 years considered in this study). Adams revealed the Group’s expectations that average daily cigarette consumption, and the global incidence of smoking, would continue to decline over the decade. This would reduce the smoking percentages of populations who smoked, particularly in markets where prices were already high (high-margin markets) such as Germany, Canada, and Japan, where volumes are shrinking more rapidly than the global average.

To offset these declines, the Group would, he announced, look to raise prices disproportionately across all markets, more so in low-margin markets where “volume and profitability are expected to grow” as consumer incomes grow at faster rates than those in higher-margin markets. This would reduce the Group’s reliance on high-margin markets. Adams stated that “this future market represents a volume and profit pool where, for those who are best positioned, there will still be a great deal to play for” (BAT, 2006). The study at hand finds that the Group has managed to adopt a pricing strategy which balances higher pricing across both high-margin markets (on which it has historically relied) and lower-margin markets (in which prices are gradually converging to those of higher-margin economies). Higher pricing was reported in 51% (n=220) of the market-year combinations, and higher pricing and profit movement in 48% (n=208) market-year combinations.

The Group significantly reduced profit-by-country *reporting* after 2016. Fig. 4 provides the number of countries for which profit trends were provided each year. In most years, profit trends for each of the 31 key markets were given, but in 2017, 2018, and 2019 the profit trends were provided only for 13, 16, and 15 countries respectively.

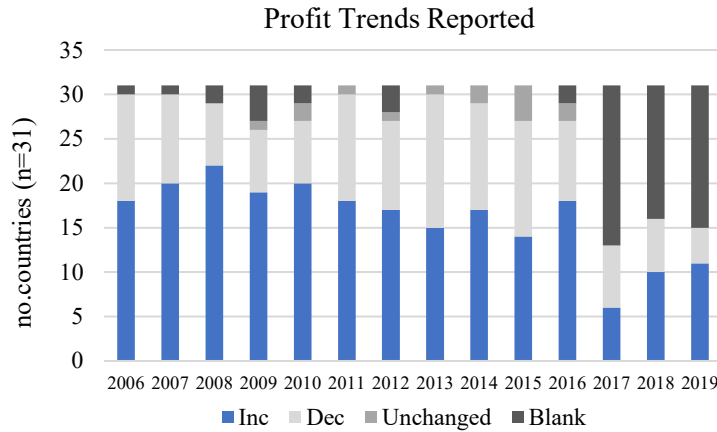


Figure 4. Number of countries for which profit trends were reported each year.  
Source: BAT Annual Reports 2006-2019.

In Fig. 5 the percentage of key markets that reported an increase in profits each year is provided. In addition, quantitative profit and organic<sup>7</sup> profit values are given. It is clear that profits benefitted substantially from the 2017 RAI acquisition. Organic profit, on the other hand, increased at a decreasing rate for 8-years (2006-2013) before decreasing marginally between 2013 and 2015 and remained relatively flat thereafter. What the figure makes clear is that while organic profits are sluggishly trending upward, the Group is reporting which countries are responsible for profit increases and decreases at a decreasing rate. This is evidenced by the dotted trend line, which moves in the opposite direction of profits over time.

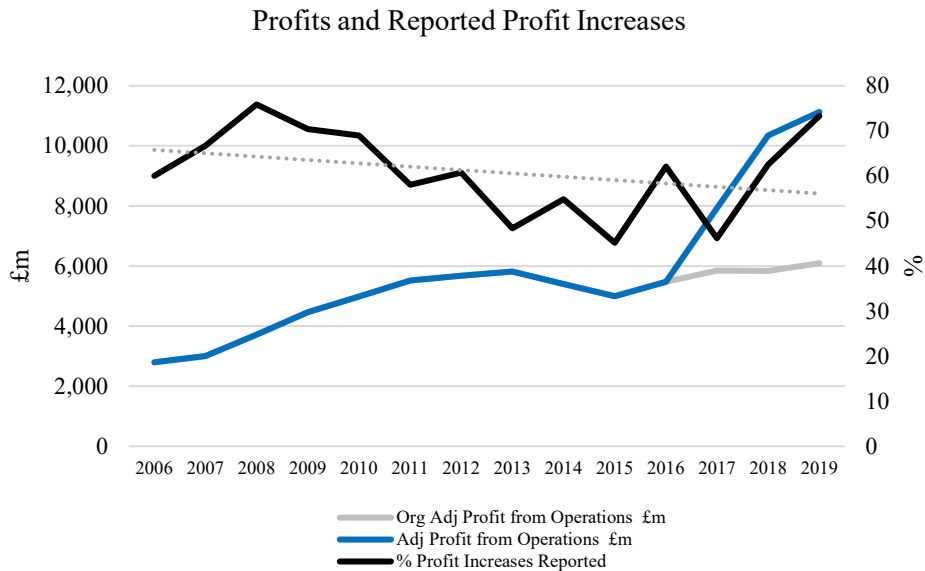


Figure 5. Profit, organic profit and percentage of key markets that reported an increase in profit each year.  
Source: BAT Annual Reports 2006-2019.

<sup>7</sup> Where figures are presented as 'organic' or 'org' they exclude the impact of the contribution of businesses and brands acquired in 2017, which include in the main, RAI, as well as Fabrika Duhana Sarajevo, Winnington, and Bulgartabac.

Reporting revenue trends by country first appeared in the Group's Regional Review sections from 2017 and, where profits were mentioned, they concerned significant adjusting items only (and not adjusted profit trends as had been the case before 2017). In addition, while *profit* trends were reported for at least 26 countries on average per year prior to 2017, in the 2017-2019 reports, *revenue* trends were only reported for 5 countries on average each year.

It appears that the Group has adjusted what and how it reports on its key markets, namely which markets are responsible for profit increases and decreases. Reporting profit trends in these markets is also being replaced by reports of revenue trends. Future studies which aim to monitor the Group's pricing strategy and profitability (and those of the tobacco industry at large) ought to be aware of the way in which the tobacco industry's reporting of its activities has changed.

## 5.2. Three Case studies (South Africa, Australia and Taiwan)

This section graphically presents changes to the market, from BAT's perspective, for three of the Group's key markets, along with the Group's practical responses to these developments. In each case, changes to the respective markets have been captured as binary variables and mapped chronologically. Seven binary variables were analysed and plotted. These are: pricing, change in volume, change in market share, illicit trade, down-trading, significant/material excise increase, and profit change variables. On the graphs, a positive value suggests a positive development (from BAT's perspective) and vice versa. For example, if the Group raised prices in a given year and country, then the *binary higher pricing* variable would take on a value of +1 for that year, and this would be reflected in the green shaded portion of the graph (positive field). If illicit trade accelerated in a given year then the *binary illicit trade* variable would take on a value of -1, and this would be reflected in the red shaded portion of the graph (negative field); conversely, if illicit trade decreased, the variable would take a value of +1. If the Group did not report a development for a given variable in a given year, or if the variable was reported as unchanged, then a value of 0 was assigned and there would be no development depicted visually.

The occurrence of a significant excise tax increase, followed by higher pricing and subsequent profit increases, indicates the presence of overshifting. This is often accompanied by lower volumes, increased illicit trade, and possibly down-trading in high-margin markets. Market share gains that co-occur with price increases typically imply a hybrid overshift/undershift strategy. In such instances, excise increases have been absorbed on cheaper brands so that these become relatively cheaper compared to competitors' products. While this indeed negatively impacts the Group's product mix and possibly its profits, it attracts new customers. Net undershifting is evidenced when a significant excise tax increase is not associated by stronger pricing, and often profits decrease as a result. In years when the Group loses market share, this is largely as a result of competitor pricing. When volumes increase with, or prior to, a significant excise increase (with or without accompanying pricing changes) then trade buying ('stockpiling' from the Group's perspective) has occurred in anticipation of the tax increase.

In Australia, it was found that the Group employed a hybrid pricing strategy in response to a significant excise shock, and there was evidence that the Group adjusted product attributes in

response to a strong regulatory change. In South Africa, a reversal in pricing strategy from overshifting to undershifting was observed, owing to significant excise tax increases and increased market competition. Finally, in Taiwan it was found that the Group achieved prolonged profits as a result of low and unchanged excise taxes, and an increased market share because of its particular position in the Taiwanese market.

### Australia

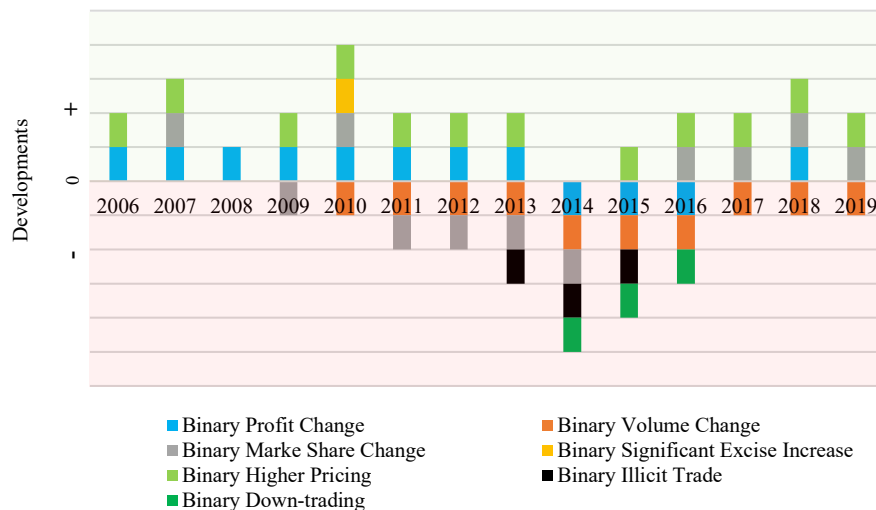


Figure 6. Market developments in Australia (BAT perspective).  
Source: BAT Annual Reports 2006-2019.

In Australia, a significant ad hoc excise tax increase in May 2010 was overshifted on premium brands and absorbed (undershifted) on cheaper and value-for-money brands, which resulted in an overall market share increase. Specifically, Dunhill (premium) lost market share after three years of consecutive share growth, but the share growth Winfield (cheapest) and Benson & Hedges (value-for-money) more than offset this. The net effect was higher pricing, which meant that BAT had overshifted the tax increase. Volumes declined from 2010 onward as a result of the higher prices, and also of regulatory changes, particularly plain packaging regulations. In 2011, the Group incurred substantial costs associated with its campaign against plain packaging, and in 2012 plain packaging was officially introduced. While the regulatory change has proven to be a catalyst for reducing smoking, BAT Australia sought to minimise its impact by releasing modified names and new products to its catalogue of brands.

This further differentiated the Group’s brand variants by price, introducing a wider range of products and therefore of price points. As a result, consumers could choose to trade down only marginally where, previously, switching to cheaper cigarettes meant a greater price change. Therefore, consumer down-trading (which accelerated in 2014, 2015 and 2016) was less discrete than if the Group had not adjusted certain product attributes. In addition, by modifying brand names, the Group was able to successfully impart product information which had previously been communicated by packaging designs (Greenland *et al.*, 2016). Furthermore, with the introduction of plain packaging the Group substantially increased its volume-based price discount. These two examples illustrate that, in addition to tactical pricing

strategies, different trading environments allow for additional, sometimes non-pricing, strategies. In the Australian case, the Group effectively segmented the market in response to tobacco-control measures, and this resulted in consumers being able to avoid excise tax increases by trading down or buying in bulk.

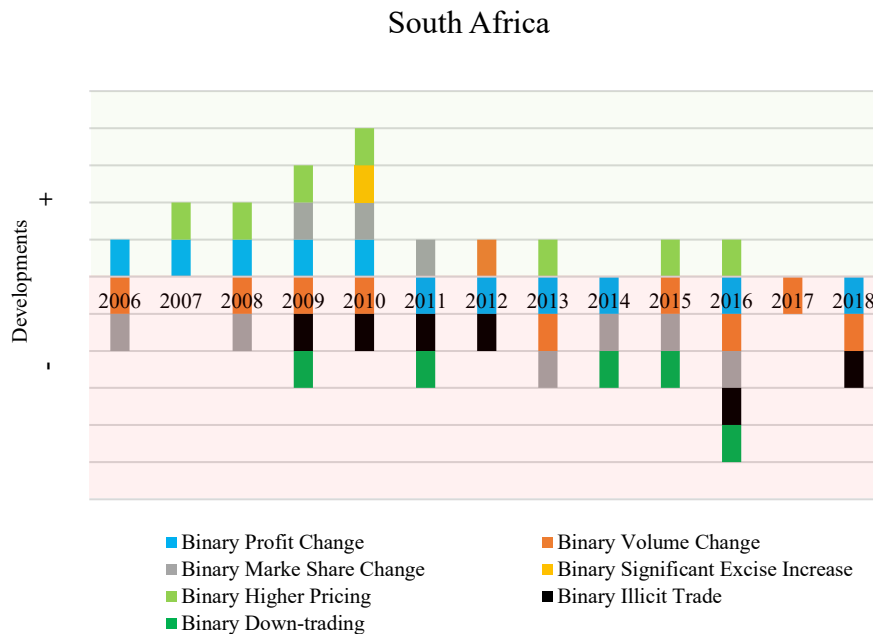


Figure 7. Market developments in South Africa (BAT perspective).  
Source: BAT Annual Reports 2006-2019.

In South Africa, higher pricing was employed in the pre-2010 period and largely disappeared after that year. Linegar & van Walbeek (2018) confirm that, prior to 2010, there were two substantial price increases each year, specifically in March and July/August. Holding costs constant, the price increases (a combination of excise-led and discretionary increases) had the net effect of overshifting excise tax increases before 2010. This increased profits for the Group between 2006 and 2010, despite volumes decreasing over the period. In 2010, the Group reported a significant excise tax increase and subsequent increases in illicit trade and consumer down-trading.

In addition, the high net-of-tax retail prices collected by the Group and other established market players encouraged competitors to enter the market. Entrants competed on price and this reduced the Group's capacity to pass through the excise increases to consumers. Therefore, the significant 2010 tax increase and subsequent tax increases were undershifted and this is reflected in the declines in profit reported by the Group each year post-2010, except in 2015 and 2017, for which no profit trends were divulged. The South African case suggests that the Group's propensity to shift excise tax increases on to consumers is a function of market competition.

## Taiwan

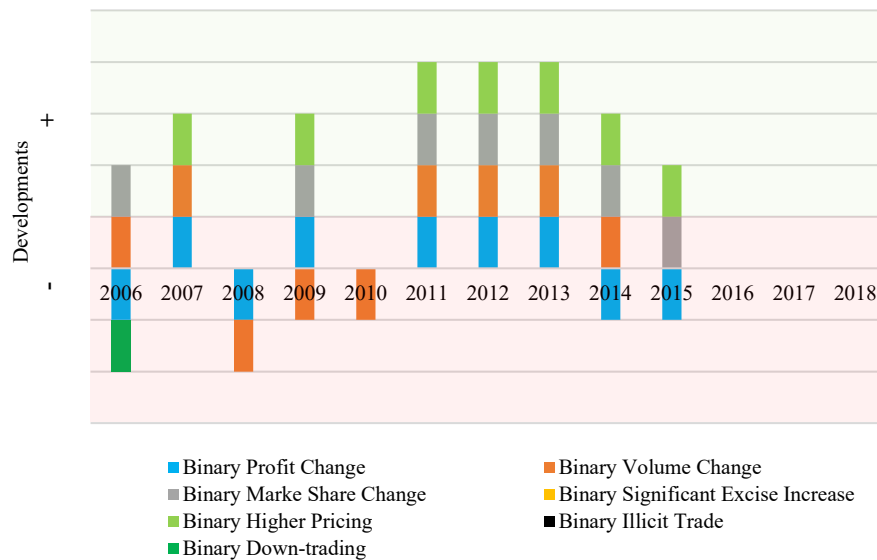


Figure 8. Market developments in Taiwan (BAT perspective).  
Source: BAT Annual Reports 2006-2019.

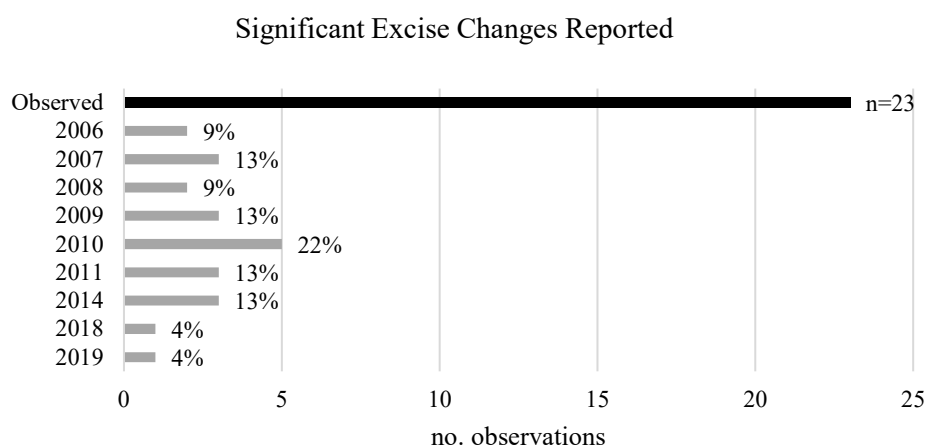
The Group reported profits and volumes which fluctuated inconsequentially over the pre-2010 period in the Taiwanese market. Then, over the period 2011 to 2016, there were no excise tax increases in Taiwan. This meant the Group was able to adjust their prices upward entirely on a non-excise-led basis and this increased revenues significantly. During the period of no changes to the tobacco tax, the Group reported both higher pricing and increased market share each year.

The latter effect was the outcome of the fact that price increases by the Group were less than those applied by Japan Tobacco (JT), the leading tobacco company in Taiwan by market share. Gao *et al.* (2019) show that JT increased the average retail price per pack of 20 cigarettes between 2011 and 2016 from \$NT79.12 to \$NT89.89. On the other hand, BAT increased the average retail price per pack of 20 cigarettes between 2011 and 2016 from \$NT69.94 to \$NT75.77,

Profit increases were reported for the low-tax period 2011- 2016, except in 2014 and 2015, when increased marketing investment more than offset the higher revenues, and in 2016 when no market changes (developments) were reported. Volumes and market share were up in the same years that profit was up. By raising prices by less than JT, the Group not only successfully overshifted the low excise tax (significantly) and increased market share, but, more importantly, made their product relatively more affordable than JT's product, and thus stimulated consumption. This was possible only because of the low and unchanged excise tax environment in Taiwan between 2011 and 2016.

The Taiwan case is a clear example of the impact of a low excise tax environment, where tobacco companies will continue to price their profits in the absence of excise tax increases.

Because trading environments differ across the world and over time, the Group has had to apply a variety of strategies to maintain its profitability. The largest threat to Group profits is increasing excise taxes on its products, which force retail prices up in the long run; promoting cessation among smokers and decreasing consumption among those who continue to smoke (IARC, 2011, and van Walbeek, 2006). Altogether the company recorded 23 significant excise changes in 19 of its key markets, with 22% of these occurring in 2010. The tobacco industry opposes excise increases, and particularly sudden or significant increases, as these have long-lasting impacts on their business. The *material* excise changes reported by the Group were more often than not overshifted; this was the case 57% (n=13) of the time.



*Figure 9.* Significant excise changes reported, and in which years these occurred.  
*Source:* BAT Annual Reports 2006-2019.

## 6. Discussion

Excise taxes are in most countries generally increasing, with occasional spikes and, in some countries, years of no change. Increases are advocated as part of government efforts to raise revenue, or because of public health recommendations. The Group’s principal response to excise shocks is to increase the net-of-tax price of its products by more than the tax increase (overshift). In theory, this strategy has the effect of retaining profits at the expense of volumes. Overshifting is even more effective if it is hybrid in nature rather than occurring across all price points. The literature on excise pass-through is limited and much of it focusses on the USA (Linegar & van Walbeek, 2018; Sullivan & Dutkowsky, 2012; Harding *et al.*, 2012 and Espinosa & Evans, 2013). The majority of these studies find that excise taxes are overshifted, and that the industry is compensated by higher profit margins for losses in the volume of sales. The findings of the present study suggest a more complex scenario, at least for the BAT Group. It was found that overshifting the tax increase did not always increase the Group’s profits. In fact, holding costs constant, excise-led volume declines and competitor pricing more than offset the higher prices achieved through overshifting 46% of the time. In these instances, excise increases were only partially recovered through higher prices.

Differing market conditions meant that in instances the Group had to turn to alternative strategies, such as undershifting, stockpiling the market, possibly timing its price changes (which was not explicitly observed), and, increasingly, developing new product categories beyond traditional combustibles. The Group undershifted significant excise increases 43% of the time, and this increased market share, except in instances where illicit trade accelerated considerably. Increasing the net-of-tax price on its products by less than the excise increases caused profits to decrease each time, except where favourable exchange rates more than offset the decrease. There were a number of instances where volumes increased substantially in anticipation of a significant excise tax increase, for example in Brazil, Mexico, and Russia. This trade-stocking/buying activity not only stabilised or increased Group profits but caused volumes to increase in line with the tax increase, and this undermines the efforts of tobacco-control advocates, who argue that increasing the tobacco excise tax reduces consumption. It should be noted that this effect is ephemeral. As the impact of trade-stocking wanes, increased tax revenues will be observed in addition to reduced consumption, in line with a substantial body of research indicating that sizeably increasing the excise tax and the price of tobacco products, is the most consistently effective instrument for decreasing tobacco consumption.

In markets where excise taxes were low, the Group was able to apply sizeable price increases and raise profits. This profit growth allowed the Group to invest in research and development and further promote their products by increasing marketing investments notably. There is significant scope to raise tobacco taxes in these low-tax markets.

As global combustibles are increasingly coming under pressure, the Group has responded by developing a broad range of Potentially Reduced Risk Products (PRRPs). BAT's PRRPs have continued to gain traction since the Group released its first e-cigarette in 2012, with volumes and profits increasing from the outset and throughout. The development of these non-combustible products has been aimed at the long-term reduction of tobacco harm (as reported by the Group), and addresses changing consumer preferences. This more modern measure, and the historic judicious pricing strategies and non-pricing measures discussed above, have allowed the Group to thrive and have made it one of the world's most successful businesses.

## **7. Conclusion**

The tobacco industry is opposed to increases in tobacco taxes, changes in relative tax rates for different tobacco products, and adjustments to excise structures, because all of these adversely affect their profits. However, the tobacco industry can mitigate the negative effects of these changes by means of its pricing strategies. The tobacco industry is also faced with declining volumes, shifting consumer preferences, and a regulatory environment which gives precedence to public health.

Altogether, very little is known about how the British American Tobacco Group responds practically to these factors. This study investigated measures employed by the Group to maintain its profitability, using both quantitative and qualitative data for 31 of the Group's key markets. It was found that excise tax increases are not always fully passed through to consumers by the industry incumbent BAT, although overshifting is the Group's most common response to excise tax increases. The Group's ability to overshift tax increases is a function of the underlying degree of market competition, and overshifting does not guarantee increased profits. In high-margin markets, where consumption is decreasing at a greater rate

than the global average, price increases are even further constrained. The Group has historically relied on these higher-margin markets for profitability, but is balancing this out by increasing prices by disproportionately more in low-margin markets. It was also found that the Group is adjusting what and how it reports on its key markets, namely which markets are responsible for profit increases and decreases. And, reporting profit trends in these markets is being replaced by reporting revenue trends.

An additional pricing strategy frequently observed is undershifting excise tax increases, and where the Group has done this it has been compensated with gains in market share but lower profits. Timed price changes were not explicitly observed, but it may be that methods will be devised to infer them that can benefit future research. The Group has also used non-pricing measures to maintain profits. That is, profitability has benefitted from product modifications in response to regulatory changes, new product categories, low and sometimes unchanged tobacco taxes, and trade-buying. The findings confirm that it is crucial to monitor the pricing (and non-pricing) strategies practised by the industry. The study indicates that excise increases are indeed detrimental to industry profits, yet the share of excise tax in the Group's gross turnover is not increasing. This means that there is scope to increase excise taxes, particularly in low-tax countries, and governments therefore have an incentive to administer tax increases regularly in order to raise revenues and promote public health. Finally, the Group is regularly undershifting significant excise increases and this is not sustainable. In the future, it will be forced to increase retail prices to maintain profits, which is encouraging for tobacco-control efforts as cigarettes will become increasingly less affordable.

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