Title: The difference between Recommended Retail Price and Sales Price for tobacco products in independent and convenience (small) retailers before and after the introduction of standardised tobacco packaging in the United Kingdom.

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The difference between Recommended Retail Price and Sales Price in independent and convenience (small) retailers before and after the introduction of standardised tobacco packaging in the United Kingdom.

ABSTRACT

Aim: Recommended Retail Price (RRP) is a marketing strategy used by tobacco companies to maintain competitiveness, communicate product positioning, and drive sales. We explored small retailer adherence to RRP before and after the introduction of the Standardised Packaging of Tobacco Products Regulations in the United Kingdom (fully implemented 20th May 2017), which mandated standardised packaging of cigarettes and rolling tobacco, set minimum pack/pouch sizes, and prohibited price-marking.

Method: Monthly Electronic Point of Sale data from 500 small retailers in England, Scotland, and Wales were analysed. From May 2016-October 2017, we monitored 20 of the best-selling fully-branded tobacco products (15 factory-made cigarettes, 5 rolling tobacco) and their standardised equivalents. Adherence to RRP was measured as the average difference (%) between monthly RRPs and Sale Prices by pack type (fully-branded vs. standardised), price-marking on packaging, and price segment.

Results: The average difference between RRP and Sales Price increased from +0.36% above RRP (*SD*=0.72) in May 2016, when only fully-branded packs were sold, to +1.37% in October 2017 (*SD*=0.30), when standardised packs were mandatory. Increases above RRP for fully-branded packs increased as they were phased out, with deviation greater for non-price-marked packs and premium products.

Discussion: Despite tobacco companies emphasising the importance of RRP, small retailers implemented small increases above RRP as standardised packaging was introduced. Consequently, any intended price changes by tobacco companies in response to the legislation (i.e. to increase affordability or brand positioning) may be confounded by retailer behaviour, and such deviation may increase consumer price sensitivity.

INTRODUCTION

Recommended Retail Price (RRP, or list price), aims to set a consistent price for a company's products across retailers. This helps drive sales and profitability by communicating each product's position in terms of price and perceived quality both within, and between, brand portfolios [1-3]. For tobacco products, RRPs are set by tobacco companies and communicated to retailers through wholesalers and tobacco company representatives. RRPs are particularly important in markets with tobacco display bans, where other marketing opportunities are curtailed in the retail setting [4,5]. Despite the importance of price as a marketing strategy [6-8], RRPs are not compulsory (or legally enforceable) [9] and retailers can deviate from listed prices [10], particularly in response to market shifts brought about by legislative or economic change. For example, almost one-fifth of retailers in New Zealand did not sell cigarettes or rolling tobacco at RRP following a 10% increase in excise duty, but instead charged above RRP for more expensive products and below for cheaper products [11]. In Australia, retail prices remained lower than RRPs throughout a series of tax and excise duty changes, with particular discrepancies in discount stores [12].

In the United Kingdom (UK), the Standardised Packaging of Tobacco Products Regulations 2015 and Tobacco and Related Products Regulations 2016 require cigarettes and rolling tobacco to be sold in standardised packs (drab brown colour with large pictorial health warnings), which are not allowed to feature price-marks on packs (price lists are permitted in retailers), or contain less than 20 cigarettes or 30 grams of rolling tobacco [13]. In addition, brand variant names on packs must not reference taste, smell, flavour, or anything that promotes a product by creating an erroneous impression about its characteristics. The legislation was introduced 20th May 2016 and, after a one year transition period, became mandatory 20th May 2017 [13,14]. Research in Australia and the UK shows that tobacco companies responded to standardised packaging by condensing brands portfolios, introducing new brand variants, and product innovation [15-20].

Research in Australia has examined changes in the RRPs specified by tobacco companies following the introduction of standardised packaging, but research into how this was reflected in prices was limited [21,22]. There are at least four reasons why it is important to explore how standardised packaging influenced retailer pricing. First, opponents of standardised packaging argue it will harm small retailers through increased sales of cheaper brands, for which the profit margin is lower than more expensive brands [23,24]. This could lead small retailers to price discount to remain competitive or sell above RRP to compensate for lost revenue. Second, tobacco companies contend that the uniform appearance of standardised packs, minimum pack sizes, and variant names restrictions, may confuse consumers and retailers [25,26]. This may lead small retailers to sell below RRP for newly compliant products to incentivise consumers to switch from fully-branded packaging, particularly as the minimum pack size requirements for cigarettes and rolling tobacco are greater than for most products previously sold [27,28]. It is also possible that these changes lead retailers to unintentionally use older pricing structures or capitalise on the removal of price-marking on packs and smaller pack sizes to increase profit. Third, as retailers had a one-year transition period to sell non-compliant products [13,14], it may prompt them to sell below RRP to dispose of non-compliant stock, or above RRP to capitalise on consumer willingness to pay more for fully-branded packs being phased out [29]. Fourth, tobacco companies argue that standardised packaging would lead to lower prices, as cost becomes the only means of competition, and consumers will focus on products offering the most affordable price-per-cigarette [25,26]. As even small price changes can influence smoking behaviour [6,7,30], understanding how retailers adjusted their own pricing strategies in response to the legislation, and to advice from tobacco companies, provides important context for understanding affordability of tobacco following standardised packaging.

We explored how independent and convenience (small) retailers adhered to, or deviated from, RRP before and after standardised packaging was introduced in the UK. We explored differences for fully-branded and standardised packs, products which had price-marking on packs or not, and by price segment (value, mid-price, premium).

METHODS

Design

An observational study using monthly Electronic Point of Sale (EPoS) data was conducted to monitor the difference between RRP and Sales Price (SP) in independent and convenience (small) retailers in England, Scotland, and Wales. Small retailers account for over half of cigarette sales in the UK and a majority of small retailers consider tobacco to be important to their profits [31,32]. Data were collected for 18 months (May 2016–October 2017). This included the one-year transition period, when non-compliant packs (i.e. fully-branded packaging and/or containing $\leq$20 cigarettes or $\leq$30g rolling tobacco, with price-marking on packs permitted) and compliant packs (i.e. standardised packaging and containing $\geq$20 cigarettes or $\geq$30g rolling tobacco, with price-marking on packs not permitted) could be sold, and six months after, when only compliant packs were permitted.

Retailer sample

Data were obtained from The Retail Data Partnership Ltd (TRDP), a company which supplies EPoS systems to approximately 2,300 small retailers in the UK (e.g. small grocery and convenience stores, off-licences alcohol shops, and confectionary, tobacco, and newspaper shops). The database captures approximately 14% of convenience EPoS data in the UK [33], and includes symbol-group affiliated stores (a form of franchise) and independent stores. It does not include larger supermarket chains and their satellite convenience stores. The retailer sample is commercially generated, which means that retailers enter the database after agreeing to purchase TRDP's EPoS system. A stratified random sample of 500 small retailers was monitored, including 300 retailers from England, 100 in Scotland, and 100 in Wales. In England, the sampling frame was stratified by the nine Government Office regions (e.g. 'London' or 'North East'). In Scotland, Wales, and each of the nine regions in England, the sample was stratified by deprivation level (based on Indices of Multiple Deprivation of the retail outlet postcode) and a random selection of stores was selected. A replacement buffer sample, drawn using the same selection process, was used to address attrition [14].

Tobacco products monitored

Using Universal Product Codes (UPCs, or barcodes), which are similar to Stock Keeping Units [17], we monitored 40 tobacco products, including the 20 best-selling roll-your-own (RYO 25g) and 20 factory made-cigarettes (FMC) (or nearest size equivalent) and the 19 standardised products which replaced them (Table 1). This allowed the data to capture adherence to RRP for fully-branded products which would be phased out and standardised products introduced under the legislation. For each group, the sample included 15 FMC and five RYO products (Table 1) and included five value products, 13 mid-price, and two premium.

Table 1: The fully-branded products monitored from May 2016 and the replacement standardised products

Fully-branded and non-compliant[1]	**Standardised and compliant**[2]	**Price segment**
Amber Leaf Rolling Tobacco 25g (RYO)	Amber Leaf Original Rolling Tobacco 30g (RYO)	Mid-price
Benson & Hedges Gold 20 sticks	Benson & Hedges King Size Gold 20 sticks	Premium
Carlton King Size 19 sticks	Carlton King Size Red 20 sticks	Value
Carlton Superkings 19 sticks	Carlton Superkings Red 20 sticks	Value
Gold Leaf 25g (RYO)	Gold Leaf JPS Quality Blend 30g (RYO)	Mid-price
Golden Virginia Classic 25g (RYO)	Golden Virginia The Original 30g (RYO)	Mid-price
Golden Virginia Smooth 25g (RYO)	Golden Virginia Bright Yellow 30g (RYO)	Mid-price
John Player Special King Size Blue 19 sticks	JPS King Size Real Blue 20 sticks	Mid-price
John Player Special Silver 25g (RYO)	*No standardised and compliant equivalent*	Mid-price
Lambert & Butler King Size 20 sticks	Lambert & Butler King Size Original Silver 20 sticks	Mid-price
Lambert & Butler King Size Blue 19 sticks	L&B Blue King Size Real Blue 20	Mid-price
Marlboro King Size Gold 20 sticks	Marlboro King Size Gold 20 sticks	Premium
Mayfair King Size 19 sticks	Mayfair King Size 20 sticks	Mid-price
Players King Size 18 sticks	JPS Players King Size Real Red 20 sticks	Value
Players Superkings 18 sticks	JPS Players Superkings Real Red 20 sticks	Value
Richmond King Size 19 sticks	Richmond King Size Real Blue 20 sticks	Mid-price
Richmond Superkings 19 sticks	Richmond Superkings Real Blue 20 sticks	Mid-price
Rothmans King Size Value Blue 18 sticks	Rothmans King Size Value Blue 20 sticks	Mid-price
Rothmans Superkings Value Blue 18 sticks	Rothmans Superkings Value Blue 20 sticks	Value
Sterling King Size Dual 17 sticks	Sterling King Size Dual 20 sticks	Mid-price

Notes:
[1] Non-compliant = Fully-branded packaging, no minimum pack size, and price-marking permitted on product packaging.
[2] Compliant = Standardised packaging, minimum pack sizes, no price-marking permitted on product packaging, and no misleading names.
RYO = Roll-your-own tobacco
Best-selling products determined through cumulative sales value (£) March 2015–March 2016.

Difference between Recommended Retail Price and Sales Price

The RRP for tobacco products can be set or changed at different stages of the retail process: by tobacco companies who set brand strategy, by wholesalers who sell and distribute products to retailers (and may suggest price strategy across their symbol group stores), and by individual stores. We used the RRP set on the EPoS system for each product in each individual store (i.e. default sales value when the product is scanned, £GBP) to account for possible changes at each stage of the retail process. Within each store, the suggested RRPs for each product were periodically downloaded from wholesaler databases, after which they could be manually adjusted by retailers on their EPoS system to increase profitability or implement offers. To ensure that the sample of retailers were not considerably altering RRPs from those suggested by wholesalers, the average RRPs from the EPoS data were compared to the average wholesaler RRPs over a 12-month period (August 2016–August 2017). Over this period, the average difference between EPoS RRPs and wholesaler RRPs was only -£0.05 for fully-branded products (range: -0.62-0.12) and -£0.04 for standardised products (range: -0.10-0.00) (Supplementary Table 1). SP represented the product cost recorded at the point of transaction (GBP£) in each retailer, which could be manually adjusted from the default RRP for each sale. RRPs and SPs were inclusive of Value Added Tax (20%).

In this study, all prices used are nominal, that is the price at which products were sold in each month and unadjusted for inflation. Percentage difference between RRP and SP was preferred to the difference in monetary value (£) as it provided a standardised method of comparing between time-points and pack types (e.g. smaller vs. larger packs) and negated the need to adjust values for inflation. This calculation involved three steps: (1) The nominal average RRP and nominal average SP were computed across the retailer sample, with 5% trimmed means used to exclude outlying values occurring from manual EPoS system errors; (2) The price difference was computed by subtracting the nominal average RRP from the nominal average SP price; and (3) The percentage (%) difference was calculated by dividing the difference by the nominal average RRP and multiplying by 100. This calculation was computed separately for each product in each month.

Analysis

Data were analysed using SPSS version 23 and Microsoft Excel. At the retailer level, the average number of monitored fully-branded and standardised products sold, and the number of retailers who had sold any fully-branded or standardised products, were calculated for each month (overall and by price segment). This was to contextualise the difference between RRP and SP (i.e. was the difference based on all 20 fully-branded products sold in many retailers or just a small number of products sold in a few retailers?) At the product level, the monthly nominal average RRP and SP (£), and the difference (%) between the two, was calculated across the subsamples of fully-branded and standardised products, and by price-segment. For fully-branded products, the monthly deviation from RRP (%) was calculated for price-marked and non-price-marked variants separately, and for a combined total. Standardised products were not analysed by price-marking, as price-marking was prohibited by the legislation. Only products sold by at least 1% of the retailer sample (*n*=5) were included in the monthly average RRPs and difference to SP (%) to avoid biases by including products sold by a minority of retailers (e.g. one value product sold by only one retailer).

RESULTS

Retailers selling fully-branded tobacco products and nominal average RRP

In May 2016, all retailers had sold fully-branded products. Of the twenty fully-branded products we monitored, retailers sold, on average, 12.22 (*SD*=2.83) and the average RRP was £7.71 (*SD*=1.24) (Table 2). There was little variation in product availability until February

2017, although the average RRP did increase to £8.13 (*SD*=1.23) in the same period. From March 2017, there was a sharp decline in the average number of fully-branded products sold by each retailer, reaching 2.33 (*SD*=1.16) by the end of May 2017, when standardised packaging became mandatory, although the average RRP remained at £8.13 (*SD*=2.45). After standardised packaging became mandatory in May 2017, only a small number of retailers continued to sell fully-branded products (*n* range: 4-67), with the average number of fully-branded products sold by each retailer low (*M* range: 1.00–1.28; *SD* range: 0.00–0.62). Availability and RRP trends within price segments are reported in Table 3.

Difference between RRP and SP for fully-branded products

In May 2016, SPs for fully-branded products were, on average, +0.36% higher than RRPs (*SD*=0.72) (Table 2). There was a net increase in this difference over the next nine months, and by February 2017 SPs for fully-branded products were, on average, +0.97% higher than RRPs (*SD*=0.58). There was a further increase in subsequent months, coinciding with a reduction in the availability of fully-branded products (Table 2), and by the end of May 2017 SPs for fully-branded products were, on average, +2.45% higher than RRPs (*SD*=1.23). There was a further increase in the average difference in June (to +3.53%) and October 2017 (to 12.51%), when standardised products were mandatory, albeit these differences were based on a small number of products across a limited number of retailers (Table 2).

For fully-branded price-marked products sold in May 2016, there was no discernible difference (%) between average SPs and RRPs (Table 2). There was a net increase across the transition year, and by May 2017 the average difference between SP and RRP for price-marked products had increased to +1.17% (*SD* = 2.21). For fully-branded non-price-marked products, the difference between SP and RRP in May 2016 was, on average, +1.68% (*SD*=0.97). There was a net decrease across the first ten months of the transition period, with the average difference between SP and RRP reaching +1.19% (*SD*=0.53) by February 2017. Once availability of fully-branded products began to decline sharply, the average difference between SP and RRP for fully-branded non-price-marked products exhibited a corresponding increase, reaching +2.95% by the end of May 2017 (*SD*=1.25), when it became mandatory to sell standardised products.

In May 2016, the average difference between RRP and SP for fully-branded premium products (+2.18%) was higher than mid-price (+0.21%) and value products (+0.02%) (Table 3). There was a net increase in the average difference for all price segments across the transition year, reaching +2.59% for value products, +2.14% for mid-price, and +3.68% for premium in May 2017, when it was mandatory to sell standardised products and there was low availability of fully-branded products.

Retailers selling standardised tobacco products and nominal RRPs

The first standardised products were sold October-December 2016 (two FMC and two RYO), with the average RRP ranging from £10.70–£11.62 (Table 4). From January 2017 onwards, there was a sharp increase in the average number of standardised products sold by each retailer, reaching 15.92 (*SD*=2.88) by the end of May 2017 (when compliance became mandatory). In the same period, the average RRP declined as more products were sold in standardised packs, reaching £9.05 (*SD*=1.69) by May 2017. Between June-October 2017, there was little difference in the average number of standardised products sold by each retailer (*M* range: 16.24–16.45; *SD* range = 2.64–2.95) or the average RRP (*M* range: £9.05–9.08; *SD* range=1.70–1.72). Availability and RRP trends within price segments are reported in Table 5.

Table 2. Difference (%) between RRP and SP for all fully-branded products, and by price-marked and non-price marked packs

Overall and sample composition						Price-marked		Non Price-marked	
Month	Retailers selling (*n*)	Average *n* of monitored products sold by retailers	Average RRP (£)	Ave. diff. (%) RRP and SP	*SD*	Ave. diff. (%) RRP and SP	*SD*	Ave. diff. (%) RRP and SP	*SD*
May-16	500	12.22	7.71	+0.36	0.72	0.00	0.00	+1.68	0.97
Jun-16	497	12.33	7.75	+0.35	0.71	0.00	0.01	+1.67	1.00
Jul-16	500	13.02	7.77	+0.33	0.65	0.00	0.00	+1.13	0.84
Aug-16	499	12.80	7.82	+0.45	0.66	+0.04	0.17	+1.01	0.75
Sep-16	497	12.68	7.83	+0.55	0.59	+0.05	0.14	+1.11	0.60
Oct-16	497	13.13	7.84	+0.64	0.61	+0.09	0.26	+1.09	0.60
Nov-16	500	13.56	8.09	+0.79	0.54	+0.15	0.28	+1.04	0.54
Dec-16	500	13.89	8.00	+0.81	0.55	+0.12	0.26	+0.99	0.55
Jan-17	499	12.84	8.04	+0.97	0.55	+0.13	0.23	+1.08	0.62
Feb-17	500	11.00	8.13	+0.97	0.58	+0.12	0.27	+1.19	0.53
Mar-17	495	6.61	8.17	+1.36	0.78	+0.23	0.63	+1.63	0.70
Apr-17	482	3.66	8.13	+2.13	1.30	+0.56	0.80	+2.48	1.20
May-17	452	2.33	8.13	+2.45	1.23	+1.17	2.21	+2.95	1.25
End of transition period – Only standardised (compliant) products permitted									
Jun-17	67	1.28	8.11	+3.53	3.03	+0.88	-	+3.97	3.18
Jul-17	11	1.00	-	-	-	-	-	-	-
Aug-17	10	1.20	9.08	+12.51	-	-	-	+12.51	-
Sep-17	4	1.00	-	-	-	-	-	-	-
Oct-17	4	1.00	-	-	-	-	-	-	-

Notes: Twenty fully-branded products monitored; Average difference (%) = 100*(nominal average SP – nominal average RRP)/nominal average RRP, calculated for each product separately; Only products sold by at least 1% of retailer sample (n = 5) included in average RRP and difference (%) between RRP and SP for each month.

Table 3. Difference (%) between RRP and SP for fully-branded products, by price segment.

	Value products					**Mid-price products**					**Premium products**				
Month	Retailers selling (*n*)	Average *n* of monitored products sold by retailers	Average RRP (£)	Ave. diff. (%) RRP and SP	*SD*	Retailers selling (*n*)	Average *n* of monitored products sold by retailers	Average RRP (£)	Ave. diff. (%) RRP and SP	*SD*	Retailers selling (*n*)	Average *n* of monitored products sold by retailers	Average RRP (£)	Ave. diff. (%) RRP and SP	*SD*
May-16	456	2.15	6.24	+0.02	0.06	499	8.43	8.00	+0.21	0.42	458	1.64	9.53	+2.18	0.54
Jun-16	448	1.95	6.25	+0.03	0.05	498	8.72	8.05	+0.19	0.37	453	1.65	9.54	+2.18	0.61
Jul-16	452	1.90	6.27	+0.09	0.12	499	9.47	8.08	+0.16	0.25	455	1.66	9.58	+2.06	0.74
Aug-16	458	1.96	6.32	+0.18	0.23	498	9.18	8.11	+0.31	0.33	451	1.67	9.65	+2.08	0.93
Sep-16	458	1.98	6.33	+0.39	0.38	497	9.04	8.12	+0.42	0.42	457	1.66	9.74	+1.82	0.57
Oct-16	477	2.56	6.32	+0.49	0.45	497	8.93	8.13	+0.49	0.43	449	1.63	9.76	+1.93	0.52
Nov-16	484	3.11	6.35	+0.72	0.18	500	8.85	8.40	+0.64	0.41	453	1.60	9.77	+1.88	0.48
Dec-16	486	3.37	6.36	+0.72	0.16	498	8.89	8.23	+0.67	0.46	458	1.64	9.78	+1.87	0.54
Jan-17	488	3.44	6.41	+0.69	0.28	497	7.78	8.32	+0.88	0.42	448	1.62	9.78	+2.03	0.46
Feb-17	486	3.02	6.45	+0.85	0.33	497	6.39	8.42	+0.83	0.49	443	1.60	9.78	+2.07	0.38
Mar-17	456	1.89	6.52	+1.23	0.23	486	3.54	8.44	+1.20	0.78	415	1.18	9.83	+2.54	0.62
Apr-17	420	1.27	6.53	+1.72	0.39	448	1.98	8.39	+2.02	1.40	166	0.40	9.90	+3.50	1.66
May-17	352	0.94	6.65	+2.59	0.58	385	1.25	8.24	+2.14	1.24	58	0.14	9.85	+3.68	1.67
End of transition period – Only standardised (compliant) products permitted															
Jun-17	20	0.31	6.78	+4.31	0.34	37	0.64	7.96	+2.17	1.98	22	0.33	9.66	+4.81	6.10
Jul-17	-	-	-	-	-	7	0.64	-	-	-	4	0.36	-	-	-
Aug-17	1	0.10	-	-	-	4	0.40	-	-	-	7	0.70	9.08	+12.51	-
Sep-17	-		-	-	-	1	0.25	-	-	-	3	0.75	-	-	-
Oct-17	-	-	-	-	-	2	0.50	-	-	-	2	0.50	-	-	-

Notes: Twenty fully-branded products monitored (five value; thirteen mid-price; two premium); Average difference (%) = 100*(nominal average SP – nominal average RRP)/nominal average RRP, calculated for each product separately; Only products sold by at least 1% of retailer sample (*n* = 5) included in average RRP and difference (%) between RRP and SP for each month.

Table 4. Difference between RRP and SP for standardised products

Month	Retailers selling (*n*)	Average *n* of monitored products sold by retailers	Average RRP (£)	Ave. diff. (%) RRP and SP	*SD*
May-16	-	-	-	-	-
Jun-16	-	-	-	-	-
Jul-16	-	-	-	-	-
Aug-16	-	-	-	-	-
Sep-16	-	-	-	-	-
Oct-16	32	1.00	11.62	+0.95	-
Nov-16	99	1.00	11.61	+0.87	-
Dec-16	385	1.35	10.70	+0.78	0.26
Jan-17	490	3.60	8.78	+0.54	0.24
Feb-17	499	10.21	8.76	+0.89	0.89
Mar-17	498	13.98	9.04	+0.96	0.22
Apr-17	500	14.59	9.05	+1.26	0.41
May-17	499	15.92	9.05	+1.31	0.36
End of transition period – Only standardised (compliant) products permitted					
Jun-17	498	16.24	9.05	+1.35	0.31
Jul-17	498	16.28	9.05	+1.37	0.38
Aug-17	499	16.34	9.06	+1.32	0.30
Sep-17	499	16.33	9.08	+1.34	0.31
Oct-17	499	16.45	9.08	+1.37	0.30

Notes: Nineteen standardised products monitored; Average difference (%) = 100*(nominal average SP – nominal average RRP)/nominal average RRP, calculated for each product separately; Only products sold by at least 1% of retailer sample (*n* = 5) included in average RRP and difference (%) between RRP and SP for each month.

Difference between RRPs and SP for standardised products

Between October 2016 and January 2017, when some standardised products first appeared in small retailers, the average difference between SP and RRP ranged +0.54–0.95% (Table 4) and was comparable to the average for fully-branded products in the same period (range: 0.64–0.97%). From February 2017 onwards, when most standardised products began to be sold (*M*=10.21; *SD*=3.07), the difference between SP and RRP began to increase. By the end of May 2017, the average difference between SP and RRP was +1.31% (*SD*=0.36). In June 2017, the first month in which standardised products were mandatory, the average difference between SP and RRP rose to +1.35% (*SD*=0.31), where it remained consistent until October 2017 (range: +1.32–1.37).

When value products first appeared in standardised packaging, in January 2017, SPs were, on average, +0.37% higher than RRPs (*SD*=0.16) (Table 5). There was a net increase in the difference as more value products became available in standardised packaging, reaching +1.31% in June 2017 (*SD*=0.20), when standardised packaging was mandatory, after which the difference remained stable. When mid-price products appeared in standardised packaging, in October 2016, SPs were, on average, +0.95% higher than RRPs. There was a net increase in the difference as more mid-price products became available, reaching +1.43% by May 2017 (*SD*=0.40), after which the difference remained stable. When premium products appeared in standardised packaging, in February 2017, average SPs were +0.91% (*SD*=0.55) higher than RRPs. There was a small net increase in this difference as standardised packaging became mandatory, reaching +1.10 (*SD*=0.35) in May 2017, after which the difference remained stable. The average difference between RRP and SP for value (+1.39%) and mid-price products (+1.42%) in October 2017, when only standardised products were sold, was higher than the comparable averages for value (+0.02%) and mid-price products (+0.21%) in May 2016, when only fully-branded products were sold. For premium products, however, the average difference between RRP and SP was higher in May 2016, when only the fully-branded products were sold (+2.18), than in October 2017 (+1.05%) when only standardised products were sold.

Table 5. Difference (%) between RRP and sales price for standardised products, by price segment.

	Value products					Mid-price products					Premium products				
Month	Retailers selling (*n*)	Average *n* of monitored products sold by retailers	Average RRP (£)	Ave. diff. (%) RRP and SP	*SD*	Retailers selling (*n*)	Average *n* of monitored products sold by retailers	Average RRP (£)	Ave. diff. (%) RRP and SP	*SD*	Retailers selling (*n*)	Average *n* of monitored products sold by retailers	Average RRP (£)	Ave. diff. (%) RRP and SP	*SD*
Oct-16	-	-	-	-	-	32	1.00	11.62	+0.95	-	-	-	-	-	-
Nov-16	-	-	-	-	-	99	1.00	11.61	+0.87	-	-	-	-	-	-
Dec-16	-	-	-	-	-	385	1.35	10.70	+0.78	-	-	-	-	-	-
Jan-17	219	0.54	7.05	+0.37	0.16	487	3.06	9.30	+0.59	0.24	-	-	-	-	-
Feb-17	463	2.40	7.19	+1.33	1.74	499	7.39	9.28	+0.70	0.17	202	0.42	9.85	+0.91	0.55
Mar-17	487	3.35	7.37	+0.79	0.09	499	9.41	9.54	+1.03	0.20	391	1.22	10.17	+0.95	0.45
Apr-17	487	3.37	7.42	+1.02	0.09	500	9.74	9.54	+1.40	0.45	426	1.47	10.21	+1.04	0.41
May-17	494	4.13	7.42	+1.11	0.06	499	10.21	9.54	+1.43	0.40	441	1.58	10.22	+1.10	0.35
End of transition period – Only standardised (compliant) products permitted															
Jun-17	494	4.22	7.39	+1.31	0.20	497	10.41	9.54	+1.41	0.35	443	1.61	10.22	+1.10	0.33
Jul-17	496	4.28	7.39	+1.32	0.27	498	10.37	9.54	+1.44	0.42	442	1.62	10.26	+1.10	0.35
Aug-17	497	4.28	7.39	+1.33	0.36	499	10.43	9.54	+1.36	0.25	448	1.63	10.34	+1.06	0.45
Sep-17	495	4.24	7.40	+1.37	0.40	499	10.47	9.54	+1.39	0.25	447	1.62	10.49	+0.92	0.13
Oct-17	497	4.27	7.40	+1.39	0.38	499	10.56	9.54	+1.42	0.26	448	1.63	10.51	+1.05	0.20

Notes: Nineteen standardised products monitored (five value; twelve mid-price; two premium); Average difference (%) = 100*(nominal average sales price – nominal average RRP)/nominal average RRP, calculated for each product separately; Only products sold by at least 1% of retailer sample (*n* = 5) included in average RRP and difference (%) between RRP and SP for each month.

DISCUSSION

Our findings extend understanding of tobacco pricing in retail settings by showing that variation in the use of RRP by retailers can occur not only because of changes to taxation [11,12] but also in response to legislation which alters the appearance of the packaging and, in this case, bans price-marking on packaging and sets minimum pack sizes.

We found that the difference between RRP and SP for fully-branded products increased as they were withdrawn, i.e. retailers sold fully-branded packs above RRPs. This increase occurred for price-marked and non-priced-marked products, and across price segments. Research has shown that consumers view fully-branded packaging more positively than standardised packaging [34-39], to the extent that they are willing to pay more [29,40]. It is possible that small retailers increased prices for fully-branded packs as they were withdrawn to capitalise on this in real-time. That customers were seemingly willing to pay above the price-marked price for fully-branded packs, and that premium products were eventually sold 3% above RRP, demonstrates the appeal of packaging [41-43]. This could also explain why the difference between RRP and SP peaked after the transition period ended, when the availability of fully-branded products was low and retailers risked punitive measures for selling non-compliant products [13,44]. Retailers may have also used the new minimum pack sizes, which generated more expensive up-front pack costs to customers, as an opportunity to increase prices for remaining smaller pack sizes. We found no evidence that retailers sold fully-branded products lower than RRP to expedite the sale of non-compliant stock towards the end of the transition period.

When products were first introduced in standardised packs, the difference between RRP and SP was similar to the trend for fully-branded products. This is consistent with tobacco companies' recommendation that, post-standardised packaging, retailers should continue to sell at RRP or below to remain competitive and ensure customer loyalty [45-50]. Once standardised packaging was commonplace, from March 2017, products were consistently sold more than 1% above RRP, with increases particularly in the value and mid-price segment. This difference was approximately 1% higher than the overall variation from RRP in May 2016, when only fully-branded products were sold, although it is comparable to the variation from RRP for non-price-marked fully-branded products at the same time. It is possible that retailers used standardised packaging, the new minimum pack sizes with higher up-front costs, and the removal of price-marking, to opportunistically increase profit margin [51,52]. This deviation was possible because the volume of changes created informational asymmetry between retailers (aware of changes and prices from wholesalers and tobacco company representatives) and consumers (unlikely to be aware of product and price changes until sold by retailers) [53]. Alternatively, retailers may have increased prices in response to the slight decline in sales accompanying the legislation [44], a hypothesis supported by anecdotal reports in the trade press [54,55]. Regardless of the reason, selling above RRP across price segments contrasts with tobacco companies' advice that retailers should sell at RRP or below [48,49].

While the deviation from RRP reported only translates into a small monetary increase for each pack post-standardised packaging, e.g. £0.10 above RRP for products in the value segment in October 2017, many smokers are price sensitive, with elasticities most variable for value products and consumers with limited disposable income [30,56]. As the new minimum pack sizes generated more expensive up-front pack costs, further increases above RRP may have been sufficient to alter purchasing decisions in price-sensitive customers, and future research should consider this hypothesis.

To help explain the reported trends, research is also needed to explore the motives of small retailers for selling above RRP when standardised packaging was introduced and fully-branded packaging removed. One hypothesis is that the potential expansion of cheaper product ranges and declines in smoking behaviour, as reported following the introduction of plain packaging in Australia [57,58], may have created a greater need for small retailers to increase their profit margin. Also, this study only explored how retailers adhered to RRP. Research into other components of pricing, including changes in wholesale prices to retailers, changes in SP (per cigarette and gram), and gross margin to retailers, may help to further explain the trends at a retailer and customer level.

Concerning limitations, we only focused on small retailers and a sample of top-selling products. The findings are not representative of the wider UK tobacco market, including larger retailers where the product range offered is likely to be greater and prices more standardised, or smaller pack sizes (e.g. 10 pack FMC or 12.5g RYO). The results are only based on the monthly average RRP and SP, and the percentage difference. They do not provide insight into, or control for, sales volume. This is a consideration for the early months of transition to standardised packaging, and after compliance became mandatory, where the difference between RRP and SP is based on a smaller volume of sales for fully-branded and standardised products. Future research could also consider how adherence to RRP was influenced by pack size, including smaller pack sizes not permitted under the legislation or sampled in this study, and by socio-demographic factors of each retailer (e.g. area of deprivation, UK region, or symbol group status).

In conclusion, small retailers in the UK sold tobacco above RRP after the introduction of standardised packaging. Other countries seeking to introduce or evaluate standardised packaging, or legislation that may directly or indirectly alter the price of tobacco (e.g. taxation), should also consider the role that retailers play in dictating the affordability of tobacco, and not just information provided by tobacco companies or wholesalers on RRP.

What this paper adds:

- Recommended Retail Price (RRP, or list price) plays an important role in tobacco marketing strategy and delivery.
- Although research has demonstrated that retailers deviate from RRPs in response to economic or tax changes, little is known about how retailers react to legislation which introduces wider market changes. We explored small retailer adherence to RRP during, and after, the introduction of standardised packaging, the removal of price-marking on packs, and setting of minimum pack sizes.
- The average difference between sales price and RRP increased from +0.36% to +1.37% as standardised packaging was introduced, with increases above RRP highest for fully-branded products as they were phased out.
- Small retailer pricing behaviour is influenced by legislation which initiates wider market changes, not only tax changes. Standardised packaging made price the only available marketing tool, and therefore small increases above RRP by retailers may have heighted price-sensitive consumers' attention to more affordable products.

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