

**Introduction of standardised tobacco packaging during a
12-month transition period: Findings from small retailers in
the United Kingdom**

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**Introduction of standardised tobacco packaging during a 12-month transition period:
Findings from small retailers in the United Kingdom**

ABSTRACT

Introduction: Factory-made cigarettes (FMC) and roll-your-own (RYO) tobacco have had to be produced in standardised packaging since 20th May 2016 in the United Kingdom, with a minimum pack size of 20 sticks for FMC and 30 grams for RYO. Manufacturers and retailers were given a 12-month transition period. **Methods:** An observational study was conducted using monthly Electronic Point of Sale data from 500 small retailers in England, Scotland, and Wales, between May 2016 and May 2017. The 20 top selling tobacco products (15 FMC, 5 RYO) were monitored to observe when standardised packs were first introduced, the proportion of retailers selling each fully branded and standardised product, and the average number of monitored fully branded and standardised products sold by each retailer. The number of unique tobacco-related product codes sold by each retailer was also recorded each month. **Results:** Eighteen of the fully branded products continued to be sold throughout the transition period and no standardised variants were sold in the first five months. It was not until month eleven that the average number of standardised products sold by retailers exceeded the fully branded products. The average number of unique tobacco-related product codes sold by each retailer decreased by a third over the transition period. **Conclusions:** Tobacco companies used the transition period to delay the removal of fully branded products and gradually introduce standardised variants. This staggered introduction may have mitigated some of the immediate intended effects of the legislation by desensitising consumers to new pack designs.

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IMPLICATIONS

Evaluation research from countries which have introduced standardised packaging for tobacco products is key to help inform future implementation. This is the first study to monitor the transition from fully branded to standardised products using real-time retail data. The findings demonstrate that tobacco companies delayed the introduction of standardised products and removal of fully branded packaging. Countries seeking to introduce standardised packaging should consider what length of transition is allowed, as the protracted 12 month period in the UK appeared longer than needed to transition stockholding and may have mitigated immediate intended effects by desensitising consumers to new pack designs.

For Peer Review

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INTRODUCTION

The United Kingdom (UK) Standardised Packaging of Tobacco Products Regulations 2015 and the Tobacco and Related Products Regulations 2016, which transposed into UK law the EU Tobacco Products Directive (EUTPD), came into force on 20th May 2016. These required all factory-made cigarettes (FMC) and roll-your-own (RYO) tobacco for sale in the UK to be produced in standardised packs, and required FMC to be sold in packs containing a minimum of 20 sticks and RYO in packs containing a minimum of 30 grams (g). Price marking was also removed from packs. A twelve month transition period was permitted from 20th May 2016 to 20th May 2017.¹ This served two main purposes. The first was to provide the tobacco industry with sufficient time to change their manufacturing and distribution to compliant standardised packaging or repackage all non-compliant variants. The second was to allow retailers sufficient time to sell any non-compliant products and transition stockholding. The twelve month transition period was longer than the two month period permitted in Australia, the first country to implement standardised (plain) packaging, and the nine month period permitted in France, the second country to introduce this measure.

There are at least two reasons why it is important to monitor market changes during the transition to standardised packaging. From a consumer perspective, exploring when new standardised products enter the market, and when they exceed the proportion of fully branded products sold, may help to explain the findings of consumer research which explores the impact of standardised packaging, particularly time series analyses. Examples of the consumer outcomes monitored during the introduction of standardised packaging in Australia include calls to a quit helpline,² changes in affective responses to health warnings or pack attractiveness,³ and smoking attitudes or behaviours.^{4,5} From a policy perspective, other countries are considering the introduction of standardised packaging.⁶ Studying the experiences of countries which have introduced such measures can help inform the decision on what length of transition period to allow for new legislation.

Research which has explored the response of tobacco companies to standardised packaging in Australia has focused predominately on changes at the product level. Documented examples include the expansion of lower priced product ranges, twin-pack promotions, variant name changes (e.g. the addition of a colour descriptor), brand rationalisation, product developments, and expanded product ranges to increase differentiation.⁷⁻¹¹ In this study, we expand on this research by exploring how tobacco companies introduced new compliant standardised products and withdrew non-compliant

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products (i.e. fully branded packs and packs containing less than 20 FMC or 30g RYO) across the 12-month transition period in small retailers in England, Scotland, and Wales.

METHODS

Design

An observational study using Electronic Point of Sale (EPOS) data was conducted to monitor the sale of 20 fully branded tobacco products, and their compliant variants under the new legislation (standardised pack and minimum of 20 FMC or 30g RYO), over the 12-month transition period in small retailers in England, Scotland, and Wales. Small retailers are an important group to investigate, as reportedly half of their consumers purchase tobacco and over half consider tobacco to be important to their overall profits.¹² Data were obtained from The Retail Data Partnership Ltd (TRDP), an agency which supplies EPOS systems to the independent and convenience retail sector (e.g. hardware and software used for managing stock-holding, replenishing stock, and recording sales). Data were collected on a monthly basis from May 2016 (the start of the transition period) to May 2017 (the end of the transition period).

Retailer sample selection

The Retail Data Partnership supplies EPOS systems to approximately 2,300 small retailers across the UK. The sample is commercially generated, which means that retailers enter the database after agreeing to purchase TRDP's EPOS system. From this dataset, a stratified random sample of 500 stores was selected. A total of 300 stores were drawn from England along with 100 in each of Scotland and Wales, to ensure a minimum of 100 stores in each country. No retailers were selected from Northern Ireland, as the sampling frame contained fewer than ten stores in this country. In England, the sampling frame was further stratified by nine regions (e.g. 'London' or 'North East'). In Scotland, Wales and each of the nine Government Office Regions in England, the sample was stratified by deprivation level (based on Indices of Multiple Deprivation score of the retail outlet postcode) and a random selection of stores was selected.

It was possible for retailers to drop out of TRDP's database (for example, by ceasing trading or switching to a different EPOS system). In anticipation of this, a buffer sample of 75 stores was selected from the remaining sample frame after the main sample of 500 had been drawn. The selection procedure for the buffer sample was identical to that of the main

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sample. In the event of a drop-out, the store was replaced with the nearest match from the buffer sample. The buffer sample was replenished as and when required throughout the study period. At each replenishment stage, unused stores in the replenishment sample were combined with unused stores in the sample frame as a whole (including new stores), and a new buffer sample was drawn using identical procedures as described above.

Monitored tobacco products

In the retail data, all tobacco products were identified through a Universal Product Code (UPC) (i.e. barcode). Each variation in product characteristic, such as a change in pack size or from fully branded to standardised packaging, generated a new UPC. This provided the ability to monitor individual products throughout the transition period. The approach is similar to research which has used Stock Keeping Units (SKUs) to examine market changes following the introduction of standardised packaging in Australia.⁹ Forty tobacco products were selected to include both the 20 best-selling fully branded products (price-marked and non-price-marked variants were combined and treated as one product) and the 20 standardised products which would replace them by the end of the transition period. The first step in selection was to identify the fifteen top selling FMC and five top selling RYO products, based on cumulative sales value (£) in the period March 2015 – March 2016 (Table 1). The next step was to identify the equivalent standardised products (Table 2). Anticipated names were identified using data from other studies into tobacco companies' use of packaging and brand strategy.^{13,14} These names were confirmed through monthly screening of the wholesaler product listings, manufacturer databases, pack purchases, and open source information (e.g. review of trade press articles).

Number of unique tobacco related UPCs sold each month

Monthly data were also obtained for the number of unique tobacco-related UPCs sold by each retailer. This information provided broader insight into the overall tobacco market (beyond the monitored products) and was collected to explore whether the range of products available to consumers increased or decreased as the standardised packaging and EUTPD legislations were implemented.

Analysis

All data were analysed using SPSS version 23 (SPSS Inc. Chicago, IL). At the product level, the proportion (%) of retailers selling each of the fully branded or standardised tobacco

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3 products was calculated for each month of the transition period. Price-marked and non-price-
4 marked UPCs for the same product were combined to form an overall profile for fully
5 branded products (price-marked variants were not permitted under the standardised
6 packaging and EUTDP legislation). At the retailer level, the average number of monitored
7 fully branded and standardised tobacco products sold was calculated for each month of the
8 transition period, for all 20 fully branded and 20 standardised products and by price segment
9 (value, mid-price, or premium, as defined by the data supplier). The average number of
10 unique tobacco-related UPCs sold by each retailer was also calculated for each month of the
11 transition period. Three bivariate Pearson's correlations were used to explore the association
12 between stage of transition period (in months) and the average number of fully branded
13 products sold by each retailer, average number of standardised products sold by each retailer,
14 and average number of unique tobacco-related UPCs sold by each retailer.
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RESULTS**Trends in retailers selling fully branded tobacco products**

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28 In the first month of the transition period, all 20 of the monitored fully branded products were
29 sold in the retailer sample (Table 1) and the average number of fully branded products sold
30 by each retailer was 12.22 ($SD = 2.83$) (Table 3). Over the first nine months of the transition
31 period, all 20 fully branded products continued to be sold in the retailer sample, and there was
32 little variation in the average number of the products sold by each retailer (M range: 12.22-
33 13.89; SD range: 2.44-2.83). From month ten (February 2017), the average number of fully
34 branded products sold by each retailer began to steadily decline, reaching a low of 2.33 ($SD =$
35 1.16) in the final month of the transition period (May 2017). By the end of the transition
36 period, only two of the fully branded tobacco products had ceased to be sold by all retailers
37 (Rothman's King Size and Superkings Value Blue 18 sticks), albeit both products had only
38 been sold by a small proportion of retailers at any other point in the transition period (Table
39 1). A bivariate Pearson's correlation showed a significant and strong negative correlation
40 between month of transition period and the average number of fully branded tobacco
41 products sold by each retailer, $r(13) = -0.73, p < 0.005$.
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Trends in retailers selling standardised tobacco products

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54 In the first five months of the transition period, none of the 20 monitored standardised
55 tobacco products were sold in the retailer sample (May – September 2016). A small number
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of the standardised tobacco products first began to be sold in the sixth ($n = 1$) and eighth month ($n = 3$) of the transition period, although most were first sold in either month nine or ten ($n = 15$) (January and February 2017) (Table 2). The average number of monitored standardised products sold by each retailer increased from 3.60 ($SD = 1.63$) to 10.21 ($SD = 3.07$) between January and February 2017, and to 15.92 ($SD = 2.88$) by the final month of the transition period (May 2017) (Table 3). By the end of the transition period, standardised variants had been observed for 19 of the 20 fully branded products monitored (John Player Special Silver 25g RYO was delisted without a direct standardised variant). A bivariate Pearson's correlation showed a significant and strong positive correlation between month of transition period and the average number of standardised tobacco products sold, $r(13) = 0.88$, $p < 0.001$.

Transition from fully branded to standardised tobacco products

The average number of fully branded tobacco products sold by each retailer remained above the average number of standardised products until month eleven of the transition period (March 2017) (Table 3). In the final months of the transition period (April – May 2017), the average number of fully branded tobacco products sold by each retailer sharply declined, and the average number of standardised products increased correspondingly. By the final month of the transition period retailers were selling, on average, 13.59 more of the monitored standardised products ($M = 15.92$, $SD = 2.88$) than fully branded products ($M = 2.33$, $SD = 1.16$).

Number of unique tobacco-related UPCs

For the first eleven months of the transition period (to March 2017), there was little variation in the average number of unique tobacco-related UPCs sold by each retailer (M range: 118.67 – 130.68; SD range: 41.09 – 45.32) (Table 3). In the final two months, however, the average number of tobacco-related UPCs sold by each retailer decreased to 82.30 ($SD = 32.06$), 33% lower than at the start of the transition period ($M = 123.60$; $SD = 44.24$). A bivariate Pearson's correlation showed a significant and strong negative correlation between month of transition and the average number of tobacco-related UPCs sold, $r(13) = -0.75$, $p < 0.005$.

DISCUSSION

The tobacco products monitored in this study continued to be sold in fully branded packs in small retailers in England, Scotland, and Wales up until the final month of the transition

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3 period (May 2017). It was not until the later stages of the transition period that the
4 standardised variants of these products began to appear in retailers and the average number of
5 standardised tobacco products sold by each retailer exceeded that of fully branded products.
6 The findings therefore suggest that the tobacco companies planned for, and took full
7 advantage of, the twelve month transition period permitted in UK.
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11 There are several possible explanations for the timing of the phasing out of fully
12 branded packs and the phasing in of standardised packs. As fully branded packaging is
13 known to influence smoking attitudes and behaviours, maximising the transition period
14 prolonged use of this marketing technique.^{15,16} Premium cigarette brands, for example, which
15 offer tobacco companies greater profitability, are partly reliant on their fully branded
16 packaging to justify their higher price point¹³. This could explain why it was not until the
17 penultimate months of transition that the two premium brand products monitored in our study
18 were replaced with standardised variants in most retailers, although this delay could also be
19 due to a slower turnover of premium products compared to value or mid-price. The delayed
20 transition is also consistent with advice in the trade press which suggested that retailers
21 should rotate their stock as standardised packs began to filter through, to ensure that fully
22 branded products were still sold first before the deadline.^{17,18} From an industry and retail
23 perspective, it may be argued that this rotation was intended to mitigate some the suggested
24 unintended negative consequences, such as retailer and consumer confusion over mixed
25 product availability.¹⁹⁻²² Using the full transition period also allowed gradual phasing in of
26 standardised products. In Australia, the shorter transition period was reported to have an
27 immediate effect on consumer behaviour.^{2-4,23} As tobacco companies have a history of
28 designing marketing activities to reduce the effectiveness of legislation²⁴, the gradual
29 transition in the UK may have been intended to mitigate immediate effects by desensitising
30 consumers to the standardised pack designs and raising awareness of new variants' names.
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43 The twelve-month transition period for standardised packaging allowed in the UK
44 was longer than the periods permitted in other countries with similar legislation, such as
45 France (nine months) and Australia (two months). It is possible that the UK Government
46 allowed a longer transition period to reduce potential reimbursement expenses to tobacco
47 companies or retailers, although as the costs of implementing the new legislations have not
48 been disclosed it remains unclear to what extent (if at all) this was a factor. Evidence also
49 suggests that tobacco companies have frequently engaged in activities which intend to delay,
50 or stop, the introduction of standardised packaging legislation.²⁵⁻²⁷ Our results therefore
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3 suggest that consideration should be given to what transition period is allowed, and the
4 justification, implications, and processes involved in this decision.
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6 There are several avenues for future research. The data only represent a cross-section
7 of small retailers, and further investigation is required to understand transition across the
8 wider UK tobacco market (e.g. supermarkets). The average number of unique tobacco-related
9 UPCs sold in the final month was approximately a third lower than during the rest of
10 transition period. It is plausible that this reflects the removal of price-marked products, which
11 would have had different UPCs to non-price-marked products, although it is also possible that
12 this is the result of other market changes such as brand rationalisation. Research in Australia
13 has found that standardised packaging did not inhibit, and perhaps even encouraged, brand
14 and variant expansion or diversification, an increase in the range of pack sizes (the Australian
15 legislation did not mandate minimum pack sizes), and other packaging developments.^{8,9,11,28}
16 Similar research exploring tobacco companies' brand strategies in the UK would be of value.
17 The results also show that many of the monitored products had a name change in the
18 transition to standardised variants (e.g. addition of colour or product descriptor). Further
19 research exploring changes to brand variant names, and the impact that these name changes
20 have on consumers, is warranted.
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30 As this study only considered which fully branded and standardised tobacco products
31 were sold, and when, during the transition period, future research should also consider other
32 market changes. For instance, advice from tobacco companies in the trade press highlighted
33 that price remained an important marketing strategy beyond the EUTPD and standardised
34 packaging legislations.^{17,18} Further research should therefore consider how price was used as
35 marketing strategy as fully branded products were removed²⁹ and whether pricing (per
36 cigarette and per gram) changed because of the new minimum pack sizes (20 for FMCs and
37 30g for RYO). Related to this, research exploring whether retailers adhered to recommended
38 retail price (RRP) as consumers moved towards standardised, non-price-marked packs, would
39 help understand whether confounding factors may have impacted on purchasing decisions.
40 Finally, time-series research exploring how reported market changes are reflected in the
41 smoking attitudes and behaviour of consumers throughout the transition period (if at all)
42 would be of value, as to would research which compares the impact of protracted (as in the
43 UK) versus immediate or short-term compliance deadlines (as in Australia).
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53 In terms of limitations, we used a stratified sample of small retailers in England,
54 Scotland, and Wales, and therefore do not provide insight into trends for larger retailers. In
55 addition, while we intentionally monitored the 20 top selling tobacco products in small
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retailers, and the number of unique-tobacco related UPCs sold, our findings are not necessarily representative of all products (i.e. only two premium products were monitored), nor did we consider smaller pack sizes which would have been most affected by the enforced pack size increases (e.g. 10 packs of FMCs). Furthermore, the results only provide insight into the number of retailers which sold the tobacco products each month, but not the total volume of sales. It is possible, particularly as standardised packs were being introduced or fully branded packs withdrawn, that only a small volume of each were sold by retailers.

Conclusion

In conclusion, this study suggests that tobacco companies took full advantage of the transition period to delay the withdrawal of fully branded products and limit the sale of standardised products until compliance became mandatory. Doing so prolonged the use of fully branded packaging and may have mitigated some of the immediate intended effects of the legislation by desensitising consumers to the new pack designs. With virtually no standardised products sold in the first seven months of the transition period, the results also suggest that 12 months was longer than needed to transition stockholding and allow non-compliant, fully branded packaging to be sold. Other countries which are planning to implement standardised packaging should therefore consider what length of transition period is allowed, and the rationale and implications of this. The results also suggest a need to explore other tobacco brand strategies following the new legislations, for example innovation in product names and pack design, and use of other marketing strategies (e.g. price and RRP).

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Running head: Transition to standardised packaging in small retailers

Table 1. Per cent of retailers ($n = 500$) selling the monitored fully branded tobacco products over the 12-month transition period

| Product name by price segment | % Retailers selling product in each wave of data | | | | | | | | | | | | |
|--|--|-----------|------------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | May 16 | Jun 16 | July 16 | Aug 16 | Sept 16 | Oct 16 | Nov 16 | Dec 16 | Jan 17 | Feb 17 | Mar 17 | Apr 17 | May 17 |
| <i>Value (n = 5)</i> | | | | | | | | | | | | | |
| Carlton King Size 19 sticks | 10 | 8 | 7 | 10 | 10 | 18 | 48 | 68 | 76 | 77 | 78 | 78 | 68 |
| Carlton Superkings 19 sticks | 35 | 17 | 12 | 12 | 15 | 61 | 82 | 88 | 87 | 86 | 81 | 36 | 14 |
| Players King Size 18 sticks | 81 | 81 | 83 | 84 | 84 | 85 | 87 | 89 | 90 | 77 | 17 | 6 | 3 |
| Players Superkings 18 sticks | 84 | 84 | 85 | 87 | 86 | 90 | 93 | 93 | 90 | 61 | 10 | 2 | 0.8 |
| Rothmans Superkings Value Blue 18 sticks | 6 | 4 | 2 | 2 | 1 | 1 | 1 | 1 | 0.2 | 0.4 | 0.2 | - | - |
| <i>Mid-range (n = 13)</i> | | | | | | | | | | | | | |
| Amber Leaf Rolling Tobacco 25g | 94 | 95 | 96 | 96 | 96 | 97 | 92 | 85 | 23 | 3 | 2 | 0.2 | 0.4 |
| Gold Leaf 25g | 82 | 84 | 84 | 84 | 86 | 85 | 86 | 88 | 85 | 86 | 50 | 4 | 0.6 |
| Golden Virginia Classic 25g | 80 | 80 | 77 | 31 | 9 | 3 | 3 | 2 | 1 | 2 | 1 | 1 | 0.2 |
| Golden Virginia Smooth 25g | 69 | 69 | 69 | 69 | 70 | 66 | 68 | 75 | 33 | 16 | 13 | 5 | 2 |
| John Player Special King Size Blue 19 sticks | 93 | 93 | 94 | 94 | 93 | 94 | 93 | 93 | 93 | 91 | 32 | 10 | 3 |
| John Player Special Silver 25g | 28 | 28 | 29 | 29 | 29 | 30 | 27 | 27 | 33 | 36 | 42 | 32 | 8 |
| Lambert & Butler King Size 20 sticks | 22 | 48 | 78 | 82 | 84 | 86 | 87 | 89 | 87 | 32 | 13 | 5 | 3 |
| Lambert & Butler King Size Blue 19 sticks | 77 | 77 | 76 | 77 | 76 | 76 | 75 | 75 | 76 | 76 | 75 | 75 | 67 |
| Mayfair King Size 19 sticks | 92 | 92 | 94 | 94 | 92 | 90 | 92 | 91 | 90 | 86 | 34 | 12 | 6 |
| Richmond King Size 19 sticks | 19 | 19 | 66 | 76 | 80 | 80 | 82 | 82 | 79 | 39 | 20 | 14 | 8 |
| Richmond Superkings 19 sticks | 85 | 84 | 85 | 85 | 84 | 85 | 83 | 84 | 83 | 75 | 36 | 17 | 9 |
| Rothmans King Size Value Blue 18 sticks | 5 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 0.4 | 1 | - | 1 | - |
| Sterling King Size Dual 17 sticks | 95 | 95 | 96 | 96 | 96 | 95 | 96 | 96 | 97 | 96 | 33 | 12 | 6 |
| <i>Premium (n = 2)</i> | | | | | | | | | | | | | |
| Benson & Hedges Gold 20 sticks | 81 | 80 | 81 | 82 | 80 | 78 | 78 | 80 | 80 | 78 | 78 | 26 | 7 |
| Marlboro King Size Gold 20 sticks | 84 | 84 | 84 | 84 | 85 | 84 | 83 | 83 | 82 | 81 | 39 | 12 | 5 |

Running head: Transition to standardised packaging in small retailers

Table 2. Per cent of retailers ($n = 500$) selling the monitored standardised tobacco products over the 12 month transition period

| Product name by price segment | % Retailers selling product in each wave of data | | | | | | | |
|--|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Oct 16 | Nov 16 | Dec 16 | Jan 17 | Feb 17 | Mar 17 | Apr 17 | May 17 |
| <i>Value (n = 5)</i> | | | | | | | | |
| Carlton King Size Red 20 sticks | - | - | - | 1 | 27 | 48 | 50 | 81 |
| Carlton Superkings Red 20 sticks | - | - | - | 3 | 39 | 57 | 51 | 86 |
| JPS Players King Size Real Red 20 sticks | - | - | - | 8 | 72 | 83 | 87 | 92 |
| JPS Players Superkings Real Red 20 sticks | - | - | - | 41 | 83 | 90 | 91 | 93 |
| Rothmans Superkings Blue 20 sticks | - | - | - | 1 | 18 | 55 | 59 | 61 |
| <i>Mid-range (n = 13)</i> | | | | | | | | |
| Amber Leaf Original Rolling Tobacco 30g | 6 | 20 | 71 | 94 | 96 | 96 | 93 | 78 |
| Gold Leaf JPS Quality Blend 30g | - | - | - | - | 35 | 85 | 93 | 97 |
| Golden Virginia Bright Yellow 30g | - | - | 31 | 51 | 58 | 73 | 78 | 80 |
| Golden Virginia The Original 30g | - | - | - | 21 | 66 | 90 | 94 | 95 |
| JPS King Size Real Blue 20 sticks | - | - | - | 1 | 65 | 83 | 87 | 93 |
| John Player Special Silver 25g | - | - | - | - | - | - | - | - |
| Lambert & Butler King Size Original Silver 20 sticks | - | - | 2 | 63 | 85 | 89 | 91 | 93 |
| L&B Blue King Size Real Blue 20 | - | - | - | 6 | 40 | 49 | 45 | 72 |
| Mayfair King Size 20 sticks | - | - | - | 5 | 56 | 80 | 85 | 89 |
| Richmond King Size Real Blue 20 sticks | - | - | 1 | 40 | 61 | 67 | 72 | 78 |
| Richmond Superkings Real Blue 20 sticks | - | - | - | 4 | 42 | 65 | 74 | 79 |
| Rothmans King Size Blue 20 sticks | - | - | - | 15 | 56 | 67 | 69 | 70 |
| Sterling King Size Dual 20 sticks | - | - | - | 0.2 | 78 | 93 | 94 | 96 |
| <i>Premium (n = 2)</i> | | | | | | | | |
| Benson & Hedges King Size Gold 20 sticks | - | - | - | - | 1 | 51 | 71 | 77 |
| Marlboro King Size Gold 20 sticks | - | - | - | 0.2 | 40 | 70 | 77 | 81 |

Note: No standardised variant was released for John Player Special Silver 25g. This product was delisted, as the manufacturers stopped producing the 'Silver' range for RYO.

None of the monitored standardised products appeared in the retailer sample prior to October 2016.

Running head: Transition to standardised packaging in small retailers

Table 3. Average number of the monitored fully branded and standardised products sold by retailers, and average number of tobacco related UPCs, across the transition period

| Product name by price segment | Wave of data | | | | | | | | | | | | |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|
| | May 16 | Jun 16 | July 16 | Aug 16 | Sept 16 | Oct 16 | Nov 16 | Dec 16 | Jan 17 | Feb 17 | Mar 17 | Apr 17 | May 17 |
| Fully branded packs | | | | | | | | | | | | | |
| <i>N</i> retailers selling fully branded products | 500.0 | 497.0 | 500.0 | 499.0 | 497.0 | 497.0 | 500.0 | 500.0 | 499.0 | 500.0 | 495.0 | 482.0 | 452.0 |
| Average <i>n</i> of fully branded products sold (<i>SD</i>) (<i>max</i> = 20) | 12.22 (2.83) | 12.33 (2.65) | 13.02 (2.76) | 12.80 (2.67) | 12.68 (2.44) | 13.13 (2.53) | 13.56 (2.70) | 13.89 (2.73) | 12.84 (2.68) | 11.00 (2.64) | 6.61 (2.33) | 3.66 (1.76) | 2.33 (1.16) |
| Average <i>n</i> of value products sold (<i>SD</i>) (<i>max</i> = 5) | 2.15 (1.02) | 1.95 (0.87) | 1.90 (0.84) | 1.96 (0.82) | 1.98 (0.84) | 2.56 (0.95) | 3.11 (0.99) | 3.37 (0.97) | 3.44 (0.95) | 3.02 (1.04) | 1.89 (0.82) | 1.27 (0.72) | 0.94 (0.63) |
| Average <i>n</i> of mid-range products sold (<i>SD</i>) (<i>max</i> = 13) | 8.43 (1.96) | 8.72 (1.92) | 9.47 (2.11) | 9.18 (2.04) | 9.04 (1.84) | 8.93 (1.81) | 8.85 (1.92) | 8.89 (1.90) | 7.78 (1.86) | 6.39 (1.79) | 3.54 (1.72) | 1.98 (1.28) | 1.25 (0.87) |
| Average <i>n</i> of premium products sold (<i>SD</i>) (<i>max</i> = 2) | 1.64 (0.63) | 1.65 (0.64) | 1.66 (0.64) | 1.67 (0.64) | 1.66 (0.62) | 1.63 (0.65) | 1.60 (0.65) | 1.64 (0.63) | 1.62 (0.66) | 1.60 (0.69) | 1.18 (0.69) | 0.40 (0.59) | 0.14 (0.38) |
| Standardised packs | | | | | | | | | | | | | |
| Number of retailers selling standardised packs | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 32.0 | 99.0 | 385.0 | 490.0 | 499.0 | 498.0 | 500.0 | 499.0 |
| Average <i>n</i> of standardised products sold (<i>SD</i>) (<i>max</i> = 19) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 1.0 (0.0) | 1.0 (0.0) | 1.35 (0.50) | 3.60 (1.63) | 10.21 (3.07) | 13.98 (3.06) | 14.59 (3.02) | 15.92 (2.88) |
| Average <i>n</i> of value products sold (<i>SD</i>) (<i>max</i> = 5) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.54 (0.69) | 2.40 (1.21) | 3.35 (1.24) | 3.37 (1.20) | 4.13 (1.09) |
| Average <i>n</i> of mid-range products sold (<i>SD</i>) (<i>max</i> = 12) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 1.0 (0.0) | 1.0 (0.0) | 1.35 (0.50) | 3.06 (1.30) | 7.39 (2.22) | 9.41 (2.00) | 9.74 (1.94) | 10.21 (1.82) |
| Average <i>n</i> of premium products sold (<i>SD</i>) (<i>max</i> = 2) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.0 (-) | 0.42 (0.52) | 1.22 (0.78) | 1.47 (0.74) | 1.58 (0.69) |
| Average number of tobacco related UPCs sold by each retailer (<i>SD</i>) | 123.60 (44.24) | 124.21 (42.92) | 130.32 (44.88) | 130.68 (44.65) | 127.15 (42.84) | 124.23 (41.89) | 120.45 (41.09) | 120.74 (42.15) | 120.49 (42.13) | 119.86 (43.67) | 118.67 (45.32) | 95.85 (38.76) | 82.30 (32.06) |