



Illicit tobacco in Australia

2020 Full Year Report

21 May 2021

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Important notice

This presentation of key findings (the 'Report') has been prepared by KPMG LLP in the UK ('KPMG UK') for Imperial Tobacco Australia Limited, described together in this Important Notice and in this Report as the 'Beneficiary', on the basis set out in a private contract dated 5th August 2020 agreed separately with the Beneficiary.

Nothing in this Report constitutes legal advice. Information sources, the scope of our work, and scope and source limitations, are set out in the Appendices to this Report. The scope of our review of the contraband, counterfeit and unbranded segments of the tobacco market within Australia was fixed by agreement with the Beneficiary and is set out in the Appendices.

We have satisfied ourselves, so far as possible, that the information presented in this Report is consistent with our information sources but we have not sought to establish the reliability of the information sources by reference to other evidence.

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In particular, and without limiting the general statement above, since we have prepared this Report for the Beneficiary alone, this Report has not been prepared for the benefit of any other manufacturer of tobacco products nor for any other person or organisation who might have an interest in the matters discussed in this Report, including for example those who work in or monitor the tobacco or public health sectors or those who provide goods or services to those who operate in those sectors.

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Glossary

| | |
|--------------------------------------|--|
| ABF | Australian Border Force |
| ABS | Australian Bureau of Statistics |
| ACIC | Australian Criminal Intelligence Commission (formerly Australian Crime Commission) |
| ACT | Australian Capital Territory |
| AIHW | Australian Institute of Health and Welfare |
| AIT | Anti-Illicit Trade |
| ATO | Australian Taxation Office |
| AWOTE | Average Weekly Ordinary Time Earnings |
| AUSTRAC | Australian Transaction Reports and Analysis Centre |
| BATA | British American Tobacco Australia |
| Bn | Billion |
| CAGR | Compound Annual Growth Rate |
| CATI | Computer Aided Telephone Interview |
| CAWI | Computer Aided Web Interview |
| Contraband | Genuine manufactured cigarettes that are sold without the payment of applicable excise taxes in the market of consumption. Contraband cigarettes tend to have been bought in a low-tax country and brought into the country of consumption illegally or acquired without taxes (for export purposes) and illegally re-sold in the market of consumption. This category includes genuine products that are brought into a country in amounts exceeding the personal allowance; in Australia this limit is 25 cigarettes or 25 grams of RYO per person |
| Counterfeit | Manufactured cigarettes that are illegally manufactured and carry the trademark and/or branding of a legally manufactured brand without the consent of the trademark owner. Counterfeit cigarettes are also known as fake cigarettes. For the purposes of this analysis, data relating to counterfeit is not included within the definition of contraband |
| CPI | Consumer Price Index |
| DIBP | The Department of Immigration and Border Protection |
| Domestic cigarettes | Cigarettes that are produced for consumption in Australia |
| Domestic Illicit Plains | Flows of Illicit White brands that have packaging designed for the domestic Australian market |
| EOS | Shipment data is provided by each manufacturer to independent research agencies who process and combine it into a single set of data to reflect ex-factory shipments for all four manufacturers |
| EPS | Empty packs survey |
| FCTC | WHO Framework Convention on Tobacco Control, signed 29 June 2004, Volume 2302, page 166 (entered into force 27 February 2005) |
| g | Gram |
| GCC | Gulf Cooperation Council |
| GDP | Gross Domestic Product |
| H1 | First half of the year i.e. the period from January through June |
| H2 | Second half of the year i.e. the period from July through December |
| Illicit Whites | Manufactured cigarettes that are usually manufactured legally in one country/market but which the evidence suggests have been smuggled across borders during their transit to Australia, where they have limited or no legal distribution and are sold without the payment of tax. These flows include Domestic Illicit Plains and Illicit Whites (non-domestic) |
| Illicit Whites (non-domestic) | Flows of Illicit White brands that do not have plain packaging designed for the domestic Australian market |
| Inflows | Total volume of cigarettes coming into Australia |

Glossary (cont.)

| | |
|--------------------------------|--|
| ITA | Imperial Tobacco Australia |
| ITTF | Illicit Tobacco Task Force |
| Kg | Kilogram |
| KPI | Key Performance Indicator |
| LDC | Legal Domestic Consumption |
| LDS | Legal Domestic Sales |
| LTM | Last Twelve Months |
| LTM H1 | Last Twelve Months to the end of June (e.g. 1 July 2019 to 30 June 2020) |
| LTM H2 | Last Twelve Months to the end of December (e.g. 1 January 2020 to 31 December 2020) |
| M | Million |
| MSI | MS Intelligence |
| ND(L) | Non-Domestic Legal is the legitimate tobacco purchased in duty free or abroad within personal allowance limits. Since 1 July 2017, consumers have a limit of 25 cigarettes or 25g of RYO |
| Non-domestic cigarettes | Cigarettes that are not Australian (i.e. no Australian health warning or not in English, brands not sold in Australia, packs with identifying marks from other markets such as tax stamps) |
| OECD | Organisation for Economic Cooperation and Development |
| PDI | Personal Disposable Income |
| PML | Philip Morris Limited |
| Pp | Percentage point |
| Project Stella | A study of the illicit cigarette market in the European Union, UK, Norway and Switzerland by KPMG. Formerly the project was called Project SUN |
| Outflows | Legitimate tobacco purchased in Australia and taken abroad |
| Q1 | First quarter to the end of March (e.g. 1 Jan to 31 Mar) |
| Q2 | Second quarter to the end of June (e.g. 1 Apr to 30 Jun) |
| Q3 | Third quarter to the end of September (e.g. 1 Jul to 30 Sep) |
| Q4 | Fourth quarter to the end of December (e.g. 1 Oct to 31 Dec) |
| RMR | Roy Morgan Research |
| RSP | Retail Selling Price |
| RYO | Roll Your Own |
| TSG | Tobacco Stakeholder Group. Formerly known as the Tobacco Industry Forum (TIF) |
| Tonnes | Thousand kilograms |
| WHO | World Health Organization |
| WSPM | WSPM Group |
| Unbranded tobacco | Illegal loose leaf tobacco upon which no duty has been paid and which carries no labelling or health warnings. It is sold and consumed either in RYO form (called Chop Chop) or inserted into empty cigarette tubes. Commonly sold in both bags or boxes |
| Unspecified | Unspecified market variant refers to cigarette packs that do not bear specific market labelling or duty free labelling |
| Y o Y | Year on Year |

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1. Executive summary and key findings

- 1.1 Key messages
- 1.2 The purpose of this report
- 1.3 External
- 1.4 KPMG UK's anti-illicit tobacco measurement experience

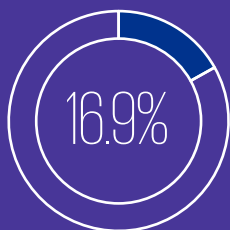
Executive summary

2.2 kg million

Illicit tobacco consumed

- Declined by 26.6%
- Unbranded and Illicit manufactured cigarette declined by 15.2% and 35.6% respectively

% of total consumption that was illicit



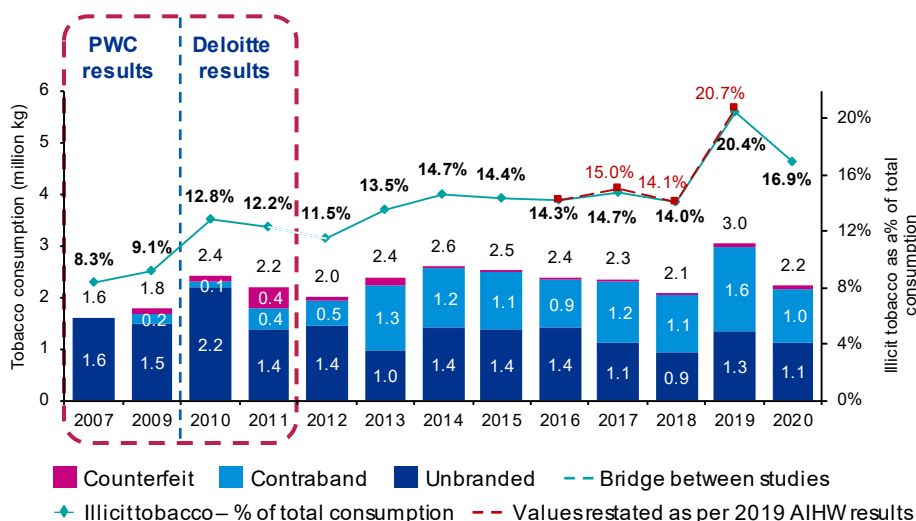
- Illicit tobacco consumption decreased by 3.5 ppts

13.1 kg million

Total consumption

- Overall decline of 11.4%
- Driven by 26.6% decline in illicit consumption and 7.4% decline in legal consumption

1.1 Consumption of illicit tobacco products by category and as a percentage of overall consumption, 2007 – 2020^{(1)(2)(3)(4)(5)(a)(b)(c)(d)(e)}



Our study suggests that COVID had an impact on the consumption of tobacco in Australia. The findings highlight that tobacco consumption declined in 2020

- Overall tobacco consumption in Australia decreased by 11.4%; the largest decline reported in our studies
- All categories of tobacco experienced a declining trend except for counterfeit
- The overall decline in tobacco consumption was driven by a 7.4% decline in legal domestic sales and a 26.6% decline in total illicit consumption

As a result, the consumption of illicit tobacco, as a proportion of total consumption, decreased from 20.4% in 2019 to 16.9% in 2020

- Illicit manufactured cigarette consumption volumes decreased by 35.6%
 - In 2020, Marlboro witnessed the largest decline in non-domestic incidence and was at its lowest recorded level
 - Whilst flows from most countries fell in 2020, flows from China (including China duty free) remained fairly resilient and accounted for 31% of all non-domestic flows compared to 25% in 2019
 - However, the decline in contraband was slightly offset by an increase in the consumption of Domestic Illicit Plains
- Meanwhile, the consumption of unbranded tobacco also fell (by 15.2%), primarily due to a large fall in the volume purchased per occasion. We also note a large fall in the frequency of purchase during the Q2 consumer survey which was conducted around the time of the first COVID lockdown. In Q4 2020, the frequency of purchase increased to the highest rate recorded through these surveys. This decline was despite the highest recorded percentage of smokers stating that they have used unbranded tobacco
- If the 2.2 million kg of tobacco had been consumed legally, it would have represented an estimated excise value of AUD2.9 billion^(c).

Notes: (a) KPMG have not had the opportunity to validate results for 2007-2011. (b) Values below 0.1 have been removed for clarity purposes. (c) Calculated at the average excise rate for 2020. (d) Q1 2020 EPS has been adjusted to account for COVID-19 adjustments that include (i) Adjustment for lockdown days in Q1 to estimate at H1 results; (ii) Adjustment for decline in the consumption based on Q2 consumer survey responses for changes in consumption pattern (adjustments are explained in detail on page 52). (e) Following the release of AIHW's latest estimates of smoking prevalence for 2019 we have restated our estimates of smoking prevalence from 2017 to 2019.

Sources: (1) PWC, *Illegal Tobacco: counting the cost of Australia's black market*, 2007, 2009. (2) Deloitte, *Illicit Trade of Tobacco in Australia*, 2010, 2011, 2012. (3) Industry data; see specific report sections for further detail. (4) KPMG Analysis. (5) IRI scan data, 2020.

Executive summary and key findings

KPMG UK is a leading advisor in the field of illicit tobacco consumption measurement

1.2 The purpose of this report

Imperial Tobacco Australia Limited (ITA) has commissioned KPMG UK to estimate the size of the consumption of illicit tobacco in Australia. Reports are produced annually. The purpose of this report is:

1. To provide an overview of the nature and dynamics of the legal and illicit tobacco markets in Australia, and
2. To provide an independent estimate of the size of the illicit tobacco market in Australia.

This full year 2020 report measures the consumption of illicit tobacco in Australia. It reports on events occurring during the twelve month period from January 2020 through December 2020. This 2020 report is produced using a methodology in line with previous KPMG 'Illicit Tobacco in Australia' reports.

1.3 External

This report provides an overview on the consumption of tobacco in Australia. It should be noted that a number of external issues have impacted the results this year. These include the COVID pandemic and the release of new Australian Institute of Health and Welfare data on smoking prevalence. We have made adjustments to our approach to account for these factors.

1.4 KPMG UK's anti-illicit tobacco measurement experience

KPMG UK has significant experience in the measurement of illicit tobacco consumption across a number of markets as well as Australia. Our work has covered Europe, Latin and North America, Asia and the Middle East.

Our work was pioneered in Europe where we have published an annual report on illicit cigarette consumption since 2006. In 2013, it was conducted on a pan-industry basis for the first time. In 2018, the report was funded by Philip Morris International Management. The project was called 'Illicit consumption in EU, Norway, UK and Switzerland' in 2020 (formerly known as Project STAR, Project SUN and Project Stella).



2. Australian tobacco market

2.1 Tobacco consumption in Australia

2.2 Legal tobacco market

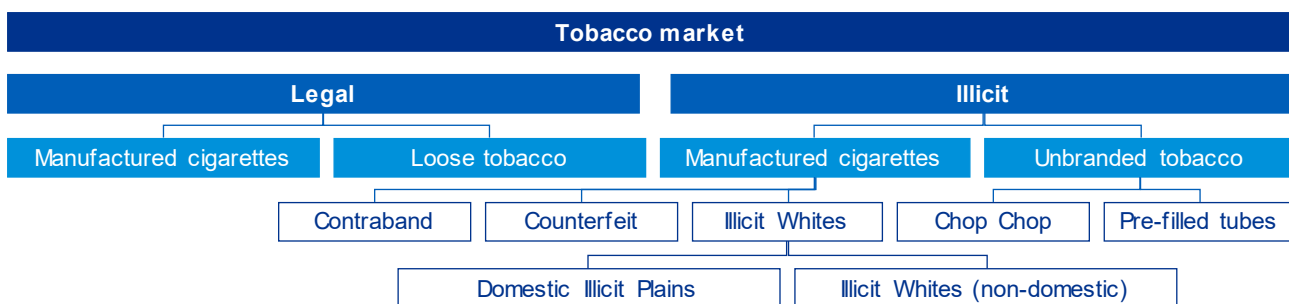
Australian tobacco market

The legal and illicit markets are made up of manufactured cigarettes and loose tobacco

2.1 Tobacco consumption in Australia

Tobacco consumption refers to the total volume of consumption for all types of tobacco as mapped out in figure 2.1. This section deals with the tobacco market and related products:

Figure 2.1: Australia tobacco market map



Legal tobacco products

There are two main types of legal tobacco products considered in this report (shisha, cigars and pipe tobacco have been excluded for the purposes of this study):

Manufactured cigarettes – Made for the legal tobacco market and sold in packets.

Loose tobacco – Legal loose leaf tobacco sold in pouches and used in Roll Your Own (RYO) cigarettes, which are made using rolling papers or tubes.

As will be shown in Section 4.1, additional legal consumption is possible in the form of non-domestic legal product. The non-domestic legal product is tobacco purchased abroad by consumers and imported legally into Australia, either within personal allowance limits or by paying duty on the amount over this allowance.

Illicit tobacco products

Illicit tobacco is either grown or produced locally or procured illegally from overseas markets without the payment of customs duties. This tobacco is sold to consumers at lower prices than legal Australian cigarettes, avoiding Australian customs obligations, or is brought into the country in amounts exceeding the allowable personal limit.

Contraband

These cigarettes are manufactured legally outside of Australia but are non-compliant with Australian regulations and are smuggled into the Australian market. Contraband also includes cigarettes that are purchased legally outside Australia but exceed the personal import allowance and have no duty paid.

Contraband cigarettes are legitimately manufactured by the trademark owner but imported illegally (by third parties or consumers) to avoid Australian government regulations, quarantine inspections and local product controls.⁽¹⁾

Illicit Whites

Illicit Whites are manufactured cigarettes that are usually manufactured legally in one country/market but which the evidence suggests have been smuggled across borders during their transit to Australia, where they have limited or no legal distribution and are sold without the payment of tax. These flows include Domestic Illicit Plains and Illicit Whites (non-domestic). Domestic Illicit Plains are flows of Illicit White brands that have packaging designed for the domestic Australian market. Illicit White brand flows that do not have plain packaging designed for the domestic Australian market are Illicit Whites (non-domestic).

Illicit Whites cigarettes have been included in our analysis of contraband.

Following the report on the Black Economy Taskforce, in the 2018-19 budget the Australian Government announced a number of measures to combat illicit tobacco trade. However, as we take a consumption based approach, some of these products could still be sold in channels. Also, we are unable to assess whether these products are counterfeit or not. As a result, we have continued to monitor these flows.

Sources: (1) Legal and Constitutional Affairs Legislation Committee, 23 February 2015.

Australian tobacco market

The legal and illicit markets are made up of manufactured cigarettes and loose tobacco (cont.)

2.1 Tobacco consumption in Australia (cont.)

Counterfeit

These cigarettes are illegally manufactured and sold by a party other than the trademark owner. Once manufactured, they are smuggled into Australia most commonly via ports in large freight containers and other channels including airmail.

Unbranded tobacco

Unbranded tobacco is often sold as finely cut loose leaf tobacco in a range of pack sizes from 30 grams to half kilogram amounts. Although, it has been reported by the industry that recently these products have been sold in pack sizes ranging from 20-500g.

This product carries no labelling or health warnings and is made in RYO form or inserted into empty cigarette tubes that are available from legitimate tobacco retailers, often sold in the original cigarette tube boxes. The product is then sold in pre-filled tubes or loose in bags (called Chop Chop).⁽¹⁾

Sources: (1) Tobacco Industry Stakeholder Group (TISG). TISG is no longer operative.

Australian tobacco market

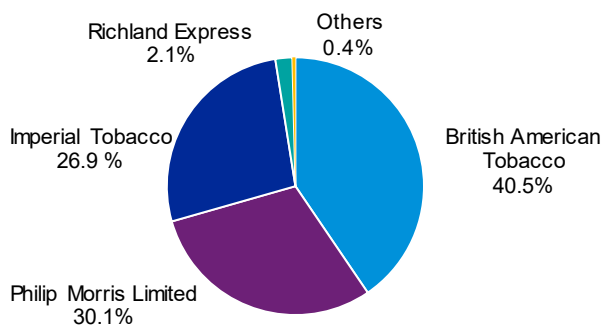
British American Tobacco has the largest market share in manufactured cigarettes whilst Imperial Tobacco has the biggest market share in loose tobacco

2.2.2 Australia legal tobacco competitive overview

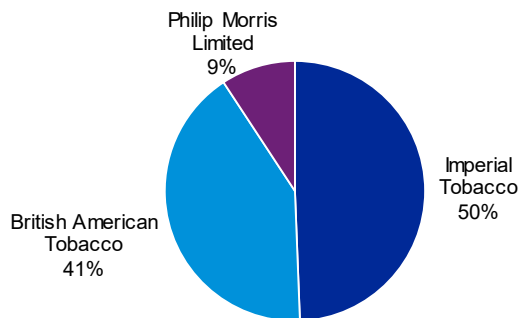
Figure 2.2.2a: Market share by manufacturer, 2020^{(1)(a)(b)}

Manufactured cigarettes

Loose tobacco



Total market: 8.5 million kilograms



Total market: 2.4 million kilograms

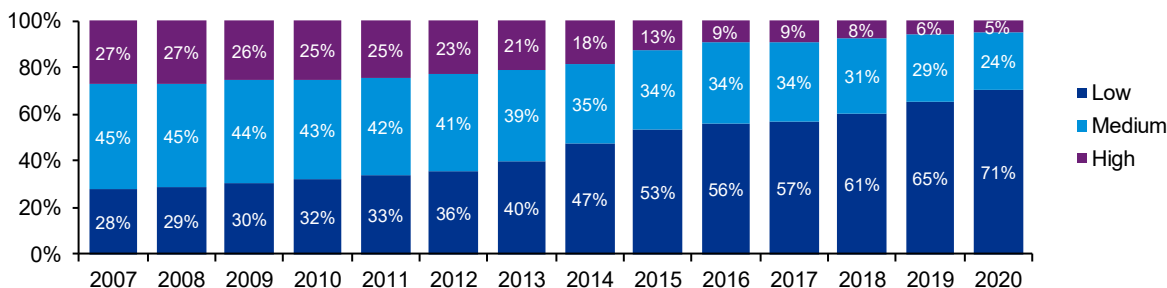
Market share

The three major tobacco manufacturers have large market shares across both the manufactured cigarette and loose tobacco markets. British American Tobacco's market share declined from 41% to 40% in 2020.

Between 2019 and 2020 the market share of Philip Morris Limited increased from 28% to 30% while Imperial Tobacco maintained its share of 28% in 2020. Other manufacturers maintained a 3% share.

Imperial Tobacco continues to hold the largest market share in loose tobacco. British American Tobacco and Philip Morris Limited are the only other major competitors in this segment.

Figure 2.2.2b: Market share of manufactured cigarettes by price category, 2007 – 2020^{(2)(3)(c)}



Price category

Since 2007, the market share of low priced cigarettes has increased at the expense of medium and high priced cigarettes as people are switching to cheaper cigarettes. This trend has developed further in 2020 as high and medium priced cigarettes lost further market share.

In 2020, the growth in the low priced category was primarily driven by an increase in the number of variants of existing brands in Australia rather than new brands entering the market.

- Notes: (a) Data gathered from Aztec – IRI indicates that the three major manufacturers account for approximately 98% of the domestic market of manufactured cigarettes. However, there may be legal imports which might not have been included in this data.
 (b) Numbers in the chart may not add to 100% due to rounding.
 (c) For the purpose of this analysis price categorisation for historical periods has been kept same as that of last year, 2020 has been updated with the

- latest industry data.
 Sources: (1) IRI scan data, 2020.
 (2) KPMG analysis of IRI scan data.
 (3) Euromonitor, *Tobacco in Australia*, July 2020.

No tobacco is grown in Australia for legal commercial sale

2.2.3 Supply and distribution of legal manufactured tobacco in Australia

Figure 2.2.3 Supply chain for legal tobacco products in Australia



Tobacco supply chain and sales channels

All manufactured tobacco products are imported into Australia as tobacco leaf or finished products. Tobacco can only be grown in Australia (for personal or commercial use) with an excise license.⁽¹⁾ There are no current licenses for tobacco growing in Australia⁽²⁾ and therefore no tobacco is legally grown in Australia for any purpose.

Non-domestic legal consumption channel

Travellers can bring tobacco products with them into Australia if they are aged 18 years or older. They can bring one unopen packet of up to 25 cigarettes or 25 grams of other tobacco products; and one open packet of cigarettes without permit. If they bring in tobacco they must declare any tobacco above the duty free allowance and pay all relevant duty and taxes that apply on arrival into Australia.⁽³⁾

Given the low duty-free low allowance, there is evidence (see detail in Appendix A4) to suggest that non-domestic legal is a small proportion of consumption.

Further, from July 2019, the Australian Government prohibited the import of tobacco products (other than cigars, chewing tobacco and snuff intended for oral use up to 1.5kg) through the mail.⁽⁴⁾ This change may lead to a decline in non-domestic legal consumption.

To precisely quantify non-domestic legal consumption, parties using internet and mail channels would need to declare all purchases/sales in excess of the allowed quantities to the Australian Border Force (ABF). Failure to declare all these purchases may result in a minor understatement of both non-domestic legal and contraband consumption. Non-domestic legal consumption is discussed further in Appendix A4 (p.57).

Sources: (1) *Excise Act 1901* (Cth) s 28.

(2) Australian Taxation Office, Tobacco excise (15 August 2019) Australian Taxation Office.

(3) Australian Government COVID-19 travel restrictions and information for visa holders. Australian Border Force

(4) [Tobacco \(abf.gov.au\)](https://www.abf.gov.au) (Updated on 6th April 2021)

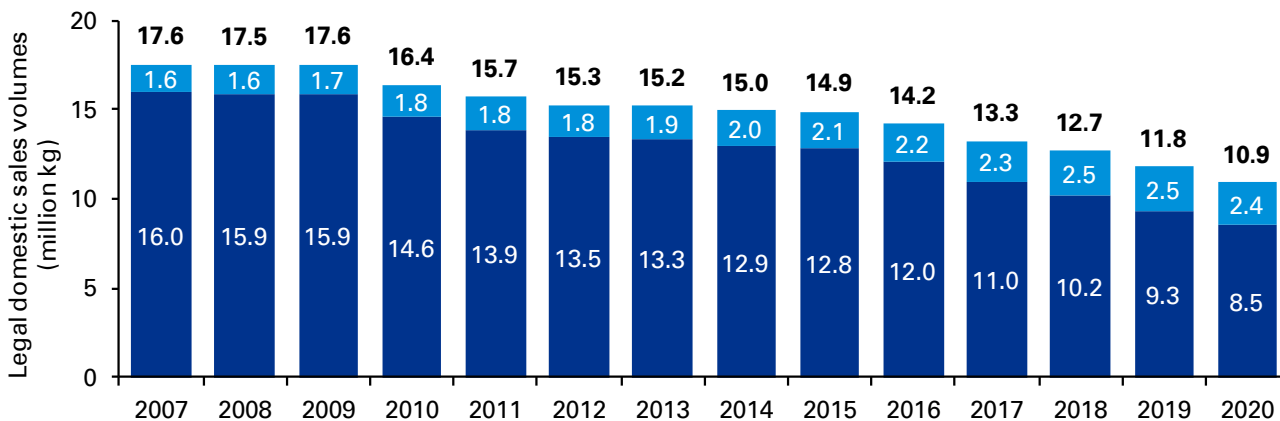
Australian tobacco market

Supported by declining RYO, legal domestic sales experienced the largest decline seen since the inception of our studies

2.2 Legal tobacco market

2.2.1 Historic legal domestic sales

Figure 2.2.1: Legal domestic sales in Australia, 2008 – 2020^{(1)(2)(3)(a)(b)(c)(d)}



| CAGR (%) | 2008 – 2020 | 2019 – 2020 |
|-------------------------|---------------|---------------|
| Manufactured cigarettes | (5.1)% | (8.5)% |
| Loose tobacco | 3.3% | (3.3)% |
| Total market | (3.9)% | (7.4)% |

Overall sales of legal domestic tobacco experienced an increased rate of decline of 7.4% between 2019 and 2020; a larger decline compared to the CAGR decline of 3.9% seen for the period 2008 to 2020.

Though the market has been declining steadily since 2009, this has historically been driven by declining manufactured cigarette sales. However, between 2019 and 2020 loose tobacco sales fell for the first time since the inception of our studies. Legal domestic sales of manufactured cigarettes experienced a decline of 8.5%.

- Notes:
- (a) Numbers in the above chart may not sum due to rounding.
 - (b) Market estimates are adjusted to include sales not attributable to the three major tobacco manufacturers.
 - (c) Refer to the glossary for further definition.
 - (d) Legal domestic sales for 2013 were based on an analysis of Exchange of Sales data (EOS) and Euromonitor data as discussed in previous reports. For subsequent reports, KPMG has examined a range of data sources, including industry exchange of sales and off-take data, supplied by independent research agencies and industry stakeholders.

- Sources:
- (1) KPMG analysis of IRI (scan) databases.
 - (2) Euromonitor, Legal domestic sales (from trade sources and national statistics), accessed 2013, 2014, 2015.
 - (3) IRI scan data, 2020

Australian tobacco market

Legal sales seem to have been impacted differently by COVID with some evidence that manufactured cigarettes were hardest hit

Figure 2.2.2 Manufactured cigarette annual change by month^{(1)(2)(3)(a)}

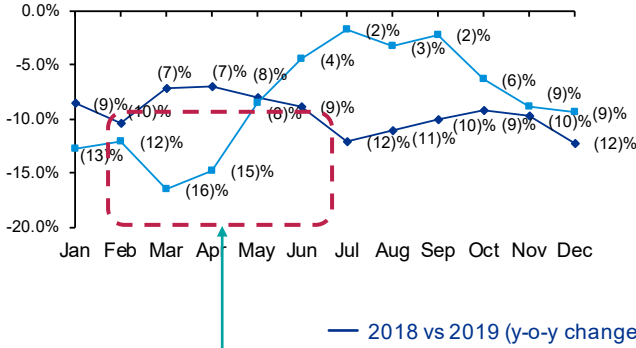
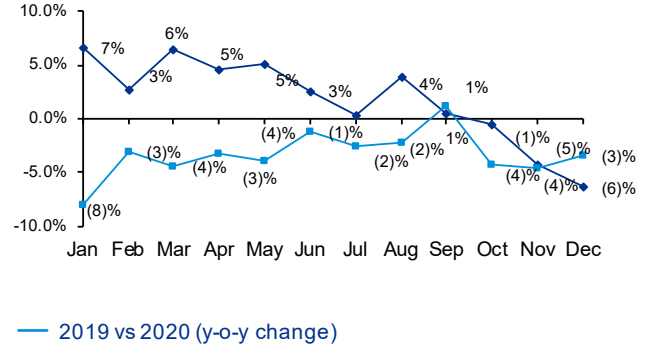


Figure 2.2.3 Loose tobacco annual change by month^{(1)(2)(3)(a)}



The first lockdown seems to have had a large impact on the sales of legal cigarettes

The RYO market moved into decline at the end of 2019 which continued throughout 2020

A month by month analysis of legal manufactured cigarette sales sees a large decline during the first lockdown period compared to the previous year. There was some softening of the decline between July and September, especially compared to the previous year.

This year's results are notable for the observation that loose tobacco experienced a decline for the first time since the inception of these reports. The data suggests that the decline started to set in around September/October 2019.

Notes: (a) Numbers in the above chart may not sum due to rounding.

Source: (1) KPMG analysis of IRI (scan) databases.
 (2) Euromonitor, Legal domestic sales (from trade sources and national statistics), accessed 2013, 2014, 2015.
 (3) IRI scan data, 2020.



3. Relative pricing

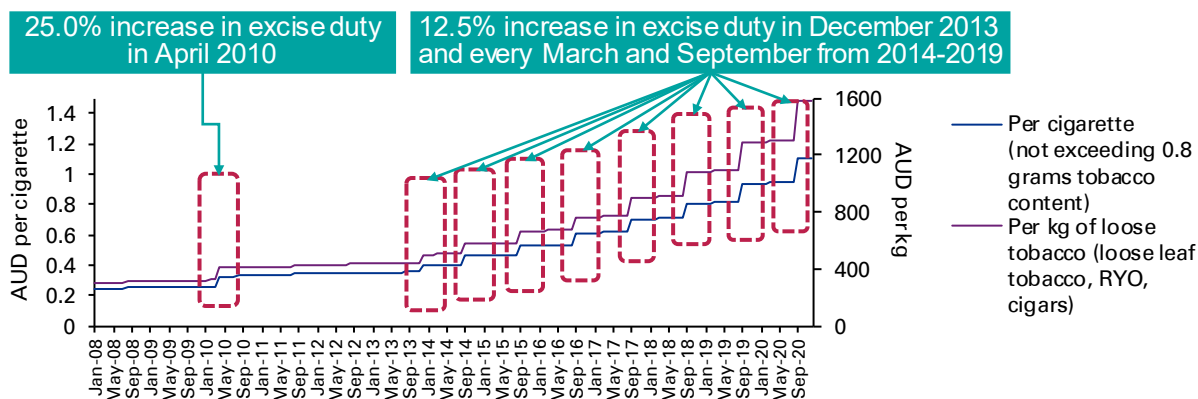
- 3.1 Recent development of excise duty and tobacco affordability in Australia
- 3.2 Regional tobacco prices
- 3.3 Relative price of illicit tobacco

Relative pricing

Whilst the AWOTE increase remains in effect, 2020 marks the end of successive 12.5% annual excise increases in Australia

3.1 Recent development of excise duty and tobacco affordability in Australia

Figure 3.1a: Values of tobacco excise and customs duty, Australia, January 2008 – September 2020^{(1)(a)}



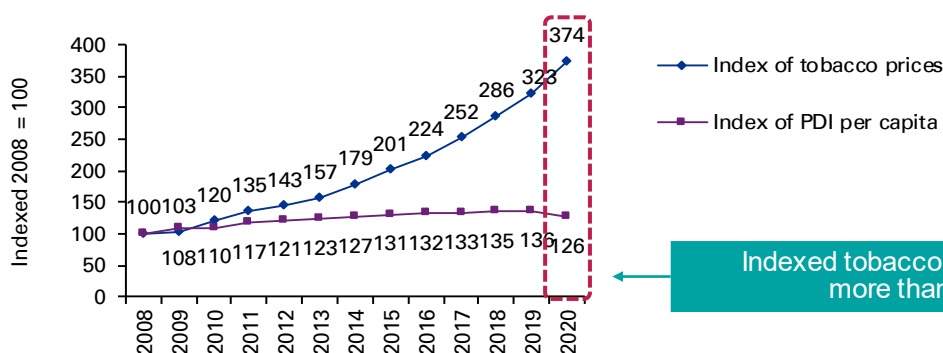
On 30 April 2010, an excise increase of 25% was introduced in Australia. Following this, annual ad hoc excise increases were applied in December and then in September each year from 2013 to 2016. Legislative amendments made in 2016 resulted in further excise increases of 12.5% per annum between 2017-2020. This increase was over and above the annual indexation linked to AWOTE⁽²⁾.

Until 2017-18, the excise equivalence on manufactured cigarettes and loose leaf tobacco was based on the assumption that a cigarette contained 0.8 grams of tobacco, which has now changed

to 0.7 grams per cigarette. To harmonise the tax equivalence applying to different tobacco products, the excise rate adjustment for loose leaf tobacco began in September 2017 and was phased over four years between 2017 to 2020. This increase was a step-up on the loose leaf tobacco rate beyond the regular indexation and previously announced excise rate increases on 1st of September each year.⁽³⁾

These factors have resulted in the excise on manufactured cigarettes and loose tobacco increasing by 18% and 22% respectively between December 2019 and December 2020.⁽⁴⁾

Figure 3.1b: Index of tobacco prices and per capita PDI, Australia, 2008 – 2020^{(5)(6)(a)(b)(c)}



Indexed tobacco prices have risen 488% more than PDI since 2008

PDI per capita declined in 2020. The excise rate increase in 2010, combined with subsequent increases, contributed to tobacco prices increasing at a higher rate than PDI per capita.

The increases have resulted in a decline in relative affordability when compared to previous years

Notes: (a) AWOTE is based on latest available estimates, accessed February 2021.

(b) Indexed with 2008 values taken as 100.

(c) The Index of tobacco prices and per capita PDI numbers have been updated as per the latest data available on Euromonitor.

Sources: (1) Australian Taxation Office, www.ato.gov.au.

(2) Australian Government – Australian Taxation Office, New legislation:

Excise and excise-equivalent customs duty – index tobacco excise to average weekly ordinary time earnings, 25 June 2013.

(3) *Customs Tariff Amendment (Tobacco duty harmonisation) Bill 2017*.

(4) Australian Taxation Office, Excise rates for tobacco, February 2021.

(5) Euromonitor, Index of tobacco prices, accessed February 2021.

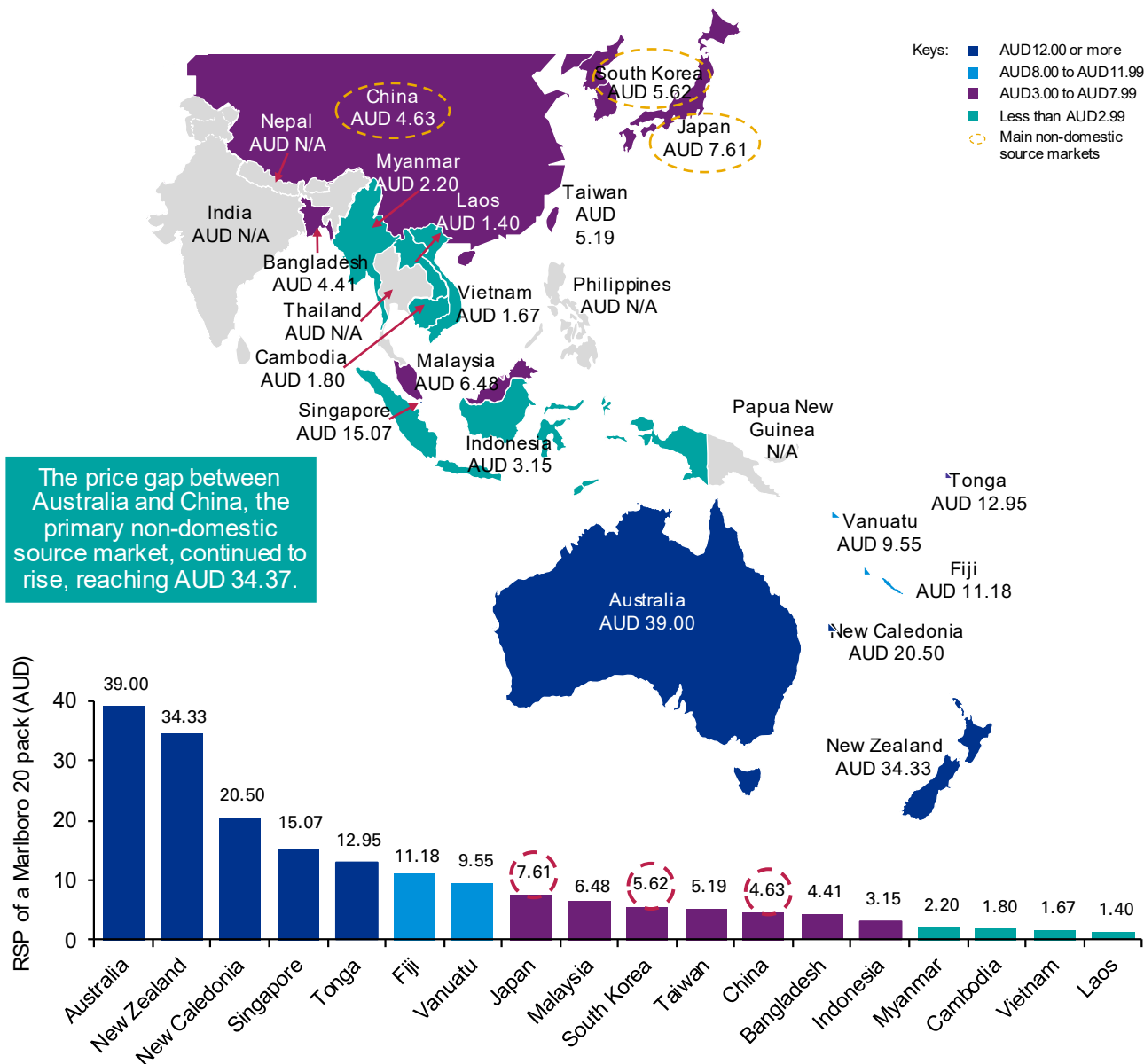
(6) Euromonitor, Annual disposable income, accessed February 2021.

Relative pricing

Australia has the highest cigarette prices within the Asia Pacific region

3.2 Regional tobacco prices

Figure 3.2: Price of a pack of 20 Marlboro cigarettes – Australia and selected markets, 2020^{(1)(2)(a)(b)(c)}



Australia and New Zealand have much higher cigarette prices than surrounding markets in South East Asia. With the exception of New Zealand and New Caledonia, Australian prices are over 159% higher than any other market-within the region (as shown above).

This large price differential between Australia and other nearby markets creates an economic incentive for those involved in the illicit market, although tight border controls seek to limit this.

Notes: (a) Prices for a 20 cigarette pack of Marlboro (taxes included); where Marlboro is not available, a comparable premium brand has been used.
 (b) The prices represents average price as of December 2020.
 (c) Yearly average rate is used for foreign exchange conversion.

Source: (1) Industry data.
 (2) Foreign exchange rates sourced from ofx.com, oanda.com and x-rates.com, accessed on 4th Mar 2021.

Relative pricing

Whilst the price differential between legal and contraband narrowed, it widened for tubes and loose tobacco in the last twelve months

3.3 Relative price of illicit tobacco

Figure 3.3.1: Prices of illicit tobacco products and Winfield 25s, June 2013 – December 2020^{(1)(a)(b)(c)(d)(e)}

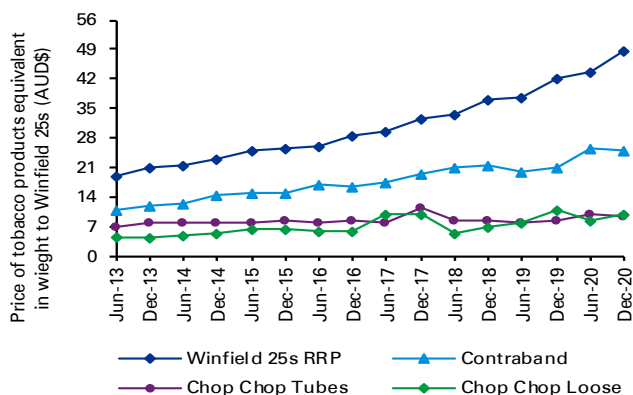
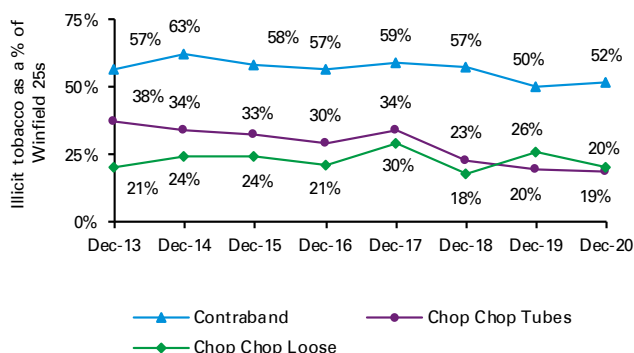


Figure 3.3.2: Illicit tobacco prices as a proportion of Winfield 25s, December 2013 – December 2020^{(1)(a)(b)(c)(d)(e)(f)}



Data provided by the industry based upon covert enquiries^(b) made across Australia highlights the price difference of illicit products compared to legitimate products. While this data will be impacted by the split of random versus intelligence led purchases^(c), the data will provide some insights into the size and change in the market.

The above figure illustrates how prices have changed for a range of illicit tobacco and a legitimate pack of Winfield 25s. Between the period December 2019 and December 2020, only Contraband (19%) exhibited a price increase higher than that of a pack of Winfield 25s (16%). Chop Chop Tubes prices also rose over the period, but this increase was relatively smaller at around 12% whilst Chop Chop Loose price declined by 10%.

Increased excise rates have resulted in an increase in legitimate tobacco prices. As illicit products bypass the payment of excise, the rise in illicit tobacco prices has likely supported higher margins for smugglers and illegal retailers.

Between December 2019 and December 2020, illicit tobacco prices as a proportion of Winfield 25s fell for Chop Chop Loose and Chop Chop Tubes resulting in an increased price differential between the products. However, a higher percentage increase in price of Contraband in 2020 as compared to the percentage increase in price of Winfield 25s led to narrowed price differential.

- Notes:
- (a) Contraband prices are an average of price for products found in Sydney and Melbourne. Unbranded prices have been converted to a pack of 25 cigarette equivalents.
 - (b) Illicit tobacco prices are obtained through market place pricing enquiries.
 - (c) Intelligence led enquiries involve gathering data and information on retail outlets suspected of dealing in illicit tobacco and using it to guide market enquiries. Random enquiries are made without suspicion that illicit tobacco products are available from the outlet.

- (d) A pack of Winfield 25s was chosen as the benchmark for changes in tobacco prices. It is an established brand with price changes likely to be representative of the broader legal tobacco market.
- (e) Data for Chop Chop loose price for December 2016 is not available.
- (f) For the purpose of this analysis Chop Chop loose price for December 2016 has been taken to be the same as that of June 2016, since the price for December 2016 was not available.

Source: (1) Industry intelligence data.

4. Size of the illicit tobacco market

- 4.1 Estimating the illicit tobacco market
- 4.2 Illicit tobacco consumption in Australia
- 4.3 Enforcement context

Size of the illicit tobacco market

The approach used to estimate the size of the Australian illicit tobacco market is globally consistent, methodical and robust

4.1 Estimating the illicit tobacco market

Methodology and validation

As discussed in section 2.1, KPMG divides the illicit tobacco market into unbranded tobacco and illicit manufactured cigarettes (in the form of counterfeit and contraband). These categories taken together form total illicit consumption. Therefore, it is important to take account of all consumption flows when assessing the amount of illicit tobacco consumed.

The chart below illustrates how KPMG breaks consumption into a number of categories (defined in section 2.1) and how each category requires different data sources to estimate the size of the market and validate the findings.

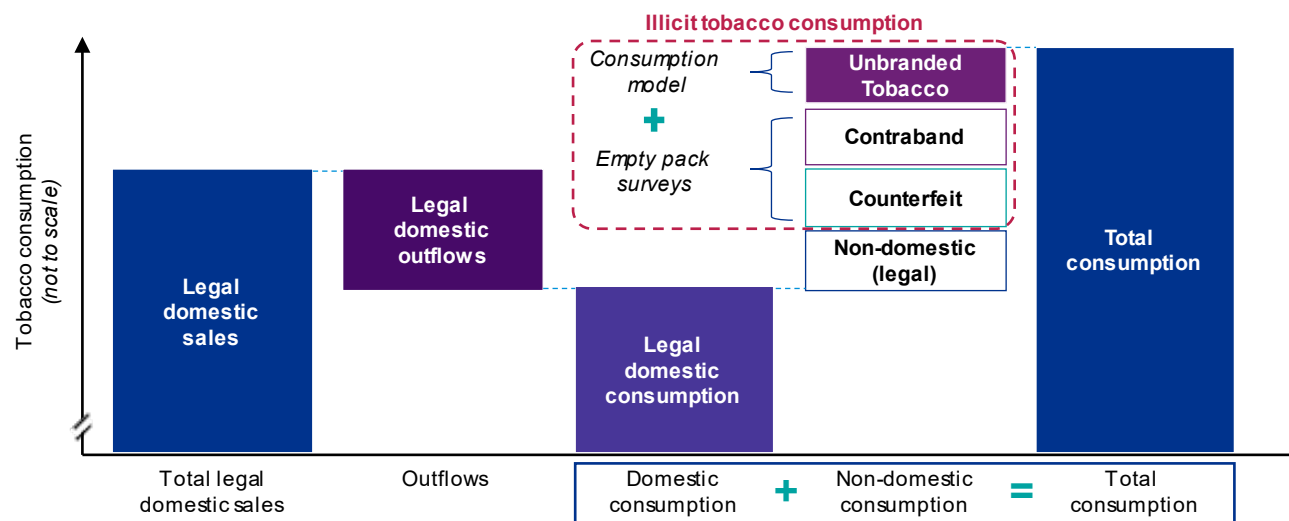
For each of these categories a separate primary approach is used in order to estimate the volume of illicit tobacco. For unbranded tobacco, a consumption model, based on results from a consumer survey is used.

The consumption model includes Chop Chop (unbranded loose tobacco sold in bags) and unbranded tobacco sold in pre-filled tubes. For illicit manufactured cigarettes an empty pack survey (EPS) analysis is used, based on the collection of discarded cigarette packs across Australia.

This approach has been used consistently in each report over the past eight years, which provides more reliable insights into market trends. It should be noted that due to the impact of COVID on data gathering we have made some adjustments to this methodology which is discussed in detail later (see page 52).

We believe this approach provides an estimate of the size of the illicit market in Australia that is as robust as possible within current research techniques. However, to further increase the level of confidence in this estimate, alternative approaches are used to validate the illicit tobacco volumes generated by the consumption model and the EPS analysis.

Figure 4.1a: Estimation of the illicit market^(a)



Data sources

Note: (a) Definitions for the above sales categories can be found in the glossary on page 3 and page 4.

Size of the illicit tobacco market

We have used a broad range of approaches to produce an estimate for the size of the Australian illicit tobacco market

4.1 Estimating the illicit tobacco market (cont.)

The validations can be used as alternative estimations, or to support trends and changes noted in the market. In this section, each of the approaches are described before the process of estimation and validation is explained. A detailed overview of these approaches can be found in Appendices A1, A2 and A3. A detailed list of all data and information used can be found in Appendix A10.

Primary approaches

Consumption model

This approach is based on the responses of consumers to the survey conducted by Roy Morgan Research (RMR) in the first half of 2020 (H1 2020) and the second half of 2020 (H2 2020). The survey is commissioned by BATA, PML and ITA but provided to us by ITA.

Survey participants represent the demographic, geographic and social factors that characterise the Australian population. The survey asks consumers about their consumption of both legal and illicit tobacco. These survey responses are then combined with other data sources by KPMG to arrive at an estimate for total illicit tobacco consumption. Consumers are asked about both unbranded tobacco and illicit manufactured cigarettes.

For the purpose of this report, the consumption model number for unbranded volumes in 2020 is based on the average of the H1 2020 and H2 2020 consumer survey results. Since consumers are likely to give a more accurate estimate of their purchase behaviour over a shorter time period, using an average of both surveys provides a more robust number for 2020. Detailed results of the consumer survey are discussed in Section 5.

Empty pack survey (EPS)^(a)

An EPS is a study undertaken independently by an independent market research agency, in this case, WSPM Group in 2020, who collect 12,000 discarded cigarette packs per survey across 16 different population centres in Australia. Before 2019, the EPS was conducted by MSIintelligence (MSI). The EPS is conducted every six months.

The brand and country of origin of each collected pack is assessed by WSPM to determine whether it is a domestic or non-domestic product. Products from different countries of origin are labelled as non-domestic. The collected packs are then sent to the participating manufacturers for analysis to determine genuine and counterfeit packs. KPMG uses the EPS results to extrapolate overall consumption in the market. The percentages of non-domestic and counterfeit packs are applied to the volume of legal domestic sales in order to establish the total consumption of manufactured cigarettes in Australia.

The EPS approach provides an objective and statistically representative estimate of the size of the illicit manufactured cigarette market. The results are not subject to respondent behaviour and are therefore less prone to sampling errors than many other alternative methodologies. The 16 population centres covered by the sample plan covers the equivalent of approximately 75.2% of Australia's population.

A small proportion of non-domestic cigarettes are likely to have been brought into Australia legally by Australians travelling overseas or by tourists and permanent settlers arriving in Australia. Travel statistics from the Australian Bureau of Statistics are reviewed by KPMG in order to estimate the likely volume.

An analysis of the amount of non-domestic legal brought into Australia by these two groups can be found in Appendix A6. Areas that are typically frequented by tourists and international students (e.g. sports stadia, tourist attractions, railway stations) are excluded from the EPS to avoid over-estimating non-domestic legal consumption and to provide a representative sample of the local population's consumption.

These non-domestic legal cigarettes are removed from the total non-domestic volume by KPMG, which leaves the total estimated illicit manufactured cigarette market, split into contraband and counterfeit cigarettes as described in Section 2.

Note: (a) Q1 2020 EPS has been adjusted to account for COVID-19 adjustments that include (i) Adjustment for lockdown days in Q1 to estimate at H1 results; (ii) Adjustment for decline in the consumption based on Q2 consumer survey responses for changes in consumption pattern (adjustments are explained in detail on page 52).

Size of the illicit tobacco market

We have used a broad range of approaches to produce an estimate for the size of the Australian illicit tobacco market (cont.)

4.1 Estimating the illicit tobacco market (cont.)

Since 2012, the empty pack surveys have been jointly commissioned by the industry (BATA, ITA and PML). Before H1 2013, the study was carried out by ACNielsen. Prior to 2019 the Empty Pack Surveys were conducted by MSI. In 2020 the EPS^(a) was conducted by WSPM. Prior surveys were also run in 2009 and 2010 by ACNielsen (who also have experience of conducting EPS in Europe) on behalf of PML, and these have been made available to KPMG for use in this report. The methodology and sample walking routes used by WSPM are consistent with those used previously by MSI and ACNielsen.

For the purpose of this report, EPS surveys have been conducted by WSPM in Q1 and Q4 2020. The results from these surveys have been used to arrive at an estimate for the illicit manufactured cigarette consumption for 2020. This method is consistent with the approach used by KPMG in the European report to assess the level of counterfeit and contraband cigarettes across the EU Member States, UK, Norway and Switzerland. It is a widely accepted method for measuring the illicit market.

Means of validation

Seizures data

Seizures data obtained from the Goods Compliance report by ABF shows the total number of detections for illicit tobacco in the year.⁽¹⁾ The distinction between the roles and responsibilities of ABF and ATO are that whilst, ABF is responsible for illicit tobacco imported into Australia, the ATO is responsible for illicit tobacco produced and/or manufactured domestically.⁽²⁾ The ATO is a partner agency in the Illicit Tobacco Task Force (ITTF) which is led by the Australian Border Force.⁽³⁾

Using seizure data to size the illicit market is often unreliable since it is difficult to ascertain the proportion of total illicit product that is seized. Detections depend as much on the performance of the customs or law enforcement agency as they do on the presence of illicit activity or the ingenuity of those involved. In addition, seizures data used to intercept tobacco products coming into Australia will not pick up loose tobacco that may have been illegally grown in Australia.

Whilst seizure data is unlikely to generate an accurate estimate for the illicit tobacco market, it can be used to indicate trends and validate any considerable changes to the illicit market. For example, an increase in manufactured cigarette flows from a country picked up in the EPS could be validated with a corresponding increase in seizures from that country or in manufactured cigarettes representing a growing percentage of seizures. We also use internal tobacco company intelligence data as a validation of trends, however, since this data is commercially sensitive we are not authorised to publish it.

Note: (a) Q1 2020 EPS has been adjusted to account for COVID-19 adjustments that include (i) Adjustment for lockdown days in Q1 to estimate at H1 results; (ii) Adjustment for decline in the consumption based on Q2 consumer survey responses for changes in consumption pattern (adjustments are explained in detail on page 52).

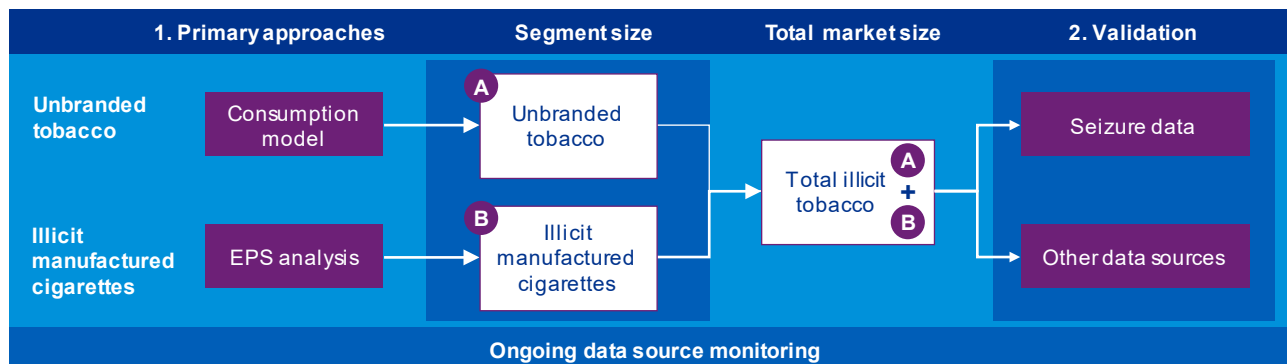
Source: (1) Goods Compliance Update February 2021, ABF.
(2) Inquiry into illicit tobacco Submission 176.
(3) Australian Taxation Office, www.ato.gov.au.

Size of the illicit tobacco market – Methodology

The validation of our measurements with additional data sources provides confidence in the results

4.1 Estimating the illicit tobacco market (cont.)

Figure 4.1b: Overview of approach to estimating illicit tobacco



The consumption model and EPS approaches are thought to be the most robust for estimating the illicit tobacco market in Australia. Figure 4.1 shows the process by which the consumption model and EPS analysis are validated through alternative analysis.

1. Primary approaches

A Unbranded tobacco: The consumption model uses data from the RMR consumer survey, external data sources such as the Australian Institute of Health and Welfare and the Australian Bureau of Statistics to estimate the results. We consider it to be the best way of sizing the unbranded tobacco market.

B Illicit manufactured cigarettes: We regard the EPS, conducted in Australia by WSPM, as the most reliable measure of contraband and counterfeit. The methodology is consistent with Project Illicit consumption in EU, Norway, UK and Switzerland (formerly known as Project Stella)^(a).

A + B Total illicit tobacco: The total illicit tobacco market size estimate is calculated by adding the results of the validated EPS analysis for manufactured cigarettes (i.e. contraband and counterfeit consumption) with the output of the validated consumption model for unbranded tobacco. The results are presented in kilograms to show total consumption of both loose tobacco and manufactured cigarettes.

2. Validation

Total illicit tobacco consumption (i.e. unbranded tobacco and manufactured cigarettes together) can be validated further by seizures data.

Seizures data can be used in order to validate the likely mix of illicit tobacco consumption. If the consumption model and EPS show a large change in the mix of illicit products, seizures data should support this change.

Using this validation process enables us to understand and corroborate any significant changes to illicit tobacco consumption.

This year, COVID-19 restrictions impacted the collection of empty packs in Australia. This led to the requirement to make adjustments to account for the lockdown period. The assumptions and adjustments made to the EPS are detailed in the sections ahead.

Ongoing data source monitoring

We take a forward looking approach to ensure the most appropriate data is used in the modelling process. For example, many surveys of smoking prevalence are conducted at irregular intervals whereas the actual decline is smooth over time between these periods. To avoid major future restatements that distort trends, we continuously monitor the relevance of data sources and may rebase some data based on historic and forecast trends.

To ensure comparability with our ongoing methodology, we have applied these changes retrospectively. See page 52 and 53 of Appendix A3 for details.

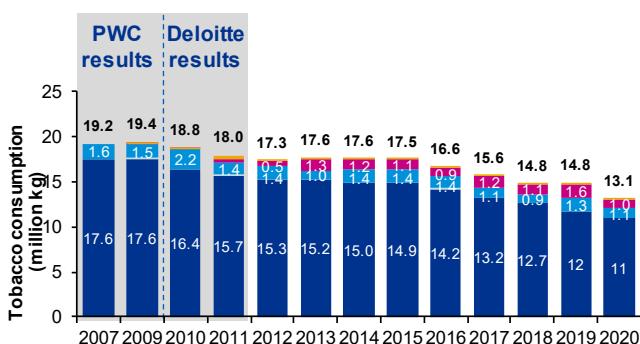
Notes: (a) A study of the illicit cigarette market in the European Union, UK, Norway and Switzerland by KPMG.

Size of the illicit tobacco market

Last year saw the largest decline in total tobacco consumption since the inception of our studies

4.2 Illicit tobacco consumption in Australia

Figure 4.2a: Consumption of tobacco products by category, 2007 – 2020^{(1)(2)(3)(a)(b)(c)(d)(e)(f)}



| | 2019 kg'000s | 2020 kg'000s | % change (2019– 2020) |
|----------------------------|-----------------|-----------------|-----------------------------|
| Counterfeit | 71 | 73 | 3.2% |
| Contraband ^(e) | 1,625 | 1,020 | (37.3%) |
| Unbranded | 1,333 | 1,130 | (15.2%) |
| All illicit product | 3,029 | 2,223 | (26.6%) |
| Non-domestic (legal) | 23 | 7 | (71.4%) |
| Legal domestic sales | 11,787 | 10,912 | (7.4%) |
| Total consumption | 14,840 | 13,142 | (11.4%) |

The total level of tobacco consumed in Australia was estimated at 13.1 million kg in 2020, of which 2.2 million kg was estimated to be illicit. Our estimate of total consumption represents a decline in volume of 11.4% from 2019. The consumption of illicit tobacco as a proportion of total consumption decreased from 20.4% in 2019 to 16.9% in 2020.

Illicit consumption of unbranded tobacco and manufactured cigarettes (i.e. CB&CF) decreased by 15.2% and 35.6% respectively.

The mix of illicit tobacco consumed saw an increase in the share of unbranded consumption after 2016, rebalancing the share of loose and manufactured cigarettes in the segment. For the first time since 2016, unbranded tobacco represented the largest share of illicit consumption.

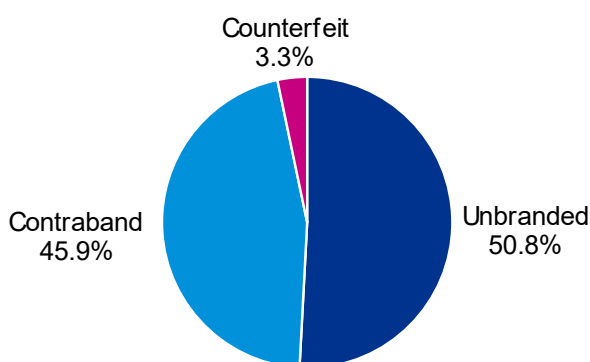
Approximately 0.10% of cigarettes consumed in Australia were Illicit Whites (non-domestic), a decline from the 0.45% of consumption identified in the 2019 EPS.

Domestic Illicit Plains increased from 0.9% in 2019 to 1.5% of the consumption in 2020. Due to COVID restrictions the volume of non-domestic (legal) product fell significantly.

Counterfeit continued to remain a very small component of illicit tobacco consumption (3.3%).

As a result, the decline in total consumption is due to a reduction in consumption of both legal tobacco and unbranded tobacco.

Figure 4.2b: Share of illicit tobacco consumption, 2020^{(3)(e)}



- Notes:
- (a) Counterfeit and contraband estimations are unavailable for 2007.
 - (b) Non-domestic legal volumes are smaller than 0.1 million kg and volume labels have not been included for this category.
 - (c) KPMG have not had the opportunity to validate results for 2007-2011.
 - (d) Numbers may not sum due to rounding.
 - (e) Contraband includes non-domestic contraband as well as the volumes of Illicit Whites (non-domestic) and Domestic Illicit Plains.
 - (f) We note that a single period change in panel composition for the Q4 2018 consumer survey may have resulted in an under-recording of the amount of unbranded consumption for 2018. Therefore, the reported growth in unbranded consumption and total consumption should be considered with that in mind.

- Sources:
- (1) PriceWaterhouseCoopers, *Australia's Illegal Tobacco Market*, 2007, 2009.
 - (2) Deloitte, *Illicit Trade of Tobacco in Australia*, 2010, 2011, 2012.
 - (3) KPMG analysis.

Size of the illicit tobacco market

The overall seizures declined in 2020

4.3 Enforcement context

Evolution of points of entry

The Australian Border Force (ABF) seized over 494 tonnes of illicit tobacco in 2019-20, 64% of the volume was of cigarettes and 36% was of loose leaf tobacco. This represents a 22% decrease in the volume of tobacco products seized by ABF in 2019-20, as compared to 2018-19.⁽¹⁾

ABF reported 157,549 detections of illicit tobacco supported by the ITTF ^(a). Total ABF seizures accounted for \$621 million excise revenue evasion on tobacco products in 2019-20.

Whilst COVID-19 effected small businesses in Australia, unlicensed growers and manufacturers of tobacco and tobacco products did not suffer the same effect, and were able to continue with their operations.⁽²⁾

According to the Assistant Minister for Customs, Community Safety and Multicultural Affairs, established organised crime groups are diversifying their commodities to include illicit tobacco as it is perceived as a low risk/high reward activity. This is leading to the emergence of new organised crime groups that are working on illicit tobacco importation and distribution.⁽³⁾

ATO seizures increased by 220% from 41 tonnes in 2018-19 to 131 tonnes in 2019-20.⁽⁵⁾

The combined effect of this is that overall seizures by ABF and ATO declined by 7% from 672 tonnes to 625 tonnes.

Figure 4.3.1: ABF seizures, 2017-2018 – 2019-2020^{(1)(4)(b)(c)(d)(e)}

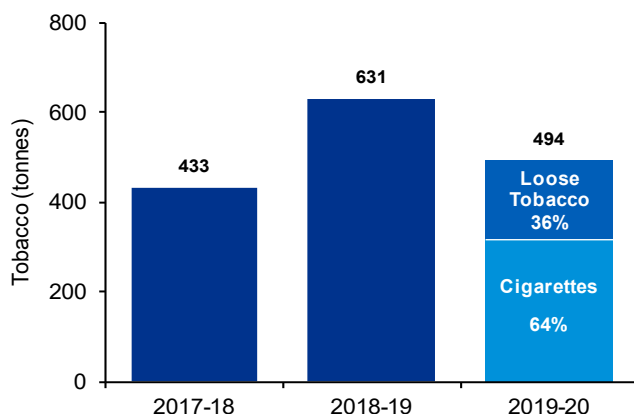
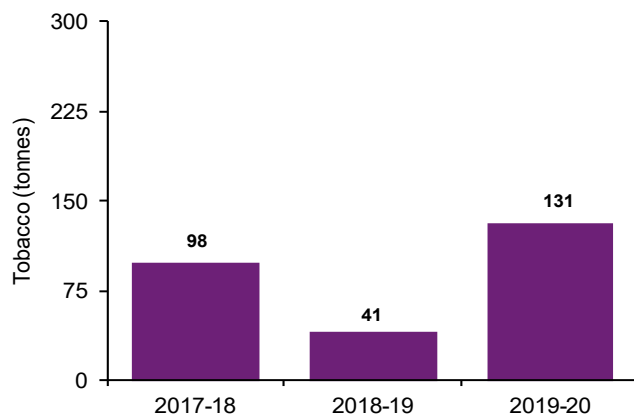


Figure 4.3.2: ATO seizures, 2017-2018 – 2019-2020^{(5)(d)}



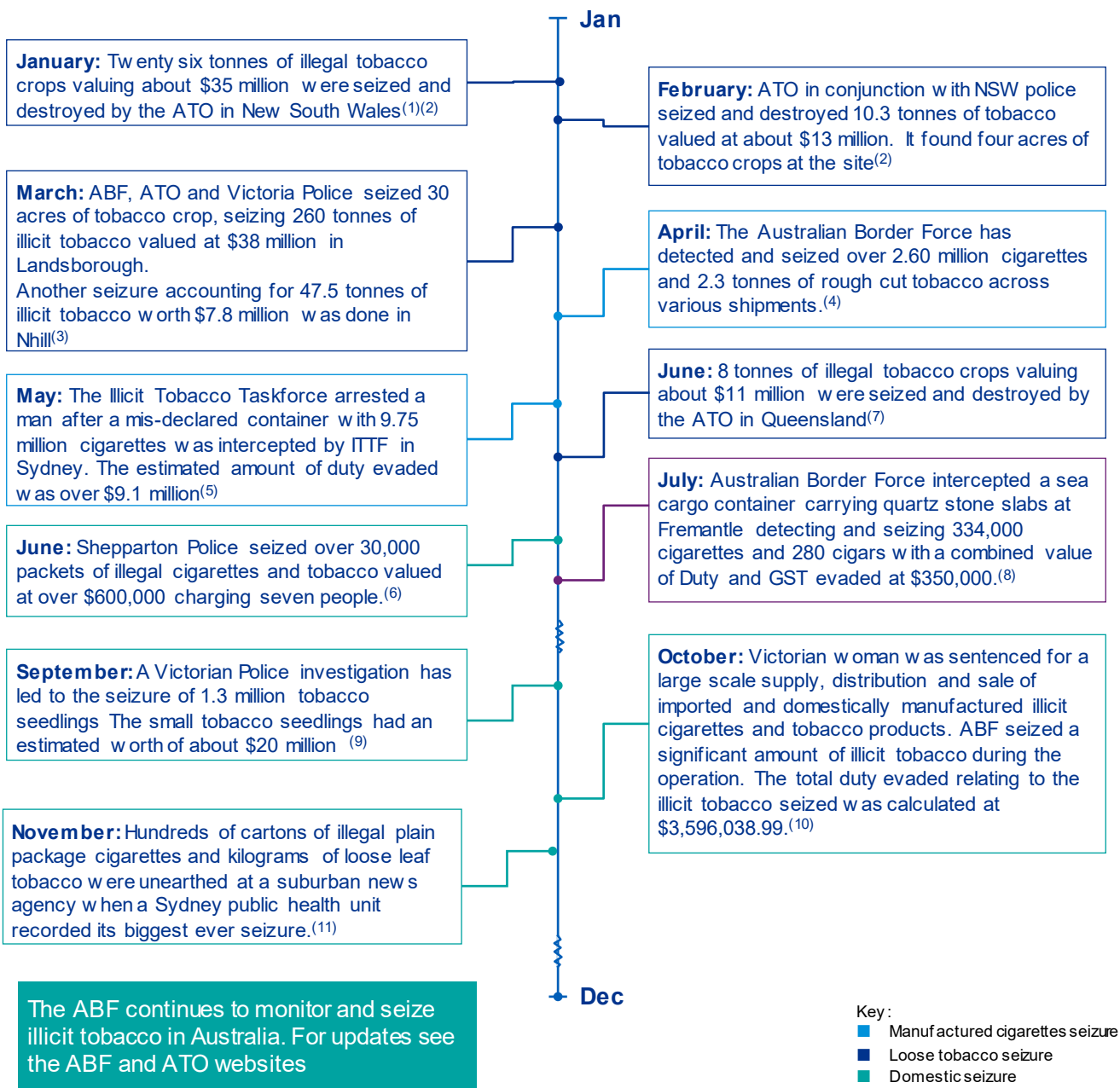
- Notes:
- (a) On 1 July 2018, ITTF which replaces the strike team was established.
 - (b) Total weight of illicit tobacco for 2018-19 has been restated in 2020.
 - (c) The difference in the total weight of seizures reported in 2015-16 by the Australian Taxation Office for its tobacco tax gap analysis (205 tonnes) and the numbers reported by Department of Home Affairs for 2015-16 in its Annual report 2017-18 could be attributed to difference in methodologies used.
 - (d) ATO conversion rate (calculated) – 1 cigarette = 0.73 g tobacco
 - (e) There is an overlap of six months between the period of study for this report (1st January, 2020 – 31st December, 2020) and the period for which the Department of Home Affairs reports the seizure figures (1st July, 2019 – 30th June, 2020).

- Sources:
- (1) Department of Home Affairs Annual Report, 2019-20.
 - (2) Australian Taxation Office, Weeding out the illegal tobacco trade, July 2020.
 - (3) Australia Government, Minister congratulates ABF on tobacco seizures, May 2020.
 - (4) Australian Border Force, Goods compliance update, February 2021.
 - (5) ATO website, last update of 02 Feb 2021.

Size of the illicit tobacco market

ABF and other enforcement agencies made a number of seizures in 2020

Figure 4.3.3: Key seizures in 2020



- Source: (1) Australian Taxation Office, \$34.5 million in illegal tobacco seized and destroyed in major tobacco bust near Port Macquarie, January 2020.
 (2) Australian Taxation Office, ATO seizes and destroys \$50 million worth of illicit tobacco in NSW, February 2020.
 (3) Australian Taxation Office, ATO, Victoria Police and the ABF continue to shut down illicit tobacco operations, March 2020.
 (4) Australia Government, Minister congratulates ABF on tobacco seizures, May 2020.
 (5) Australian Border Forces, ITTF seizure of nearly 10 million cigarettes leads to the arrest of one man, May 2020.
 (6) Shepparton News, Shepparton police seize \$600,000 worth of illegal

- cigarettes and tobacco, June 2020.
 (7) ATO destroys \$171 million of illicit tobacco, 19 Jul 2020.
 (8) Australian Border Force, ABF cracks quartz cigarette smuggling concealment, August 2020.
 (9) Tobacco seedlings, worth \$20 million at maturity, seized in Shepparton, Shepparton News, Sept 2020.
 (10) Successful Illicit Tobacco Taskforce operation leads to three year prison sentence, Australian Border Force, October 2020.
 (11) Riverwood Newsagency: illegal cigarette bust lands Rui Chen in court, The Daily Telegraph, November 2020.



5. Drivers of results

- 5.1 Consumer survey overview
- 5.2 Empty pack survey results

Roy Morgan Research sampling overview

5.1 Consumer survey overview

5.1.1 Roy Morgan Research survey overview

The consumer survey is primary research carried out to establish the size of the illicit unbranded tobacco market in Australia. The industry survey, commissioned by the industry (BATA, PML and ITA), was again carried out by Roy Morgan Research (RMR) to ensure comparability with previous years.

The survey focuses on tobacco consumption behaviour by adult smokers who smoke on a regular basis.^(a) Consumers are asked about their consumption and purchase of legal and illicit tobacco products including:

- Unbranded loose tobacco (both ‘Chop Chop’ sold loose in bags or in pre-filled tubes).
- Counterfeit and contraband manufactured cigarettes.

The consumer survey was conducted at least annually from 2009 and then biannually from 2013. There is a three week response period and the survey made use of Computer Assisted Web-based Interviewing (CAWI), previously Computer Assisted Telephone Interviewing (CATI) was used. The H1 2020 survey was carried out between 28 April and 20 May 2020 and the H2 2020 between 4 November and 1 December 2020. Respondents took on average 6 minutes to complete the survey.^{(1)(b)}

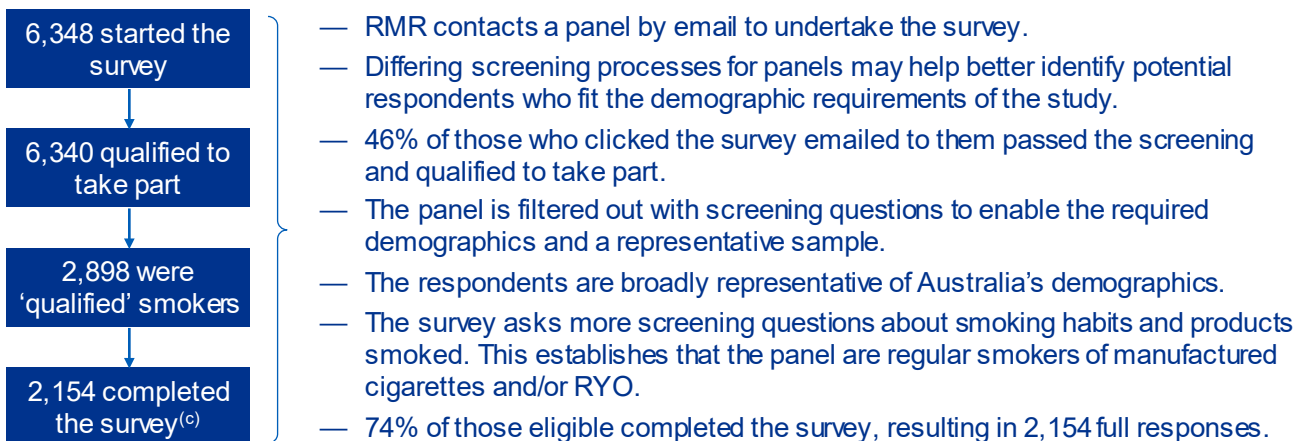
Participants in the online research were compensated with points or credits based on the length of the questionnaire. These accumulate over many studies and can then be redeemed for prizes or gift vouchers. Respondents have to complete a number of consumer surveys focusing on a range of issues in order to accumulate enough points to exchange for vouchers of a certain value.

There are state-by-state regulations that guide the implementation of rewards for such consumer surveys, and this RMR survey complies with all such regulations nationally

The Australian Institute of Health and Welfare (AIHW) has indicated that this approach is probably the “most appropriate way to measure this type of information”.⁽²⁾

Founded in 1941, Roy Morgan Research (RMR) is an established Australian market research company. RMR has significant experience working with consumer surveys monitoring legal and illicit tobacco consumption and has provided the consumer research for all of the previous versions of this report.

Figure 5.1.1a: Roy Morgan Research (RMR) survey Q4 2020 attrition chart⁽¹⁾



Notes: (a) For the purposes of this report, a regular smoker is a person who smokes tobacco products on at least five days in a given week.
 (b) The Australian Market and Social Research Society's 'Guideline for Market and Social Research Interviews' recommends a maximum survey length for incentivised online surveys of 20 minutes.

(c) The respondent cannot have done the study in the most recent prior quarter.
 Source: (1) Roy Morgan Research, Consumer survey, Q4 2020.
 (2) Proof Committee Hansard, Parliamentary Joint Committee on Law Enforcement, March 2016.

Roy Morgan Research sampling overview

5.1 Consumer survey overview

5.1.2 Consumer survey sampling methodology

RMR draws its sample from an Australia-wide database (urban and rural areas) collected through its 'Establishment Survey'. This survey is conducted throughout the year and includes information on demographics and attitudes.

The sample for the tobacco questionnaire is weighted by location, age and gender using RMR Single Source data in order to be representative of the national population. The Single Source^(a) distribution of income, occupation and work status of smokers is then used to rim weight^(b) the data. The survey only samples people over 18 years old. Non-private dwellings and institutions, occasional (<5 days per week) and non-smokers are excluded. RMR also uses a one quarter exclusion rule for respondents.^(c)

To meet target responses, RMR supplements its sample with samples from a set of qualified third-party suppliers (large reputable international suppliers of online research samples).

In 2020, survey results showed that unbranded tobacco awareness not only returned to the range of its previously reported levels but also recorded the highest level of awareness ever reported.

- Notes:
- (a) Single Source is RMR's database collected through their Establishment Survey that focuses on demographic and behavioural factors and closely matches the ABS Census. It is used to establish quotas for other surveys.
 - (b) Rim weighting uses mathematical algorithms to provide an even distribution of results across a dataset while balancing certain categories such as age to pre-determined totals. It weighs specified characteristics simultaneously and disturbs each variable as little as possible.

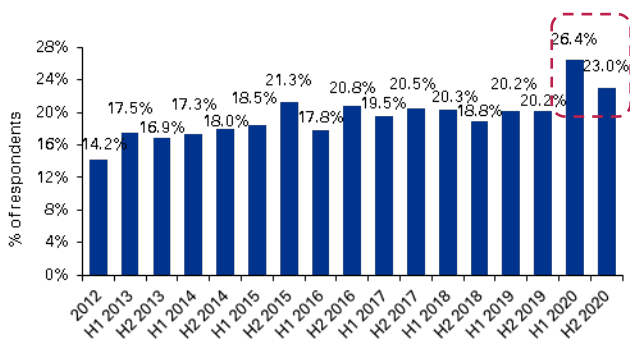
- (c) The respondent cannot have done the study in the most recent prior quarter.
- Source: (1) Roy Morgan Research, Consumer survey, Q4 2016, Q2 2017, Q4 2017, Q2 2018, Q4 2018, Q2 2019, Q4 2019, Q2 2020 and Q4 2020.

Drivers of results

Despite the highest recorded level of purchase participation, unbranded tobacco consumption fell due to declining volumes purchased on each occasion

5.1.3 Purchasers of illicit unbranded tobacco

Figure 5.1.3a: Proportion of respondents who reported purchasing illicit unbranded tobacco, 2012 – H2 2020^{(1)(2)(a)(b)(c)}



The surveys conducted in 2020 saw the highest incidence of unbranded tobacco purchased recorded since their inception

In 2020, whilst a much higher proportion of respondents purchased unbranded tobacco, the average volume purchased per occasion fell to the lowest levels recorded by the survey. This contributed to the decline in the consumption of unbranded tobacco.

In H2 2020, the proportion of respondents purchasing unbranded tobacco declined compared to H1 2020 as shown in Figure 5.1.3a. However, the proportion remained at high levels relative to historic findings. We also note that the average volume of unbranded tobacco purchased per occasion fell to its lowest levels since 2014 as shown in Figure 5.1.3c.

Furthermore, the frequency of purchase fluctuated between one of its lowest and highest levels. It peaked to an all time high in H2 2020.

Despite high levels of participation rates, both average frequency of purchase and average purchase volumes were lower in 2020 than in 2019. As a result, overall unbranded volumes decreased from 1.33 million kg in 2019 to 1.13 million kg in 2020.^(d)

Figure 5.1.3b: Average frequency of purchase per annum, 2012 – H2 2020^{(1)(2)(a)(b)(c)}

In 2020, frequency of purchase fluctuated between one of its lowest and highest levels. It peaked to an all time high in Q4 2020

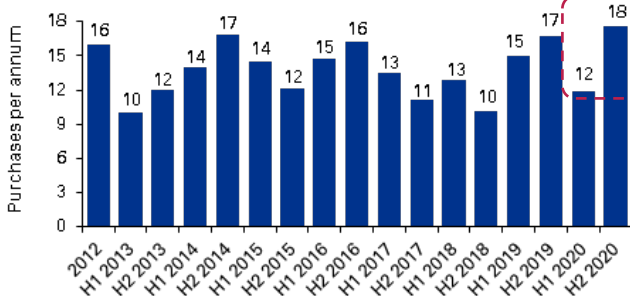
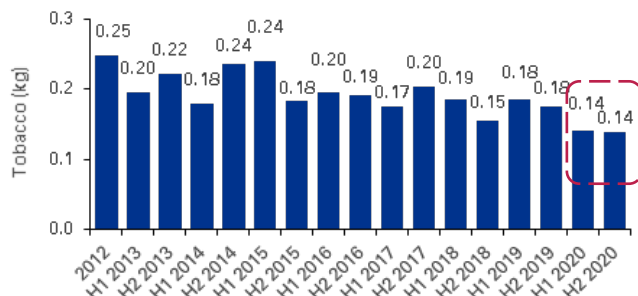


Figure 5.1.3c: Average volume purchased (kg) per occasion, 2012 – H2 2020^{(1)(2)(a)(b)(c)}

In 2020, the average volume of unbranded tobacco purchased per occasion fell to its lowest levels since 2014



- Notes:
- (a) 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019 and 2020 analysis is based on CAWII/CATI consumer survey results.
 - (b) Due to a single period change in the Q4 2018 panel composition, we believe there may be some underreporting of unbranded consumption on a like for like basis.
 - (c) Length of bars which indicate the exact same values might not match due to rounding till two decimal points.
 - (d) Overall unbranded volume numbers for 2019 were restated with the update to 2019 prevalence statistics published by AIHW in 2020

- Sources:
- (1) Deloitte, *Illicit Trade of Tobacco in Australia*, 2012.
 - (2) Roy Morgan Research (RMR), Consumer survey, H1 2013, H2 2013, H1 2014, H2 2014, H1 2015, H2 2015, H1 2016, H2 2016, H1 2017, H2 2017, H1 2018, H2 2018, H1 2019, H2 2019, H1 2020 and H2 2020.

Drivers of results

The EPS sampling plan comprises 12,000 empty packs collected across 16 population centres in Australia twice a year

5.2 EPS results

5.2.1 Australian EPS sampling plan⁽¹⁾⁽²⁾⁽³⁾

The EPS analyses discarded cigarette packets that have been collected from a set area. The aim is to collect a representative sample of discarded cigarette packets that can then be analysed to provide information about the nature of consumption of manufactured tobacco products.

Empty packs are collected on a proportionate basis from a number of neighbourhoods. Packs are collected from streets and easy access public bins in areas in the sampling plan.^(b)

For the purpose of this report, an EPS was carried out by an independent market research agency, WSPM across October-November 2020. The Q4 2020 EPS collection was based on a sampling plan consistent with the previous EPS sampling plan: 12,000 packs were collected, the same neighbourhoods were sampled and the same 16 population centres were covered. This covered approximately 75.2% of the total population as shown in Figure 5.2.1.

Packs are collected from pre-determined neighbourhoods, selected to be representative of the city being sampled. Similarly, the neighbourhoods selected are also consistent with the previous surveys. Packs are collected irrespective of their brand and country of origin. Collection routes specifically exclude sports stadia, shopping malls and stations, or any other locations where non-domestic incidence is likely to be higher as a result of a skewed population visiting these areas and may not be representative of local consumption.

To ensure the sample is representative, packs are weighted based on the proportion of each city's population after the collection is completed.

WSPM is a private group of companies registered in 2002, with worldwide activity and presence, its headquarters is located in Cyprus from 2017. WSPM group is a specialist in consumption intelligence and brand integrity with experience in the tobacco industry. Since 2001, WSPM's management has managed and conducted more than 1,200 empty pack surveys across 81 countries.

Table 5.2.1 Q4 2020 EPS sampling plan:

| Population centres | Population (million) 2019 estimate ^{(3)(a)} | Number of sampled neighbourhoods | Sample packs | Weighted packs |
|--------------------------------------|---|-------------------------------------|---------------|----------------|
| Sydney | 4.9 | 40 | 3,000 | 3,253 |
| Melbourne | 4.9 | 40 | 2,500 | 2,959 |
| Brisbane | 2.4 | 30 | 1,200 | 1,526 |
| Perth | 2.0 | 30 | 1,000 | 1,322 |
| Adelaide | 1.3 | 25 | 800 | 890 |
| Gold Coast – Tweed Heads | 0.7 | 13 | 400 | 412 |
| Newcastle – Maitland | 0.5 | 13 | 400 | 292 |
| Canberra – Queanbeyan | 0.5 | 10 | 300 | 287 |
| Sunshine Coast | 0.3 | 10 | 300 | 199 |
| Wollongong | 0.3 | 10 | 300 | 197 |
| Hobart | 0.2 | 10 | 300 | 151 |
| Geelong | 0.3 | 10 | 300 | 125 |
| Townsville | 0.2 | 10 | 300 | 120 |
| Cairns | 0.2 | 10 | 300 | 99 |
| Darwin | 0.1 | 10 | 300 | 92 |
| Toowoomba | 0.1 | 10 | 300 | 77 |
| Total sample | 19.0 | 281 | 12,000 | 12,000 |
| Total population of Australia | 25.4 | | | |

Notes: (a) The results are revised estimates for 2019 as on 30th June, 2019.
(b) In 2019, there were changes in the type of bins in Australia in some of the major cities. The new 'smart locked bins' made it difficult for the provider to collect the discarded packs and a change in the sample for number of packs collected from bins and streets was observed. The provider has said that this has had no impact on the survey result and methodology is consistent with those of previous surveys.

Sources: (1) WSPM, *empty pack survey*, Q2 2019, Q4 2019, Q1 2020 and Q4 2020.
(2) MSIIntelligence Research, *Empty Pack Survey*, Q2 2013, Q4 2013, Q2 2014, Q4 2014, Q2 2015, Q4 2015, Q2 2016, Q4 2016, Q2 2017, Q4 2017, Q2 2018 and Q4 2018.
(3) Australian Bureau of Statistics.

Drivers of results

There was a decline in non-domestic incidence across all 16 population centres

5.2.2 Australian EPS results – Non-domestic incidence by population centre

Figure 5.2.2a: Total non-domestic incidence by population centre, Q4 2019 – Q4 2020⁽¹⁾

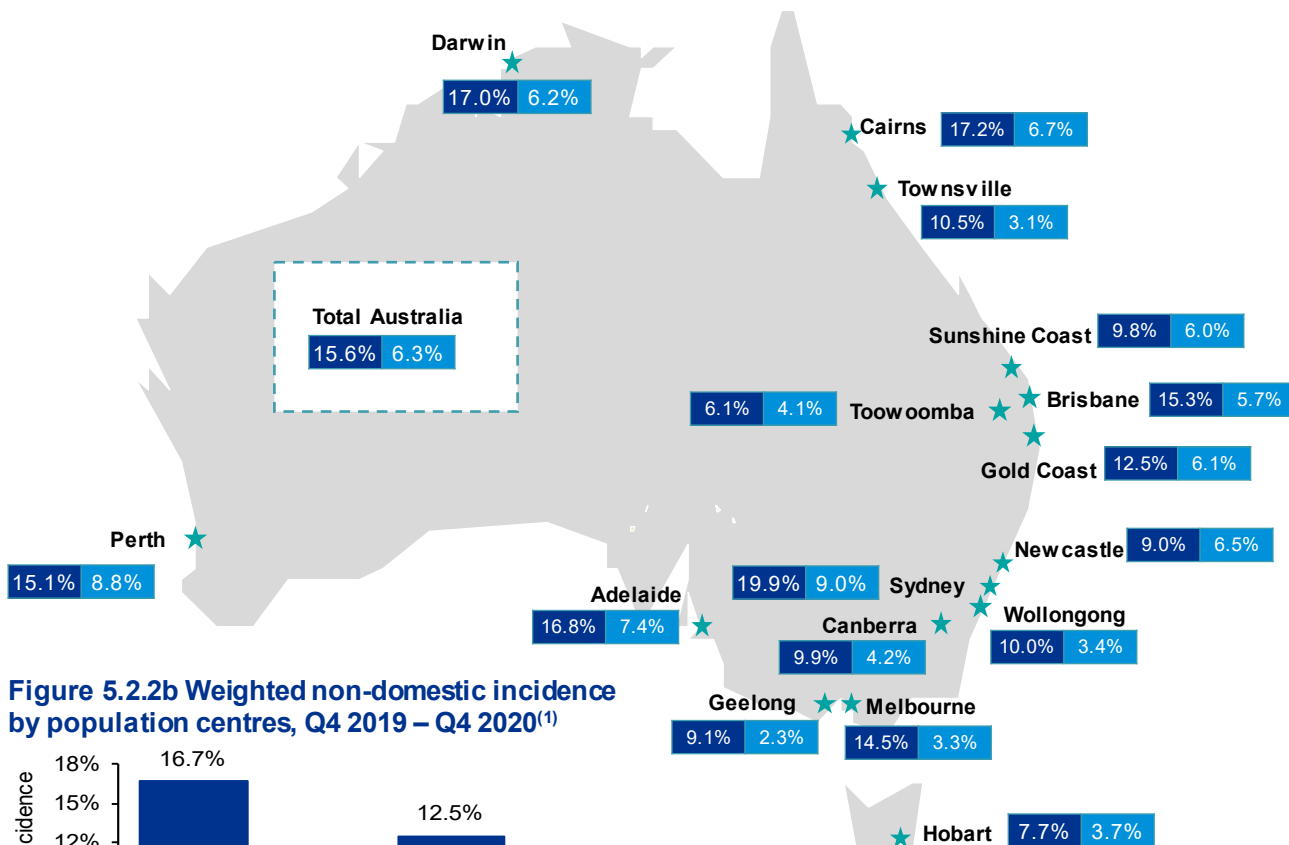
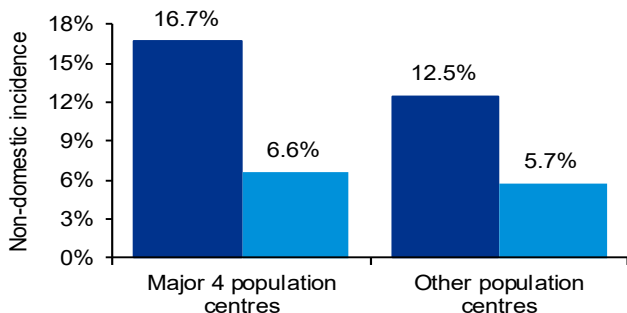


Figure 5.2.2b Weighted non-domestic incidence by population centres, Q4 2019 – Q4 2020⁽¹⁾



The Q4 2020 empty pack survey found non-domestic packs in all population centres sampled.

Non-domestic incidence stood 0.8⁽²⁾ percentage points higher in the 4 major population centres at 6.6%, as compared to other population centres at 5.7%.

In Q4 2020, non-domestic incidence decreased by 10.1 percentage points in the four largest population centres of Sydney, Melbourne, Brisbane and Perth. Similarly, non-domestic incidence decreased by 6.8 percentage points in the other population centres over the same period.

All of the population centres experienced a decrease in non-domestic incidence over the period Q4 2019 – Q4 2020. The ND incidence rate observed in Q4 2020 is the lowest since 2012. The decrease in Australia's total non-domestic incidence by 5.0 percentage points for the full year 2020 was driven by a decrease in non-domestic incidence in all major population centres.

In Q4 2020, Sydney had the highest level of non-domestic incidence, as also witnessed in Q4 2019. Sydney's share of the total non-domestic cigarettes collected in Australia increased from 34.1% in Q4 2019 to 38.7% in Q4 2020.

Sources: (1) WSPM, empty pack survey, Q2 2019, Q4 2019, Q12020 and Q4 2020.

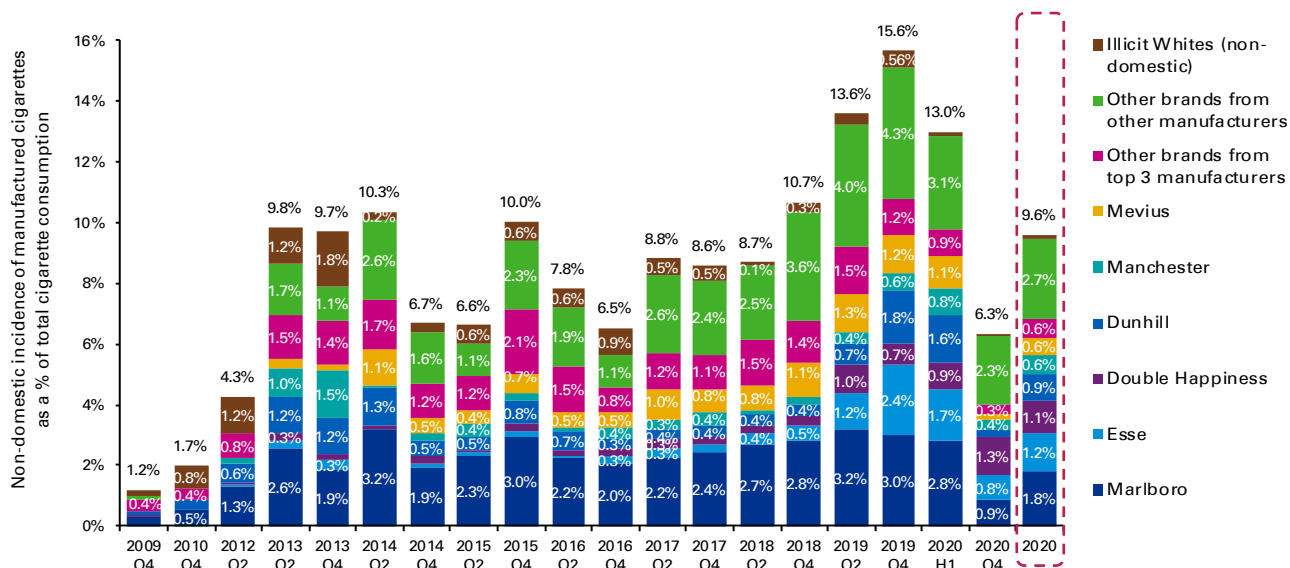
(2) Numbers in the above chart may not sum due to rounding.

Drivers of results

The decline in non-domestic incidence in 2020 is driven by reduced flows across many brands, especially Marlboro

5.2.3 Australian EPS results – Non-domestic incidence by brand flows

Figure 5.2.3: Total non-domestic incidence by brand flows as a percentage of total manufactured cigarette consumption Q4 2009 – Q4 2020^{(1)(2)(3)(a)(b)(c)(d)(e)(f)(g)}



A blended approach, assigning equal weighting to the H1 2020^(e) and Q4 2020 EPS, has been used to estimate the size of the illicit manufactured cigarette consumption volume for 2020. A blended approach gives a more accurate view on the full year findings as each bi-annual EPS is reflective of market trends at that point in time only.

Non-domestic incidence decreased to 6.3% in Q4 2020 from 13.0% in H1 2020^(e). When both survey results are combined, it gives a total non-domestic incidence of 9.6%, a decrease of 5.0 percentage points from 2019 (14.6%).

In Q4 2020, Marlboro witnessed the largest decline in non-domestic and had its lowest non-domestic incidence since 2010.

According to the 2020 EPS, 0.1% of all manufactured cigarettes consumed in Australia were Illicit Whites (non-domestic), a decline from the 0.45% of consumption identified in the 2019 EPS. The levels of Illicit White (non-domestic) brand flows continue to remain below the peak of 1.8% experienced in Q4 2013.

Amongst the top six brands, with the exception of Double Happiness and Manchester, the flows of all the other brands experienced a decline in non-domestic incidence between 2019 and 2020. Q4 2020 saw a decrease in flows of Marlboro, Esse and Dunhill which have witnessed a decline of 2.1, 1.6 and 1.5 percentage points respectively from Q4 2019.

In 2020, non-domestic flows from 11 new brands entered the Australian market. The majority of these flows originated from regions that are unspecified on their packs.

- Notes:
- (a) Our definition of Illicit Whites (see the glossary) was updated in 2014.
 - (b) The 2020 figures are based on the blended approach in which equal weighting is assigned to the H1 2020 and Q4 2020 EPS result using the weighted number of cigarettes.
 - (c) Numbers in the above chart may not sum due to rounding.
 - (d) Some of the labels with values less than 0.4% have been removed for clarity purposes.
 - (e) Q1 2020 EPS has been adjusted to account for COVID-19 adjustments that include (i) Adjustment for lockdown days in Q1 to estimate at H1 results; (ii) Adjustment for decline in the consumption based on Q2 consumer survey responses for changes in consumption pattern (adjustments are explained in detail on page 52).
 - (f) H1 represents first-half yearly results.

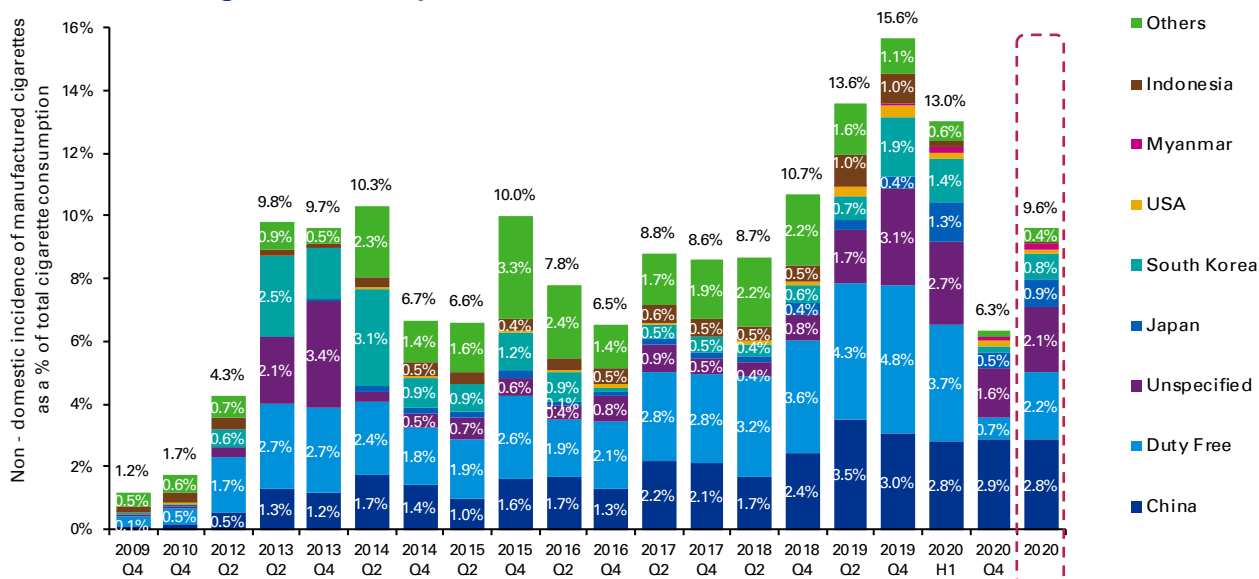
- (g) The counterfeit volume is reported from manufacturers participating in EPS: BATA, PMI and ITA. No other counterfeit is included in the volumes reported due to lack of information.
- Sources:
- (1) WSPM, *empty pack survey*, Q2 2019, Q4 2019, Q1 2020 and Q4 2020.
 - (2) MStelligence Research, *Empty Pack Survey*, Q2 2013, Q4 2013, Q2 2014, Q4 2014, Q2 2015, Q4 2015, Q2 2016, Q4 2016, Q2 2017, Q4 2017, Q2 2018, Q4 2018.
 - (3) AC Nielsen, *empty pack survey*, 2009, 2010, 2012.

Drivers of results

Despite large declines from other markets, the flows of Chinese product remained relatively stable

5.2.4 Australian EPS results – Non-domestic incidence by country of origin flows

Figure 5.2.4: Total non-domestic incidence by country of origin flows as a percentage of total manufactured cigarette consumption Q4 2009 – H2 2020^{(1)(2)(3)(a)(b)(c)(d)(e)(f)(g)}



Unspecified packs are cigarette packs that do not bear any specific market or duty free labelling

Asian countries were the primary source of inflows of non-domestic manufactured products into Australia, with high levels of duty free products also present. China (including China duty free) continued to remain the largest individual source country for non-domestic manufactured cigarette flows accounting for 31% of all non-domestic flows in 2020, compared to 25% in 2019. Whilst flows from most countries fell in 2020, flows from China remained fairly resilient.

Duty free volumes represent all duty free variant packs collected, which mainly comprise of South Korea, China and Japan duty free flows

Japanese product comprised the second largest flow of products from any individual country (excluding duty free products), followed by flows from South Korea.

Flows of non-domestic manufactured cigarettes with unspecified labelling remained a noteworthy component of non-domestic inflows in both the H1^(e) and Q4 2020 EPS with an annual share of 2.1% of total incidence. This share has decreased from around 2.4% in 2019. Approximately 86% of all the total Illicit White (non-domestic) brand flows were from unspecified origin.

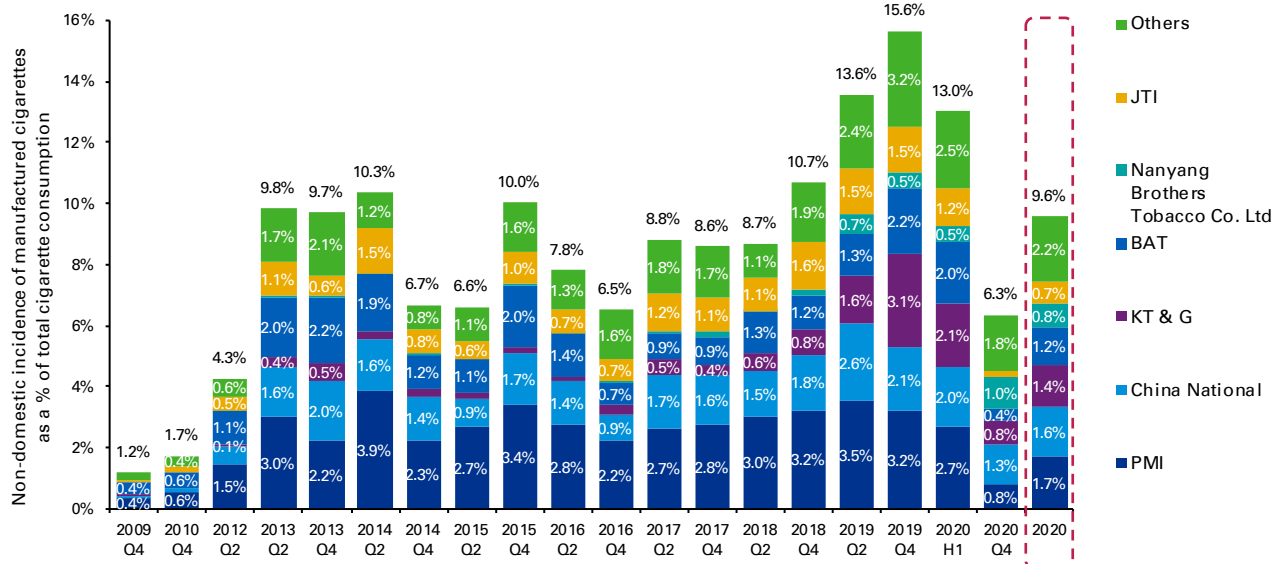
Notes: (a) The 2020 figures are based on the blended approach in which equal weighting is assigned to the H1 2020 and Q4 2020 EPS result using the weighted number of cigarettes.
 (b) Numbers in the above chart may not sum due to rounding.
 (c) Some of the labels with value less than 0.3% have been removed for clarity.
 (d) The flows exclude the Duty Free products.
 (e) Q1 2020 EPS has been adjusted to account for COVID-19 adjustments that include (i) Adjustment for lockdown days in Q1 to estimate at H1 results; (ii) Adjustment for decline in the consumption based on Q2 consumer survey responses for changes in consumption pattern (adjustments are explained in detail on page 52).
 (f) H1 represents first-half yearly results.

(g) The counterfeit volume is reported from manufacturers participating in EPS: BATA, PMI and ITA. No other counterfeit is included in the volumes reported due to lack of information.
 Sources: (1) WSPM, *empty pack survey*, Q2 2019, Q4 2019, Q1 2020 and Q4 2020.
 (2) MSIntelligence Research, *Empty Pack Survey*, Q2 2013, Q4 2013, Q2 2014, Q4 2014, Q2 2015, Q4 2015, Q2 2016, Q4 2016, Q2 2017, Q4 2017, Q2 2018, Q4 2018.
 (3) AC Nielsen, *empty pack survey*, 2009, 2010, 2012.

Non-domestic incidence declined for most trademark owners in 2020

5.2.5 Australian EPS results – Non-domestic incidence by trademark owner flows

Figure 5.2.5: Total non-domestic incidence by trademark owner flows as a percentage of total manufactured cigarette consumption Q4 2009 – Q4 2020^{(1)(2)(3)(a)(b)(c)(d)}



Flows from the EPS suggest that a large proportion of non-domestic brands are trademark owned by either Philip Morris International (PMI) or China National, accounting for around 35% of all non-domestic packs found in Australia in 2020. Brands trademark owned by Korea Tobacco (KT&G) were the third largest inflow, representing 1.4% of total incidence in 2020 survey, with an decrease of 0.9 percentage point from the 2019 survey (2.3%).

This decline in non-domestic incidence was primarily driven by flows of products trademark owned by PMI (1.6pp declined between 2019 and 2020), KT&G (0.9pp declined) and JTI (0.8pp).

Non-domestic flows from brands by 34 trademark owners were sold in Australia in 2020, in comparison to 60 in 2019. The share of ‘Other’ trademark owners decreased by 0.6 percentage points from 2019.

Notes: (a) Q1 2020 EPS has been adjusted to account for COVID-19 adjustments that include (i) Adjustment for lockdown days in Q1 to estimate at H1 results; (ii) Adjustment for decline in the consumption based on Q2 consumer survey responses for changes in consumption pattern (adjustments are explained in detail on page 52).
 (b) Numbers in the above chart may not sum due to rounding.
 (c) Some of the labels with value less than 0.3% have been removed for clarity.
 (d) The counterfeit volume is reported from manufacturers participating in

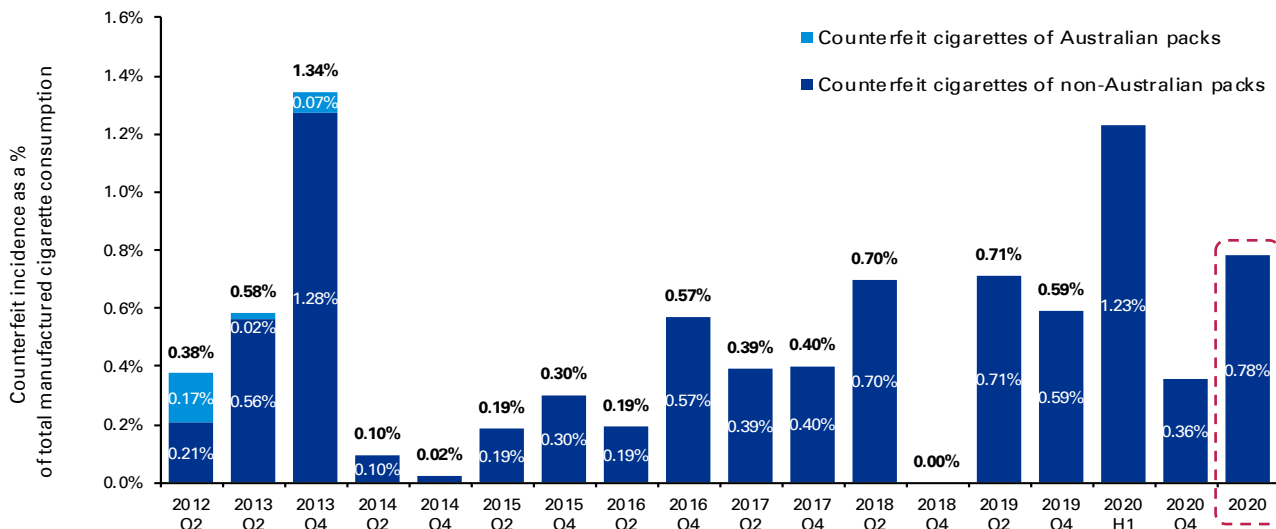
EPS: BATA, PMI and ITA. No other counterfeit is included in the volumes reported due to lack of information.
 Sources: (1) WSPM, *empty pack survey*, Q2 2019, Q4 2019, Q1 2020 and Q4 2020.
 (2) MSIntelligence Research, *Empty Pack Survey*, Q2 2013, Q4 2013, Q2 2014, Q4 2014, Q2 2015 and Q4 2015, Q2 2016, Q4 2016, Q2 2017, Q4 2017, Q2 2018, Q4 2018, Q4 2019, Q1 2020 and Q4 2020.
 (3) AC Nielsen, *empty pack survey*, 2009, 2010, 2012.

Drivers of results

Despite the decline in overall non-domestic incidence, the incidence of counterfeit increased by 0.13 percentage points from 2019 to reach 0.78%

5.2.6 Australian EPS results – Counterfeit flows

Figure 5.2.6: Counterfeit flows incidence as a percentage of total manufactured cigarette consumption Q2 2012 – H2 2020^{(1)(2)(3)(a)(b)(c)(d)(e)}



Whilst remaining a small proportion of the EPS findings, counterfeit incidence was at its highest since 2013 and second highest ever. In 2020 counterfeit incidence increased by 0.13 percentage points from 0.65% in 2019^(d) to 0.78% in 2020.

Since we can only identify counterfeit of brands from companies participating in the EPS the amount of counterfeit could be understated.

Marlboro accounted for 100% of all counterfeit volumes.

- Notes:
- (a) Counterfeit incidence is not available for 2009, 2010 and 2011.
 - (b) The counterfeit volume is reported from manufacturers participating in EPS: BATA, PMI and ITA. No other counterfeit is included in the volumes reported due to lack of information.
 - (c) Q12020 EPS has been adjusted to account for COVID-19 adjustments that include (i) Adjustment for lockdown days in Q1 to estimate at H1 results; (ii) Adjustment for decline in the consumption based on Q2 consumer survey responses for changes in consumption pattern (adjustments are explained in detail on page 52).
 - (d) Numbers may not sum due to rounding.
 - (e) Some of the labels with value less than 0.01% have been removed for clarity.

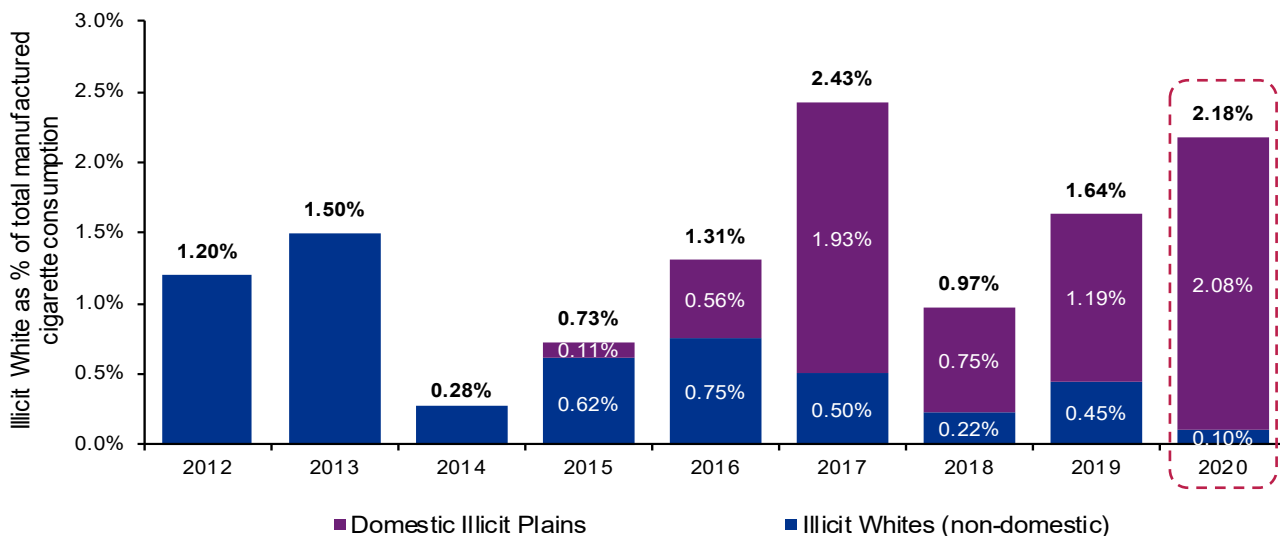
- Sources:
- (1) WSPM, *empty pack survey*, Q2 2019, Q4 2019, Q1 2020 and Q4 2020.
 - (2) MSIIntelligence Research, *Empty Pack Survey*, Q2 2013, Q4 2013, Q2 2014, Q4 2014, Q2 2015, Q4 2015, Q2 2016, Q4 2016, Q2 2017, Q4 2017, Q2 2018, Q4 2018, Q4 2019, Q1 2020 and Q4 2020.
 - (3) AC Nielsen, *empty pack survey*, 2012.

Drivers of results

In 2020, there was an increase in the flows of Domestic Illicit Plains whilst Illicit Whites (non-domestic) declined

5.2.7 Australian EPS results – Illicit Whites brand flows

Figure 5.2.7: Consumption of Illicit White flows as a percentage of total manufactured cigarette consumption 2012 – 2020^{(1)(2)(3)(a)(b)(c)(d)(e)(f)}



Approximately 0.1% of cigarettes consumed in Australia were Illicit Whites (non-domestic), a decline from the 0.45% of consumption identified in the 2019 EPS.

In 2020 results, 8 brands contributed to non-domestic Illicit White flows, in contrast to the 23 brands identified as Illicit Whites (non-domestic) in 2019.

Whilst the number of brands identified as Domestic Illicit Plains remained constant at three in 2020, the overall flows increased during the same period.

The analysis showed that flows of Domestic Illicit Plains increased from 1.19% of all manufactured cigarettes consumed in 2019 to 2.08% in 2020.

Following the report on the Black Economy Taskforce in the 2018-19 budget, the Australian Government announced a number of measures to combat illicit tobacco trade. We had expected these measures would eliminate the availability of domestic illicit plains. However, as we take a consumption based approach, some of these products could still be sold in certain channels. Also, we cannot identify whether these brands are counterfeit or not so we have continued to assess their consumption.

- Notes:
- (a) Our definition of Illicit Whites (see the glossary) was updated in 2014.
 - (b) The selected Illicit Whites brand flows reported in the Q4 2017 EPS are different from the ones reported in the FY 2013 report due to the refinement of the Illicit Whites flows methodology and changes in the magnitude of brand flows over time.
 - (c) The share of Illicit Whites flows is calculated based on the number of sticks, however, in the H1 2013 report the share of Illicit Whites brand flows was calculated based on weighted packs. The share of Illicit Whites flows when calculated based on weighted packs would have been: 0.3% in Q4 2009, 0.8% in Q4 2010, 1.4% in Q2 2012, 1.6% in Q2 2013, 2.3% in Q4 2013, 0.5% in Q2 2014, 0.6% in Q4 2014, 1.1% in Q2 2015, 1.4% in Q4 2015, 1.0% in Q2 2016, 2.2% in Q4 2016, 4.3% in Q2 2017, 1.5% in Q4 2017, 0.42% in Q2 2018, 0.85% in Q4 2018, 1.70% in Q2 2019 and 2.07% in Q4 2019.
 - (d) The overall year figures are based on the blended result of the H1 and the Q4 EPS.

- (e) Numbers in the above charts may not sum due to rounding.
 - (f) This analysis was undertaken by KPMG in conjunction with the main industry participants (ITA and BATA). From 2016, KPMG started making a distinction between Domestic Illicit Plains and Illicit Whites (non-domestic) brand flows whilst only non-domestic flows were taken into account in previous reports. Retrospectively, Domestic Illicit Plain flows in 2015 were analysed as well.
 - (g) The counterfeit volume is reported from manufacturers participating in EPS: BATA, PMI and ITA. No other counterfeit is included in the volumes reported due to lack of information.
- Sources:
- (1) WSPM, *empty pack survey*, Q2 2019, Q4 2019, Q1 2020 and Q4 2020.
 - (2) MSIntelligence Research, *Empty Pack Survey*, Q2 2013, Q4 2013, Q2 2014, Q4 2014, Q2 2015, Q4 2015, Q2 2016, Q4 2016, Q2 2017, Q4 2017, Q2 2018 and Q4 2018.
 - (3) AC Nielsen, *empty pack survey*, 2012.



6. Conclusion

Conclusion

Both the volume of overall tobacco consumption and the proportion of illicit tobacco consumption declined between 2019 to 2020

| 2019 and 2020 results (kg '000) | | | | |
|---|---------------------------|--------------|--------------|---------------------------|
| | | 2019 | 2020 | % change (2019 – 2020) |
| Illicit manufactured cigarettes | Contraband ^(a) | 1,625 | 1,020 | (37.3%) |
| | Counterfeit | 71 | 73 | 3.2% |
| | Total | 1,696 | 1,093 | (35.6%) |
| Unbranded tobacco ^(b) | | 1,333 | 1,130 | (15.2%) |
| Total illicit tobacco | | 3,029 | 2,223 | (26.6%) |
| Illicit tobacco consumption as % of total consumption | | 20.4% | 16.9% | n/a |
| Equivalent excise value (AUDm) | | AUD3,354 | AUD2,942 | (12.3%) |

The illicit tobacco market in Australia

Our study indicates that the consumption of illicit tobacco in Australia has decreased in 2020. As a proportion of total consumption, it has decreased from 20.4% to 16.9% between 2019 and 2020. A study by the Australian Institute of Criminology suggests a large proportion of the illicit tobacco trade will be due to organised crime. It suggests organised crime involvement in the illicit tobacco market in Australia is between a low estimate of 57% and a high end estimate of 100%.⁽¹⁾

Illicit manufactured cigarette consumption decreased in 2020. China (including China duty free) continues to be the largest country of origin of non-domestic flows in 2020, accounting for 31% of total non-domestic inflows.

Over the last twelve months, the consumption of unbranded and contraband tobacco have all decreased. This decrease in consumption of contraband tobacco follows from the decrease in the flows of non-domestic contraband by 45.1% from 2019-2020. The share of contraband cigarettes in total illicit tobacco consumption decreased from 53.6% to 45.9% over the twelve month period.

If all of this tobacco had been consumed in the legitimate market, we estimate it would have represented an excise amount of AUD2.9 billion at the average excise rate for 2020.⁽²⁾

- Note:
- (a) Contraband includes non-domestic contraband as well as volumes of Illicit Whites (non-domestic) and Domestic Illicit Plains.
 - (b) Unbranded volume numbers for 2019 were restated with the update to 2019 prevalence statistics published by AIHW in 2020.
 - (c) We note that a single period change in panel composition for the Q4 2018 consumer survey may have resulted in an under-recording of the amount of unbranded consumption for 2018. Therefore, the growth in unbranded consumption and total consumption should be treated with caution as it may be overstated.

The legal tobacco market in Australia

Legal domestic sales in Australia experienced the largest decline since the inception of our studies in 2020 (a 7.4% decline). The decline was driven by a 8.5% reduction in manufactured cigarette consumption and 3.3% decline in loose cigarette consumption, which witnessed negative growth for the first time. This decline in legal domestic sales and the decline in illicit consumption contributed to an overall decline in total consumption (11.4%).

The Australian tobacco market continues to remain the most expensive market in the region. A packet of Marlboro 20s is 742% more expensive than in China, the largest inflow market to Australia.

Flows from China and Japan represent the largest non-domestic inflows in 2020 and a packet of Australian Marlboro 20s is over five times the domestic price of both countries. This wide price difference creates an economic incentive for smugglers and other individuals to import and sell tobacco outside of Australian legislation.

- Sources:
- (1) Estimating the cost of serious and organised crime in Australia 2016-17, Australian Institute of Criminology.
 - (2) Based upon the average excise rate over the past 12 months for both loose and manufactured cigarettes.



Appendices

- A1 Consumption model**
- A2 Use of smoking prevalence data and updated results**
- A3 Empty pack survey analysis**
- A4 Non-domestic legal calculation**
- A5 Illicit Whites flows analysis**
- A6 Notes to this report**
- A7 Alternative illicit tobacco estimates**
- A8 Australian Taxation Office methodology for calculating tax gap**
- A9 Scope of work**
- A10 Roy Morgan Research questionnaire**
- A11 Bibliography**

KPMG has used a consumption based approach to estimate the unbranded tobacco market in Australia

A1 Consumption model

Introduction

The primary methodology we have used to estimate the unbranded tobacco market in Australia is the consumption model approach. The approach adopted by KPMG is similar to that used in previous reports on the illicit tobacco market in Australia.

The consumption model uses the results of the Roy Morgan Research (RMR) consumer survey to determine the core inputs to the model, combined with publicly available information on the legal tobacco market and smoking population.

For the purpose of this report, the consumption model number for unbranded volumes for 2020 is based on the average of the H1 2020 and H2 2020 consumer survey results. Since consumers are likely to give a more accurate estimate of their purchase behaviour over a shorter time period, using an average of the H1 2020 and H2 2020, consumer survey results will provide a more accurate number for 2020 consumption.

The consumer survey

The consumption model was based on the responses of 2,134 smokers in Australia to a CAWI web based consumer survey in H1 2020 and a further 2,154 in H2 2020. Respondents are sampled from RMR existing consumer panel from both metropolitan and non-metropolitan areas. The sample for the tobacco questionnaire is weighted by location, age and gender using RMR Single Source data in order to be representative of the national population. The Single Source^(a) distribution of income, occupation, and work status of smokers is then used to rim weight^(b) the data. The sampling plan is consistent with the surveys carried out by RMR between 2013 and 2019.

The surveys were conducted in April-May and November-December 2020 and took on average of 6 minutes to complete.^(c) Consumers were asked about their consumption and purchase of legal and illicit tobacco products; namely Chop Chop (unbranded loose tobacco sold in bags), pre-filled unbranded tobacco, as well as counterfeit and contraband manufactured cigarette products.

The consumer survey is provided in Appendix A9. This lists the entire set of questions and is not a representation of how respondents view the online survey. Respondents are asked questions based on their answers in earlier filtering questions and their navigation through the survey is determined by programmed skip patterns.

The consumer survey is used as one tool to form a view on the loose tobacco illicit market

RMR collects and compiles the consumer survey responses and provides a consolidated data sheet for KPMG analysis. The data sheet lists question responses on an individual respondent basis and is accompanied by a question and answer reference mapping.

The consumer survey responses are used to obtain several core inputs for the consumption model process. These core inputs are based on consumer responses and include:

- How many smokers purchase the different types of illicit tobacco,
- How often these illicit purchasers purchase illicit tobacco, and
- How much illicit tobacco these illicit purchasers purchase on each purchase occasion.

These responses generate the core assumptions which are used in the consumption model and are illustrated on table A1 overleaf.

Additional assumptions

In addition to the results generated by the consumer survey, further assumptions and data-points are used:

- Total adult smoking population – we assumed that the total smoking population was 2.25 million. This assumption is based on AIHW data⁽¹⁾ updated for the decline in smoking population numbers since the last official estimate.^(d) Figures for the Australian Institute of Health and Welfare are taken from the National Drug Strategy Household Survey, 2007, 2010, 2013, 2016 and 2019. The study has restated the prevalence data for 2019.

Notes: (a) Single Source is RMR's database collected through their Establishment Survey which focuses on demographic and behavioural factors and closely matches the ABS Census. It is used to establish quotas for other surveys.
(b) Rim weighting uses mathematical algorithms to provide an even distribution of results across a dataset while balancing certain categories such as age to pre-determined totals. It weights specified characteristics simultaneously and disturbs each variable as little as possible.

(c) The median survey completion time was 5 minutes.
(d) KPMG's estimate of the adult smoking population is based on applying a historical CAGR for AIHW prevalence estimates to the latest AIHW prevalence figure (2019) and multiplying this by the adult population per the Australian Bureau of Statistics.

Source: (1) Australian Institute of Health and Welfare, National Drug Strategy Household Survey, 2007, 2010, 2013, 2016 and 2019.

Appendix

The consumption modelling calculation relies on the results of the Roy Morgan Research consumer survey and publicly available data

A1 Consumption model (cont.)

The core inputs from the consumer survey and publicly available information are used in the consumption model, illustrated in table A1. These core inputs are factored together to produce an estimate of the amount of illicit tobacco products consumed by the representative population sampled in the RMR consumer survey covering the steps outlined:

Steps 1 and 2 are used to calculate the average annual volume of illicit consumption per consumer in step 3.

The number of illicit tobacco users is calculated by multiplying the total adult smoking population in step 4 by the percentage of illicit tobacco users noted in the consumer survey in step 5.

As the consumption model uses consumer survey responses, it is not possible to accurately break down illicit consumption into loose unbranded and illicit branded loose tobacco as consumers may be unable to tell the difference in the way the tobacco is sold.

The 2020 consumption model process and relevant data sources are shown in detail overleaf.

Table A1.1 Consumption model data sources and process

| Consumption model inputs | | |
|---|---|--|
| Quantity of illicit tobacco purchased per occasion (g) | ① | RMR consumer survey |
| Frequency of illicit tobacco purchased per annum | ② | RMR consumer survey |
| Quantity of illicit tobacco purchased per annum (g) | ③ | ① X ② = ③ |
| Total adult smoking population ('000) | ④ | Extrapolated Australian Institute of Health and Welfare smoking prevalence data and Australian Bureau of Statistics adult population data ^(a) |
| Illicit tobacco users as % of Australia tobacco users | ⑤ | RMR consumer survey |
| Number of illicit tobacco users, Australia ('000) | ⑥ | ④ X ⑤ = ⑥ |
| Quantity of illicit tobacco purchased in Australia (tonnes) | ⑦ | ③ X ⑥ = ⑦ |

Notes: (a) Numbers in the above table may not sum due to rounding.

Sources: (1) Roy Morgan Research, Consumer survey, H1 2020 and H2 2020.
(2) KPMG analysis.

Total consumption of unbranded tobacco decreased between 2019 and 2020

A1 Consumption model (cont.)

Figure A1.2: Consumption model results, Full Year 2020^{(1)(2)(3)(a)(b)}

| | | Q2 2020 | Q4 2020 | Unbranded Blended | |
|---|---|---------|---------|-------------------|-------|
| ① | Quantity of illicit tobacco purchased per occasion (g) | 141 | 138 | | |
| ② | Frequency of illicit tobacco purchased per annum | 12 | 18 | | |
| ③ | Quantity of illicit tobacco purchased per annum (g) | ① x ② | 1,679 | 2,438 | |
| ④ | Total adult smoking population ('000) | 2,254 | 2,254 | | |
| ⑤ | Illicit tobacco users as % of Australian tobacco users | 26.4% | 23.0% | | |
| ⑥ | Number of illicit tobacco users, Australia ('000) | ④ x ⑤ | 595 | 518 | |
| ⑦ | Quantity of illicit tobacco purchased in Australia (tonnes) | ③ x ⑥ | 999 | 1,262 | 1,130 |

The consumption model is used to estimate the size of the unbranded tobacco market.

For the purpose of this report, the Full Year 2020 estimate of unbranded consumption volume is based on the average of the Q2 2020 and Q4 2020 consumer surveys. The result of this approach is 1,130 tonnes.

We believe that consumers are likely to give a more accurate estimate of their recent purchase behaviour rather than that of the entire last twelve months. Therefore, using an average of the Q2 2020 and Q4 2020 consumption model results should provide a more robust number for the Full Year 2020.

The total consumption of unbranded tobacco decreased by an estimated 15% in 2020, from approximately 1,333 tonnes in 2019 to 1,130 tonnes in 2020. This decrease is primarily driven by a decrease in the quantity purchased.

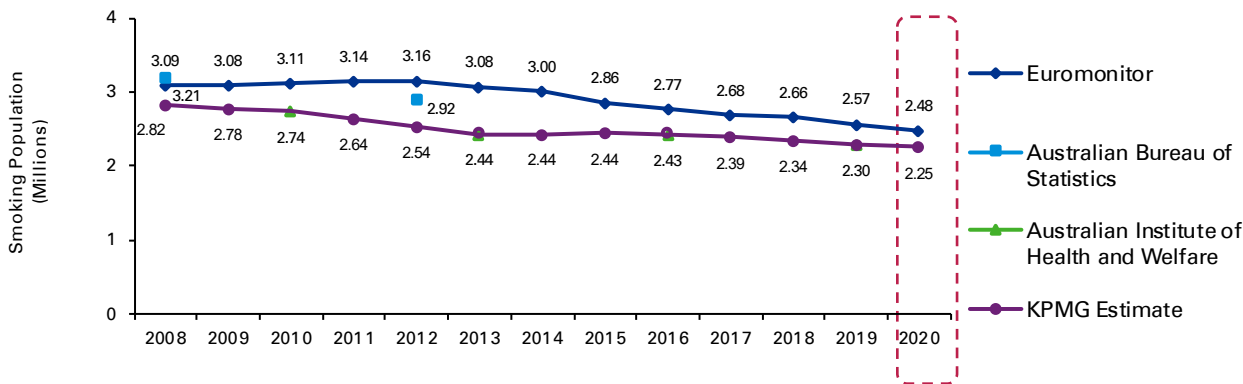
Notes: (a) Numbers in the above table may not sum due to rounding.
(b) Total consumption numbers for 2019 were restated with the update to 2019 prevalence statistics published by AIHW in 2020

Sources: (1) Roy Morgan Research, Consumer survey, H1 2020 and H2 2020.
(2) Roy Morgan Research, Consumer survey, H1 2019 and H2 2019.
(3) KPMG analysis.

As with prevalence, KPMG believes it is prudent to use the lowest estimates of smoking population to calculate illicit consumption

A2 Use of smoking prevalence data and updated results

Figure A2.1: Total number of smokers, 2008-2020^{(1)(2)(a)(b)(c)}



| CAGR (%) | 2008-12 | 2010-13 | 2013-16 | 2016-19 | 2008-20 |
|--|---------|---------|---------|---------|---------|
| Euromonitor | 0.6% | (0.4)% | (3.5)% | (2.5)% | (1.8)% |
| Australian Institute of Health and Welfare | | (3.9)% | (0.1)% | (1.8)% | |
| Australian Bureau of Statistics | (2.4)% | | | | |
| KPMG Estimate | (2.6)% | (3.9)% | (0.1)% | (1.8)% | (1.9)% |

The number of adult daily smokers in Australia is used to extrapolate the consumer survey results up to an illicit estimate for the entire population.

For the 2014, 2015 and 2016 reports, KPMG extrapolated the prevalence figures based on the 2013 AIHW survey. However, as the 2016 data for smokers has since become available from AIHW, KPMG restated the smoker population numbers between 2016 and 2019.

We have used the decline in smokers recorded in the AIHW data published in 2019 to estimate the number of smokers in 2020.

- Notes:
- (a) The Australian Institute of Health and Welfare considers population aged 14 years or older.
 - (b) Figures for the Australian Institute of Health and Welfare are taken from the National Drug Strategy Household Survey, 2007, 2010, 2013, 2016 and 2019. AIHW published updated smoking prevalence for 2019, KPMG restated the prevalence data for 2019 in the current study.
 - (c) Figures for 2020 are based on full year estimates.

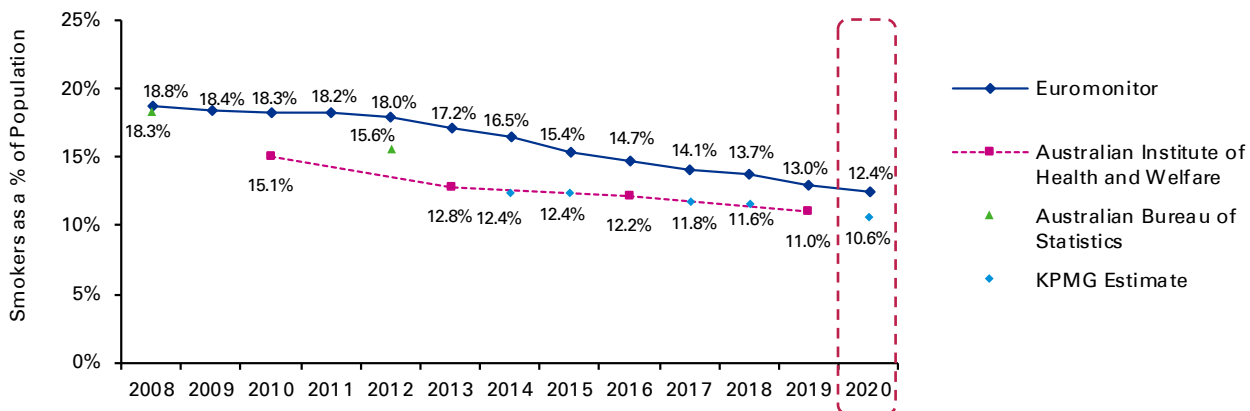
- Sources:
- (1) Australian Institute of Health and Welfare, National Drug Strategy Household Survey, 2007, 2010, 2013, 2016 and 2019.
 - (2) Australia Bureau of Statistics.
 - (3) Euromonitor.

Appendix

Several estimates of Australian smoking prevalence are publicly available, but annual data is not available from Australian government estimates

A2 Use of smoking prevalence data and updated results(cont.)

Figure A2.2: Smokers as a percentage of population, 2008 – 2020^{(1)(2)(3)(a)(b)(c)(d)(e)}



| CAGR (%) | 2008-12 | 2010-13 | 2013-16 | 2016-19 | 2008-20 |
|--|---------|---------|---------|---------|---------|
| Euromonitor | (1.1)% | (2.0)% | (5.0)% | (4.1)% | (3.4)% |
| Australian Institute of Health and Welfare | | (5.4)% | (1.6)% | (3.4)% | |
| Australian Bureau of Statistics | (3.9)% | | | | |

Official Australian Government estimates of smoking prevalence are available from both the AIHW and the Australian Bureau of Statistics (ABS). Euromonitor also provide estimates of smoking prevalence.

Each of the surveys reflects specific age groups. The AIHW and ABS estimates reflect prevalence for 14 year olds and above, whilst Euromonitor figures estimate prevalence among those aged over 18. This age prevalence in part explains the higher Euromonitor estimate.

The timing of estimates also varies. The National Drug Strategy Household Survey is conducted by the AIHW every three years and includes questions on smoking prevalence. AIHW has produced smoking prevalence estimates since 1991. The last four surveys were conducted in 2010, 2013, 2016 and 2019.

On the release of updated AIHW figures the trend line is recalculated and prior period's unbranded consumption and non-domestic legal estimates restated.

ABS figures are taken from Australian Health Surveys carried out in 2008 and 2012, whilst Euromonitor compiles its estimates annually.

All smoking prevalence surveys encounter issues with respondents under reporting. The AIHW survey highlights the possibility of under-reporting as some respondents did not answer smoking related questions. Potential under-reporting was identified in the ABS report⁽³⁾, primarily due to social pressures, especially where other household members/parents were present at the interviews for respondents.

Where KPMG require prevalence data for our estimation process, we have used the AIHW results to ensure that our estimate for the number of Australian smokers is not overstated. Overstating the number of smokers would lead to an incorrectly inflated estimate of the size of the illicit trade.

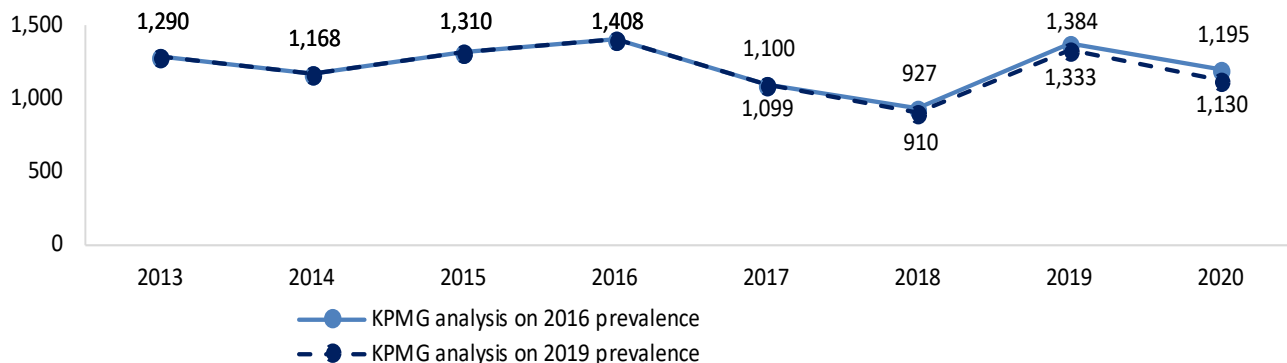
- Notes:
- (a) Euromonitor, percentage of population that are smokers refers to daily smokers > 18 years.
 - (b) Australian Institute of Health and Welfare and ABS percentage of population that are smokers refers to daily smokers >14 years.
 - (c) Euromonitor figures for 2019 are based on full year estimates.
 - (d) KPMG's estimate of smoking prevalence is based on applying a historical CAGR for AIHW prevalence estimates to the latest AIHW prevalence figure (2016 and 2019).

- Sources:
- (1) Euromonitor, smoking prevalence, accessed January 2021.
 - (2) Australian Institute of Health and Welfare, National Drug Strategy Household Survey, 2007, 2010, 2013, 2016 and 2019.
 - (3) Australian Bureau of Statistics, Health Condition And Risks, Smoking, 2017-18 financial year.

Appendix

The release of updated AIHW prevalence requires us to make a number of small restatements which led to a decrease in historic unbranded tobacco consumption

Figure A2.3: Unbranded tobacco consumption (in 000s kg) 2013 – 2020^{(1)(a)(b)(c)}



As discussed previously, in 2020 the Australian Institute of Health and Welfare (AIHW) published updated smoking prevalence figures for Australia for 2019 of 11%, down from 12.2% in 2016. We have used this latest data for our current estimate of unbranded tobacco consumption. We have also restated the results for 2017-2019.

| Smoking prevalence (Daily smokers aged 14 and over) ^(d) | | | | | |
|--|-------|-------|-------|-------|-------|
| | 2016A | 2017E | 2018E | 2019A | 2020E |
| Based on 2016 AIHW data | 12.2% | 11.8% | 11.6% | 11.4% | 11.2% |
| Based on 2019 AIHW data | 12.2% | 11.8% | 11.4% | 11.0% | 10.6% |

| Unbranded loose consumption (000s kg) ^(d) | | | | | |
|--|-------|-------|-------|-------|-------|
| | 2016A | 2017E | 2018E | 2019A | 2020E |
| Based on 2016 AIHW data | 1,408 | 1,100 | 927 | 1,384 | 1,195 |
| Based on 2019 AIHW data | 1,408 | 1,099 | 910 | 1,333 | 1,130 |

- Notes:
- (a) Q1 2013 results are based on a combination of CATI and CAWI whilst the Q2 2013 – Q4 2020 results are based on CAWI only.
 - (b) Results for Q1 2016, Q3 2016, Q1 2017, Q3 2017, Q1 2018, Q3 2018, Q1 2019, Q3 2019, Q1 2020 and Q3 2020 are not presented as no survey was undertaken in these periods.
 - (c) Annual unbranded tobacco consumption numbers are calculated as an average of the results for the respective quarters of the year where data is available.

- (d) AIHW has provided prevalence data for 2016 and 2019. Numbers for 2017, 2018 and 2020 have been extrapolated as part of KPMG analysis. (A = actual AIHW data, E=Extrapolated estimate).
- Source: (1) Roy Morgan Research consumer surveys 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020.

The Q4 2020 empty pack survey found that 6.3% of all manufactured cigarettes consumed were not intended for the Australian market

A3 EPS Analysis

Nineteen empty pack surveys (EPS) have been carried out in Australia in the last twelve years.

AC Nielsen carried out surveys commissioned by PML in Q4 2009 and Q4 2010. The 2009 survey consisted of 9,343 collected packs and the 2010 survey 6,000 packs. These surveys are believed to be broadly comparable to the 2012 and 2013 EPS.

AC Nielsen also carried out the 2012 Q2 survey, which was commissioned by all three industry parties; BATA, PML and ITA. The 2012 survey was conducted in May, June and July and consisted of 12,000 packs collected across 16 population centres.

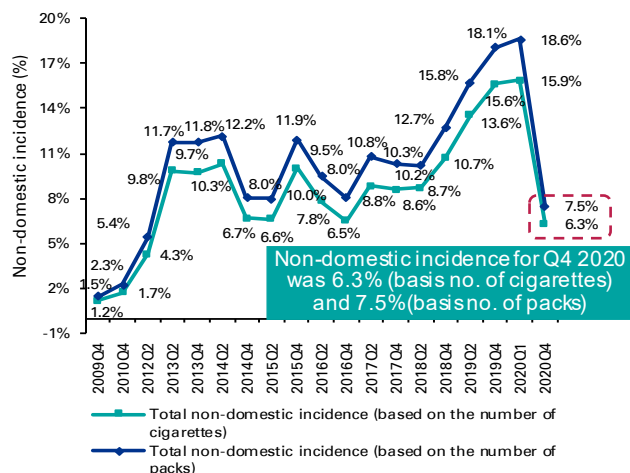
In 2013, the EPS provider changed from AC Nielsen to MSIIntelligence (MSI). MSI was selected after a tender process. MSI was commissioned to replicate the survey using an identical methodology to AC Nielsen. In 2019 the EPS provider was changed to WSPM post a competitive tender process. The empty pack survey methodology undertaken by the agency was same as that of MSI and AC Nielsen.

In 2020, WSPM was chosen to conduct the survey. WSPM has been commissioned by the industry (BATA, PML and ITA) to undertake surveys every six months. These surveys collect 12,000 packs across the same 16 population centres in Australia.

The EPS records the pack size of each pack collected. This approach enables us to report using the number of cigarettes rather than the number of packs. As there can be considerable variation in pack sizes, using a measurement based on the number of cigarettes provides a more accurate representation of consumption patterns.

WSPM uses the EPS analysis in order to take the proportion of cigarettes that are not Australian (no health warnings or non-domestic health warning, brands not sold in Australia, packs with identifying marks from other markets such as tax stamps) and class these cigarettes as 'non-domestic'. The proportion of non-domestic cigarettes recorded by the EPS is called the non-domestic incidence. The non-domestic incidence of the EPS is shown in the chart, below left.

Figure A3.1 Total non-domestic incidence, Q4 2009 – Q4 2020 (1)(2)(3)(a)(b)(c)(d)(e)



The total non-domestic incidence in Australia for Q4 2020 was 6.3% (on the basis of number of cigarettes) and 7.5% (on the basis of number of packs). The non-domestic incidence recorded in Q4 2020 (both on the basis of number of cigarettes and packs) was the lowest since 2013.

Whilst a proportion of non-domestic cigarettes will be legally brought into Australia by both inbound (foreign nationals travelling to Australia) and outbound travellers (Australians returning from abroad), this legal proportion is relatively small, with the majority of non-domestic cigarettes being illicit. A calculation of the legal volume of non-domestic cigarettes is shown in Appendix A5.

- Notes:
- (a) No survey was conducted in 2011, trend line is for information only.
 - (b) Non-domestic incidence based on the number of packs is higher than the non-domestic incidence based on the number of sticks due to the average Australian pack of cigarettes being larger than an international pack, i.e. the most commonly sold pack size in Australia is 25 cigarettes compared to the standard 20 cigarettes packs available internationally.
 - (c) Q1 2020 EPS has been adjusted to account for COVID-19 adjustments that include (i) Adjustment for lockdown days in Q1 to estimate at H1 results; (ii) Adjustment for decline in the consumption based on Q2 consumer survey responses for changes in consumption pattern (adjustments are explained in detail on page 52).
 - (d) As per WSPM, in 2020, at the time of the EPS collection in each city there were no restrictions which restricted the collection operation. The

- collection was performed with accordance to the relaxation of COVID-19 lockdown restrictions in each region.
- (e) In 2019, 'smart locked bins' were installed in the major cities across Australia which led to a change in the proportion of sample for number of packs collected. The provider has said that this change in proportion has had no impact on the survey result and methodology is consistent with those of previous surveys.

- Sources:
- (1) WSPM, *empty pack survey*, Q2 2019, Q4 2019, Q1 2020 and Q4 2020.
 - (2) MSIIntelligence Research, *Empty Pack Survey*, Q2 2013, Q4 2013, Q2 2014, Q4 2014, Q2 2015, Q4 2015, Q2 2016, Q4 2016, Q2 2017, Q4 2017, Q2 2018, Q4 2018.
 - (3) AC Nielsen, *empty pack survey*, 2009, 2010, 2012.

A3 EPS Analysis (cont.)

Figure A3.2: EPS Methodology

**Empty pack survey methodology**

The EPS is conducted in a consistent way in each time period to provide a clear comparison of results and follow trends. It follows a four step process:

1. Population centre selection

To achieve a sample of cigarette packs that is representative of the cigarette smoking population of Australia, 16 population centres are chosen based, on parameters such as population, size and geographical location. The population centres chosen represent 16 of the largest population centres in Australia and cover 75.2% of Australia's population. WSPM informed us that this provides a margin of error of 0.89% with a confidence interval of 95%.

Each population centre is divided into five sectors (north, south, east, west and centre). Each sector is subdivided into neighborhoods of the same size (250 metre radius).

2. Pack collection

The neighbourhoods sampled include residential, commercial and industrial areas. The EPS collection routes specifically exclude tourist areas, sports stadia, shopping malls and stations, or any other locations where non-domestic incidence is likely to be higher as a result of a skewed population visiting these areas. The EPS is therefore representative of the Australian population. Each neighbourhood is assigned a number of discarded packs for collection based on the size of the overall population centre in comparison with the national population. For example, the centre of Sydney includes eight neighbourhoods representative of the population of Sydney, whilst the centre of Cairns only includes two representative neighbourhoods. In total, 281 neighbourhoods are sampled across Australia. A minimum of 30 empty packs are collected from each neighbourhood (higher thresholds are applied in larger neighbourhoods) to fulfil statistical requirements and support reliable confidence level.

These packs can be collected by any number of collectors, each of whom has no target number of packs to collect and no knowledge of the clients' names or purpose of the survey. Each neighbourhood has a specific starting point and a fixed route. The collectors accumulate as many empty packs as possible within each neighbourhood regardless of the quota requested in the sampling plan. Packs collected may be from any manufacturer regardless of whether they participate in the survey. Indeed, collectors are unaware the final client. Collectors revisit the neighbourhood as many times as necessary in order to achieve the required quotas.

The training of WSPM collectors includes an explanation of the methodology and running of pilots prior to the collection. Each team of collectors is supervised by a team leader.

An additional 5% extra packs ('the buffer') are collected across neighbourhoods in case there are issues with the existing sample, such as spoiled packs. Any such packs are replaced by an identical 'buffer' pack collected from the same neighbourhood. If no identical pack is available, the pack is replaced randomly from the 'buffer' collected in that neighbourhood.

3. Pack processing

The empty packs are placed into bags and stored at a safe collection point. Packs are discarded if they do not meet the survey quality requirements (e.g. torn, unreadable, rotten). Each survey qualified pack is cleaned and placed in a transparent nylon bag with a zipper that carries a unique barcode label indicating the serial number attributed to the pack (corresponding to the datasheet). WSPM identifies whether the packs are domestic or non-domestic. The details are then entered into the survey 'Data Sheet' provided by WSPM. The packs are delivered to the participating manufacturer(s) in a way that enables easy processing and identification.

A3 EPS Analysis (cont.)

Figure A3.2: EPS Methodology



3. Pack processing (Cont.)

Data discussed in this report refers to the information recorded on these packs.

Those brand names that are unknown are sent to the participating manufacturers to assess whether they are Illicit White flows.

4. Pack analysis

The participating manufacturers check their packs only to identify counterfeit and inform the agency, which collates and updates the data-sheets. We do not know whether packs from other manufacturers are counterfeit or not. The collected packs are weighted according to the population of each settlement with results then calculated based on the number of cigarettes per pack. Reporting is done on the basis of cigarette sticks (as opposed to packs) to provide a more accurate estimation of total consumption).

These data-sheets are finally provided to KPMG and analysed to calculate the non-domestic incidence and contraband and counterfeit volumes.

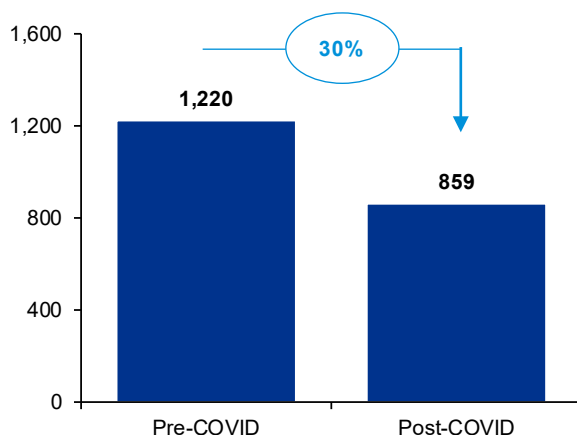
Appendix

In order to account for COVID-19 restrictions in Australia, we included questions related to cheap cigarettes in this year's consumer survey

Figure A3.3 EPS Adjustments

| | Q2 2020 ^(b) | |
|--|------------------------|------------|
| | Pre-COVID | Post-COVID |
| ① Quantity of cheap cigarettes purchased per occasion (g) | 141 | 140 |
| ② Frequency of cheap cigarettes purchase per annum | 38.4 | 38.0 |
| ③ Quantity of cheap cigarettes purchased per annum (g) ① x ② | 5,393 | 5,341 |
| ④ Total adult smoking population ('000) | 2,254 | 2,254 |
| ⑤ Cheap cigarettes users as % of tobacco users (%) | 10.0% | 7.1% |
| ⑥ Number of cheap cigarettes users ('000) ④ x ⑤ | 226 | 161 |
| ⑦ Quantity of cheap cigarettes purchased ('000kg) ③ x ⑥ | 1,220 | 859 |

Figure A3.4 Quantity of cheap cigarettes purchased ('000kg)^{(1)(a)(b)}



Since it was not possible to conduct an empty pack survey during the first lockdown, we introduced a section for COVID-19 analysis in both quarters of the consumer survey.

A number of questions were added in the survey which were used as a proxy to provide an indication of the impact of COVID-19 on illicit manufactured cigarettes. The results of the consumer survey were used to make adjustments to the empty pack survey results.

The new questions added in this year's consumer survey are detailed in Appendix A10.

The results of the Q2 2020 survey suggested:

- The COVID-19 period of isolation saw a large decline in the number of cheap cigarette users, the consumption pattern showed a decline of 30%
- Frequency and volumes did not exhibit a lot of change during the period of isolation

To facilitate the analysis, British American Tobacco provided a Q1 empty pack survey to Imperial Tobacco and PML that they normally run on a stand alone basis. The Q1 empty pack survey methodology was consistent with those of previous surveys. This enabled us to gain a better estimate non-domestic flows for the first half of the year (see next page).

Notes: (a) Numbers presented in the table may not match calculations due to rounding errors.
 (b) Post-COVID-19 period is not defined by specific dates. The responses to the COVID-19 questions correspond to the date since respondents personally began to alter their work/travel due to the COVID-19 period of isolation.

Sources: (1) Roy Morgan Research, Consumer survey, Q2 2020 and Q4 2020.

Appendix

Our COVID adjustments to the EPS suggests a non-domestic incidence of 9.6%; a 1.5 percentage point reduction on the non-adjusted figure

A3 EPS Adjustments (cont.)

Figure A3.5 Adjusted non-domestic incidence for H1 and Q4 EPS, 2020^{(1)(2)(a)(b)}

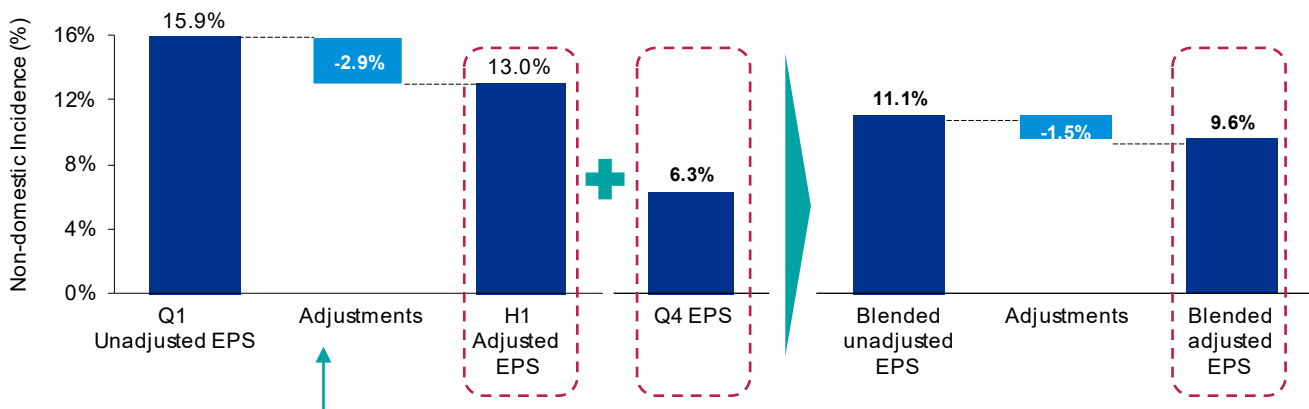
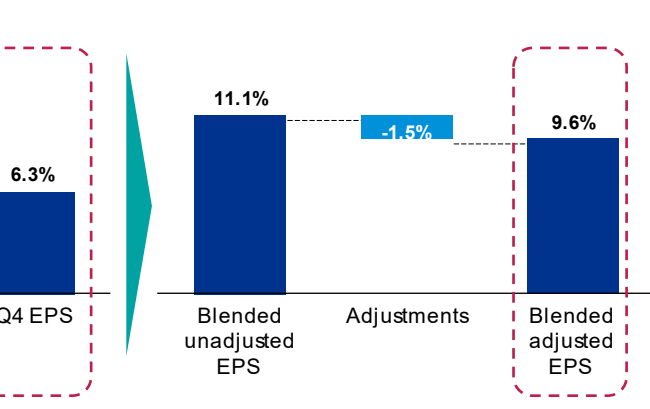


Figure A3.6 Blended non-domestic EPS incidence, 2020^{(1)(2)(a)(b)}

Figure A3.6 Blended non-domestic EPS incidence, 2020^{(1)(2)(a)(b)}



Down weighing^(b) of the Q1 EPS by 30% for the 55 days of lockdown between 21 March and 15th May 2020. This results in a 2.9 percentage point reduction in the amount of non-domestic for the first half of 2020 (H1 2020)

Figure A3.5 and figure A3.6 show the adjustment made to estimate blended non-domestic incidence. The empty pack survey conducted during Q1 was used to build a view of non-domestic incidence for the first half of 2020 (H1).

The adjustment made to the Q1 2020 EPS included downweighing^(b) the Q1 EPS by 30% for the 55 days of lockdown between 21 March and 15th May 2020. This results in a 2.9 percentage point reduction in the amount of non-domestic for the first half of 2020 (H1 2020).

Despite the lockdown restrictions in Victoria during Q4 2020, the collection of empty packs for the quarter's survey remained unimpacted. Therefore no adjustment was made to the Q4 2020 EPS.

When assessing the impact of this adjustment on 2020 overall, it reduced non-domestic incidence by 1.5 percentage points taking the blended non-domestic incidence to 9.6%.

Note: (a) Numbers in the above chart may not sum due to rounding.
 (b) The sample was downweighed to include the impact of 55 days lockdown (21 March – 15th May).

Sources: (1) WSPM, *empty pack survey*, Q1 2020 and Q4 2020.
 (2) Roy Morgan Research, *Consumer survey*, H1 2020 and H2 2020.

The results of the EPS analysis indicate an illicit volume of 893 thousand kilograms of non-domestic manufactured cigarettes

A3 EPS Analysis (cont.)

We have used the non-domestic incidence obtained from the EPS as the basis of estimates for the volumes of counterfeit and non-domestic contraband consumption in Australia (excluding Domestic Illicit Plains).

The 9.6% non-domestic incidence is combined with estimates for legal domestic sales volumes from the industry to create a volume estimate for illicit manufactured cigarettes. This estimate can then be broken down into volume estimates for non-domestic legal, counterfeit, and contraband.

Figure: A3.7: Australian EPS non-domestic consumption and illicit estimate^{(1)(2)(3)(4)(a)(b)(c)(d)}

| | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| Legal sales of manufactured cigarettes (kg'000s) | ① | 14,598 | 13,908 | 13,468 | 13,321 | 12,942 | 12,811 | 12,033 | 10,928 | 10,214 | 9,283 | 8,491 |
| EPS non-domestic incidence | ② | 1.7% | - | 4.3% | 9.8% | 8.5% | 8.3% | 7.2% | 8.7% | 9.7% | 14.6% | 9.6% |
| Total consumption of manufactured cigarettes (kg'000s) | ③ = ① × (② + 100%) | 14,857 | - | 14,068 | 14,762 | 14,142 | 13,972 | 12,962 | 11,969 | 11,309 | 10,872 | 9,391 |
| Non-domestic consumption (kg'000s) | ④ = ③ - ① | 258 | - | 600 | 1,441 | 1,201 | 1,161 | 928 | 1,041 | 1,095 | 1,589 | 900 |
| Non-domestic (legal) volume estimate (kg'000s) | ⑤ | 33.7 | - | 35.6 | 21.3 | 26.1 | 34.6 | 38.0 | 28.2 | 20.4 | 23.0 | 6.6 |
| Illicit non-domestic consumption (kg'000s) | ⑥ = ④ - ⑤ | 224.3 | - | 564 | 1,419 | 1,175 | 1,126 | 890 | 1,013 | 1,075 | 1,566 | 893 |
| EPS counterfeit incidence | ⑦ | - | - | 0.4% | 1.0% | 0.1% | 0.2% | 0.4% | 0.4% | 0.3% | 0.7% | 0.8% |
| Counterfeit consumption (kg'000s) | ⑧ = ④ × (⑦ / 100) | - | - | 50 | 143 | 8 | 34 | 50 | 47 | 39 | 71 | 73.2 |
| Contraband consumption (kg'000s) | ⑨ = ⑥ - ⑧ | - | - | 515 | 1,276 | 1,166 | 1,092 | 840 | 965 | 1,035 | 1,495 | 820 |

Figure A3.7 shows the calculation used to estimate the total volume of illicit manufactured cigarettes consumed in Australia. The percentage of non-domestic cigarettes is added to legal domestic consumption in order to calculate total consumption in step 3. Total illicit consumption is calculated by removing the non-domestic legal volume estimate in step 6.

The EPS also records the counterfeit incidence as a percentage in step 7. This counterfeit incidence is taken as a percentage of total non-domestic consumption and multiplied by the illicit consumption estimate in step 8, with the remainder contraband in step 9. The counterfeit volumes are reported from the manufacturers participating in the EPS (BATA, PML and ITA). No other counterfeit is included in the volumes reported due to a lack of information.

The results of the EPS analysis show non-domestic consumption has decreased in 2020. Non-domestic legal volumes have also decreased in 2020. However, the decrease in non-domestic legal volumes is smaller in comparison to overall decrease in non-domestic consumption calculated basis the EPS analysis. This has translated into lower volumes of illicit consumption of manufactured cigarettes.

Volumes attributable to counterfeit manufactured cigarettes grew in this period, despite remaining small, whilst contraband flows accounted for over 91% of the total illicit non-domestic consumption of manufactured cigarettes, as indicated by the EPS analysis.

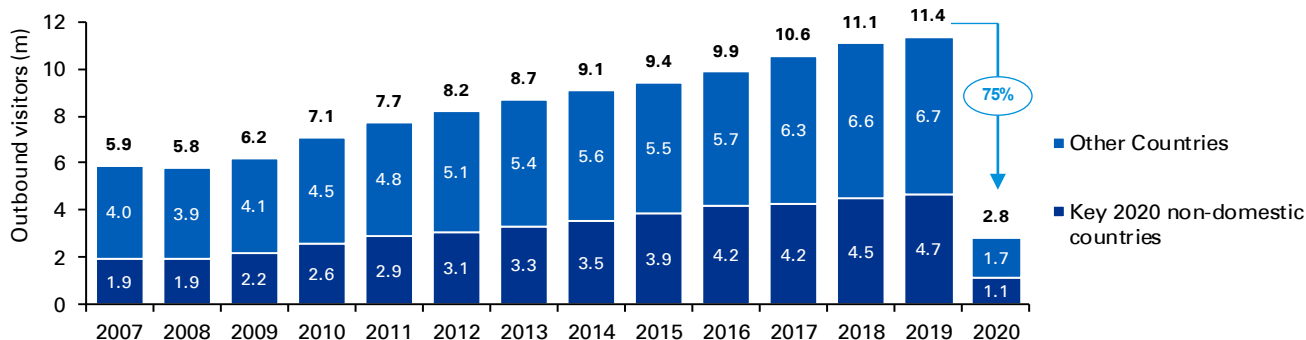
Notes: (a) Counterfeit incidence is not available for 2009, 2010 and 2011.
 (b) Numbers in the above table may not sum due to rounding.
 (c) Contraband consumption excludes Domestic Illicit Plains. However, the volume includes Illicit Whites (non-domestic).
 (d) Q1 2020 EPS has been adjusted to account for COVID-19 adjustments that include (i) Adjustment for lockdown days in Q1 to estimate at H1 results; (ii) Adjustment for decline in the consumption based on Q2 consumer survey responses for changes in consumption pattern (adjustments are explained in detail on page 52).

Sources: (1) WSPM, *empty pack survey*, Q2 2019, Q4 2019, Q1 2020 and Q4 2020.
 (2) MStelligence Research, *Empty Pack Survey*, Q2 2013, Q4 2013, Q2 2014, Q4 2014, Q2 2015, Q4 2015, Q2 2016, Q4 2016, Q2 2017, Q4 2017, Q2 2018 and Q4 2018.
 (3) AC Nielsen, *empty pack survey*, 2009, 2010, 2012.
 (4) KPMG analysis.

Outbound trips to non-domestic source countries decreased sharply in 2020 due to COVID-19 related restrictions

A4 Non-domestic legal calculation

Figure A4.1 Overseas travel of Australian residents, 2007 – 2020^{(1)(2)(a)(b)(d)}

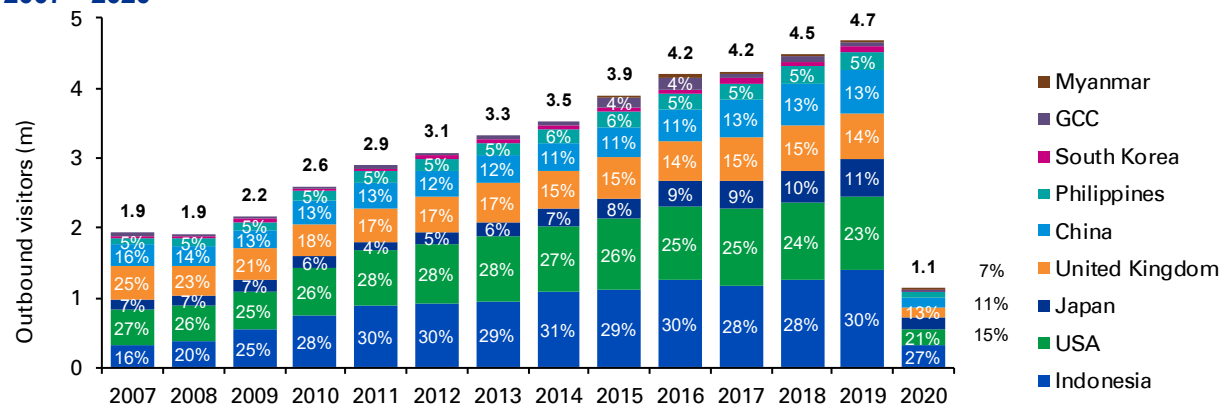


| CAGR (%) of outbound trips | 2008-2011 | 2011-2014 | 2014-2020 | 2019-2020 |
|------------------------------|-----------|-----------|-----------|-----------|
| Key 2020 ND source countries | 14.7% | 6.9% | -17.2% | -75.8% |
| Total overseas trips | 10.1% | 5.5% | -17.7% | -75.1% |

Travel trend data is used by KPMG to estimate non-domestic legal volumes, i.e. tobacco products that are brought into the country legally by consumers, such as during an overseas trip. The 2020 EPS results showed larger inflows from Myanmar and the GCC region. We have therefore included these flows

in the non-domestic legal calculation whilst removing India and Taiwan as the inflows had declined in 2020. Trips made to key non-domestic source countries of manufactured cigarettes decreased by 75.8% between 2019 and 2020, whereas overall outbound trips decreased at a rate of 75.1%.

Figure A4.2 Overseas travel of Australian residents to key 2020 non-domestic source countries, 2007 – 2020^{(1)(2)(a)(b)(c)(d)}



Visits to key non-domestic source countries fell to a total of 1.1 million in 2020, accounting for approximately 40% of all trips made overseas by Australian residents.

However, the low inbound traveller allowances to Australia would also have likely tempered the growth of legal non-domestic consumption and the same is examined in more detail overleaf.

- Notes:
- (a) Key non-domestic source countries have been selected from the EPS carried out in 2020, the countries shown in the graph above accounted for over 65% of the non-domestic cigarette sticks found in Australia (excluding sticks that come from unspecified countries).
 - (b) ND(L) volumes are estimated using actual travel data from January 2020 to December 2020.
 - (c) Some of the labels with value less than or equal to 3% have been removed for clarity.
 - (d) Australian Bureau of Statistics did not publish Short-term movement,

- Resident Returning – Selected Destinations: Trend data series in 2020 due to COVID-19 lockdowns. We have used the Short-term movement, Resident Returning – Selected Destinations: Original data series for 2020 figures.
- Sources: (1) Australian Bureau of Statistics, Short-term movement, Resident Departures – Selected Destinations: Trend, 2014, 2015, 2016, 2017, 2018, 2019.
 (2) Australian Bureau of Statistics, Short-term movement, Resident Returning – Selected Destinations: Original, 2020.

The decline in outbound trips to key source countries due to COVID-19 restrictions led to a decline in non-domestic legal volumes in 2020

A4 Non-domestic legal calculation (cont.)

Figure A4.3 Example non-domestic legal calculation (outbound)

| | | | | | | | | | | | |
|----------------|-----------------|---|-----------|---|----------------------|---|------------------------|---|--------------------|---|----------------|
| | Overseas visits | x | ND uplift | x | % population smokers | x | Propensity to purchase | x | Amount per trip | = | Total (tonnes) |
| Full year 2020 | 1.13m | | 10% | | 10.6% | | 43% | | 25g ^(a) | | 1.4 |

| KPMG non-domestic legal calculation based on overseas departures from Australia ^{(1)(2)(3)(4)(5)(b)(c)(d)(e)(f)(g)(i)(j)} | | | | | | | | | | | | | |
|--|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------|-------------|-------------|-------------|
| | Source | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Overseas trips to non-domestic source countries in the year (m) | ABS | 2.61 | 2.99 | 3.22 | 3.34 | 3.57 | 3.84 | 4.03 | 4.33 | 4.64 | 5.14 | 5.09 | 1.13 |
| Overseas trips (with New Zealand capping) for ND(L) calculation (m) ^(a) | ABS | 1.53 | 1.53 | 2.20 | 2.35 | 2.44 | 2.55 | 3.42 | 3.55 | 3.26 | 3.83 | 5.09 | 1.13 |
| Non-domestic source uplift | EPS | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% | 10% |
| % of population that are smokers | AIHW (& extrapolated) | 15.5% | 15.1% | 14.4% | 13.6% | 12.8% | 12.6% | 12.4% | 12.2% | 11.8% | 11.4% | 11.0% | 10.6% |
| % of smokers that buy tobacco | RMR consumer survey | 53% | 53% | 53% | 53% | 59% | 59% | 60% | 58% | 57% | 57% | 53% | 43% |
| Number of smokers purchasing overseas (m) | | 0.14 | 0.13 | 0.18 | 0.19 | 0.20 | 0.21 | 0.28 | 0.28 | 0.24 | 0.28 | 0.34 | 0.06 |
| Amount purchased (g) | Inbound traveller allowance | 250 | 250 | 250 | 183 | 50 | 50 | 50 | 50 | 25/50 ^(a) | 25 | 25 | 25 |
| Total (kg'000s) | | 34.57 | 33.67 | 46.05 | 34.05 | 10.12 | 10.50 | 13.95 | 13.83 | 9.08 | 6.90 | 8.21 | 1.42 |
| Non-domestic legal as % of total consumption | | 0.2% | 0.2% | 0.3% | 0.2% | 0.1% | 0.1% | 0.2% | 0.2% | 0.2% | 0.1% | 0.2% | 0.1% |

Estimates of non-domestic legal flows show that total volumes account for a small proportion of total consumption.

The change to inbound traveller allowances made in September 2012 had a considerable impact on the amount of tobacco consumers could bring back into the country legally. This reduced the estimate of legal non-domestic volumes further from 2013.

A further change in allowance was implemented in 2017 bringing the legal limit down to 25 grams. This resulted in a further decline in the estimate of non-domestic legal volume.

The 2020 consumer survey suggested that 43% of smokers traveling inbound bought cigarettes overseas, the lowest level recorded since 2012.

- Notes:
- (a) The allowance limit was changed to 25g from 1st July 2017.
 - (b) The figures for overseas trips have been updated due to the change in key ND countries.
 - (c) Travel volumes for New Zealand have been capped for prior years as a share of total travel to and from the main source countries. This capping is based on New Zealand's share of non-domestic packs per the blended EPS for that year. However, any capping for New Zealand has not been done in 2019, as it is not a key ND source country in 2019.
 - (d) Respondents were asked 'Q51. Have you travelled outside of Australia in the last 6 months?'
 - (e) Respondents were then asked 'Q52. Did you buy any manufactured cigarettes or any other tobacco products to bring back to Australia on any of your trips to other countries in the past 6 months?'
 - (f) The inbound traveller allowance for 2012 has been calculated using the 250g limit for 8 months and the 50g limit for 4 months to reflect the change in inbound traveller allowances made in September 2012.
 - (g) ND(L) volumes are estimated using actual travel data from January 2020 to December 2020.

- (i) Australian Bureau of Statistics did not publish Short-term movement, Resident Returning – Selected Destinations: Trend data series in 2020 due to COVID-19 lockdowns. We have used the Short-term movement, Resident Returning – Selected Destinations: Original data series for 2020 figures.
 - (j) Smoking prevalence for 2017-2019 was restated with updated statistics published by AIHW in 2020.
- Sources:
- (1) Roy Morgan Research, Consumer survey, H1 2013, H2 2013, H1 2014, H2 2014, H1 2015, H2 2015, H1 2016, H2 2016, H1 2017, H2 2017, H1 2018, H2 2018, H1 2019, H2 2019, H1 2020 and H2 2020.
 - (2) Australian Institute of Health and Welfare, National Drug Strategy Household Survey, 2010, 2013, 2016 and 2019.
 - (3) Australian Bureau of Statistics, Short-term movement, Resident Departures – Selected Destinations: Trend, 2013, 2014, 2015, 2016, 2017, 2018, 2019.
 - (4) Australian Bureau of Statistics, Short-term movement, Residents Returning – Selected Destinations: Trend, 2020.
 - (5) Australian Bureau of Statistics, Short-term movement, Residents Returning – Selected Destinations: Original, 2020.

The EPS analysis indicates that the overseas visitors also serve as contributors to non-domestic packs found in Australia

A4 Non-domestic legal calculation (cont.)

Overseas visitors arrivals from key non-domestic countries include both short term arrivals and permanent settlers.

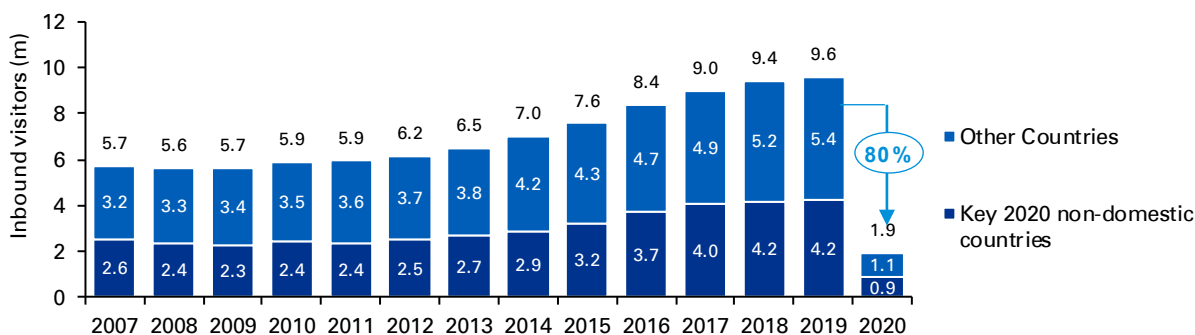
As discussed on page 57, the key source countries have been updated based on the key inflows from each market in the 2020 EPS.

Visitors (short-term arrivals and settlers) from key non-domestic source countries identified by the EPS saw sharp declines in 2020 due to COVID-19 related restrictions.

Due to changes in ABS data, a five-year average uplift has been used to calculate permanent movement settlers' numbers for January-December 2020 to ensure prudence and consistency.^(c)

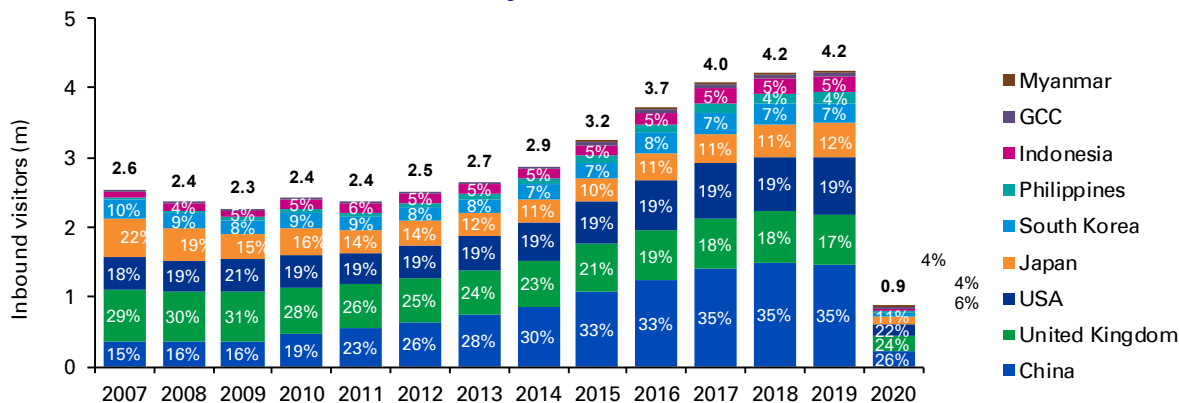
In the absence of data and to avoid overstating illicit consumption, KPMG has made a prudent assumption that all visitors who are calculated to be smokers bring the maximum duty free amount of cigarettes. As of July 1 2017, the maximum allowance for Australia was reduced to 25 grams, as compared to the earlier 50 grams limit.

Figure A4.4 Overseas visitors (short term visitors and settlers) arrivals to Australia, 2007 –2020^{(1)(2)(3)(a)(b)(c)(e)}



| CAGR (%) of inbound trips | 2008 – 2011 | 2011 – 2014 | 2014 – 2020 | 2019 – 2020 |
|------------------------------|-------------|-------------|-------------|-------------|
| Key 2020 ND source countries | 0.1% | 6.5% | -18.3% | -79.7% |
| Total arrivals | 1.7% | 5.8% | -19.3% | -79.7% |

Figure A4.5 Overseas visitors arrivals from key 2020 non-domestic source countries, 2007 –2020^{(1)(2)(3)(a)(b)(c)(d)(e)}



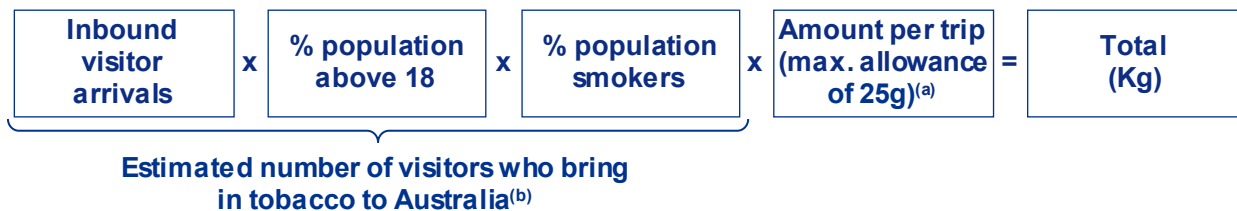
- Notes:
- (a) Key non-domestic source countries have been selected from the EPS carried out in H1 2020 and Q4 2020, the countries shown in the graph above accounted for over 65% of the non-domestic cigarette sticks found in Australia excluding sticks that come from unspecified countries.
 - (b) ND(L) volumes are estimated using actual travel data from January 2020 to December 2020.
 - (c) Australian Bureau of Statistics stopped publishing data for permanent settlers since 2017, to calculate the same a five-year average uplift has been used to calculate permanent movement settlers' numbers for January-December 2020.
 - (d) Some of the labels with value less than or equal to 3% have been removed for clarity.
 - (e) Australian Bureau of Statistics did not publish Short-term movement, Visitor Arrivals – Selected Countries of Residence: Trend data series in 2020 due to COVID-19 lockdowns. We have used the Short-term movement, Visitor Arrivals – Selected Countries of Residence: Original data series for 2020 figures.
- Sources:
- (1) Australian Bureau of Statistics, Short-term Movement, Visitor Arrivals – Selected Countries of Residence: Trend, 2013, 2014, 2015, 2016, 2017, 2018, 2019.
 - (2) Australian Bureau of Statistics, Permanent Movement, Settlers – Country of Birth, Major Groups and Selected Source Countries: Original, 2013, 2014, 2015, 2016, 2017, 2018, 2019.
 - (3) Australian Bureau of Statistics, Short-term Movement, Visitor Arrivals – Selected Countries of Residence: Original, 2020.

Appendix

Non-domestic legal estimates calculated on the basis of inbound visitor arrivals indicate that non-domestic legal remains a small proportion of total consumption

A4 Non-domestic legal calculation (cont.)

Figure A4.6 Example non-domestic legal calculation (inbound)



Example of KPMG non-domestic legal calculation based on overseas visitor arrivals to Australia^{(1)(2)(3)(4)(5)(b)(c)(d)(e)(f)(g)}

| 2020 | Inbound visitor arrivals (m) ^(d) | % population above 18 ^(e) | % population smokers | Number of visitors bringing tobacco (m) | Amount purchased (kg) |
|----------------|---|--------------------------------------|----------------------|---|-----------------------|
| Source | Australian Bureau of Statistics | Euromonitor | Euromonitor | | |
| China | 0.42 | 67% | 28% | 0.078 | 1,945 |
| Japan | 0.18 | 57% | 17% | 0.018 | 444 |
| South Korea | 0.05 | 69% | 21% | 0.008 | 195 |
| USA | 0.19 | 61% | 13% | 0.015 | 387 |
| Myanmar | 0.01 | 63% | 26% | 0.001 | 25 |
| Indonesia | 0.07 | 63% | 37% | 0.016 | 394 |
| Gcc | 0.03 | 72% | 27% | 0.006 | 152 |
| Philippines | 0.06 | 59% | 23% | 0.008 | 208 |
| United Kingdom | 0.20 | 60% | 14% | 0.017 | 426 |
| Total | 1.22 | | | | 4,177 |

Total amount brought into Australia by inbound tourists

Estimation of non-domestic legal volumes shows that total volumes account for a small proportion of total consumption (0.1%).

This proportion remains insignificant even if arrivals data is included in the non-domestic legal calculation. This analysis has been shown in detail on the next page.

- Notes:
- (a) The legal allowance limit was changed to 25 grams applicable from 1st July 2017.
 - (b) KPMG has used a prudent approach and assumed that 100% of visitors arriving in Australia purchase the maximum inbound traveller allowance.
 - (c) A five-year average uplift has been used to calculate permanent movement settlers' numbers for January-December 2020.
 - (d) Inbound visitor arrivals to include arrivals of short term overseas visitors and permanent settlers.
 - (e) Population within the age group 18-64 years.
 - (f) The total of amount purchased by travelers from individual source countries may slightly differ from the total amount brought into Australia by inbound tourists due to minor differences in the six year average uplift used to calculate permanent movement settlers' numbers.
 - (g) Australian Bureau of Statistics did not publish Short-term movement, Visitor Arrivals – Selected Countries of Residence: Trend data series in 2020 due to COVID-19 lockdowns. We have used the Short-term movement, Visitor Arrivals – Selected Countries of Residence: Original data series for 2020 figures.

- Sources:
- (1) Australian Bureau of Statistics, Short-term Movement, Visitor Arrivals – Selected Countries of Residence: Trend, 2013, 2014, 2015, 2016, 2017, 2018, 2019.
 - (2) Australian Bureau of Statistics, Permanent Movement, Settlers – Country of Birth, Major Groups and Selected Source Countries: Original, 2013, 2014, 2015, 2016, 2017, 2018, 2019.
 - (3) Australian Bureau of Statistics, Short-term Movement, Visitor Arrivals – Selected Countries of Residence: Original, 2020.
 - (4) Euromonitor, Population: National Estimates, accessed January 2020.
 - (5) Euromonitor, Smoking Prevalence Among Total Adult Population, accessed January 2020.

Total non-domestic legal consumption represents less than 0.1% of total consumption in Australia

A4 Non-domestic legal calculation (cont.)

| KPMG Total non-domestic legal calculation ^{(3)(4)(5)(6)(7)(8)(9)(a)(b)(c)(d)} | | | | | | | | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 2007 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Outbound trips ('000 kg) | 28.6 | 34.6 | 33.7 | 46.0 | 34.1 | 10.1 | 10.5 | 14.0 | 13.8 | 9.1 | 7.0 | 8.5 | 5.2 |
| Inbound trips ('000 kg) | | | | | | 11.2 | 15.6 | 20.6 | 24.2 | 19.1 | 13.5 | 14.8 | 1.4 |
| Total ND(L) ('000 kg) | 28.6 | 34.6 | 33.7 | 46.0 | 34.1 | 21.3 | 26.1 | 34.6 | 38.0 | 28.2 | 20.5 | 23.4 | 6.6 |
| Non-domestic legal as % of total consumption | 0.1% | 0.2% | 0.2% | 0.3% | 0.2% | 0.1% | 0.1% | 0.2% | 0.2% | 0.2% | 0.1% | 0.2% | 0.1% |

The estimate of non-domestic legal volumes above comprises the legitimate flows from the main source countries highlighted by the EPS and represents 0.050% of total consumption. If we were to assume that all travellers from the source markets indicated by the EPS purchased their full allowance, we would derive an ND(L) volume of approximately 6.8 tonnes or 0.052% of total consumption.

Store based retailing continued to be a major distribution channel accounting for 98.7% of all sales for cigarettes and 96.8% of all sales for smoking tobacco. E-commerce remains a small channel, representing only 1% of sales for cigarettes and 3.1% of sales for smoking tobacco.⁽¹⁾

Although traditional retailing channels continue to dominate tobacco sales, the RMR consumer survey results indicated that in 2013, 1.8% of purchasers of unbranded tobacco did so via the internet. As per the recent survey results of H2 2020, this number has increased to 3.1%.⁽²⁾

- Notes:
- (a) ND(L) volumes are estimated using actual travel data from January 2020 to December 2020.
 - (b) Figures for outbound trips have been restated for 2014, 2015, 2016 as we have updated the smoking prevalence numbers as per the new AIHW survey.
 - (c) Australian Bureau of Statistics did not publish Short-term movement, Visitor Arrivals – Selected Countries of Residence: Trend data series in 2020 due to COVID-19 lockdowns. We have used the Short-term movement, Visitor Arrivals – Selected Countries of Residence: Original data series for 2020 figures.
 - (d) Australian Bureau of Statistics did not publish Short-term movement, Resident Returning – Selected Destinations: Trend data series in 2020 due to COVID-19 lockdowns. We have used the Short-term movement, Resident Returning – Selected Destinations: Original data series for 2020 figures.

- Sources:
- (1) Euromonitor, Tobacco in Australia, 2020.
 - (2) Roy Morgan Research, Consumer survey, H1 2013, H2 2013, H1 2014, H2 2014, H1 2015, H2 2015, H1 2016, H2 2016, H1 2017, H2 2017, H1 2018, H2 2018, H1 2019, H2 2019, H1 2020 and H2 2020.
 - (3) Australian Bureau of Statistics, Short-term movement, Resident Departures – Selected Destinations: Trend, 2013, 2014, 2015, 2016, 2017, 2018, 2019.
 - (4) Australian Bureau of Statistics, Short-term movement, Residents Returning – Selected Destinations: Trend, 2017.
 - (5) Australian Bureau of Statistics, Short-term Movement, Visitor Arrivals – Selected Countries of Residence: Trend, 2013, 2014, 2015, 2016, 2017, 2018, 2019.
 - (6) Australian Bureau of Statistics, Permanent Movement, Settlers – Country of Birth, Major Groups and Selected Source Countries: Original, 2013, 2014, 2015, 2016, 2017, 2018, 2019.
 - (7) Australian Bureau of Statistics, Short-term Movement, Visitor Arrivals – Selected Countries of Residence: Original, 2020.
 - (8) Australian Bureau of Statistics, Short-term movement, Residents Returning – Selected Destinations: Original, 2020.
 - (9) KPMG Analysis.

Illicit Whites flows methodology

A5 Illicit Whites flows analysis

Illicit Whites are defined as manufactured cigarettes that are usually manufactured legally in one country/market but which the evidence suggests have been smuggled across borders during their transit to Australia, where they have limited or no legal distribution and are sold without the payment of tax.

Feedback on our approach to Illicit Whites definitions had suggested that we did not capture flows of Illicit White brands that have packaging designed for the domestic Australian market. In 2016, we adapted our approach in an attempt to assess these flows. Therefore, our analysis now includes both branded cigarette packs as well as the packs which are in plain packaging.

Domestic Illicit Plains

To identify which brands made up Domestic Illicit Plains brand flows, KPMG undertook the following analysis:

- All domestic cigarette brands in the EPS data were compiled for analysis. The list was corroborated through an analysis of Aztec – IRI scan sales data^(a) (and pack labelling as per EPS). EPS determined volumes were compared to legally reported sales of these brands to determine an estimated share of total consumption.
- Brand flows were also compared with the brand lists published in The Retail Tobacconist trade magazine⁽¹⁾, which has a comprehensive list of legitimate brands. Brands included in this publication were then eliminated.
- Consistent with our approach in Project Illicit consumption in EU, Norway, UK and Switzerland (formally Stella), KPMG has conservatively assumed that, where consumption implied by the EPS volumes represented > 99% of total legal consumption, the brand is considered a Domestic Illicit Plain.

Table A6a Domestic Illicit Plains identification process, Illicit Tobacco in Australia – worked example

| Illicit Tobacco in Australia – Illicit Whites identification process, 2020 ⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾ | | | | |
|--|-------------------------------|--------------------------|--|----------------------------------|
| | Domestic v volume (bn sticks) | LDS v volume (bn sticks) | ND v volumes as a share of total consumption | Illicit White v volumes by brand |
| Brand A | 0.01 | - | 100% | 0.01 |
| Brand B | 0.24 | 0.00 | 100% | 0.24 |
| Brand C | 0.01 | - | 100% | 0.01 |
| Brand D | 0.01 | 0.01 | 38% | - |

Brands A, B and C are classified as a Domestic Illicit Plain since there is no evidence of legal distribution and all flows are unspecified origin. Brand D is not classified as a Domestic Illicit Plain where the domestic volumes are 38% of the consumption.

Notes: (a) The Aztec IRI scan sales data reflect the sales made to consumers only.
 Sources: (1) Australian Retail Tobacconist, Q4 2020.
 (2) WSPM, empty pack survey, Q2 2019, Q4 2019, Q1 2020 and Q4 2020.

(3) MSIIntelligence Research, Empty Pack Survey, Q2 2013, Q4 2013, Q2 2014, Q4 2014, Q2 2015, Q4 2015, Q2 2016, Q4 2016, Q2 2017, Q4 2017, Q2 2018, Q4 2018.
 (4) Aztec – IRI monthly scan data, Jan 2020– December 2020.

Illicit Whites flows methodology (cont.)

A5 Illicit Whites flows analysis

Illicit Whites (non-domestic)

To identify which non-domestic brands made up Illicit Whites brand flows, KPMG undertook the following analysis:

- All non-domestic labelled cigarette brands were compiled to form an initial list of brands.
- These brands were then compared with the Aztec – IRI scan data⁽¹⁾ (which records most brands being sold through most legitimate channels). Brands included in the Aztec – IRI data were then eliminated from the list.

- Remaining brand were then compared with the brand lists published in The Retail Tobacconist trade magazine.⁽²⁾ Brands included in this publication were then also eliminated.
- Further analysis was undertaken by looking at the country of origin and corroborating this with third party sources.^(a)
- Remaining brand flows were identified as Illicit Whites.

Given our identification of counterfeit product is limited to the three industry participants, we cannot assess whether or not these flows are counterfeit product.

Table A6b Illicit Whites (non-domestic) identification process for, Illicit Tobacco in Australia – worked example

| Illicit Tobacco in Australia – Illicit Whites identification process ⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾ | | | | |
|--|--------------------------------------|------------------------|---------------------|-------------------------------------|
| | 2020 Non-domestic volume (bn sticks) | Aztec – IRI scan data? | Retail tobacconist? | Illicit White brand flow |
| Brand A | 0.02 | Yes | Yes | <input type="checkbox"/> |
| Brand B | 0.15 | No | Yes | <input type="checkbox"/> |
| Brand C | 0.06 | No | No | <input checked="" type="checkbox"/> |
| Brand D | 0.01 | Yes | No | <input type="checkbox"/> |
| Brand E | 0.01 | Yes | Yes | <input type="checkbox"/> |

Only the brand flows which are not present in both the Aztec – IRI scan data and the retail tobacconist are categorised as Illicit White flows.

Notes: (a) Third party sources include Euromonitor tobacco reports which were used for further verification.

Sources: (1) Aztec – IRI monthly scan data, Jan 2020 – December 2020,
 (2) Australian Retail Tobacconist, Q4 2020.

(3) WSPM, *empty pack survey*, Q2 2019, Q4 2019, Q1 2020 and Q4 2020.

(4) MSIintelligence Research, *Empty Pack Survey*, Q2 2013, Q4 2013, Q2 2014, Q4 2014, Q2 2015, Q4 2015, Q2 2016, Q4 2016, Q2 2017, Q4 2017, Q2 2018, Q4 2018.

A6 Notes to this report

The measurement of illicit consumption is inherently complex as those involved seek to conceal their activities.

We believe that the approach adopted for this report, both in terms of the consumption model methodology and the key data sources, generates an estimate of illicit consumption that is as robust as possible within current research techniques.

Whilst we believe this approach is currently the most appropriate method, we also recognize that we have been required to make a number of data assumptions and scope exclusions.

Further detail on key approaches and methodology limitations is provided in the table below.

| Illicit tobacco in Australia | |
|---|---|
| Source | Overview |
| EPS | <ul style="list-style-type: none"> — The EPS approach provides an objective and statistically representative estimate of the size of the illicit manufactured cigarette market. The results are not subject to respondent behaviour and are less prone to sampling errors than many other alternative methodologies. — In 2020, sampling for the Q2 2020 EPS could not be conducted due to COVID-19 restrictions. Therefore, Q1 EPS flows were downweighted to estimate an H1 view on consumption. To account for the impact of restrictions, questions were added to the consumer survey and results were used to adjust the EPS for the period of the lockdown. Using a consumer survey led adjustment impacts the robustness of the empty pack survey outputs — Whilst the EPS is designed to be representative of the overall population, it is not possible to ensure the sample is fully representative because: <ul style="list-style-type: none"> - The sample is more heavily weighted towards populous, urban areas, so in some markets the EPS may not be fully representative of consumption habits in rural areas. The impact in Australia is likely to be minimal as only 10% of the population live in rural areas.⁽¹⁾ - Collection routes also specifically exclude sports stadia, shopping malls and stations, or any other locations where non-domestic incidence is likely to be higher as a result of a skewed population visiting these areas. - In 2020, due to the COVID-19 pandemic, consumers spent more time at home due to the lockdown restrictions. This may have led to reduced smoking on streets/open spaces and may have had an impact on the sample collection process. — Although EPS dates are selected to minimise seasonal factors, there may be specific events that impact the results such as major national events which result in large numbers of overseas visitors. We normally use a blended result of Q2 and Q4 EPS data to minimise this impact. — Brand and market variant share can only be extrapolated with a degree of statistical accuracy for brands where a sufficiently large number of packs have been collected. — In 2019, there were changes in the type of bins in Australia in some of the major cities. The new 'smart locked bins' made it difficult for the provider to collect the discarded packs from bins and a change in the proportion of sample for number of packs collected from bins and streets was observed. The provider has said that this change in proportion has had no impact on the survey result and methodology is consistent with those of previous surveys. |
| Non-major manufacturer (non-participating) counterfeit | <ul style="list-style-type: none"> — EPS results do not identify counterfeit packs that have been made by manufacturers other than BATA, ITA and PML as only the manufacturer / trademark owner can confirm whether their brand pack is genuine. <ul style="list-style-type: none"> - As a result, for brands which are not trademark-owned by BATA, ITA or PML, it is not possible to identify counterfeit (non-domestic variants) products. |

Notes to this report (cont.)

A6 Notes to this report (cont.)

| Illicit tobacco in Australia | |
|---|--|
| Source | Overview |
| Non-major manufacturer (non-participating) counterfeit (cont.) | <ul style="list-style-type: none"> — The volume of legal domestic consumption may be overstated where domestic counterfeit variants exist, leading to corresponding understatements of illicit volumes for some brands (although the impact is likely to be minimal and would require any counterfeit pack barcodes to operate correctly and to be scanned by retailers). — Illicit White volumes may include counterfeit. However, the presence of counterfeit is unlikely to have a major impact as counterfeit volumes in 2020 only represented a small proportion (0.78%)(1) of the total sample of the three participating manufacturers brand flows and counterfeit is typically concentrated on the most popular brands only. |
| LDS | <ul style="list-style-type: none"> — There are minor variations in the LDS data provided by Aztec - IRI and industry stakeholders due to small differences in the way sales data is collected (for example, the way data is collected from tobacconists and timings of data release). KPMG has taken IRI data directly from IRI. — Slight timing variances may arise between the date the product was purchased and actual consumption. However, these variances are not considered significant and the 2020 LDS information we have from industry companies is considered to be a good representation of the market. |
| Consumer surveys | <ul style="list-style-type: none"> — For the purpose of our analysis, our unbranded volumes are based on the average of the last two consumer surveys as consumers are likely to give a more accurate estimate of their purchase behaviour over a short time period rather than the last twelve months. — The sample for the tobacco questionnaire is weighted by location, age and gender using RMR Single Source data in order to be representative of the national population. — There are state-by-state regulations that guide the implementation of consumer surveys in Australia and the RMR survey used in this report complies with all such regulations nationally. — In Q4 2018 RMR supplemented the survey with an additional panel in order to meet the targeted number of respondents. The Q4 2018 sample had a higher percentage of manufactured tobacco users as compared to prior surveys (i.e. 84.1% in Q4 2018, as compared to an average of 79.2% in the period Q2 2019-Q4 2019 and an average of 83.3% in the period Q4 2016-Q2 2018). — As a result, the Q4 2018 survey also had a lower percentage of RYO users as compared to other surveys (i.e. 43.2% in Q4 2018, as compared to an average of 46.8% in the period Q2 2019-Q4 2019 and an average of 44.8% in the period Q4 2016 to Q2 2018). — The potential impact on the 2018 results is that it may have resulted in a relatively lower recorded rate of awareness, frequency of purchase per annum, penetration of use and average volume purchased of unbranded tobacco. — As a result, our estimates for unbranded consumption in 2018 illicit unbranded consumption could be underreported on a like for like basis. If this is the correct then the growth rate in estimated unbranded consumption between 2019 and 2018 would be overstated. — Although the consumer survey is designed to be nationally representative of the population, there are certain limitations associated with consumer surveys, such as: <ul style="list-style-type: none"> - Information obtained from a consumer survey is based on a sample rather than the entire population and therefore data is subject to sampling variability. |

Sources: (1) WSPM, empty pack surveys, Q1 2020 and Q4 2020

Notes to this report (cont.)

A6 Notes to this report (cont.)

| Illicit tobacco in Australia | |
|------------------------------|--|
| Source | Overview |
| | <ul style="list-style-type: none"> — In addition, there are limitations to using a consumer survey to estimate tobacco consumption and more specifically illicit tobacco consumption: <ul style="list-style-type: none"> - Consumer surveys have historically under-reported tobacco consumption, especially in countries where it has become increasingly socially less acceptable. For example, AIHW highlights the possibility of under-reporting in smoking related questions as some respondents do not answer smoking related questions.⁽¹⁾ As such, the RMR consumer survey used in this report asks respondents about purchase behaviour rather than actual consumption habits. - Illicit tobacco consumption is likely to be under-reported to an even greater degree.⁽²⁾ |
| ND(L) | <ul style="list-style-type: none"> — We have used inbound and outbound travel data and inbound settler data from the Australian Bureau of Statistics to calculate the number of trips made. — Inbound settler data was available up to June 2017, after which the Australian Bureau of Statistics stopped publishing these figures. For the purpose of our analysis, we have uplifted the short term arrivals estimates by the last six years average to estimate the number of inbound settlers from January 2020 to December 2020. — Due to the COVID-19 lockdown, the '<i>trend data series</i>'^{(a)(3)} for travel statistics was not published by the Australian Bureau of Statistics in 2020. For the purpose of our analysis the '<i>original data series</i>'^{(b)(3)} published by the agency has been used for travel trends in Australia. To understand the difference between the two datasets, we compared the '<i>trend</i>' series and the '<i>original</i>' series for 2019 and noticed only a marginal difference between the two datasets. Hence we believe, that as this pertains to a single year change, it would have had limited impact on our analysis. We continue to monitor the publication of travel data by ABS and shall return to the usage of the '<i>trend data series</i>' for travel statistics from next year if it is made available. — We have calculated the number of cigarettes purchased by assuming smokers purchase the legal allowance. This approach may overweight ND(L) volumes as a share of total non-domestic flows. — We have not been able to accurately estimate the number of cigarettes purchased through mail order and legally imported into Australia. However, as highlighted on page 58, we feel that the volume consumed is unlikely to be material. |
| Outflows from Australia | <ul style="list-style-type: none"> — Illicit outflows from Australia are not considered to be material due to the high prices relative to other parts of the world. |
| External data sources | <ul style="list-style-type: none"> — We have used a series of external data sources to estimate illicit tobacco consumption in Australia in 2020. There are a number of limitations associated with these sources such as their infrequent updates (AIHW National Drug Strategy Household survey is updated every three years, with the latest survey conducted in 2019 whilst the Australian census is conducted by the ABS every five years, the most recent conducted in 2019). To update these numbers for the period of study, we make a series of assumptions as required that are detailed throughout the report. — There are also differences between our key data sources and other points of corroboration. For example, the RMR consumer survey focuses on those over 18 years old, whilst the AIHW survey focuses on those over 14 years old. |

Note: (a) Trend dataset published by ABS is an adjusted data series in which irregularity and seasonality is removed to make the data less volatile and less prone to revisions over time.
 (b) Original dataset published by ABS is the unadjusted series that has not been adjusted for seasonality.

Sources: (1) National Drug Strategy Household Survey, Australian Institute of Health and Welfare, 2013.
 (2) Temporal changes of under-reporting of cigarette consumption in population-based studies, Gallus et al, 2011.
 (3) ABS website, Methods, Classifications, Concepts & Standards.

The Roy Morgan Research survey and the AIHW survey differ in focus and methodology, whilst limitations of consumer surveys are recognised

A7 Alternative illicit tobacco estimates

The Australian Institute of Health and Welfare's (AIHW) National Drug Strategy Household Survey (NDSHS) is the only other major consumer survey in Australia that provides an overview on the prevalence of the use of illicit tobacco.

There are a number of differences between the RMR and AIHW survey (also conducted by RMR) including the key purpose of each, the frequency of surveys carried out, and both the size and age profile of the sample. The RMR survey is used to estimate the size of the illicit market whereas the AIHW survey is focused more on attitudes and behaviours across a wider range of health and drug related issues. The RMR surveys are carried out biannually whilst the AIHW survey is conducted every three years.

RMR draws its sample from an Australia-wide database collected through its 'Establishment Survey'. This survey is conducted throughout the year and includes information on demographic and attitudes.

The sample for the tobacco questionnaire is weighted by location, age and gender in order to be representative of the national population. To meet target responses, RMR then supplements its sample with samples from a set of qualified third-party suppliers.

AIHW also adopts a sampling plan stratified by region. Weightings are then applied to address any imbalances through sample execution and different response rates.

RMR has used a web-based survey throughout, whilst AIHW moved from a combined CATI and drop-and-collect methodology to a pure drop-and-collect method from 2010. From 2016 onwards AIHW started using a combination of drop-and-collect, online survey and CATI methodology.

In its data quality statement, AIHW also acknowledges that it "is known from past studies of alcohol and tobacco consumption that respondents tend to underestimate actual consumption levels".⁽³⁾ In addition, the Australian Bureau of Statistics suggested social pressures are likely to account for such under-reporting.⁽⁴⁾ Illicit tobacco consumption is therefore likely to be under-reported to an even greater degree. These are issues we have previously highlighted.

| Comparison of RMR and AIHW consumer surveys ^{(1)(2)(a)(b)} | | |
|---|--|--|
| | RMR | AIHW (conducted by RMR) |
| Survey focus | — Size of the illicit tobacco market | — Knowledge of and attitudes towards drugs, drug consumption histories, related behaviours |
| Frequency | — At least annually from 2009 and biannually from 2013 | — Every three years |
| Response period | — Three week period (twice annually) | — 5-6 months (April–September 2019) |
| Key exclusions | — Non-private dwellings and institutions; non-smokers and occasional smokers | — Non-private dwellings and institutions |
| Contacted | — 5,195 qualified smokers | — 45,481 households |
| Response rates | — 82.5% (4,228 completed surveys) | — 49.0% (22,274 completed surveys) |
| Sample size | — 2015: 4,235 (H1: 1,852 + H2: 2,383) — 2016: 4,205 (H1: 2,105 + H2: 2,100) — 2017: 4,203 (H1: 2,102 + H2: 2,101) — 2018: 4,228 (H1: 2,104 + H2: 2,124) — 2019: 4,249 (H1: 2,128 + H2: 2,121) — 2020: 4,288 (H1: 2,134 + H2: 2,154) | — Greater than 26,000 people aged 12 years or older participated in the 2010 survey — Approximately 24,000 people aged 14 years or older participated in the 2013 and 2016 surveys — Greater than 22,000 people aged 14 years or older participated in the 2019 survey |
| Age groups | — Smokers aged 19+ | — Smokers aged 14+ |
| Methodology | — Web-based surveys | — Drop and collect/Online survey/CATI |
| Language | — English only | — English only (introduction letter and FAQs in 5 other languages) |
| Types of tobacco addressed | — Unbranded, counterfeit cigarettes, contraband cigarettes | — Unbranded, non-plain packaged tobacco |

Notes: (a) Roy Morgan Research results for 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019 and 2020 analysis is based on CAWI/CATI consumer survey results.

(b) Results from the 2010 AIHW survey asked questions only about unbranded loose tobacco, whereas the 2016, 2013 and 2007 surveys also asked about unbranded cigarettes.

Sources: (1) Roy Morgan Research, Consumer survey, H1 2013, H2 2013, H1 2014, H2 2014, H1 2015, H2 2015, H1 2016, H2 2016, H1 2017, H2 2017, H1 2018, H2 2018, H1 2019, H2 2019, H1 2020 and H2 2020.

(2) Australian Institute of Health and Welfare, The National Drug Strategy Household Survey, 2010, 2013, 2016, 2019.

(3) National Drug Strategy Household Survey 2019 – Data Quality Statement.

(4) 'Profiles of Health, Australia, 2011-13 – Tobacco Smoking', Australian Bureau of Statistics, June 2013.

(5) Proof Committee Hansard, Parliamentary Joint Committee on Law Enforcement, March 2016.

Appendix

The latest AIHW National Drug Strategy Household Survey results suggest reasonably similar movements in consumption

AIHW Consumer Survey approach, 2016 and 2019⁽¹⁾

The 2016 AIHW National Drug Strategy Household Survey was the first in which an online form was able to be used by participants completing the survey. For the 2013 and 2010 surveys, only a self-completion drop-and-collect method was offered. A total of 25% of questionnaires in 2019 were completed online, which was higher than the level of 22% in 2016 and this may be a factor when comparisons are made over time.

Sources: (1) Australian Institute of Health and Welfare, National Drug Strategy Household Survey, 2013, 2016 and 2019

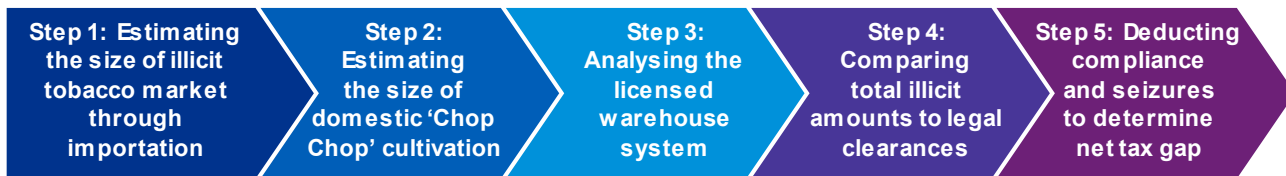


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Appendix

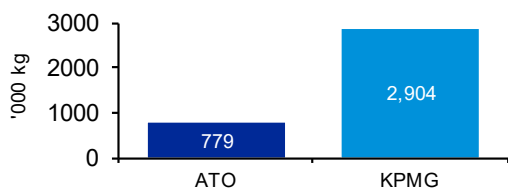
The ATO has recently produced its own calculation of illicit tobacco consumption

A8 Australian Taxation Office methodology for calculating tax gap⁽¹⁾



Estimates of Illicit volume (kg '000) by ATO and KPMG in 2018-19^{(1)(2)(a)(b)}

The Australian Taxation Office (ATO) estimated the amount of excise on illicit tobacco lost in 2018 – 19 was AUD822m, the KPMG estimate for the same period was AUD3,354m, a 308% difference.



Below we assess the ATO methodology in order to try and understand the difference.

| Comparison of Australian Taxation Office and KPMG ⁽¹⁾⁽²⁾ | | |
|--|--|--|
| | Australian Taxation Office | KPMG comments |
| Step 1: Estimating the size of the illicit tobacco market through importation | <ul style="list-style-type: none"> ATO uses data from detections and inspections that have not been targeted. ATO suggests that this helps determine a leakage rate for illicit tobacco reaching Australia ATO then uses this implied leakage rate to extrapolate across total import volumes to derive an estimate for illicit tobacco through the sea cargo, air cargo and international post channels | <ul style="list-style-type: none"> ATO's methodology which calculates a leakage rate is unclear on how it will evolve over time to effectively calculate illicit tobacco from total import volumes across these streams. ATO estimates total volume lost through international passenger channel as small, and thus has not accounted for this in its methodology. There is a price incentive for people to smuggle cigarettes into Australia in a large number of vast small consignments, this process is termed as 'ant-smuggling' in Europe.⁽³⁾ This might add to the illicit volume of tobacco in the country which is not accounted for in ATO's approach. |
| Step 2: Estimating the size of domestic 'Chop Chop' cultivation | <ul style="list-style-type: none"> This involves estimating the size of domestic 'Chop Chop' cultivation. All tobacco grown in Australia for consumption is illicit. To create an uplift factor for cultivated tobacco that has not been detected or reported to authorities, they analyse the value of seizures, risk, and intelligence referrals for domestically cultivated tobacco. | <ul style="list-style-type: none"> ATO's approach was developed through the use of under-reporting of crime statistics from the Australian Institute of Criminology. It is unclear regarding the appropriateness of this as an approach ATO's methodology which takes into account an uplift factor for undetected home grown tobacco for consumption is unclear on how it will evolve over time to effectively recalculate future levels of illicit tobacco. |

Notes: (a) ATO volume estimates exclude seizures through compliance activity calculated during step 1 (illicit tobacco market through importation) and step 2 (market through domestic Chop Chop cultivation).
 (b) Excise amount for 2019 was updated as the unbranded volume numbers for 2019 were restated with the update to 2019 prevalence statistics published by AIHW in 2020.

Sources: (1) Australian Taxation Office, Tobacco Tax Gap.
 (2) KPMG Illicit Tobacco Report for 2015.
 (3) 'Cigarette smuggling in Europe: who really benefits?', Luk Joossens, Tobacco Control.

Appendix

The ATO has recently produced its own calculation of illicit tobacco consumption (cont.)

A8 Australian Taxation Office methodology for calculating tax gap⁽¹⁾

| Comparison of Australian Taxation Office and KPMG ⁽¹⁾⁽²⁾ | | |
|---|--|--|
| | Australian Taxation Office | KPMG comments |
| Step 3: Analysing the licensed warehouse system | <ul style="list-style-type: none"> — This is done to account for 'Leakages' which occur where tobacco that has entered the warehouse system exits without tobacco duty being paid as for the majority of tobacco imports the customs duty is deferred until it exits the licensed warehouse system. | <ul style="list-style-type: none"> — This type of illicit is not captured by our approach |
| Step 4: Compare total illicit amounts to legal clearances | <ul style="list-style-type: none"> — In this step the ATO sums the illicit tobacco estimates from steps 1, 2 and 3 to arrive at the gross gap of duty paid from all channels. — Estimates of legal clearances (duty paid on the inflow of legal tobacco) are added to the gross gap. — This amounts to an estimated value for the total theoretical clearances of tobacco (duty that should have been paid on the inflow of total tobacco if all products entered legally). | <ul style="list-style-type: none"> — A mathematical calculation based on steps 1-3 |
| Step 5: Deduct compliance and seizures to determine net gap | <ul style="list-style-type: none"> — The last step involves deducting the total seizures estimated by ATO and Home Affairs compliance activities and seizures (across all channels) from the gross gap to arrive at the net gap. | <ul style="list-style-type: none"> — A mathematical calculation based on internal ATO and Home Affairs data |

Sources: (1) Australian Taxation Office, Tobacco Tax Gap.

Appendix

The description of the services set out below comprises the agreed scope of our work

A9 Scope of work

Scope

We will analyse and report on:

- The total level of legal domestic sales of tobacco products and consumption in the market.
- The estimated proportion of the Australian tobacco market accounted for by the illicit trade, across both manufactured products and the unbranded, encompassing contraband, counterfeit, and unbranded products (including 'Chop Chop').
- An overview of the nature of the illicit trade in the country, including the sources of illicit product.
- Findings on the characteristics and consumption patterns of illicit tobacco users, and how these have changed from the results of surveys previously undertaken in 2013, 2014, 2015, 2016, 2017, 2018, 2019 and 2019 based on the consumer research outputs.

Methodology

In order to size the illicit tobacco market, we will use two principal approaches:

Consumer research approach: utilising the full year 2013, 2014, 2015, 2016, 2017, 2018, 2019 and 2020 Roy Morgan Research report, commissioned and provided to us by BATA, PML and ITA; namely:

- Analyse consumer responses to seek to establish the proportion of illicit tobacco consumed.
- Extrapolate the proportion of illicit tobacco consumed on a national level.
- Express the findings as a proportion of total tobacco consumption.

Empty pack survey (EPS) approach: using EPS data commissioned and provided to us by BATA, PML and ITA; namely:

- Analyse the data output from WSPM to seek to establish the proportion of market accounted for by non-domestic manufactured cigarettes.
- Extrapolate the non-domestic and counterfeit incidence estimates identified in the EPS against the level of legal domestic sales in Australia.
- Express findings on the estimates of both non-domestic consumption of manufactured cigarettes and consumption of counterfeit product as a proportion of consumption.

The overall results from the two approaches will then be compared and combined in order to build up our overall estimate of the size and composition of the illicit market as a proportion of total tobacco consumption.

These results will be compared to our analysis of seizures data and historical consumption trends to help to validate findings.

Questions asked by the consumer survey

A10 Roy Morgan Research questionnaire

- Do you, or does any member of your immediate family work in any of the following companies?
- What is your post code?
- Are you... [male/female/other/prefer not to answer]?
- Can you please select the age bracket you belong to?
- Which of the following products do you currently consume? (Options provided)
- What type of tobacco product do you smoke or use, even if only occasionally? (Options provided)
- How often do you normally smoke manufactured cigarettes?
- How often do you normally smoke roll your own cigarettes?
- How many manufactured cigarettes do you normally smoke each day (on average)?
- How many roll your own cigarettes do you normally smoke each day (on average)?
- What is your regular brand of manufactured cigarettes, that is, the one you smoke more than any other brand now-a-days?
- What other brands of manufactured cigarettes do you currently smoke?
- What is your regular brand of roll your own cigarettes, that is, the one you smoke more than any other brand now-a-days?
- What other brands of roll your own cigarettes do you currently smoke?
- Are you aware that unbranded tobacco can be purchased?
- Since you turned 18 have you ever purchased unbranded tobacco? Unbranded tobacco is also known as 'chop chop.' It is loose tobacco or cigarettes in cartons or packs that are sold without a brand name. This does not include branded tobacco products that are now sold in plain packaging that are green/brown in colour with graphic health warnings and information messages and does not refer to roll-your-own tobacco (RYO). Cartons means a number of cigarettes in a single box, typically this would be a box of around 100 cigarettes e.g. Ventii box.
- Throughout the survey, we're just focusing on products you buy for your own use. Do you purchase unbranded tobacco for your own use currently?
- Have you purchased unbranded tobacco in the last 12 months?
- In the past 12 months, how often did you purchase unbranded tobacco?
- Well, can you give an estimate of how often you purchased unbranded tobacco in the past 12 months?
- Since you turned 18, how long have you been buying unbranded tobacco?
- Well, can you give an estimate of how long you had been buying unbranded tobacco since you turned 18?
- When you last purchased unbranded tobacco, from which outlet or outlets did you buy it?
- When you last purchased unbranded tobacco, how many grams of unbranded tobacco did you purchase?
- When you last purchased unbranded tobacco, what format or formats was the unbranded tobacco in?
- When you last purchased loose unbranded tobacco, how many grams did you buy? (In grams)
- When you last purchased loose unbranded tobacco, how much did it cost in total?
- How long ago was your most recent purchase of loose unbranded tobacco?
- Well, can you give me an estimate of when your most recent purchase of loose unbranded tobacco was?
- When you last purchased cartons of unbranded tobacco, how many did you buy?
- When you last purchased cartons of unbranded tobacco, how much did it cost in total?
- How long ago was your most recent purchase of unbranded tobacco in cartons?
- Well, can you give me an estimate of when your most recent purchase of unbranded tobacco in cartons was?

Questions asked by the consumer survey (cont.)

A10 Roy Morgan Research questionnaire (cont.)

- When you last purchased packs of unbranded tobacco, how many did you buy?
- When you last purchased packs of unbranded tobacco, how much did it cost in total?
- How long ago was your most recent purchase of unbranded tobacco in packs?
- Well, can you provide an estimate of when your most recent purchase of unbranded tobacco in packs was?
- When you were smoking unbranded tobacco, how much of it would you say that you smoked per day?
- Well, can you provide an estimate of how much unbranded tobacco you were smoking per day?
- How did you usually consume unbranded tobacco?
- How many suppliers did you ever purchase unbranded tobacco from, since you turned 18?
- When you stopped buying unbranded tobacco did you not smoke or did you purchase duty paid tobacco products?
- Why did you smoke unbranded tobacco?
- Do you know the country of origin of the unbranded tobacco that you purchased?
- Where does it usually come from?
- From the list below, please select the reasons why you stopped purchasing unbranded tobacco. (Options provided)
- How often do you purchase unbranded tobacco?
- Well, can you provide an estimate of how often you purchase unbranded tobacco?
- Since you turned 18, how long have you been buying unbranded tobacco?
- Well, can you provide an estimate of how long you have been buying unbranded tobacco?
- From which outlets do you usually buy your unbranded tobacco?
- How many grams of unbranded tobacco do you purchase for the average purchase?
- What format or formats do you usually purchase unbranded tobacco in?
- The next three questions below ask about the price you paid for Loose unbranded tobacco in bags. Please express this in dollars and cents in Australian dollars. Put a decimal point between dollars and cents, e.g. 100.03 is \$100 and 3 cents. What is the minimum price that you have paid for Loose unbranded tobacco in bags?
- What is the average price that you have paid for loose unbranded tobacco in bags?
- What is the maximum price that you have paid for loose unbranded tobacco in bags?
- The next three questions below ask about the price you paid for unbranded Cigarettes in cartons. What is the minimum price that you have paid for unbranded Cigarettes in cartons?
- What is the average price that you have paid for unbranded cigarettes in cartons?
- What is the maximum price that you have paid for unbranded cigarettes in cartons?
- The next three questions below ask about the price you paid for unbranded Cigarettes in packs. Packs means cigarettes that come in packets of 20, 25 or 30. Please express this in dollars and cents in Australian dollars. Put a decimal point between dollars and cents, e.g. 100.03 is \$100 and 3 cents. What is the minimum price that you have paid for unbranded Cigarettes in packs?
- What is the average price that you have paid for unbranded cigarettes in packs?
- What is the maximum price that you have paid for unbranded cigarettes in packs?
- How much would you say that you smoke per day of unbranded tobacco?
- Well, can you provide an estimate of how much you smoke per day of unbranded tobacco?
- The most recent time you purchased unbranded tobacco what format or formats was it?
- How much loose unbranded tobacco did you buy? (In grams)
- How much did it cost in total?

Questions asked by the consumer survey (cont.)

A10 Roy Morgan Research questionnaire (cont.)

- Approximately how many cigarettes can you get from X grams of loose unbranded tobacco?^(a)
- How long ago was your most recent purchase of loose unbranded tobacco?
- Well, can you provide an estimate of when your most recent purchase of loose unbranded tobacco was?
- How many cartons of unbranded cigarettes did you buy?
- How much did it cost in total?
- How long ago was your most recent purchase of unbranded tobacco in cartons?
- Well, can you provide an estimate of when your most recent purchase of unbranded tobacco in cartons was?
- How many packs of unbranded cigarettes did you buy?
- How much did it cost in total?
- How long ago was your most recent purchase of unbranded tobacco in packs?
- Well, can you provide an estimate of when your most recent purchase of unbranded tobacco in packs was?
- How do you usually consume unbranded tobacco?
- How many suppliers have you ever purchased unbranded tobacco from, since you turned 18?
- Do you find unbranded tobacco easier or harder to obtain than a year ago or has there been no change?
- If you cannot get unbranded tobacco do you not smoke or do you purchase duty paid tobacco products?
- Why do you smoke unbranded tobacco?
- Do you know the country of origin of the unbranded tobacco that you purchase?
- Where does it usually come from?

- Notes:
- (a) X denotes answer to question "How much loose unbranded tobacco did you buy? (In grams)."
 - (b) Questions asked pertaining to COVID-19 period in Q2 2020.
 - (c) Questions asked pertaining to COVID-19 period in Q1 and Q2 2020.
 - (d) Questions asked pertaining to COVID-19 period in Q3 and Q4 2020.
 - (e) Questions asked pertaining to COVID-19 period in Q3 and Q4 2020.

A10 Roy Morgan Research questionnaire - Additional COVID questions

- Did you purchase cheap cigarettes either before or after the COVID-19 period of isolation? (That is, before or after the date you personally began to alter your work/travel due to presence of the Coronavirus in Australia.)^(b)
- Before the date you personally began to alter your work/travel due to the COVID-19 period of isolation, how frequently did you purchase packs of cheap cigarettes?
- When you bought cheap cigarettes, before the date you personally began to alter your work/travel due to the COVID-19 period of isolation, how many packs did you buy per occasion?^(b)
- Before the date you personally began to alter your work/travel due to the COVID-19 period of isolation, how frequently did you purchase cartons of cheap cigarettes?^(b)
- When you bought cheap cigarettes, before the date you personally began to alter your work/travel due to the COVID-19 period of isolation, how many cartons did you buy per occasion?^(b)
- Before the date you personally began to alter your work/travel due to the COVID-19 period of isolation, how frequently did you purchase prepack tubes for cheap cigarettes?^(c)
- When you bought cheap cigarettes, before the date you personally began to alter your work/travel due to the COVID-19 period of isolation, how many prepacked tubes did you buy per occasion?^(c)
- How often are you purchasing packs of cheap cigarettes since the date you personally began to alter your work/travel due to the COVID-19 period of isolation?^(c)
- Since the date you personally began to alter your work/travel due to the COVID-19 period of isolation, how many packs of cheap cigarettes are you buying per occasion?^(c)

Questions asked by the consumer survey (cont.)

A10 Roy Morgan Research questionnaire - Additional questions (cont.)

- How often are you purchasing cartons of cheap cigarettes since the date you personally began to alter your work/travel due to the COVID-19 period of isolation?^(c)
- Since the date you personally began to alter your work/travel due to the COVID-19 period of isolation, how many cartons of cheap cigarettes are you buying per occasion?^(c)
- How often are you purchasing prepack tubes since the date you personally began to alter your work/travel due to the COVID-19 period of isolation?^(c)
- Since the date you personally began to alter your work/travel due to the COVID-19 period of isolation, how many prepack tubes of cheap cigarettes are you buying per occasion?^(c)
- If you think you might have purchased cheap cigarettes before or after the COVID-19 period of isolation, what brands were they?^(c)
- Since the beginning of the COVID-19 period of isolation, where do you usually buy cheap cigarettes?^(c)
- Do you find cheap cigarettes easier or harder to obtain since the date you personally began to alter your work/travel due to the COVID-19 period of isolation?^(c)
- Did you purchase cheap cigarettes either before or after the second wave of lockdowns in July (Stages 3 and 4)?^(d)
- Before the date you personally began to alter your work/travel due to the second wave of lockdowns in July (before Stages 3 and 4), how frequently did you purchase packs of cheap cigarettes?^(d)
- Before the date you personally began to alter your work/travel due second wave of lockdowns in July (before Stages 3 and 4), how frequently did you purchase cartons of cheap cigarettes?^(d)
- Before the date you personally began to alter your work/travel due to second wave of lockdowns in July (before Stages 3 and 4), how frequently did you purchase prepack tubes of cheap cigarettes?^(d)
- When you bought cheap cigarettes, before the date you personally began to alter your work/travel due to second wave of lockdowns in July (before Stages 3 and 4), how many packs did you buy per occasion?^(d)
- When you bought cheap cigarettes, before the date you personally began to alter your work/travel due to second wave of lockdowns in July (before Stages 3 and 4), how many cartons did you buy per occasion?^(d)
- When you bought tubes, before the date you personally began to alter your work/travel due to second wave of lockdowns in July (before Stages 3 and 4), how many prepack tubes did you buy per occasion?^(d)
- How often are you purchasing packs of cheap cigarettes since the date you personally began to alter your work/travel due to second wave of lockdowns in July (Stages 3 and 4)?^(d)
- How often are you purchasing cartons of cheap cigarettes since the date you personally began to alter your work/travel due to second wave of lockdowns in July (Stages 3 and 4)?^(d)
- How often are you purchasing prepack tubes since the date you personally began to alter your work/travel due to second wave of lockdowns in July (Stages 3 and 4)?^(d)
- Since the date you personally began to alter your work/travel due to second wave of lockdowns in July (since the start of Stages 3 and 4), how many packs of cheap cigarettes are you buying per occasion?^(d)
- Since the date you personally began to alter your work/travel due to second wave of lockdowns in July (since the start of Stages 3 and 4), how many cartons of cheap cigarettes are you buying per occasion?^(d)

- Notes:
- (a) X denotes answer to question "How much loose unbranded tobacco did you buy? (In grams)."
 - (b) Questions asked pertaining to COVID-19 period in Q2 2020.
 - (c) Questions asked pertaining to COVID-19 period in Q1 and Q2 2020.
 - (d) Questions asked pertaining to COVID-19 period in Q3 and Q4 2020.
 - (e) Questions asked pertaining to COVID-19 period in Q3 and Q4 2020.

Questions asked by the consumer survey (cont.)

A10 Roy Morgan Research questionnaire - Additional questions (cont.)

- Since the date you personally began to alter your work/travel due to second wave of lockdowns in July (since the start of Stages 3 and 4), how many prepack tubes of cheap cigarettes are you buying per occasion?^(d)
- What brands of cheap cigarettes do you think you might have purchased after the second wave of lockdowns in July (after the start of Stages 3 and 4)?^(d)
- Where did you buy these brands bought after the second wave of lockdowns in July (after the start of Stages 3 and 4)?^(d)
- Did you find cheap cigarettes easier or harder to obtain since the date you personally began to alter your work/travel due to second wave of lockdowns in July (Stages 3 and 4)?^(d)
- Did you purchase cheap cigarettes either before or after the COVID-19 period of isolation? (Before the date you personally began to alter your work/travel due to easing of the restrictions of COVID-19 period of isolation)?^(e)
- When you personally began to alter your work/travel due to easing of the restrictions of COVID-19 period of isolation, how do you think the prices of cheap cigarettes changed?^(e)
- Did you find cheap cigarettes easier or harder to obtain since the date you personally began to alter your work/travel due to easing of the restrictions of COVID-19 period of isolation?^(e)
- Have you travelled outside of Australia in the last 6 months?
- Did you buy any manufactured cigarettes or any other tobacco products to bring back to Australia on any of your trips to other countries in the past 6 months?
- How many trips in the last 6 months did you make where you purchased manufactured cigarettes or any other tobacco products to bring back to Australia?
- For each type of product listed below, indicate how much you brought back into Australia on average per trip. (Packs, Cartons, Grams of loose tobacco)
- In which countries did you buy manufactured cigarettes/any other tobacco products?
- Did you buy duty free manufactured cigarettes or any other tobacco products at the airport or port on your return to Australia after any of your trips to other countries in the last 6 months?
- How many trips did you make in the last 6 months where you purchased duty free manufactured cigarettes or any other tobacco products on your return to Australia?
- For each type of product, indicate how much you purchased in duty free on average per trip. (Packs, Cartons, Grams of loose tobacco)
- In the last 12 months have you received or purchased any manufactured cigarettes or roll your own tobacco that was posted from abroad?
- What one type of tobacco product did you receive in the post from abroad most recently?
- When did you last receive manufactured cigarettes or roll your own tobacco in the post from abroad?
- On that most recent occasion how much did you receive in the post from abroad? (Packs, Cartons, Grams of loose tobacco)
- From which countries were the manufactured cigarettes or roll your own tobacco posted from?
- For your most recently received manufactured cigarettes or roll your own tobacco, did you declare it to customs or pay any additional taxes?
- Which of the following occupational categories best describes you? (Options provided)
- What is your own current approximate annual or weekly income from all sources before tax?

- Notes:
- (a) X denotes answer to question "How much loose unbranded tobacco did you buy? (In grams)."
 - (b) Questions asked pertaining to COVID-19 period in Q2 2020.
 - (c) Questions asked pertaining to COVID-19 period in Q1 and Q2 2020.
 - (d) Questions asked pertaining to COVID-19 period in Q3 and Q4 2020.
 - (e) Questions asked pertaining to COVID-19 period in Q3 and Q4 2020.

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