Illicit tobacco in Australia

2021 Full Year Report

9th June 2022

kpmg.com/uk

KPMG LLP
The Strategy Group
15 Canada Square
Canary Wharf
London E14 5GL
United Kingdom

Tel +44 (0)20 7311 1000
Fax +44 (0)20 7311 3311

09 June 2022

Important notice

This report of key findings (the 'Report') has been prepared by KPMG LLP. The Report was commissioned by Philip Morris Limited and Imperial Tobacco Australia Limited, described in this Important Notice and in this Report as together the 'beneficiaries', on the basis set out in a private contract agreed between the beneficiaries and KPMG LLP dated 29 November 2021.

This report has been prepared on the basis of fieldwork carried out between 01 December 2021 and 14 April 2022. The Report has not been updated for subsequent events or circumstances.

Information sources, the scope of our work, and scope and source limitations are set out in the footnotes and methodology contained within this Report. The scope of our work, information sources used, and any scope and source limitations were fixed by agreement with the beneficiaries. We have satisfied ourselves, where possible, that the information presented in this Report is consistent with the information sources used, but we have not sought to establish the reliability of the information sources by reference to other evidence. We relied upon and assumed without independent verification, the accuracy and completeness of information available from public and third party sources.

This Report is not written for the benefit any other party other than the beneficiaries. In preparing this Report we have not taken into account the interests, needs, or circumstances of any specific party, other than the beneficiaries. This Report is not suitable to be relied on by any party (other than the beneficiaries). Any person or entity (other than the beneficiaries) who chooses to rely on this Report (or any part of it) will do so at their own risk. To the fullest extent permitted by law, KPMG LLP does not assume any responsibility and will not accept any liability in respect of this Report other than to the beneficiaries.

Without limiting the general statement above, although we have prepared this Report in agreement with the beneficiaries, this Report has not been prepared for the benefit of any other manufacturer of tobacco products nor for any other person or entity 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.

Glossary

ABF	Australian Border Force
ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
ATO	Australian Taxation Office
AUD	Australian Dollar
AWOTE	Average Weekly Ordinary Time Earnings
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
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
g	Gram
GCC	Gulf Cooperation Council
H1	First half of the year i.e., the period from January through June (e.g., 1 January 2021 to 30 June 2021)
H2	Second half of the year i.e., the period from July through December (e.g., 1 July 2021 to 31 December 2021)
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
ITA	Imperial Tobacco Australia
ITTF	Illicit Tobacco Task Force
JTI	Japan Tobacco International
Kg	Kilogram
KPMG	“KPMG” or “we” (and derivatives) means “KPMG LLP” (a UK limited liability partnership), or the KPMG contracting party that issues the Engagement Letter.
KT&G	Korea Tobacco & Ginseng Corporation

Glossary (cont.)

LDC	Legal Domestic Consumption
LDS	Legal Domestic Sales
M	Million
MSI	MSIntelligence
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
NDSHS	National Drug Strategy Household Survey
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)
NSW	New South Wales
Outflows	Legitimate tobacco purchased in Australia and taken abroad
PDI	Personal Disposable Income
PMI	Philip Morris International
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 or Project STAR.
Q1	First quarter to the end of March (e.g. 1 January 2021 to 31 March 2021)
Q2	Second quarter to the end of June (e.g. 1 April 2021 to 30 June 2021)
Q3	Third quarter to the end of September (e.g. 1 July 2021 to 30 September 2021)
Q4	Fourth quarter to the end of December (e.g. 1 October 2021 to 31 December 2021)
Report	Refers to this report of key findings on illicit tobacco in Australia dated 09 June 2022.
RMR	Roy Morgan Research
RYO	Roll Your Own
Tonnes	Thousand kilograms
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/duty free labelling

Contents (title only)

1. Executive summary and key findings

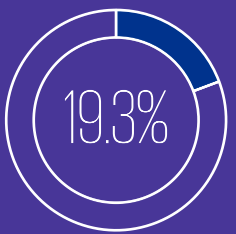
Executive summary

2,242 tonnes

Illicit tobacco consumed

- Increased by 0.8%
- Unbranded tobacco increased by 36%
- Illicit manufactured cigarettes declined by 35.5%

% of total consumption that was illicit

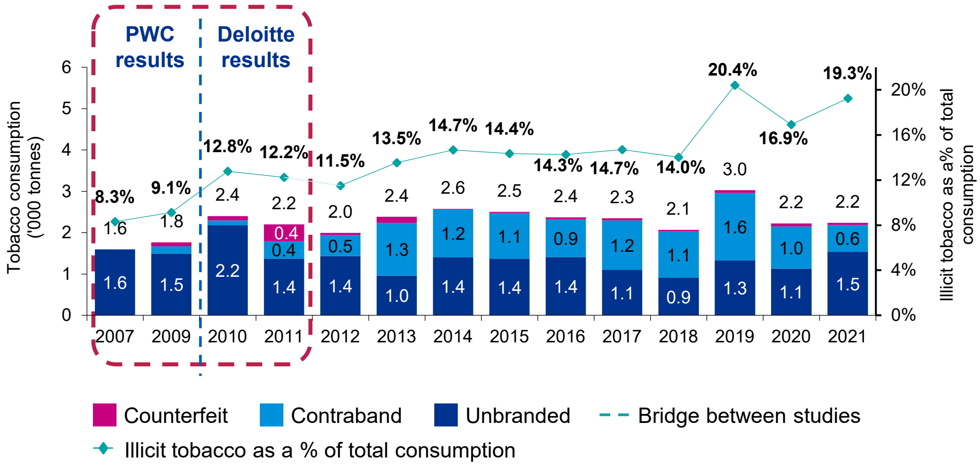


- Illicit tobacco consumption increased by 2.4 percentage points (pp)

Share of illicit tobacco consumption (% of total)

- Unbranded tobacco: 68.6% (up from 50.8%)
- Contraband: 29.0% (down from 45.9%)
- Counterfeit: 2.5% (down from 3.3%)

1.1 Consumption of illicit tobacco products by category and as a percentage of overall consumption, 2007 – 2021(1)(2)(3)(4)(a)(b)



Total consumption of tobacco in Australia declined in 2021 by 11.4%

- This was driven by a 13.9% decline in legal domestic sales (LDS), as both manufactured cigarettes and loose tobacco saw relatively large declines

The consumption of illicit tobacco in Australia marginally increased in 2021 by 19 tonnes (0.8%). This, combined with the decline in LDS, saw illicit consumption grow as a percentage of total consumption from 16.9% in 2020 to 19.3% in 2021

- Unbranded tobacco saw an increase of 36.0%; which accounted for 68.6% of illicit consumption
  - This was a result of an increase in purchase incidence and average frequency of purchases of unbranded tobacco
- This increase in unbranded tobacco was partially offset by a 35.5% decline in the consumption of illicit manufactured cigarettes
  - Contraband saw a decline by 36.3% to 649 tonnes (driven by a decrease in both non-domestic contraband & domestic illicit plains)
  - Consumption of counterfeit tobacco declined by 24.4% to 55 tonnes
- In 2021, flows of Double Happiness, Marlboro and Esse were the major contributors to total non-domestic brand flows in Australia
- Asian countries, especially China (including China duty free), continued to remain major sources for non-domestic manufactured cigarette flows
- The decline in international travel due to COVID-19 restrictions led to a relatively large decline in non-domestic (legal) consumption
- If the 2,242 tonnes of illicit tobacco had been consumed legally, it would have represented an estimated excise value of AUD3.4 billion(c)

Notes:
(a) KPMG have not checked results for 2007-2011.
(b) Values below 0.4 have been removed for clarity purposes.
(c) Calculated at the average excise rate for 2021.

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) IRI scan data, 2021.

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

1.2 The purpose of this report

Philip Morris Limited (PML) and Imperial Tobacco Australia Limited (ITA) have commissioned KPMG to estimate the size of the consumption of illicit tobacco in Australia. The purpose of this Report is:

— To provide an overview of the nature and dynamics of the legal and illicit tobacco markets in Australia; and

— To provide an estimate of the size of the illicit tobacco market in Australia.

This full year 2021 Report estimates the consumption of illicit tobacco in Australia. It reports on events occurring during the twelve month period from January 2021 through December 2021. This 2021 report is produced using a methodology in line with previous KPMG 'Illicit Tobacco in Australia' reports.

1.3 Impact of external factors

This report provides an overview on the consumption of tobacco in Australia. It should be noted that external issues such as the COVID pandemic have impacted the results for 2020 and 2021.

1.4 KPMG's anti-illicit tobacco measurement

KPMG has developed 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 it has been published an annual basis 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 (PMI) 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).

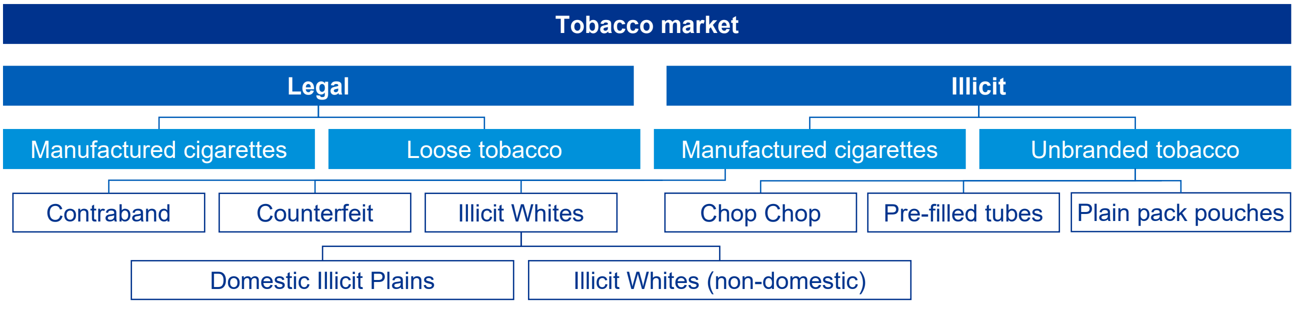
2. Australian tobacco market

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 (ND(L)) product. The ND(L) 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 customs duties/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).

Following the report of the Black Economy Taskforce, the Australian Government announced in the 2018-19 budget a number of measures to combat illicit tobacco trade.[2] However, we are unable to evaluate 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.
(2) The Treasury, Australian Government, *Australian Government response to the Black Economy Taskforce Final Report*, May 2018.

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 mail.

Unbranded tobacco

Unbranded tobacco is often sold as finely cut loose leaf tobacco in a range of pack sizes. It has been reported by our client 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, plain pack pouches 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)

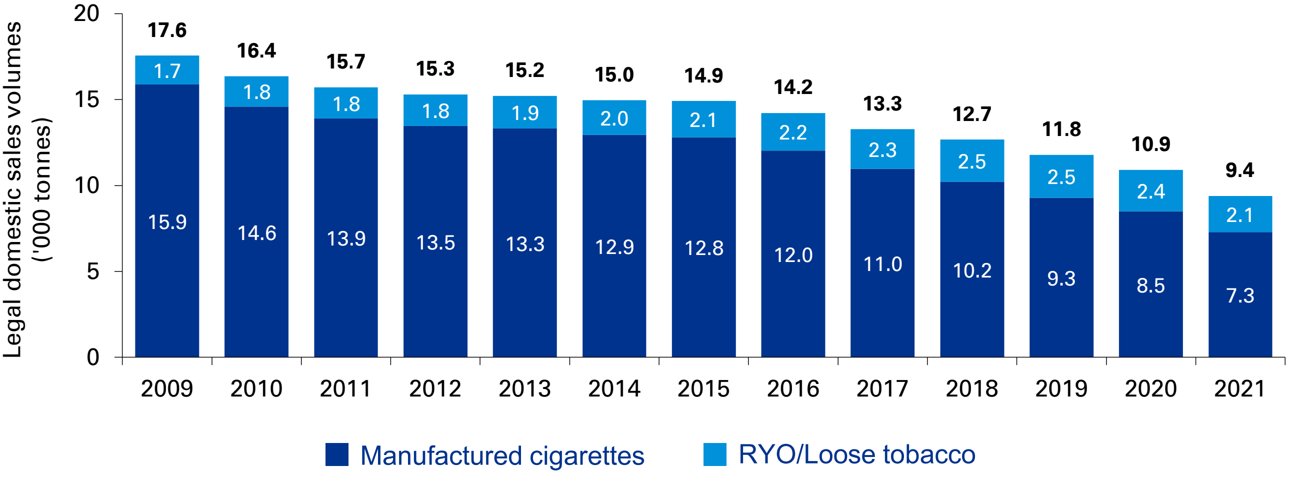
Sources: (1) Tobacco Industry Stakeholder Group (TISG). TISG is no longer operative.

Declining manufactured cigarettes and RYO contributed to the largest legal domestic sales decline since 2009

2.2 Legal tobacco market

2.2.1 Historic legal domestic sales

Figure 2.2.1: Legal domestic sales in Australia, 2009 – 2021[(1)(2)(a)(b)(c)]



Compound Annual Growth Rate (CAGR) (%)	2009 – 2021	2020 – 2021
Manufactured cigarettes	(6.3)%	(14.1)%
RYO/Loose tobacco	1.9%	(13.2)%
Total market	(5.1)%	(13.9)%

Overall sales of legal domestic tobacco experienced an increased rate of decline of 13.9% between 2020 and 2021; a larger decline compared to the CAGR decline of 5.1% seen for the period 2009 to 2021.

Though the market has been declining steadily, this has historically been driven by declining manufactured cigarette sales. However, RYO/loose tobacco saw a relatively large decline of 13.2% between 2020 and 2021 which has accelerated the overall rate of decline.

The decline in the legal domestic sales is a major driver in the decline of the overall tobacco consumption in Australia in 2021.

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

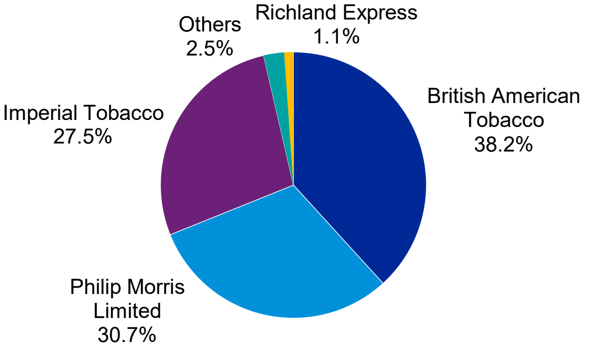
Sources:
(1) IRI (scan) databases, Volume of total manufactured cigarettes and RYO.
(2) Euromonitor, Legal domestic sales (from trade sources and national statistics), accessed 2013, 2014, 2015.

BAT and ITA continue to have the largest market share in manufactured cigarettes and loose tobacco respectively

2.2.2 Australia legal tobacco competitive overview

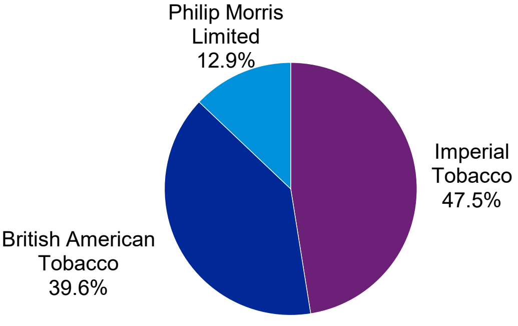
Figure 2.2.2a: Market share by manufacturer, 2021[(1)(a)(b)]

Manufactured cigarettes



Total market: 7,296 tonnes

Loose tobacco



Total market: 2,102 tonnes

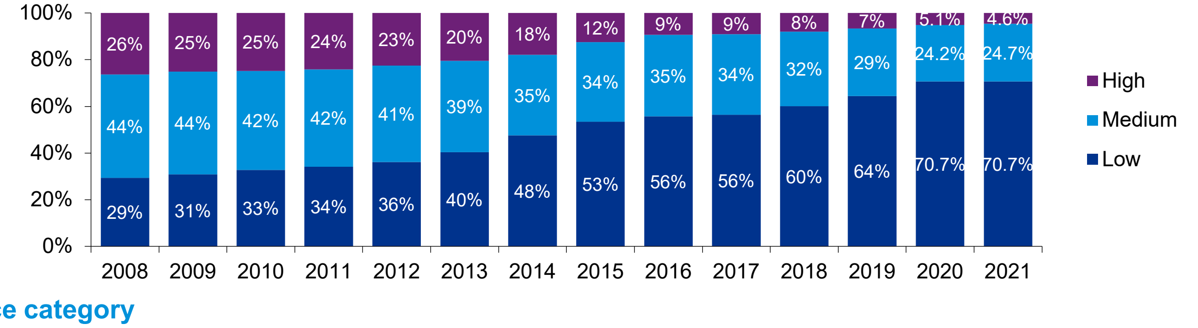
Market share

The three major tobacco manufacturers have large market shares across both the manufactured cigarette and loose tobacco markets.

British American Tobacco's manufactured cigarette market share declined from 40% to 38% between 2020 and 2021, while PML increased its share from 30% to 31%, and Imperial Tobacco's share increased from 27% to 28% in the same period. Other manufacturers maintained circa 3% share.

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

Figure 2.2.2b: Market share of manufactured cigarettes by price category, 2008 – 2021[(2)(b)(c)]



Price category

Since 2008, 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. In 2021, there was no growth in the share of low priced category.

However, medium priced category saw a marginal increase in the market share at the expense of high priced cigarettes, as people switched to more affordable cigarettes.

Notes: (a) Data gathered from IRI indicates that the three major manufacturers account for approximately 96% of the domestic market of manufactured cigarettes. However, there maybe legal imports which may 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 and for 2021 is based on the 2020 analysis. Newer brands added in 2021 have been categorised based on the latest industry data.

Sources: (1) IRI scan data, 2020 and 2021.
(2) Euromonitor, *Tobacco in Australia*, 2020 and 2021.

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

Imported finished tobacco products → Distribution of tobacco products → Retail of tobacco → Legal tobacco end user

Tobacco supply chain and sales channels

All legal manufactured tobacco products are imported into Australia as 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 25g 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 ND(L) 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 1.5 kg) through the mail.(3)

To estimate all ND(L) 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 an understatement of both ND(L) and contraband consumption. ND(L) consumption is discussed further in Appendix A4.

Sources: (1) *Excise Act 1901* (Cth) s 28.
(2) Australian Taxation Office, Tobacco excise (15 Sep 2020).
(3) Tobacco (abf.gov.au) (Updated on 3rd August 2021)

3. Relative pricing

3.1 Changes in excise duty and tobacco affordability in Australia

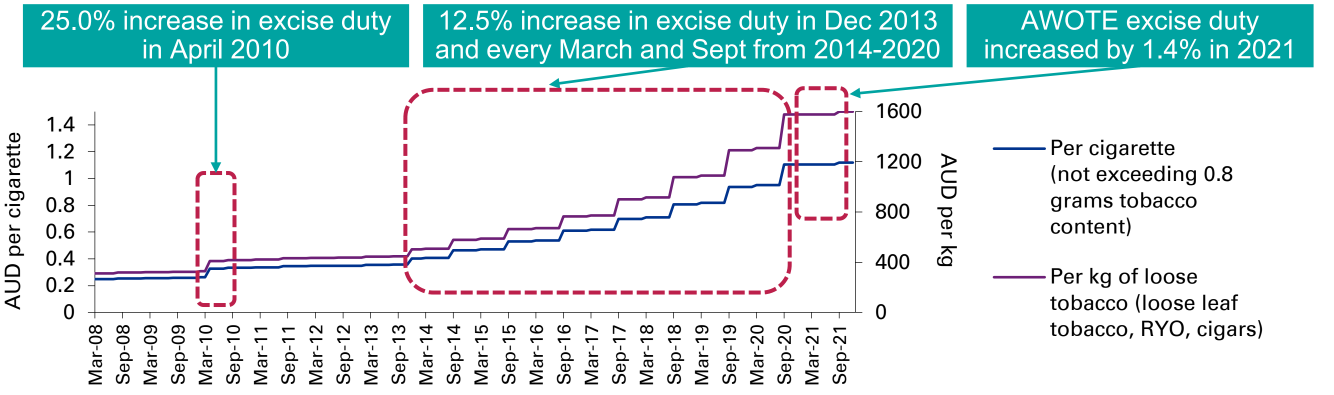
3.2 Regional tobacco prices

3.3 Relative price of illicit tobacco

In 2021, tobacco affordability declined in Australia as prices increased at a higher rate than disposable income

3.1 Changes in excise duty and tobacco affordability in Australia

Figure 3.1a: Values of tobacco excise and customs duty, Australia, January 2008 – September 2021[(1)(a)]

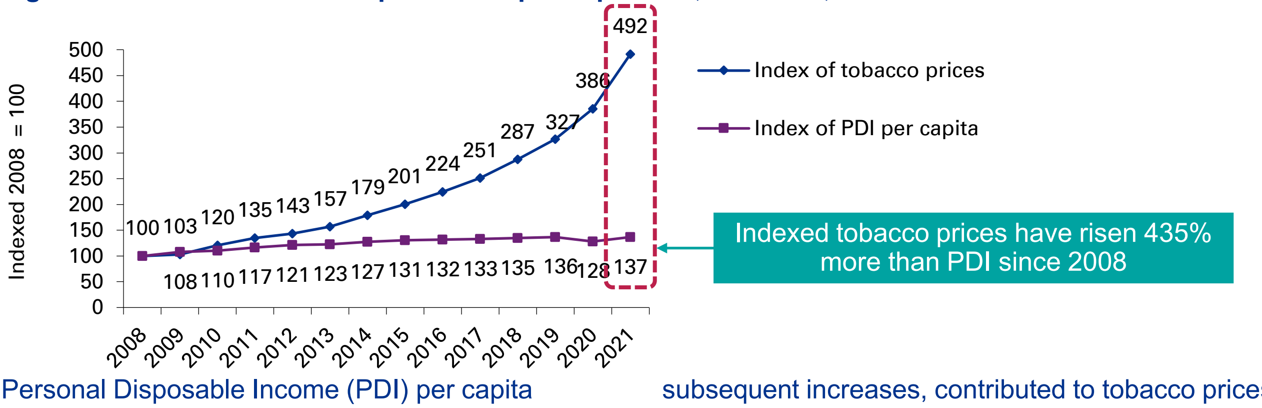


April 2010 saw the largest excise increase of 25% in Australia. Post a 12.5% excise increase in December 2013, there were annual excise increases applied in March and in September from 2013 to 2016. Legislative amendments made in 2016 further extended excise increases of 12.5% per annum between 2017-2020. 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 0.8g of tobacco, which changed to 0.7g per cigarette in 2020. 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)]

2021 was the first year since 2013 to not have the 12.5% excise tax increase applied. However, there was an AWOTE excise increase of 1.4% that was applied on 1 September 2021.[(4)]

Figure 3.1b: Index of tobacco prices and per capita PDI, Australia, 2008 – 2021[(5)(6)(b)(c)]



Personal Disposable Income (PDI) per capita increased in 2021, after a decline in 2020. Due to the relatively higher rate of inflation, tobacco prices saw a higher increase in 2021 than the previous years.[(7)] The excise rate increase in 2010, combined with subsequent increases, contributed to tobacco prices increasing at a higher rate than PDI per capita. Thus, there is a decline in relative affordability, compared to previous years.

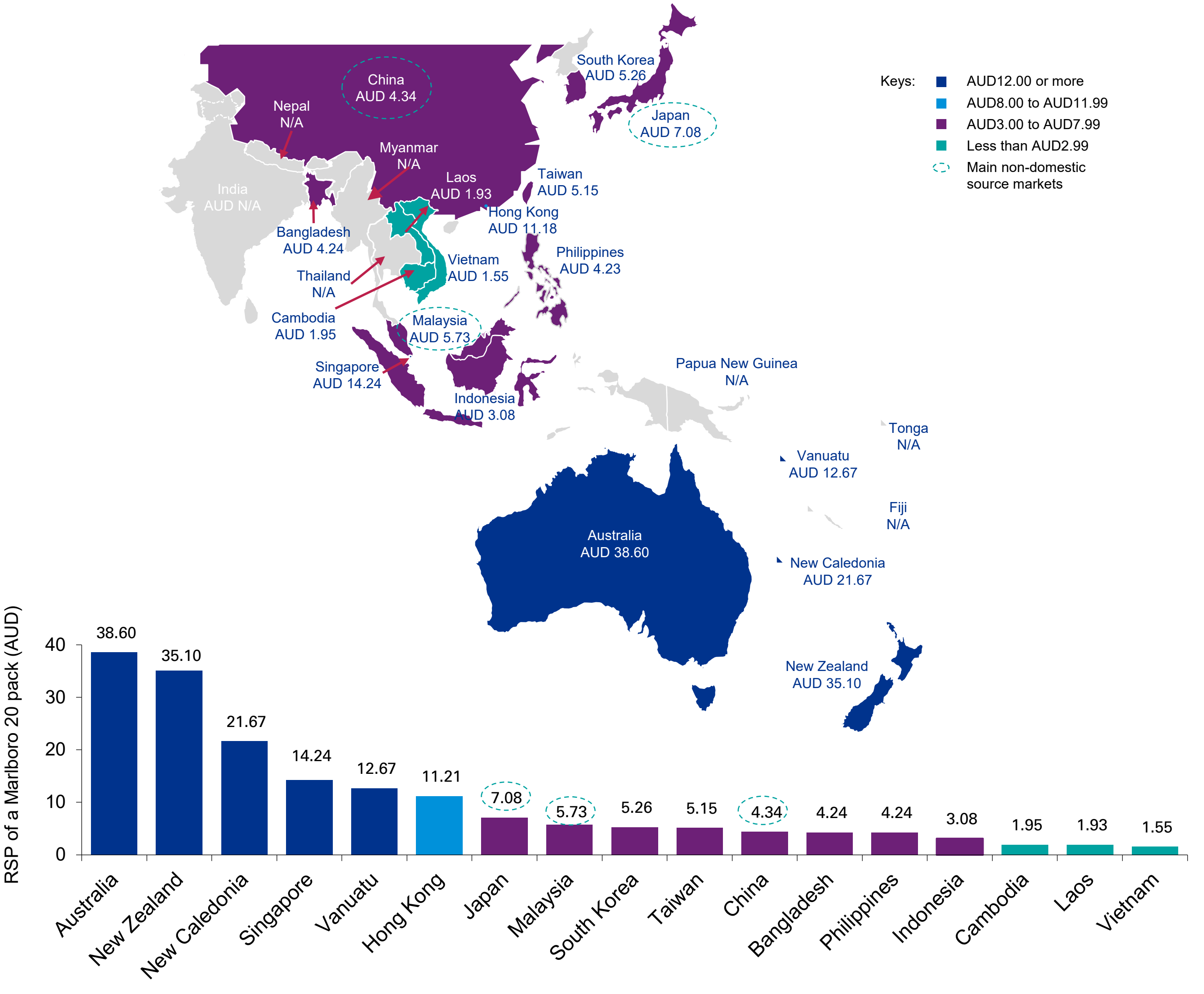
Notes:
- (a) Average weekly ordinary time earnings (AWOTE) is based on latest available estimates (September 2021).
- (b) Indexed with 2008 values taken as 100.
- (c) The Index of tobacco prices and per capita PDI numbers have been updated as per the latest data available on Euromonitor.

Sources:
- (1) Tobacco in Australia, www.tobaccoinaustralia.org.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 Bureau of Statistics, Consumer Price Index, 2022.
- (5) Euromonitor, Index of tobacco prices, accessed 2022.
- (6) Euromonitor, Annual disposable income, accessed 2022.
- (7) Express Digest, *Surging inflation hits alcohol, cigarette and petrol prices in Australia*, 2021.

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, 2021[(1)(2)(a)(b)(c)]



Australia, followed by New Zealand, lead in cigarette prices, within the South East Asia market. The price gap between Australia and China (the primary non-domestic market) declined marginally in 2021, to AUD 34.26. With the exception of New Zealand and New Caledonia, Australian prices are over 171% 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 2021.
(c) Yearly average rate is used for foreign exchange conversion.

Source:
(1) Industry data; December 2021.
(2) Foreign exchange rates as on 31st Dec 2021 from ofx.com, accessed on 28th Feb 2022.

Relative pricing

The price differential between chop chop loose and legal cigarettes narrowed slightly

3.3 Relative price of illicit tobacco

Figure 3.3.1: Prices of illicit tobacco products and Winfield 25s, June 2013 – December 2021(1)(a)(b)(c)(d)(e)

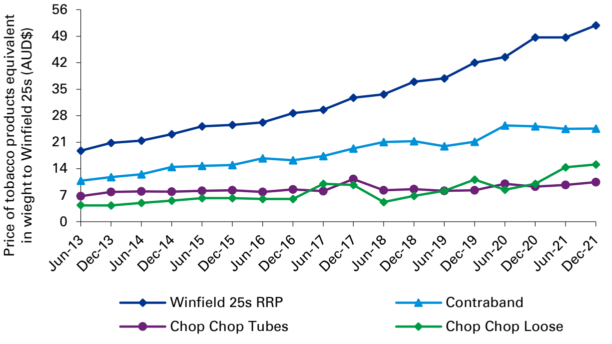
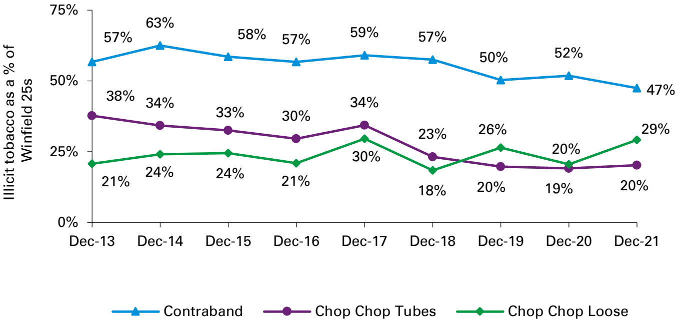


Figure 3.3.2: Illicit tobacco prices as a proportion of Winfield 25s, December 2013 – December 2021(1)(a)(b)(c)(d)(e)(f)



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 enquiries(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 2020-21, contraband exhibited a marginal price decrease by 2%, whereas the price for a pack of Winfield 25s increased by 6%. Chop chop tubes prices also rose over the period (13%) whilst chop chop loose price saw a relatively higher price increase, i.e., by 52%.

Between December 2020 and December 2021, illicit tobacco prices as a proportion of Winfield 25s increased for chop chop tubes and chop chop loose to 20% and 29% respectively.

2021 saw a narrowed price differential between chop chop loose and Winfield's. A decline in price of contraband in 2021 vs an increase in price of non-illicit tobacco led to a widened price differential.

Also, the increase in the price of chop chop tubes as compared to a higher increase in the price of Winfield 25s shows a widening price differential.

Notes:
- (a) Contraband prices for 2021 are an average of price for products found in Sydney and Melbourne for November 2021, as contraband price for Sydney in December 2021 is not available. 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 knowledge that illicit tobacco products are available from the outlet.
- (d) Our client has suggested that a pack of Winfield 25s should be 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 covert enquiries data shared by the client.

4. Size of the illicit tobacco market

The approach to estimate the size of the Australian illicit tobacco market is consistent to that used before

4.1 Estimating the illicit tobacco market

Methodology

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 considering 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.

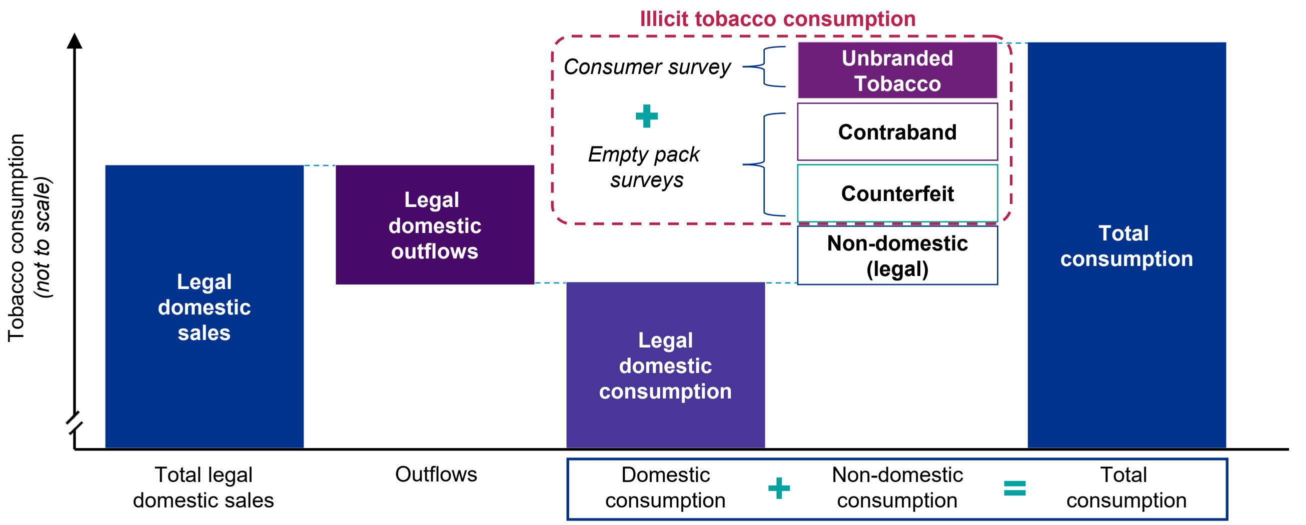
For each of these categories a separate primary approach is used in order to estimate the volume of illicit tobacco. A consumer survey undertaken by Roy Morgan Research (RMR) is used to estimate the amount of unbranded tobacco.

The RMR consumer survey covers Chop Chop (unbranded loose tobacco sold in bags) and unbranded tobacco sold in pre-filled tubes. For illicit manufactured cigarettes an empty packs survey analysis is used, based on the collection of discarded cigarette packs across Australia undertaken by WSPM Group (WSPM).

This approach has been used consistently in each report over the past ten years, which provides consistent insights into market trends.

We believe this approach provides an estimate of the size of the illicit market in Australia that is as accurate as possible within current research techniques. However, to further increase the level of confidence, alternative approaches are used to estimate the illicit tobacco volumes generated by the RMR consumer survey and the empty packs survey analysis.

Figure 4.1a: Estimation of the illicit market[a]



Data sources

Total legal domestic sales	Outflows	Domestic + Non-domestic consumption	Total consumption
IRI Scan data Euromonitor Datamonitor	RMR consumer survey Australian Bureau Statistics travel data Australia Customs Service	RMR consumer survey Empty packs surveys Internal company intelligence data ABF' seizure data Australian Bureau Statistics travel data	RMR consumer survey Australian Institute of Health and Welfare (AIHW)

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

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

4.1 Estimating the illicit tobacco market (cont.)

Alternative approaches can be used to support trends and changes noted in the market. In this section, each of the approaches are described before the process of estimation 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

Consumer survey

This approach is based on the responses of consumers to the survey conducted by RMR in the first half of 2021 (H1 2021) and the second half of 2021 (H2 2021). The survey is commissioned by British American Tobacco Australia (BATA), PML and ITA.

Survey participants are assumed to 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 (see Appendix A1). Consumers are asked about both unbranded tobacco and illicit manufactured cigarettes.

For the purpose of this report, the estimates for unbranded consumption in 2021 is based on the average of the H1 2021 and H2 2021 RMR 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 accurate number for 2021. Detailed results of the RMR consumer survey are discussed in Section 5.

Empty packs survey

An empty packs survey is a study undertaken independently by an independent market research agency, in this case, WSPM in 2021, which collects 12,000 discarded cigarette packs per survey across 16 different population centres in Australia. Before 2019, the empty packs survey was conducted by MSIntelligence (MSI). The empty packs survey 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 has extrapolated the empty packs survey results to estimate the overall tobacco consumption in the market. The percentages of non-domestic and counterfeit packs are applied to the volume of legal domestic sales in order to estimate the total consumption of manufactured cigarettes in Australia.

The market research agencies suggest that the empty packs survey 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 75.1% 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 (ABS) are reviewed by KPMG in order to estimate the likely volume.

An estimate of the amount of ND(L) tobacco brought into Australia by these two groups can be found in Appendix A4. The market research agencies have excluded areas that are typically frequented by tourists and international students (e.g., sports stadia, tourist attractions, railway stations) from the empty packs survey to avoid over-estimating ND(L) consumption and to provide a representative sample of the local population's consumption.

These ND(L) 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.

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

4.1 Estimating the illicit tobacco market (cont.)

Since 2012, the surveys have been jointly commissioned by our client. Before H1 2013, the study was carried out by ACNielsen. Prior to 2019 the Empty Packs Surveys were conducted by MSI. In 2021 the empty packs survey was conducted by WSPM. Prior surveys were also run in 2009 and 2010 by ACNielsen (who also have experience of conducting empty packs survey 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, empty packs survey surveys have been conducted by WSPM in Q2 and Q4 2021. The results from these surveys have been used to arrive at an estimate for the illicit manufactured cigarette consumption for 2021. This method is consistent with the approach used by KPMG in the European report to estimate 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.

Supplementary analysis

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 Australian Taxation Office (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 ABF.(3)

Using seizure data to size the illicit market is potentially 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.

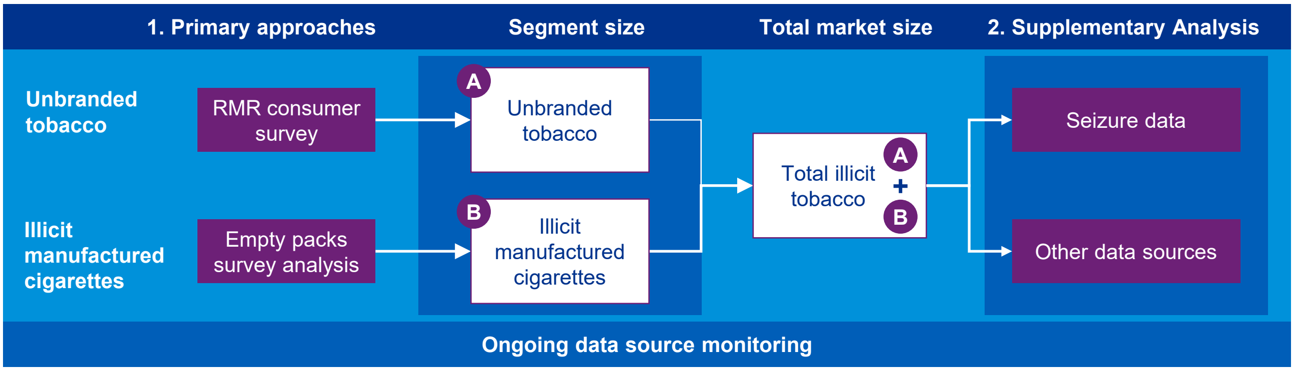
Whilst seizure data is unlikely to generate an accurate estimate for the illicit tobacco market, it can be used to indicate trends and support any considerable changes to the illicit market. For example, an increase in manufactured cigarette flows from a country picked up in the empty packs survey could be supported by a corresponding increase in seizures from that country or in manufactured cigarettes representing a growing percentage of seizures.

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

The comparison to our measurements with additional data sources supplements our analysis

4.1 Estimating the illicit tobacco market (cont.)

Figure 4.1b: Overview of approach to estimating illicit tobacco



KPMG believes that the RMR consumer survey and empty packs survey approaches are thought to be the most accurate for estimating the illicit tobacco market in Australia. Figure 4.1b shows the process by which the RMR consumer survey and empty packs survey analysis are supported by alternative analyses.

1. Primary approaches

A **Unbranded tobacco:** We use data from the RMR consumer survey, external data sources such as the AIHW and the ABS to estimate the results. We consider it to be an appropriate way of sizing the unbranded tobacco market.

B **Illicit manufactured cigarettes:** We regard the empty packs survey, conducted in Australia by WSPM, a 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 + B **Total illicit tobacco:** The total illicit tobacco market size is estimate by adding the results of the empty packs survey analysis for manufactured cigarettes (i.e., contraband and counterfeit consumption) with the output of the RMR consumer survey for unbranded tobacco. The results are presented in kgs to show total consumption of both loose tobacco and manufactured cigarettes.

2. Supplementary analysis

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

Seizures data can be used to supplement the likely mix of illicit tobacco consumption. If our findings show a large change in the mix of illicit products, seizures data may support this change.

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

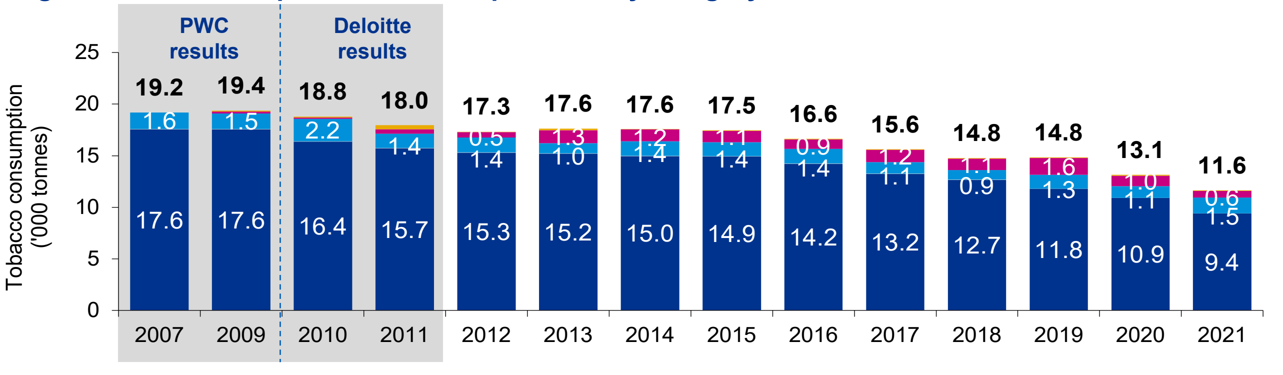
Ongoing data source monitoring

We take a forward looking approach to ensure an appropriate data is used. 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. Following the most recent AIHW survey in 2019, we restated our unbranded tobacco consumption estimates from 2017 to 2019.

The increase in illicit was more than offset by the decline in legal domestic sales

4.2 Illicit tobacco consumption in Australia

Figure 4.2a: Consumption of tobacco products by category, 2007 – 2021[(1)(2)(3)(4)(a)(b)(c)(d)(e)(f)(g)]



The total level of tobacco consumed in Australia was estimated by KPMG at 11,639 tonnes in 2021, a decline in volume by 11.4% from 2020. This decline in total consumption is largely due to a reduction in legal domestic sales.

Legal domestic sales declined by 13.9%, driven by a decline in both RYO (13.2%), and manufactured cigarette consumption (14.1%).

Due to travel restrictions during COVID-19, the volume of non-domestic (legal) product saw a another relatively large decline (93.8%).

Illicit consumption of unbranded tobacco increased by 36.0% and manufactured cigarettes decreased by 35.5%.[(h)] Counterfeit continued to remain a very small component of illicit tobacco consumption (2.5%).

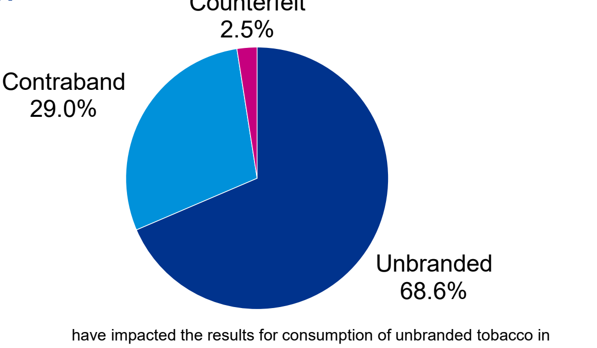
Approximately 0.49% of cigarettes consumed in Australia were illicit whites (non-domestic), an increase from the 0.10% of consumption identified in the 2020 empty packs survey. Domestic illicit plains decreased to 0.85% of manufactured cigarette consumption in 2021.

As a result of all this, illicit consumption in 2021 increased marginally to 2,242 tonnes.

	2020 (tonnes)	2021 (tonnes)	% change (2020–2021)
Counterfeit	73	55	*(24.4%)*
Contraband	1,020	649	*(36.3%)*
Unbranded	1,130	1,537	*36.0%*
All illicit products	2,223	2,242	*0.8%*
Non-domestic (legal)	6.6	0.4	*(93.8%)*
Legal domestic sales	10,912	9,397	*(13.9%)*
Total consumption	**13,141**	**11,639**	***(11.4%)***

Due to declining legal sales and a relatively small increase in illicit consumption, the consumption of illicit tobacco as a proportion of total consumption increased from 16.9% in 2020 to 19.3% in 2021.

Figure 4.2b: Share of illicit tobacco consumption, 2021[(3)(4)(d)(e)]



Notes:
(a) Non - domestic legal volumes are smaller than 100 tonnes and volume labels have not been included for this category.
(b) The non - domestic legal volumes for 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020 and 2021 have been computed by combining the volume brought into Australia by tourists and permanent settlers, and the volume brought in by short term resident departures.
(c) KPMG has not had the opportunity to validate results for 2007-2011.
(d) Some figures/percentages may not sum due to rounding.
(e) Contraband includes the volumes of Illicit Whites (non-domestic) and Domestic Illicit Plains.
(f) RMR implemented a new panel of respondents in Q4 2018 that may have impacted the results for consumption of unbranded tobacco in 2018 leading to a lower overall consumption volume.
(g) Counterfeit and contraband estimations are unavailable for 2007.
(h) Illicit manufactured cigarette includes contraband and counterfeit.

Sources:
(1) PriceWaterhouseCoopers, *Australia's Illegal Tobacco Market*, 2007, 2009.
(2) Deloitte, *Illicit Trade of Tobacco in Australia*, 2010, 2011, 2012.
(3) Industry data; further detail provided in specific sections of the main report.
(4) IRI scan data, 2021.

Seizures by ABF and ATO increased by 120% in 2020-21, driven by seizures of loose tobacco

4.3 Enforcement context

Tobacco seizures

The ABF seized over 1,248 tonnes of illicit tobacco in 2020-21 (66% of the volume was of loose leaf tobacco and 34% was of cigarettes). Tobacco products seized by ABF in the 12 months to 30 June 2021 (2020-21) increased by 157% from 2019-20.[(1)]

Illicit tobacco is an attractive market for organised criminal syndicates due to the profits that can be made through the evasion of customs duty and associated taxes. The profits made through illicit tobacco are often channelled back into organised crime groups and their activities.[(2)]

Seizures by the ATO decreased by 17% from 131 tonnes in 2019-20 to 109 tonnes in 2020-21.[(3)]

The combined effect of this is that overall seizures by ABF and ATO increased by 120% from 616 tonnes to 1,357 tonnes.

In 2020-21, the ABF seizures' excise value was AUD 1.92 billion, and ATO seizures' estimated excise duty was AUD 178 million.[(2)(3)]

The ATO estimated the amount of excise on illicit tobacco lost in 2019-20 was AUD 909 million.[(4)]

Figure 4.3.1: ABF and ATO seizures, 2017-18 – 2020-21[(1)(3)(5)(a)(b)(c)(d)(e)(f)]

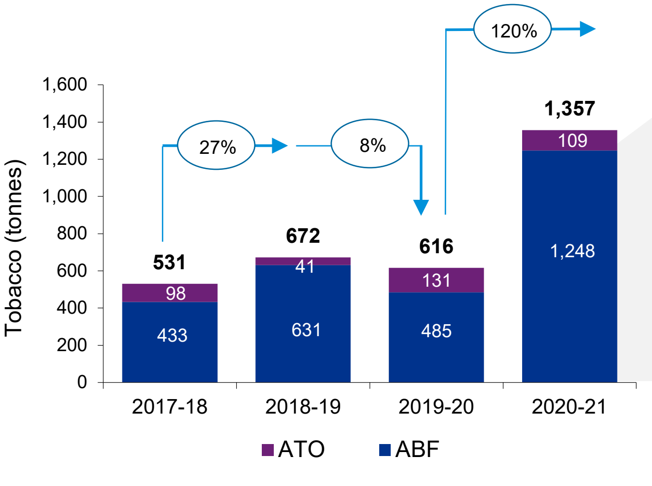
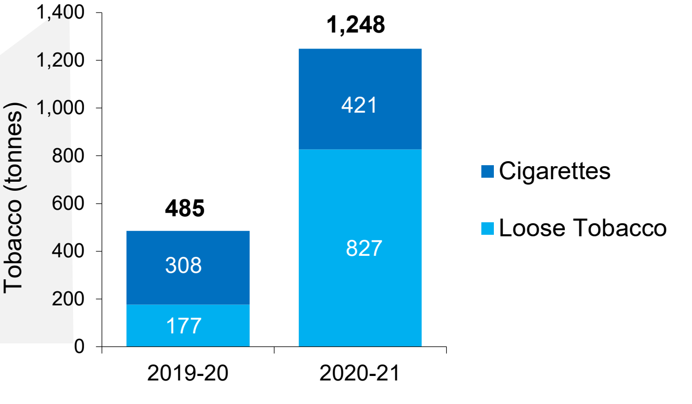


Figure 4.3.2: ABF breakup by tobacco product type 2019-20 – 2020-21[(1)(2)(5)(c)(d)(e)(f)]



Notes:
- (a) Total weight of illicit tobacco has been reported as stated.
- (b) ATO conversion rate (calculated) – 1 cigarette = 0.73g tobacco.
- (c) There is an overlap of six months between the period of study for this report (1st January, 2021 – 31st December, 2021). and the period for which the Department of Home Affairs reports the seizure figures (1st July, 2020 – 30th June, 2021).
- (d) The number of international mail items is commercial-in-confidence and therefore, we are unable to report it.
- (e) ATO's breakup by tobacco product type is not available.
- (f) In the calendar year 2021, ABF detected 879 tonnes of undeclared loose leaf tobacco and approximately 498 tonnes of cigarettes.

Source:
- (1) Department of Home Affairs Annual Report, 2020-21.
- (2) Department of Home Affairs website media release, November 2021.
- (3) ATO website, last update of 05 Jan 2022.
- (4) Australian Taxation Office, Tobacco Tax Gap.
- (5) Goldcoastbulletin.com, *Crime syndicates target Oz with illegal tobacco as smokers look for cheap alternatives*, 2022.

ABF and other enforcement agencies made a number of seizures in 2021

Figure 4.3.3: Key seizures in 2021

Jan

January: 50.3 tonnes of tobacco from an illegal tobacco crop was seized during an operation in New South Wales (NSW) by the ITTF.[1]

February: About two hectares of illegal tobacco crops and around one hectare of planted seedlings, weighing over 50 tonnes and estimated to be worth AUD 9 million, was seized and destroyed at Hunter Valley.[2]

March: ATO, ABF and NSW Police seized and destroyed over 183 tonnes of illicit tobacco in NSW.
Also, ATO officers seized and destroyed 183 tonnes of illicit tobacco crops and 140 kg processed tobacco in Victoria. In another operation, ATO seized and destroyed over 60.7 tonnes of illicit tobacco.[3]

May: Queensland Police and the ATO seized around AUD 40 million of illegal tobacco – an estimated 25 tonnes, on a property at Linthorpe, 135 km west of Brisbane.[4]

June: As part of Operation Romeo Serge, detectives from the Logan District Criminal Investigation Branch, ATO and Queensland Health uncovered 4.5 tonnes of tobacco, AUD 900,000 in cash, 114,732 packets of cigarettes and 150,000 vapes containing nicotine.[5]

August: Officers from the Crime and Intelligence Command, MOCS SER located illicit tobacco and tobacco related products, with an estimated value of AUD 600,000 at Queensland.[6]

September: Police, as part of a Joint Organised Crime Task Force investigation, seized drugs including MDMA, cannabis and tobacco across metropolitan Melbourne.[7]

October: Information received by the ABF international network enabled the NSW Cargo Examination Facility to intercept two sea cargo consignments and referred to ITTF for investigation. The two consignments contained a total of ~18 million illicit cigarette sticks with an excise value of over AUD 20 million (excluding GST).[8]

November: The ITTF, led by ABF, issued a number of warrants which resulted in the seizure of nine cigarette machines, commercially-produced cigarette packaging and over 100 mail packages containing an estimated one tonne of illicit tobacco.[9]

December: ABF seized 463,804 cigarettes, 138 kgs of loose leaf tobacco in raids of a man's home and business in Perth.[10]

Dec

Key:
- Manufactured cigarettes seizure
- Loose tobacco seizure
- Domestic seizure
- Air or sea cargo/mail order seizure

Source:
(1) Australian Taxation Office, Illegal tobacco crop seized and destroyed, January 2021.
(2) ACAIT, Illicit tobacco crops worth millions of dollars uncovered in Hunter Valley, February 2021.
(3) Australian Taxation Office, $84.3 million in illegal tobacco seized along the NSW and VIC border in a two-day blitz, March 2021.
(4) Australian Taxation Office, ABF, Queensland Police and the ATO seized around $40 million of illegal tobacco – an estimated 25 tonnes, on a property at Linthorpe, 135 km west of Brisbane, May 2021
(5) Australian Taxation Office, Illegal tobacco trading (Operation Romeo Serge), Logan and South Brisbane, June 2021
(6) myPolice, Illicit tobacco seizure, Gold Coast border, August 2021.
(7) AFP, Warrants executed across Melbourne as part of joint drug operation, Sept 2021.
(8) ABF, Over $20 million of illicit cigarette sticks up in smoke, October 2021.
(9) Foreign Affairs, MIL-OSI Australia: Three individuals arrested for illicit tobacco offences, November 2021.
(10) Border Force seizes nearly half a million cigarettes in northern suburbs raids, WAToday, December 2021

5. Drivers of results

RMR sampling overview

5.1 Consumer survey overview

5.1.1 RMR survey overview

The consumer survey is primary research carried out to estimate 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 RMR seeking 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 RMR consumer survey has been 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 2021 survey was carried out between 13 May and 3 June 2021 and the H2 2021 between 29 October and 29 November 2021. Respondents took on average 5.23 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

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 5.1.1: RMR survey Q4 2021 attrition chart[1]

6,340 started the survey

↓

6,327 qualified to take part

↓

2,580 were 'qualified' smokers

↓

2,166 completed the survey[c]

— RMR contacts a panel by email to undertake the survey.

— Differing screening processes for panels may help better identify potential respondents who fit the demographic requirements of the study.

— 41% of those who clicked the survey emailed to them passed the screening and qualified to take part.

— The panel is filtered out with screening questions to enable the required demographics and a representative sample.

— The respondents are broadly representative of Australia's demographics.

— The survey asks more screening questions about smoking habits and products smoked. This establishes that the panel are regular smokers of manufactured cigarettes and/or RYO.

— 84% of those eligible completed the survey, resulting in 2,166 full responses.

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 2021.

RMR sampling overview

5.1 Consumer survey overview[1]

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 which the research agency believes 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 2021, the survey results showed that unbranded tobacco awareness continued to increase, exceeding the previous year's recorded high, coupled with all time peaks for the frequency of purchases and the incidence of unbranded tobacco purchases.

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.

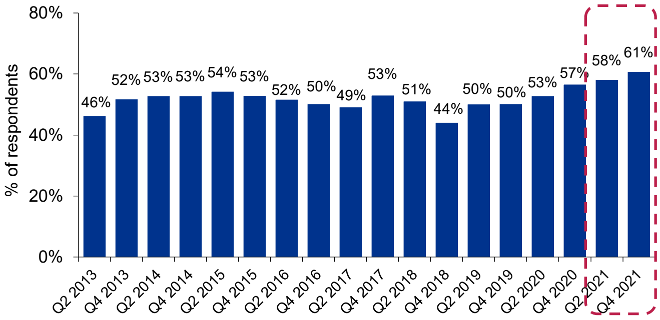
Source: (1) Roy Morgan Research, Consumer survey, Q4 2016, Q2 2017, Q4 2017, Q2 2018, Q4 2018, Q2 2019, Q4 2019, Q2 2020, Q4 2020, Q2 2021 and Q4 2021.

Record high purchase participation and frequency drove unbranded tobacco consumption in 2021

5.1.3 Purchasers of illicit unbranded tobacco

Figure 5.1.3a: Proportion of respondents who were aware of unbranded tobacco, Q1 2013 – Q4 2021[(1)(2)(a)(b)(c)]

Awareness of unbranded tobacco continued to increase in 2021



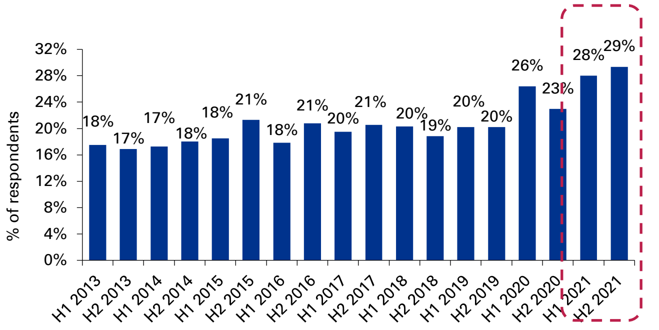
The proportion of respondents who were aware of unbranded tobacco increased in Q2 and Q4 2021 to the highest level recorded by the survey.

In 2021, whilst the volume of unbranded tobacco purchased per occasion remained relatively stable, the proportion of respondents who purchased unbranded tobacco and the average frequency of purchases increased. This contributed to the increase in the consumption of unbranded tobacco.

In H2 2021, the proportion of respondents purchasing unbranded tobacco increased compared to H1 2021 as shown in Figure 5.1.3b. Whilst remaining relatively stable, we note that the average volume of unbranded tobacco purchased per occasion fell marginally in H2 2021 compared to H1 2021 as shown in Figure 5.1.3d.

Figure 5.1.3b: Proportion of respondents who reported purchasing illicit unbranded tobacco, H1 2013 – H2 2021[(1)(2)(a)(b)(c)]

Incidence of unbranded tobacco purchased peaked at the highest level in 2021



Furthermore, the frequency of purchase dipped in H1 2021 before reaching the highest recorded level in H2 2021.

Due to high participation rates, with an increased frequency in H2 2021, overall unbranded volumes increased from 1,130 tonnes in 2020 to 1,537 tonnes in 2021.

Figure 5.1.3c: Average frequency of purchase per annum, H1 2013 – H2 2021[(1)(2)(a)(b)(c)]

Following a slight dip in H1 2021, frequency of purchase peaked to an all time high in H2 2021

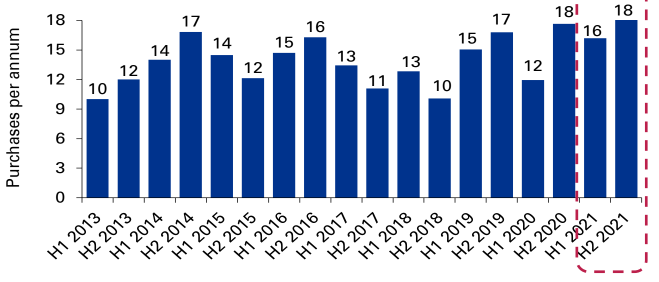
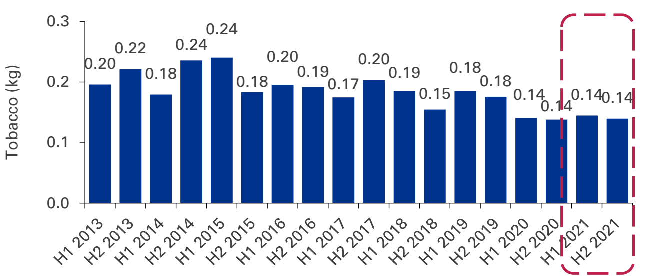


Figure 5.1.3d: Average volume purchased (kg) per occasion, H1 2013 – H2 2021[(1)(2)(a)(b)(c)]

The average volume of unbranded tobacco purchased per occasion remained stable in 2021



Notes:
(a) 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020 and 2021 analysis is based on CAWI/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 to two decimal points.

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, H2 2020, H1 2021 and H2 2021.

The empty packs survey comprises of 12,000 empty packs collected across 16 population centres twice a year

5.2 Empty packs survey results

5.2.1 Australian empty packs survey sampling plan[1][2][3]

The empty packs survey 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 empty packs survey was carried out by an independent market research agency, WSPM across October-November 2021. The 2021 empty packs survey collections were based on a sampling plan consistent with the previous empty packs survey sampling plans: 12,000 packs were collected, the same neighbourhoods were sampled and the same 16 population centres were covered. This covered approximately 75.1% 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 packs surveys across 81 countries.

Table 5.2.1 Q4 2021 empty packs survey sampling plan:

Population centres	Population (million) 2020 estimate[3][a]	Number of sampled neighbourhoods	Sample packs	Weighted packs
Melbourne	5.0	40	3,000	3,253
Sydney	5.0	40	2,500	2,959
Brisbane	2.5	30	1,200	1,526
Perth	2.1	30	1,000	1,322
Adelaide	1.4	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	**19.3**	**281**	**12,000**	**12,000**
Total population of Australia	25.7			

Notes:
(a) The results are revised estimates for 2020 as on 30th June, 2020.
(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 packs survey*, Q2 2019, Q4 2019, Q1 2020, Q4 2020, Q2 2021 and Q4 2021.
(2) MSIntelligence Research, Empty Packs 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.

Non-domestic tobacco incidence increased in Australia in Q4 2021 driven by increases across 10 population centres

5.2.2 Australian empty packs survey results – Non-domestic incidence by population centre

Figure 5.2.2a: Total non-domestic incidence by population centre, Q4 2020 – Q4 2021[(1)(a)]

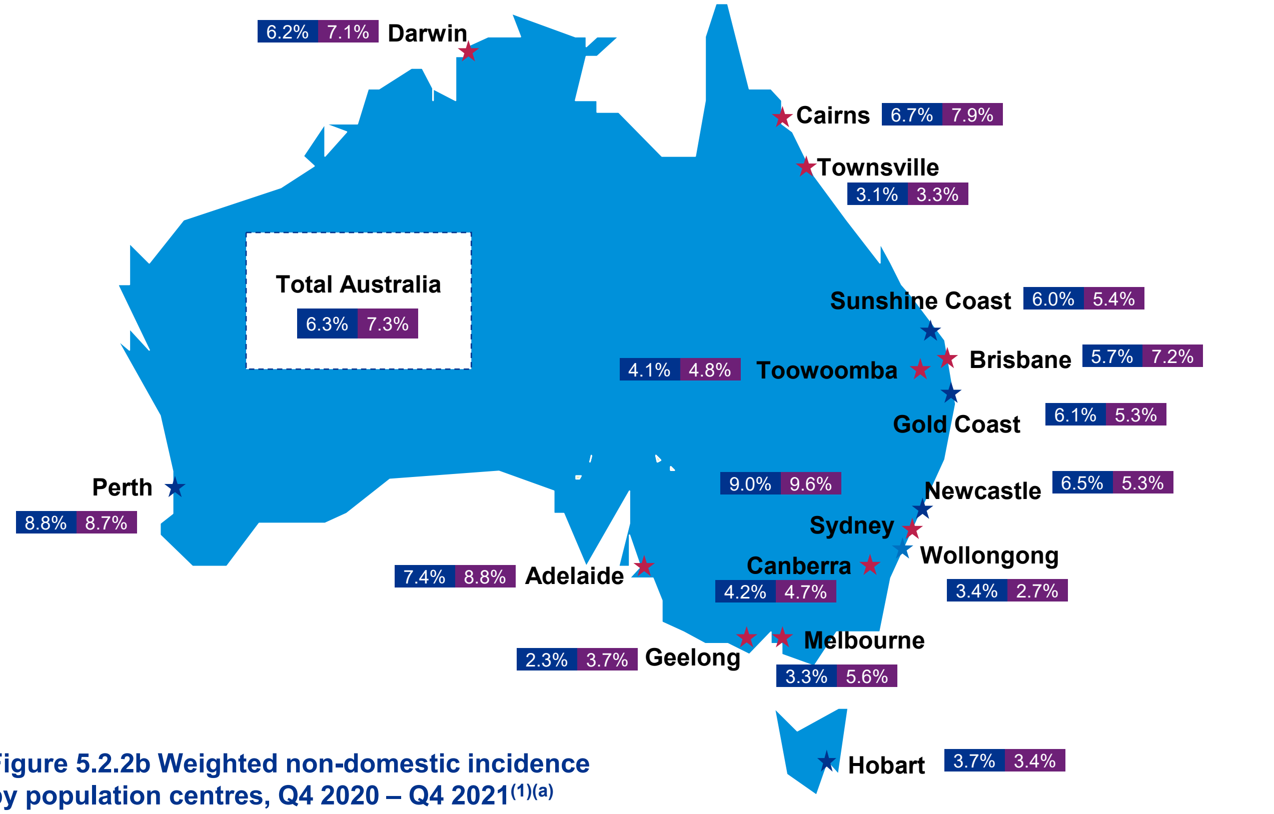
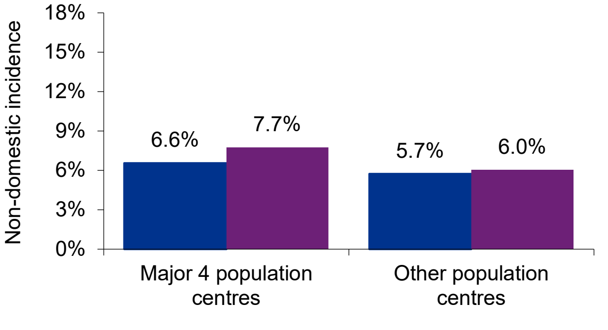


Figure 5.2.2b Weighted non-domestic incidence by population centres, Q4 2020 – Q4 2021[(1)(a)]



The Q4 2021 empty packs survey found non-domestic packs in all population centres sampled.

Non-domestic incidence in the 4 major population centres of Sydney, Brisbane, Melbourne and Perth stood at 7.7%, 1.7 pp higher than the other population centres at 6.0%.

The increase in Australia's total non-domestic incidence by 1.0 pp for the full year 2021 was driven by increased incidence across 10 of the 16 major population centres surveyed.

In Q4 2021, Sydney had the highest level of non-domestic incidence, as also observed in Q4 2020.

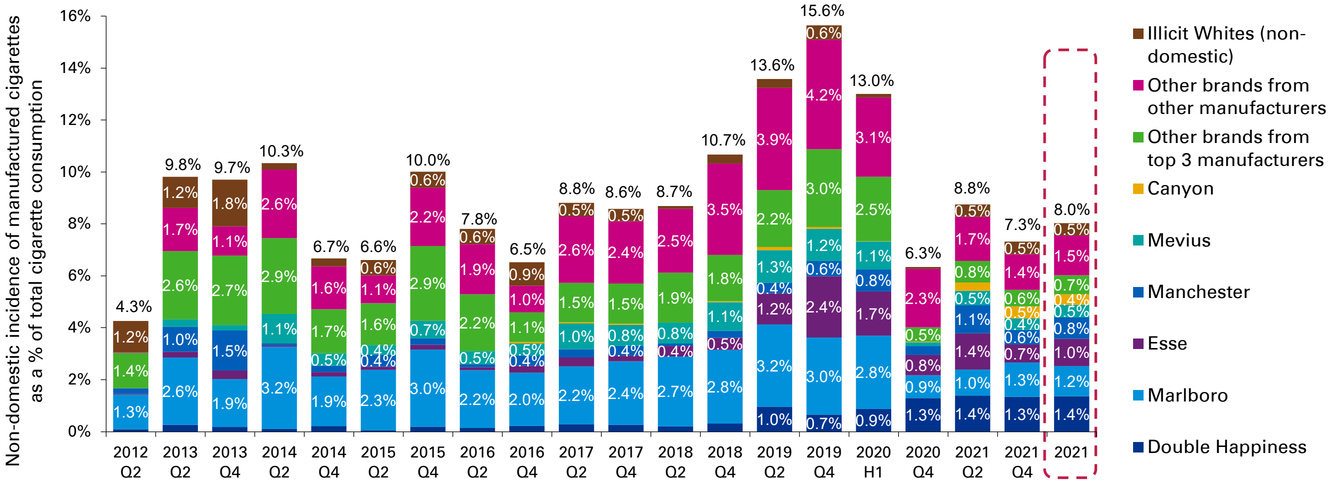
Sources: (1) WSPM, *empty packs survey*, Q1 2020, Q4 2020, Q2 2021 and Q4 2021.

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

Reduced volumes across Marlboro, Dunhill and Esse resulted in a decline in non-domestic incidence in 2021

5.2.3 Australian empty packs survey 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 Q2 2012 – Q4 2021[(1)(2)(3)(a)(b)(c)(d)(e)]



The combined results for the Q2 and Q4 surveys for 2021 gives a total non-domestic incidence of 8.0%, a decrease of 1.6 pp from 2020 (i.e., 9.6%).

Since the second half on 2020, Marlboro has witnessed a decline in its share of non-domestic flows. This trend continued in 2021 and helped suppress overall non-domestic flows. Esse flows saw a decline in share from 1.4% in Q2 2021 to 0.7% in Q4 2021.

According to the 2021 empty packs survey, approximately 0.5% of all manufactured cigarettes consumed in Australia were Illicit Whites (non-domestic), an increase from the 0.1% witnessed in the 2020 empty packs survey. The levels of Illicit White (non-domestic) brand flows continue to remain below the peak of 1.8% experienced in Q4 2013, returning to levels witnessed prior to 2020.

Amongst the six largest non-domestic brands, flows from Double Happiness, Manchester and Canyon grew, whilst the flows of Esse, Marlboro and Mevius experienced a decline between 2020 and 2021.

In 2021, flows of Double Happiness overtook flows of Marlboro as the brand with the largest non-domestic incidence. Dunhill dropped out of the six largest non-domestic brand flows in 2021, as Canyon took its place with a non-domestic incidence of 0.4%.

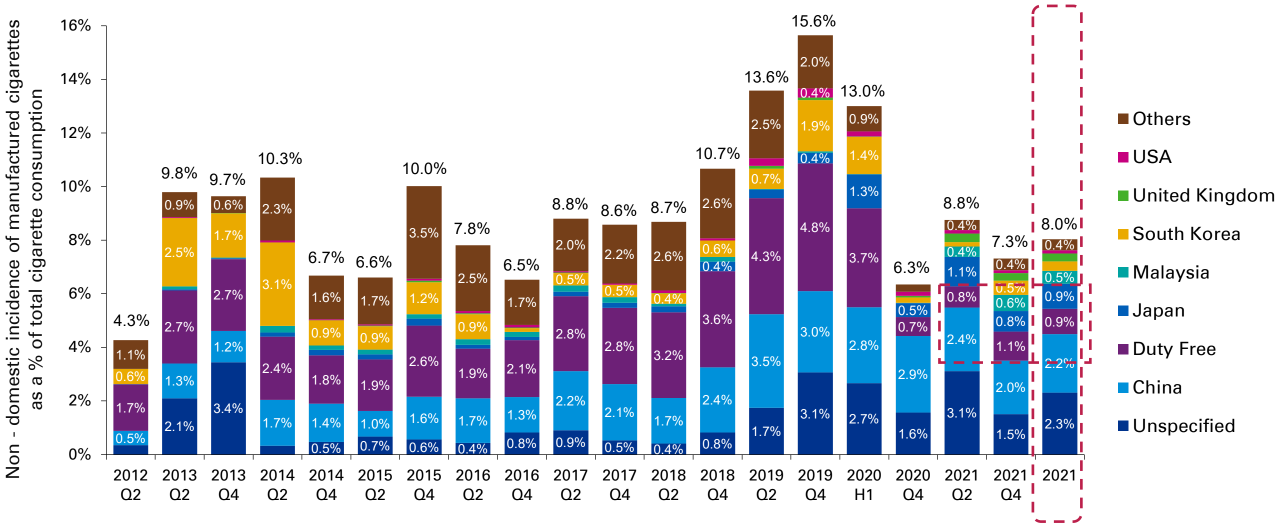
Notes:
- (a) Our definition of Illicit Whites (see the glossary) was updated in 2014.
- (b) The 2021 figures are based on the blended approach in which equal weighting is assigned to the Q2 2021 and Q4 2021 empty packs survey result using the weighted number of cigarettes.
- (c) Numbers in the above 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) The counterfeit volume is reported from manufacturers participating in empty packs survey: BATA, PMI and ITA. No other counterfeit is included in the volumes reported due to lack of information.

Sources:
- (1) WSPM, *empty packs survey*, Q2 2019, Q4 2019, Q1 2020, Q4 2020, Q2 2021 and Q4 2021.
- (2) MSIntelligence Research, Empty Packs 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 packs survey*, 2009, 2010, 2012.

Reduced duty free volumes resulted in non-domestic flows remaining below 2019 and 2020 levels

5.2.4 Australian empty packs survey 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 Q2 2012 – Q4 2021(1)(2)(3)(a)(b)(c)(d)(e)



The continuation of reduced duty free flows was the main reason that non-domestic flows remained below 2018 and 2019 levels.

Asian countries continued to be the primary source of inflows of non-domestic manufactured products into Australia. Whilst China (including China duty free) continued to remain the largest individual source country for non-domestic manufactured cigarette flows, its share fell to 2.2% of the total consumption in 2021, compared to 3.0% in 2020. Whilst flows from most countries fell in 2021, flows from 'unspecified' sources (i.e., packs that do not bear any specific market or duty free labelling) increased to 2.3% in 2021 from 2.1% in 2020.

Japanese products continued to comprise the second largest flow of products from any individual country (excluding duty free products), followed by flows from Malaysia. The share of flows from Malaysia grew to 0.5% of the total consumption in 2021 from 0.01% in 2020, overtaking South Korea as the third largest source.

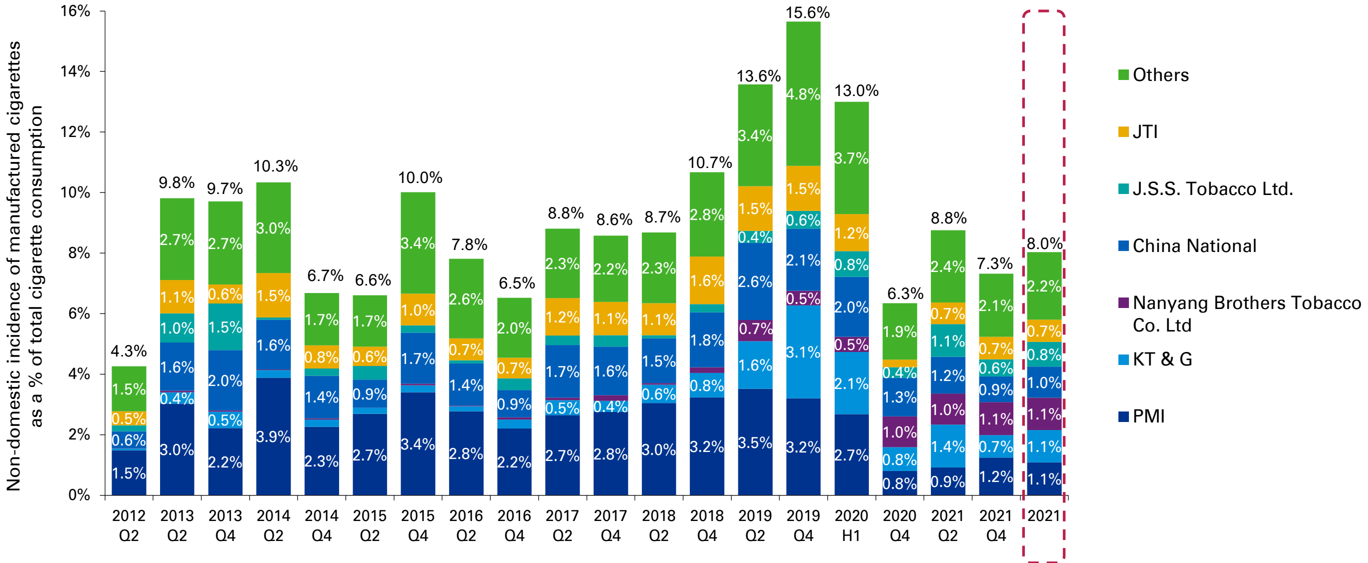
Notes:
- (a) The 2021 figures are based on the blended approach in which equal weighting is assigned to the Q2 2021 and Q4 2021 empty packs survey result using the weighted number of cigarettes.
- (b) Numbers in the above chart may not sum due to rounding.
- (c) Some of the labels with value less than 0.3% have been removed for clarity.
- (d) The country flows exclude the Duty Free products.
- (e) The counterfeit volume is reported from manufacturers participating in empty packs survey: BATA, PMI and ITA. No other counterfeit is included in the volumes reported due to lack of information.

Sources:
- (1) WSPM, *empty packs survey*, Q2 2019, Q4 2019, Q1 2020, Q4 2020, Q2 2021 and Q4 2021.
- (2) MSIntelligence Research, Empty Packs 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 packs survey*, 2009, 2010, 2012.

Reduced non-domestic flows of PMI, KT&G, China National and JTI owned trademarks contributed to lower non-domestic levels

5.2.5 Australian empty packs survey 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 Q2 2012 – Q4 2021[(1)(2)(3)(a)(b)(c)(d)]



Flows from the empty packs survey suggest that a large proportion of non-domestic brands are trademark owned by either PMI or Korea Tobacco & Ginseng Corporation (KT&G), accounting for around 2.2% of the total tobacco consumption in Australia in 2021. China National was overtaken by KT&G as the second largest trademark owner of non-domestic inflows.

Brands trademark owned by Nanyang Brothers Tobacco Co. Ltd were the third largest inflow, representing 1.1% of total incidence in 2021 survey, with an increase of 0.3 pp from the 2020 survey (0.8%).

The decline in non-domestic incidence was primarily driven by decline in the flows of products trademark owned by PMI (0.6pp), KT&G (0.3pp) and China National (0.6pp). The share of 'Other' trademark owners decreased by 0.5 pp in 2021, reaching 2.2% of incidence.

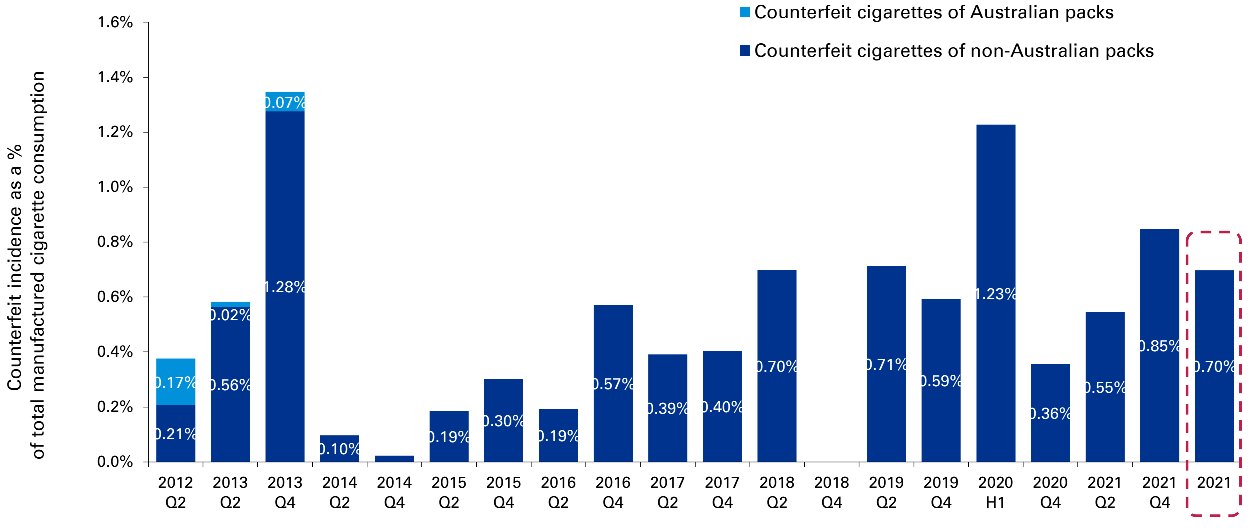
Notes:
- (a) The 2021 figures are based on the blended approach in which equal weighting is assigned to the Q2 2021 and Q4 2021 empty packs survey result using the weighted number of cigarettes.
- (b) Numbers in the above chart may not sum due to rounding.
- (c) Some of the labels with value less than 0.4% have been removed for clarity.
- (d) The counterfeit volume is reported from manufacturers participating in empty packs survey: BATA, PMI and ITA. No other counterfeit is included in the volumes reported due to lack of information.

Sources:
- (1) WSPM, *empty packs survey*, Q2 2019, Q4 2019, Q1 2020, Q4 2020, Q2 2021 and Q4 2021.
- (2) MSIntelligence Research, Empty Packs 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 packs survey*, 2009, 2010, 2012.

Overall counterfeit incidence declined in 2021

5.2.6 Australian empty packs survey results – Counterfeit flows

Figure 5.2.6: Counterfeit flows incidence as a percentage of total manufactured cigarette consumption Q2 2012 – Q4 2021[(1)(2)(3)(a)(b)(c)(d)]



Even as it continued to remain a small proportion of the empty packs survey findings, counterfeit incidence declined by 0.08pp to 0.70% in 2021.

Marlboro accounted for 82% of all counterfeit volumes, followed by Lambert & Butler with 17% volume and Dunhill having 1% of the total counterfeit volume.

Since identification of counterfeit brands is only possible from companies participating in the empty packs survey, the amount of counterfeit may be understated.

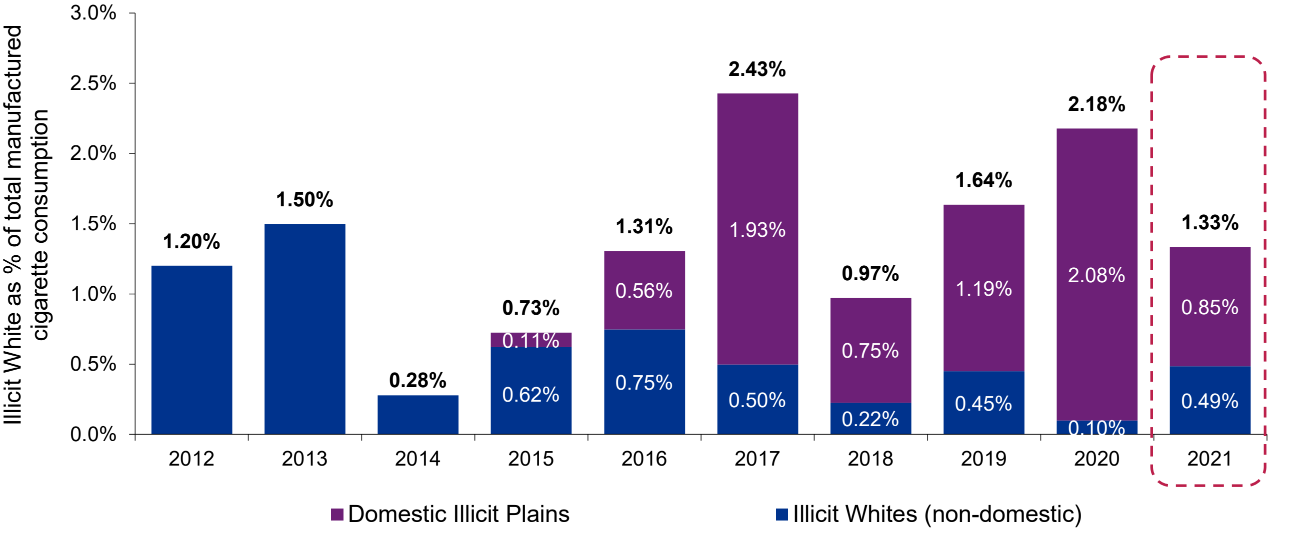
Notes:
(a) Counterfeit incidence is not available for 2009, 2010 and 2011.
(b) The counterfeit volume is reported from manufacturers participating in empty packs survey: BATA, PMI and ITA. No other counterfeit is included in the volumes reported due to lack of information.
(c) Numbers may not sum due to rounding.
(d) Some of the labels with value less than 0.01% have been removed for clarity.

Sources:
(1) WSPM, *empty packs survey*, Q2 2019, Q4 2019, Q1 2020, Q4 2020, Q2 2021 and Q4 2021.
(2) MSIntelligence Research, Empty Packs 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 packs survey,* 2012.

Flows of Domestic Illicit Plains fell, partially offset by increased Illicit White (non-domestic) flows

5.2.7 Australian empty packs survey results – Illicit Whites brand flows

Figure 5.2.7: Consumption of Illicit White flows as a percentage of total manufactured cigarette consumption 2012 – 2021[(1)(2)(3)(a)(b)(c)(d)(e)(f)(g)]



Illicit White (non-domestic) consumption increased to 0.49% of cigarettes consumed in Australia in 2021, from the 0.10% of consumption identified in the 2020 empty packs survey.

Four brands contributed to the Illicit White (non-domestic) flows in 2021, a decline from the 8 brands present in 2020.

Whilst flows of Domestic Illicit Plains decreased in 2021, the number of brands identified as Domestic Illicit Plains increased by one to four.

The overall decrease in Illicit Whites (domestic and non-domestic) was driven by a decline in consumption of Domestic Illicit Plains, counteracted partially by a rise in Illicit Whites (non-domestic).

The analysis showed that flows of Domestic Illicit Plains decreased from 2.08% of all manufactured cigarettes consumed in 2020 to 0.85% in 2021.

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. The expectation was these measures would eliminate the availability of domestic illicit plains. Also, these brands cannot be identified as counterfeit or not so their consumption has continued to be analysed.

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 empty packs survey 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 estimated 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, 2.07% in Q4 2019, 2.22% in Q2 2020, 2.68% in Q4 2020, 0.77% in Q2 2021 and 1.26% in Q4 2021.
(d) The overall year figures are based on the blended result of the Q2 and the Q4 empty packs survey.
(e) Numbers in the above charts may not sum due to rounding.
(f) This analysis was undertaken by KPMG in conjunction with the clients. 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 empty packs survey: BATA, PMI and ITA. No other counterfeit is included in the volumes reported due to lack of information.

Sources:
(1) WSPM, *empty packs survey*, Q2 2019, Q2 2019, Q1 2020, Q4 2020, Q2 2021 and Q4 2021.
(2) MSIntelligence Research, Empty Packs 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 packs survey*, 2012.

6. Conclusion

Despite total tobacco consumption falling in 2021, the volume of illicit tobacco consumed increased slightly

2020 and 2021 results (tonnes)[1][c]				
		2020	**2021**	**% change (2020 – 2021)**
Illicit manufactured cigarettes	Contraband[a]	1,020	649	(36.3%)
	Counterfeit	73	55	(24.4%)
	Total	1,093	705	(35.5%)
Unbranded tobacco		1,130	1,537	36.0%
Total illicit tobacco		**2,223**	**2,242**	**0.8%**
Illicit tobacco consumption as % of total consumption		**16.9%**	**19.3%**	**n/a**
Equivalent excise value (AUD million)		**AUD 2,942**	**AUD 3,411**	**15.9%**

The illicit tobacco market in Australia

Our study indicates that the consumption of illicit tobacco in Australia increased slightly in 2021. As a proportion of total consumption, it has increased from 16.9% to 19.3% between 2020 and 2021. This was driven by a decline in consumption of legal tobacco that more than offset the increase in illicit tobacco consumption.

Illicit manufactured cigarette consumption continued to decrease in 2021. Flows of non-domestic illicit cigarettes with unspecified labelling increased in incidence to become the largest category of non-domestic inflows. However, China (including China duty free) continues to be the largest identifiable country of origin of non-domestic flows in 2021, accounting for 27% of total non-domestic inflows.

Illicit consumption in 2021 saw a noticeable mix shift with a relatively large increase in unbranded consumption whilst illicit manufactured cigarette consumption declined. Contraband tobacco consumption decreased by 29.1% whilst counterfeit consumption declined by 24.4%. The share of contraband cigarettes in total illicit tobacco consumption fell from 45.9% to 29% and the share of counterfeit cigarettes decreased from 3.3% to 2.5% over the twelve month period.

The consumption of unbranded tobacco was estimated to have increased by 36.0%. This increase in unbranded tobacco (36.0%) is driven by the proportion of respondents who purchased unbranded tobacco peaking at 29% and the average frequency of purchases per annum increasing to the highest rate recorded by the RMR survey of 18.

If all of this tobacco had been consumed in the legitimate market, we estimate it would have represented an excise amount of AUD3.4 billion at the average excise rate for 2021.[b]

The legal tobacco market in Australia

Legal domestic sales in Australia experienced an increased rate of decline of 13.9% between 2020 and 2021. The decline was driven by a 14.1% reduction in manufactured cigarette consumption and a 13.2% decline in loose tobacco consumption. Despite a relatively small increase in illicit consumption, this contributed to an overall decline in total consumption of 11.4%; similar to that observed in 2020.

The Australian tobacco market continues to remain the most expensive market in the Asia Pacific region. Flows from China and Japan continue to represent the largest non-domestic inflows in 2021 and a packet of Australian Marlboro 20s is over five times the domestic price of both countries. This price difference creates an economic incentive for smugglers and other individuals to import and sell tobacco outside of Australian legislation.

Note: (a) Contraband includes non-domestic contraband as well as volumes of Illicit Whites (non-domestic) and Domestic Illicit Plains.
(b) Based upon the average excise rate over the past 12 months for both loose and manufactured cigarettes.
(c) Numbers may not sum due to rounding.

Source: (1) Summary analysis derived from the other sections in the Report

KPMG

Appendices

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

A1 Unbranded tobacco consumption

Introduction

The primary methodology we have used to estimate the unbranded tobacco market in Australia utilises a consumer survey. The approach adopted by KPMG is similar to that used in previous reports on the illicit tobacco market in Australia prepared by KPMG.

Our approach uses the results of the RMR consumer survey as the core input data source, combined with publicly available information on the legal tobacco market and smoking population.

For the purpose of this Report, the estimated unbranded volumes for 2021 is based on the average of the H1 2021 and H2 2021 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 2021 and H2 2021, consumer survey results are more likely to provide a more accurate number for 2021 consumption.

The consumer survey

The amount of unbranded tobacco consumed is estimated based on the responses of 2,248 smokers in Australia to a web based consumer survey in H1 2021 and a further 2,166 in H2 2021. Respondents are sampled from an existing RMR 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 May-June and October-November 2021 and took on average of 5.23 minutes to complete. 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.

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.

The RMR consumer survey is provided in Appendix A10. 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 RMR 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 to KPMG. 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. These core inputs are based on consumer responses and include:

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

These responses generate the core assumptions which are used to estimate the amount of unbranded tobacco consumed and are illustrated on table A1 overleaf.

The consumption calculation relies on the results of the RMR consumer survey and publicly available data

A1 Unbranded consumption estimation (cont.)

The core inputs from the RMR consumer survey and publicly available information are used to estimate the amount of unbranded tobacco consumed, illustrated in table A1.1. 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 estimate the average annual volume of illicit consumption per consumer in step 3.

The number of illicit tobacco users is estimated 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 approach 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 2021 process and relevant data sources are shown in detail overleaf.

Table A1.1 Data sources and process

Estimate 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 AIHW smoking prevalence data and ABS adult population data
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

In 2021 total consumption of unbranded tobacco increased by 36.0%

A1 Unbranded consumption estimation (cont.)

Figure A1.2: Unbranded tobacco consumption results, Full Year 2021[(1)(2)(a)]

					Unbranded
			Q2 2021	Q4 2021	2021
1	Quantity of illicit tobacco purchased per occasion (g)		145	140	
2	Frequency of illicit tobacco purchased per annum		16	18	
3	Quantity of illicit tobacco purchased per annum (g)	1 x 2	2,344	2,557	
4	Total adult smoking population ('000)		2,185	2,185	
5	Illicit tobacco users as % of Australian tobacco users		28%	29%	
6	Number of illicit tobacco users, Australia ('000)	4 x 5	613	641	
7	Quantity of illicit tobacco purchased in Australia (tonnes)	3 x 6	1,436	1,638	1,537

This approach is used to estimate the size of the unbranded tobacco market. For 2021, the consumption of unbranded tobacco in Australia is 1,537 tonnes.

The full year 2021's unbranded consumption is based on the average of Q2 2021 and Q4 2021 RMR consumer surveys.

The total consumption of unbranded tobacco increased by 36.0% in 2021, i.e., from 1,130 tonnes in 2020 to 1,537 tonnes in 2021.

Unbranded tobacco constituted the maximum share (68.6%) of the total illicit tobacco consumption in Australia in 2021.

A higher proportion of respondents purchased illicit tobacco in 2021 compared to 2020 with an increased frequency in purchase. This contributed to the increase in consumption of unbranded tobacco.

In 2021 the RMR consumer survey also saw the highest recorded levels of awareness of unbranded tobacco within consumers.

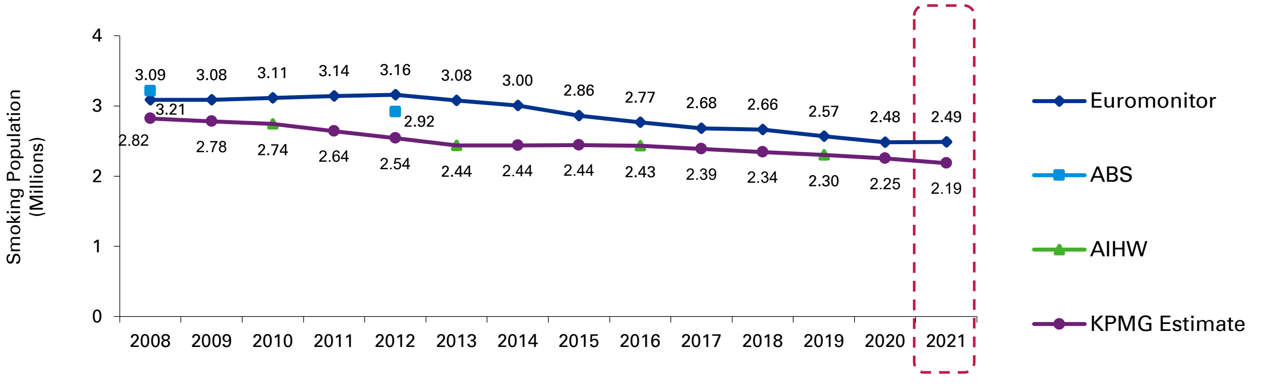
Notes: (a) Numbers in the above table may not sum due to rounding.

Sources: (1) Roy Morgan Research, Consumer survey, H1 2021 and H2 2021.
(2) Roy Morgan Research, Consumer survey, H1 2020 and H2 2020.

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

A2 Use of smoking prevalence data and updated results

Figure A2.1: Total number of smokers, 2008-2021[(1)(2)(3)(a)(b)(c)]



CAGR (%)	2008-12	2010-13	2013-16	2016-19	2008-20	2008-21
Euromonitor	0.6%	(0.4)%	(3.5)%	(2.5)%	(1.8)%	(1.6)%
ABS	(2.4)%					
AIHW		(3.9)%	(0.1)%	(1.8)%		
KPMG Estimate	(2.6)%	(3.9)%	(0.1)%	(1.8)%	(1.9)%	(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 2021.

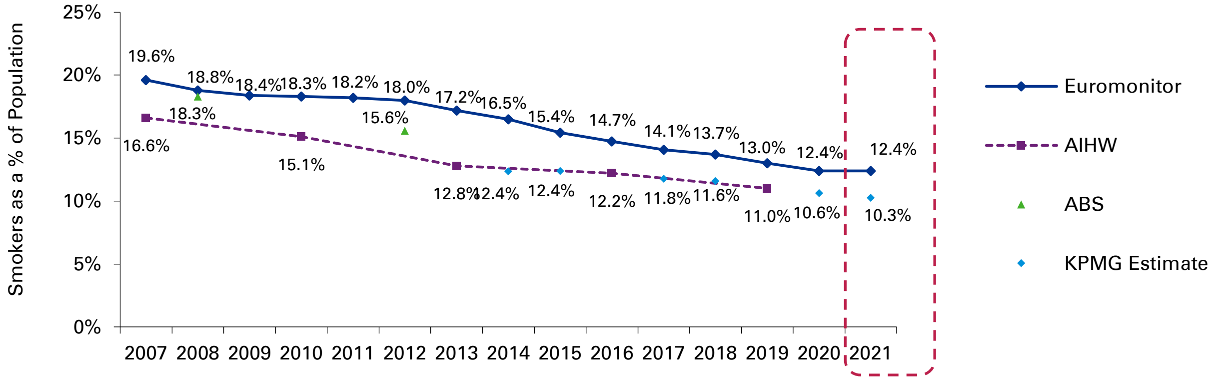
Notes:
(a) The AIHW considers population aged 14 years or older.
(b) Figures for AIHW are taken from the National Drug Strategy Household Survey, 2007, 2010, 2013, 2016 and 2019. AIHW published updated smoking prevalence for 2019.
(c) Figures for 2021 are based on full year estimates.

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.

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

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

Figure A2.2: Smokers as a percentage of population, 2008 – 2021[(1)(2)(3)(a)(b)(c)(d)(e)]



CAGR (%)	2008-12	2010-13	2013-16	2016-19	2008-20	2008-21
Euromonitor	(1.1)%	(2.0)%	(5.0)%	(4.1)%	(3.4)%	(3.2)%
AIHW		(5.4)%	(1.6)%	(3.4)%		
ABS	(3.9)%					

Official Australian Government estimates of smoking prevalence are available from both the AIHW and the 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 (NDSHS) 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 ND(L) 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 required prevalence data for our estimation process, we have used the AIHW results to supplement our estimate for the number of Australian smokers and reduce potential overstatement. 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) AIHW 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 (2019).
- (e) ABS discontinued publishing data for daily smokers as a percentage of population for >14 years after 2012.

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.

The Q4 2021 empty pack survey found that 7.3% of manufactured cigarettes were not intended for the Australian market

A3 Empty packs survey analysis

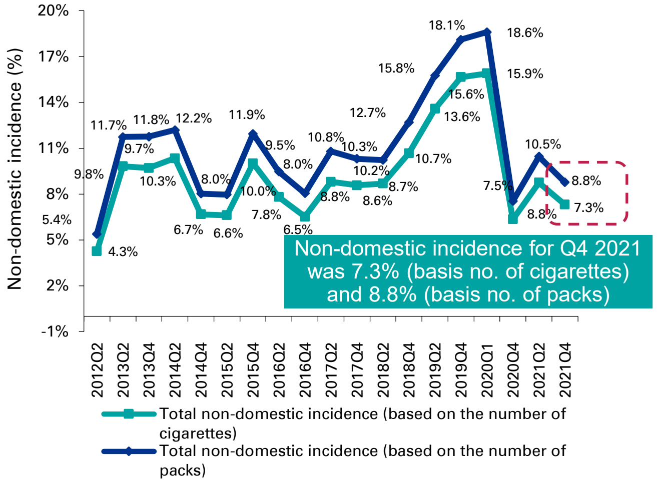
Twenty one empty packs surveys have been carried out in Australia in the last thirteen years.

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 empty packs survey.

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 empty packs survey provider changed from AC Nielsen to MSIntelligence (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 empty packs survey provider was changed to WSPM post a competitive tender process. The empty packs survey methodology undertaken by the agency was same as that of MSI and AC Nielsen.

Figure A3.1 Total non-domestic incidence, Q2 2012 – Q4 2021(1)(2)(3)(a)(b)



In 2021, WSPM was chosen by BATA, PML and ITA 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 empty packs survey 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 empty packs survey 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 empty packs survey is called the non-domestic incidence. The non-domestic incidence of the empty packs survey is shown in the chart, below left.

The total non-domestic incidence in Australia for Q4 2021 was 7.3% (on the basis of number of cigarettes) and 8.8% (on the basis of number of packs). The non-domestic incidence recorded in Q2 2021 (both on the basis of number of cigarettes and packs) rose from Q4 2020, and again dipped in Q4 2021.

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 A4.

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.

Sources:
- (1) WSPM, *empty packs survey*, Q2 2019, Q4 2019, Q1 2020, Q4 2020, Q2 2021 and Q4 2021.
- (2) MSIntelligence Research, Empty Packs 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 packs survey*, 2009, 2010, 2012.

Empty packs survey methodology (1/2)

A3 Empty packs survey analysis (cont.)

Figure A3.2: Empty packs survey methodology

1. Population centre selection	2. Pack collection	3. Pack processing	4. Pack analysis

Empty packs survey methodology

The empty packs survey 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 75.1% 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 empty packs survey 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 empty packs survey 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 of 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.

Empty packs survey methodology (2/2)

A3 Empty packs survey analysis (cont.)

Figure A3.2: Empty packs survey methodology

1. Population centre selection	2. Pack collection	3. Pack processing	4. Pack analysis

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 estimated 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 provided to KPMG and analysed to estimate the non-domestic incidence and contraband and counterfeit volumes.

Further analysis is undertaken to identify illicit whites (please see page 55 for more detail)

The result of the empty pack survey indicates an illicit volume of 637 tonnes of non-domestic manufactured cigarettes

A3 Empty packs survey analysis (cont.)

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

The 8.0% 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 ND(L), counterfeit, and contraband.

Figure: A3.7: Australian empty packs survey non-domestic consumption and illicit estimate(1)(2)(3)(a)(b)(c)

			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Legal sales of manufactured cigarettes (tonnes)	1		14,598	13,908	13,468	13,321	12,942	12,811	12,033	10,928	10,214	9,283	8,491	7,296
Empty packs survey non-domestic incidence	2		*1.7%*	-	*4.3%*	*9.8%*	*8.5%*	*8.3%*	*7.2%*	*8.7%*	*9.7%*	*14.6%*	*9.6%*	*8.0%*
Total consumption of manufactured cigarettes (tonnes)	3	= 1 / (100% – 2)	14,857	-	14,068	14,762	14,142	13,972	12,962	11,969	11,309	10,872	9,391	7,933
Non-domestic consumption (tonnes)	4	= 3 – 1	**258**	-	**600**	**1,441**	**1,201**	**1,161**	**928**	**1,041**	**1,095**	**1,589**	**900**	**637**
Non-domestic (legal) volume estimate (tonnes)	5		33.7	-	35.6	21.3	26.1	34.6	38.0	28.2	20.4	23.0	6.6	0.4
Illicit non-domestic consumption (tonnes)	6	= 4 – 5	**224.3**	-	**564**	**1,419**	**1,175**	**1,126**	**890**	**1,013**	**1,075**	**1,566**	**893**	**637**
Empty packs survey counterfeit incidence	7		-	-	*0.4%*	*1.0%*	*0.1%*	*0.2%*	*0.4%*	*0.4%*	*0.3%*	*0.7%*	*0.8%*	*0.7%*
Counterfeit consumption (tonnes)	8	= 4*(7 / 2)	-	-	50	143	8	34	50	47	39	71	73	55
Contraband consumption (tonnes)	9	= 6 – 8	-	-	515	1,276	1,166	1,092	840	965	1,035	1,495	820	582

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 (LDC) in order to estimate total consumption in step 3. Total illicit consumption is estimated by removing the ND(L) volume estimate in step 6.

The empty packs survey 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 empty packs survey (BATA, PML and ITA). No other counterfeit is included in the volumes reported due to a lack of information.

The results of the empty packs survey analysis show that non-domestic consumption has continued to decrease in 2021, with ND(L) volumes also having decreased in 2021.

Volumes attributable to counterfeit cigarettes declined in this period, dropping to the lowest volume in the last three years of the study. Contraband flows accounted for over 91% of total illicit non-domestic consumption of manufactured cigarettes, as indicated by the empty packs survey analysis.

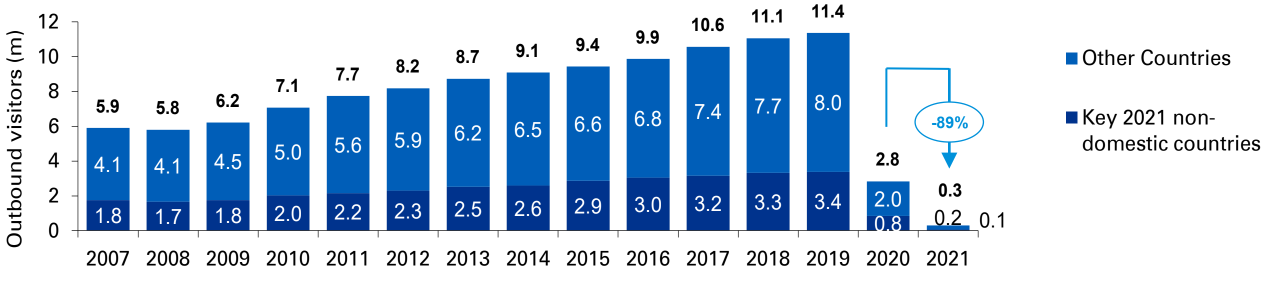
Notes:
(a) Counterfeit incidence is not available for 2009, 2010 and 2011.
(b) Numbers in the above table may not sum due to rounding.
(c) Contraband consumption excludes Domestic Illicit Plains. However, the volume includes Illicit Whites (non-domestic).

Sources:
(1) WSPM, *empty packs survey*, Q2 2019, Q4 2019, Q1 2020, Q4 2020, Q2 2021 and Q4 2021.
(2) MSIntelligence Research, Empty Packs 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 packs survey*, 2009, 2010, 2012.

Outbound trips to non-domestic source countries decreased again in 2021 due to COVID-19 related travel restrictions

A4 Non-domestic legal calculation

Figure A4.1 Overseas travel of Australian residents, 2007 – 2021(1)(2)(a)(b)(d)(e)

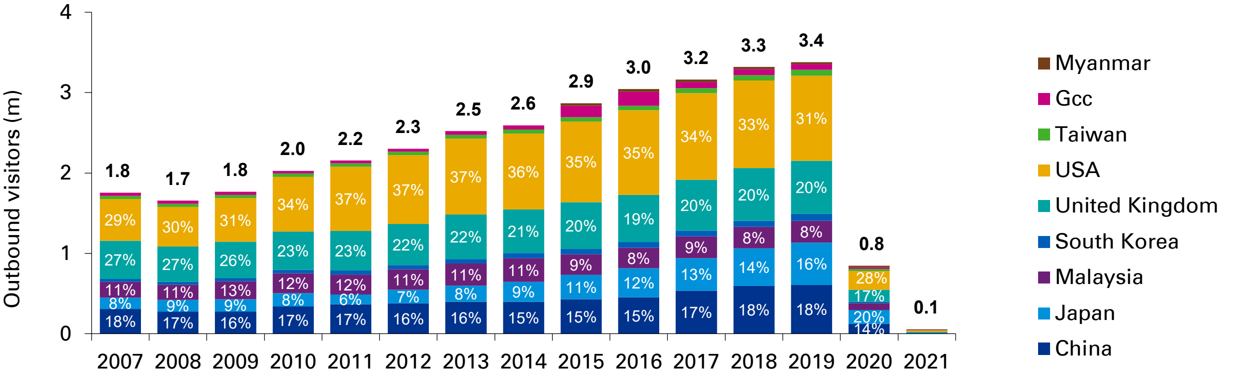


CAGR (%) of outbound trips	2008-2011	2011-2014	2014-2021	2020-2021
Key 2021 ND source countries	9.1%	6.4%	-42.4%	-93.6%
Total overseas trips	10.1%	5.5%	-38.5%	-89.4%

Travel (trend and original) data is used by KPMG to estimate ND(L) volumes, i.e., tobacco products that are brought into the country legally by consumers, such as during an overseas trip. The total number of overseas travel trips made by Australian residents in 2021 was 0.3 million.

Trips made to key non-domestic source countries of manufactured cigarettes decreased by 93.6% between 2020 and 2021, whereas overall outbound trips decreased by 89.4%. This decline was primarily driven by the travel restrictions due to COVID-19.

Figure A4.2 Overseas travel of Australian residents to key 2021 non-domestic source countries, 2007 – 2021(1)(2)(a)(b)(c)(d)(e)(f)



Visits to key non-domestic source countries fell to a total of 0.1 million in 2021, accounting for approximately 18% of all trips made overseas by Australian residents.

However, the low inbound traveller allowances to Australia has also tempered the growth of legal non-domestic consumption and the same is examined in more detail on the next page.

Notes:
(a) Key non-domestic source countries have been selected from the empty packs survey carried out in 2021.
(b) ND(L) volumes are estimated using actual travel data from January 2021 to December 2021.
(c) Some of the labels with value less than or equal to 3% have been removed for clarity.
(d) ABS did not publish Short-term movement, Residents Returning – Selected Destinations: Trend data series in 2020 and 2021 due to COVID-19 lockdowns. We have used the Short-term movement, Residents Returning – Selected Destinations: Original data series for 2020 and 2021 figures.
(e) The historic figures for overseas trips have been updated due to the change in key ND countries.
(f) GCC refers to the Gulf Cooperation Council.

Sources:
(1) Australian Bureau of Statistics, Short-term movement, Residents Returning – Selected Destinations: Trend, 2013, 2014, 2015, 2016, 2017, 2018 and 2019.
(2) Australian Bureau of Statistics, Short-term movement, Residents Returning – Selected Destinations: Original, 2020 and 2021.

The decline in outbound trips to key non-domestic source countries led to a decline in ND(L) volumes in 2021

A4 Non-domestic legal calculation (cont.)

Figure A4.3 Example ND(L) calculation (outbound)

	Overseas visits		ND uplift		% population smokers		Propensity to purchase		Amount per trip		**Total (tonnes)**
Full year 2021	**0.05m**	**x**	**10%**	**x**	**10.3%**	**x**	**71%**	**x**	**25g[a]**	**=**	**0.11**

KPMG ND(L) calculation based on overseas departures from Australia [1][2][3][4][b][d][e][f][g][h]

	Source	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
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	0.05
Overseas trips (with New Zealand capping) for ND(L) calculation (m)[c]	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	0.05
Non-domestic source uplift	Empty packs survey	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
% of population that are smokers	AIHW (& extra-polated)	15.5%	15.1%	14.4%	13.6%	12.8%	12.6%	12.4%	12.2%	11.8%	11.4%	11.0%	10.6%	10.3%
% of smokers that buy tobacco	RMR consumer survey	53%	53%	53%	53%	59%	59%	60%	58%	57%	57%	53%	43%	71%
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	0.004
Amount purchased (g)	Inbound traveller allowance	250	250	250	183	50	50	50	50	25/50 [a]	25	25	25	25
Total (tonnes)		34.57	33.67	46.05	34.05	10.12	10.50	13.95	13.83	9.08	6.90	8.21	1.42	0.11
ND(L) 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%**	**0.004%**

ND(L) flows account for a minor proportion of total tobacco consumption in Australia (0.004%).
The 2021 RMR consumer survey suggested that 71% of smokers traveling inbound bought cigarettes overseas, a relatively higher increase compared to the previous years.

Notes:
(a) The allowance limit was changed to 25g from 1st July 2017.
(b) The historic 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 for the blended empty packs survey for that year. However, any capping for New Zealand has not been done in 2019, 2020 and 2021, as it is not a key ND source country in these years.
(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 2021 to December 2021.
(h) ABS did not publish Short-term movement, Resident Returning – Selected Destinations: Trend data series in 2020 and 2021 due to COVID-19 lockdowns. We have used the Short-term movement, Resident Returning – Selected Destinations: Original data series for 2020 and 2021 figures.

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, H2 2020, H1 2021 and H2 2021.
(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, Residents Returning – Selected Destinations: Trend, 2013, 2014, 2015, 2016, 2017, 2018 and 2019.
(4) Australian Bureau of Statistics, Short-term movement, Residents Returning – Selected Destinations: Original, 2020 and 2021.

The empty pack survey 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.

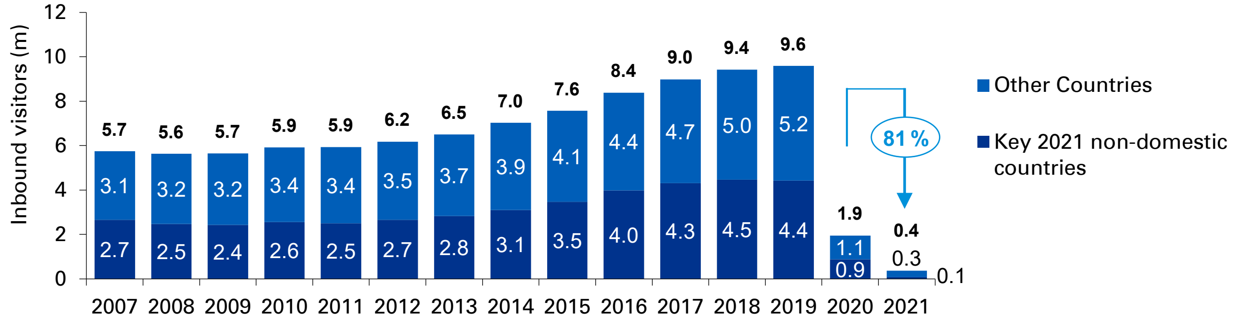
The key source countries have been updated based on the key inflows from each market in the 2021 empty packs survey.

Visitors (short-term arrivals and settlers) from key non-domestic source countries identified by the empty packs survey saw sharp declines in 2021 due to travel restrictions during the pandemic.

Due to changes in ABS data, a five-year average uplift has been used to estimate permanent movement settlers' numbers for January-December 2021 to ensure prudency and consistency.[c]

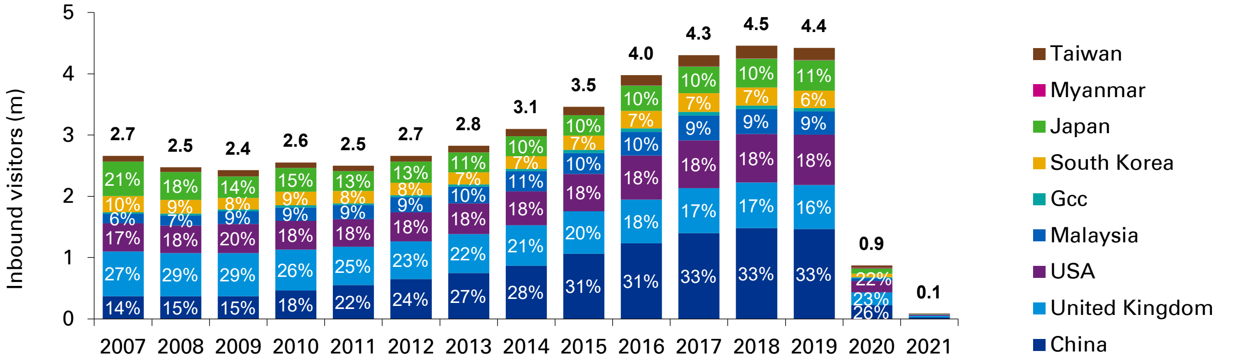
In the absence of data and to avoid overstating illicit consumption, KPMG has made a prudent assumption that all visitors who are estimated to be smokers bring the maximum duty free amount of cigarettes. The maximum allowance limit for Australia is 25g.

Figure A4.4 Overseas visitors (short term visitors and settlers) arrivals to Australia, 2007 – 2021[(1)(2)(3)(a)(b)(c)(e)]



CAGR (%) of inbound trips	2008 – 2011	2011 – 2014	2014 – 2021	2020 – 2021
Key 2021 ND source countries	0.4%	7.4%	-40.5%	-90.6%
Total arrivals	1.7%	5.8%	-34.5%	-81.3%

Figure A4.5 Overseas visitors arrivals from key 2021 non-domestic source countries, 2007 – 2021[(1)(2)(3)(a)(b)(c)(d)(e)]



Notes:
(a) Key non-domestic source countries have been selected from the empty packs survey carried out in Q2 2021 and Q4 2021.
(b) ND(L) volumes are estimated using actual travel data from January 2021 to December 2021.
(c) ABS stopped publishing data for permanent settlers since 2017; to estimate the same, a five-year average uplift has been used to estimate permanent movement settlers' numbers for January-December 2021.
(d) Some of the labels with value less than or equal to 3% have been removed for clarity.
(e) ABS did not publish Short-term movement, Visitor Arrivals – Selected Countries of Residence: Trend data series in 2020 and 2021 due to COVID-19 lockdowns. We have used the Short-term movement, Visitor Arrivals – Selected Countries of Residence: Original data series for 2020 and 2021 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.
(3) Australian Bureau of Statistics, Short-term Movement, Visitor Arrivals – Selected Countries of Residence: Original, 2020 and 2021.

ND(L) remains a small proportion of total consumption

A4 Non-domestic legal calculation (cont.)

Figure A4.6 Example ND(L) calculation (inbound)

Inbound visitor arrivals	x	% population above 18	x	% population smokers	x	Amount per trip (max. allowance of 25g)[(a)]	=	Total (Kg)

Estimated number of visitors who bring in tobacco to Australia[(b)]

Example of KPMG ND(L) calculation based on overseas visitor arrivals to Australia[(1)(2)(3)(4)(5)(b)(c)(f)(g)]

2021	Inbound visitor arrivals (m)[(d)]	% population above 18[(e)]	% population smokers	Number of visitors bringing tobacco (m)	Amount purchased (kg)
Source	**ABS**	**Euromonitor**	**Euromonitor**		
China	0.01	67%	28%	0.0024	60
Japan	0.00	57%	15%	0.0003	8
Malaysia	0.00	65%	21%	0.0006	16
South Korea	0.00	69%	20%	0.0006	14
United Kingdom	0.04	60%	13%	0.0035	88
Usa	0.03	61%	13%	0.0026	64
Taiwan	0.00	69%	11%	0.0001	2
Gcc	0.01	72%	27%	0.0013	33
Myanmar	0.00	63%	26%	0.0003	7
Total	**0.1**				**292**

Total amount brought into Australia by inbound tourists

Estimates for ND(L) volumes shows that total volumes account for a small proportion of total consumption.

This proportion remains small even if arrivals data is included in the ND(L) calculation. This analysis has been shown in detail on the next page.

Notes:
(a) The legal allowance limit was changed to 25g 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 estimate permanent movement settlers' numbers for January-December 2021.
(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 last six years average uplift used to estimate permanent movement settlers' numbers.
(g) ABS did not publish Short-term movement, Visitor Arrivals – Selected Countries of Residence: Trend data series in 2020 and 2021 due to COVID-19 lockdowns. We have used the Short-term movement, Visitor Arrivals – Selected Countries of Residence: Original data series for 2020 and 2021 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.
(3) Australian Bureau of Statistics, Short-term Movement, Visitor Arrivals – Selected Countries of Residence: Original, 2020 and 2021.
(4) Euromonitor, Population: National Estimates, accessed January 2022.
(5) Euromonitor, Smoking Prevalence Among Total Adult Population, accessed January 2022.

Total ND(L) consumption represents 0.004% of total consumption in Australia

A4 Non-domestic legal calculation (cont.)

KPMG total ND(L) calculation[(2)(3)(4)(5)(6)(a)(b)(c)]	2007	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Outbound trips (tonnes)	28.6	34.6	33.7	46.0	34.1	10.1	10.5	14.0	13.8	9.1	7.0	8.5	1.4	0.1
Inbound trips (tonnes)						11.2	15.6	20.6	24.2	19.1	13.5	14.8	5.2	0.3
Total ND(L) (tonnes)	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	0.4
ND(L) 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%**	**0.004%**

The estimate of ND(L) volumes above comprises the legitimate flows from the main source countries highlighted by the empty packs survey and represents 0.004% of total consumption. If we were to assume that all travellers from the source markets indicated by the empty packs survey purchased their full allowance, we would derive an ND(L) volume of approximately 1.1 tonnes or 0.009% of total consumption.[(7)]

Store based retailing continued to be a major distribution channel accounting for 98.7% of all sales for cigarettes and 96.7% of all sales for RYO. E-commerce remains a small channel, representing only 1.1% of sales for cigarettes and 3.2% of sales for RYO.[(1)]

Notes:
- (a) ND(L) volumes are estimated using actual travel data from January 2021 to December 2021.
- (b) ABS did not publish Short-term movement, Visitor Arrivals – Selected Countries of Residence: Trend data series in 2020 and 2021 due to COVID-19 lockdowns. We have used the Short-term movement, Visitor Arrivals – Selected Countries of Residence: Original data series for 2020 and 2021 figures.
- (c) ABS did not publish Short-term movement, Resident Returning – Selected Destinations: Trend data series in 2020 and 2021 due to COVID-19 lockdowns. We have used the Short-term movement, Resident Returning – Selected Destinations: Original data series for 2020 and 2021 figures.

Sources:
- (1) Euromonitor, Tobacco in Australia, 2021.
- (2) Australian Bureau of Statistics, Short-term movement, Residents Returning – Selected Destinations: Trend, 2013, 2014, 2015, 2016, 2017, 2018, 2019.
- (3) Australian Bureau of Statistics, Short-term Movement, Visitor Arrivals – Selected Countries of Residence: Trend, 2013, 2014, 2015, 2016, 2017, 2018, 2019.
- (4) Australian Bureau of Statistics, Permanent Movement, Settlers – Country of Birth, Major Groups and Selected Source Countries: Original, 2013, 2014, 2015, 2016, 2017.
- (5) Australian Bureau of Statistics, Short-term Movement, Visitor Arrivals – Selected Countries of Residence: Original, 2020 and 2021.
- (6) Australian Bureau of Statistics, Short-term movement, Residents Returning – Selected Destinations: Original, 2020 and 2021.
- (7) WSPM*, empty packs survey*, Q2 2021 and Q4 2021.

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 analyse 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 empty packs survey data were compiled for analysis. The list was corroborated through an analysis of IRI scan sales data[a] (and pack labelling as per empty packs survey). Empty packs survey estimated volumes were compared to legally reported sales of these brands to estimate a 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 the Illicit Consumption in the EU, Norway, UK and Switzerland report (formally Stella), KPMG has conservatively assumed that, where consumption implied by the empty packs survey 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 volume (bn sticks)	LDS volume (bn sticks)	ND volumes as a share of total consumption	Illicit White 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 IRI scan sales data reflect the sales made to consumers only.

Sources: (1) Australian Retail Tobacconist, Q4 2021.

(2) WSPM, *empty packs survey*, Q1 2020, Q4 2020, Q2 2021 and Q4 2021.

(3) MSIntelligence Research, Empty Packs 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) IRI monthly scan data, January 2021 – December 2021.

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 IRI scan data[1] (which records most brands being sold through most legitimate channels). Brands included in the 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]				
	2021 Non-domestic volume (bn sticks)	IRI scan data?	Retail tobacconist?	Illicit White brand flow
Brand A	0.02	Yes	Yes	☒
Brand B	0.15	No	Yes	☒
Brand C	0.06	No	No	☑
Brand D	0.01	Yes	No	☒
Brand E	0.01	Yes	Yes	☒

Only the brand flows which are not present in both the 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) IRI monthly scan data, January 2021 – December 2021.

(2) Australian Retail Tobacconist, Q4 2021.

(3) WSPM, *empty packs survey*, Q1 2020, Q4 2020, Q2 2021 and Q4 2021.

(4) MSIntelligence Research, Empty Packs 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.

Notes to this report

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 generates an estimate of illicit consumption that is justifiable using the current research techniques.

Whilst we believe this approach is currently the most appropriate method, we also recognise 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**

Empty packs survey	— The empty packs survey 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.
	— Whilst the empty packs survey is designed to be representative of the overall population, it is not possible to ensure the sample is fully representative because:
	  — The sample is more heavily weighted towards populous, urban areas, so in some markets the empty packs survey 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 and 2021, 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 empty packs survey 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 empty packs survey 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.

Non-major manufacturer (non-participating) counterfeit	— Empty packs survey 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. — 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. — The volume of LDC 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, KPMG believes that the presence of counterfeit is unlikely to have a major impact as counterfeit volumes in 2021 only represented a small proportion (0.70%)[2] of the total sample of the three participating manufacturers brand flows and counterfeit is typically concentrated on the most popular brands only.

Sources: (1) Australia in 2030: The Future Demographics', Euromonitor, May 2015.
(2) WSPM, *empty packs surveys*, Q2 2021 and Q4 2021

Notes to this report (cont.)

A6 Notes to this report (cont.)

Illicit tobacco in Australia	
Source	**Overview**
LDS	— There are minor variations in the LDS data provided by IRI and industry stakeholders due to small differences in the way sales data is collected (for e.g., the way data is collected from tobacconists and timings of data release). KPMG has taken IRI data directly from IRI to avoid this. — Slight timing variances may arise between the date the product was purchased and actual consumption. However, these variances are not considered significant and the 2021 LDS information we have from the industry is considered to be a good representation of the market.

Consumer surveys	— 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 consumer survey used in this report complies with all such regulations nationally.
	— Although the consumer survey is designed to be nationally representative of the population, there are certain limitations associated with consumer surveys, such as:
	  — Information obtained from a consumer survey is based on a sample rather than the entire population and therefore data is subject to sampling variability.
	— In addition, there are limitations to using a consumer survey to estimate tobacco consumption and more specifically illicit tobacco consumption:
	  — 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)
	— Recently our client has indicated that plain pack pouches have emerged as a new form of illicit consumption. Historically, this form of illicit consumption has not been captured by our analysis.

ND(L)	— We have used inbound and outbound travel data and inbound settler data from the ABS to estimate the number of trips made. — Inbound settler data was available up to June 2017, after which the ABS 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 2021 to December 2021.

Notes:
(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.

Notes to this report (cont.)

A6 Notes to this report (cont.)

Illicit tobacco in Australia	
Source	**Overview**
ND(L)	— Due to the COVID-19 lockdown, the '*trend data series*'[(3)(a)] for travel statistics was not published by the ABS in 2020 and 2021. For the purpose of our analysis the '*original data series*'[(3)(b)] published by the agency has been used for travel trends in Australia. To understand the difference between the two datasets, we compared the '*trend*' series and the '*original*' series for 2019 and noticed only a marginal difference between the two datasets. We continue to monitor the publication of travel data by ABS and shall return to the usage of the '*trend data series*' for travel statistics from next year if it is made available. — We have estimated 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 54 (check these links still apply), we feel that the volume consumed is unlikely to be material.
Outflows from Australia	— We believe that the 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	— We have used a series of external data sources to estimate illicit tobacco consumption in Australia in 2021. There are a number of limitations associated with these sources such as their infrequent updates (AIHW NDSHS 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.

The RMR survey and the AIHW survey differ in focus and methodology

A7 Alternative illicit tobacco estimates

The AIHW's 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 ABS suggested social pressures are likely to account for such under-reporting.[4]

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	— 4,990 qualified smokers	— 45,481 households
Response rates	— 88.5% (4,414 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) — 2021: 4,414 (H1: 2,248 + H2: 2,166)	— 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) RMR results for 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020 and 2021 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, H2 2020, H1 2021 and H2 2021.
(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.

The latest AIHW NDSHS results suggest reasonably similar movements in consumption

AIHW Consumer Survey approach, 2016 and 2019(1)

The 2016 AIHW NDSHS 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

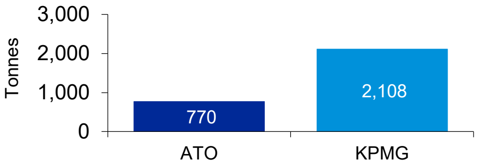
The ATO has its own calculation of illicit tobacco consumption based on a bottom-up methodology

A8 ATO methodology for calculating tax gap[1]

- **Step 1: Estimating the size of illicit tobacco market through importation**
- **Step 2: Estimating the size of domestic 'Chop Chop' cultivation**
- **Step 3: Analysing the licensed warehouse system**
- **Step 4: Comparing total illicit amounts to legal clearances**
- **Step 5: Deducting compliance and seizures to determine net tax gap**

Estimates of Illicit volume (kg '000) by ATO and KPMG in 2019-20[1][2][a][b]

The ATO estimated the amount of excise on illicit tobacco lost in 2019-20 was AUD909m, the KPMG estimate for the same period was AUD2,942m, a 224% difference.



Below we comment on the ATO methodology to understand the difference.

Commentary on ATO's approach to measuring illicit tobacco[1][2]

	ATO	KPMG comments
Step 1: Estimating the size of the illicit tobacco market through importation	— The ATO uses data from detections and inspections that have not been targeted. The ATO suggests that this helps determine a leakage rate for illicit tobacco reaching Australia. — The 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.	— The ATO does not discuss how it will evolve the leakage rate over time to effectively estimate illicit tobacco from total import volumes across these streams. — The ATO estimates total volume lost through international passenger channel as small, and is therefore excluded from its methodology. — There is a price incentive for people to smuggle cigarettes into Australia in a large number of small consignments, this process is termed as 'anti-smuggling' in Europe.[3] This might add to the illicit volume of tobacco in Australia.
Step 2: Estimating the size of domestic 'Chop Chop' cultivation	— This involves estimating the size of domestic 'Chop Chop' cultivation. All tobacco grown in Australia for consumption is illicit. — The ATO has analysed the value of seizures, risk, and intelligence referrals and created an uplift factor. This covers domestically cultivated tobacco that has not been detected or reported to authorities. This uplift was developed through referencing under-reporting of crime statistics from the Australian Institute of Criminology.	— The ATO does not explain how the uplift factor for undetected home grown tobacco will evolve over time to effectively reestimate 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) ATO's fiscal year 2019-20 began on 1 July 2019, and ended on 30 June 2020. For KPMG's corresponding analysis, we have used the tobacco taxes for 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.

The ATO has its own calculation of illicit tobacco consumption based on a bottom-up methodology (cont.)

A8 ATO methodology for calculating tax gap[1]

Commentary on ATO's approach to measuring illicit tobacco[1]		
	ATO	**KPMG comments**
Step 3: Analysing the licensed warehouse system	— 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.	— This type of illicit is not captured by our approach — As of 2017, there were no licensed warehouses in Australia. Now excise duty for tobacco is paid at the time it arrives at the Australian border.
Step 4: Compare total illicit amounts to legal clearances	— 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).	— A mathematical calculation based on steps 1-3
Step 5: Deduct compliance and seizures to determine net gap	— 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.	— A mathematical calculation based on internal ATO and Home Affairs data

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

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 Australian tobacco 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 products; and
- 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, 2020 and 2021 based on the consumer research outputs.

Methodology

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

Consumer research approach: utilising the full year 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020 and 2021 RMR report, commissioned and provided to us by our client; 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 packs survey approach: using empty packs survey 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 empty packs survey against the level of legal domestic sales in Australia; and
- 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 supplement our findings.

Questions asked by the consumer survey

A10 RMR 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 RMR 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 RMR 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?

A10 RMR questionnaire - Additional COVID questions

- Have you smoked cheap cigarettes in the last 12 months?
- If you think you might have purchased cheap cigarettes, what brands were they? Cheap cigarettes normally found in coloured packaging
- From the list below, please select the reasons why you stopped purchasing cheap cigarettes?
- 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)

Notes: (a) X denotes answer to question "How much loose unbranded tobacco did you buy? (In grams)."

Questions asked by the consumer survey (cont.)

A10 RMR questionnaire - Additional questions (cont.)

- 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?
- Are you currently? (Options provided)
- 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?

Bibliography

A11 Bibliography

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 provided by BATA, ITA and PML.
4. IRI scan data, 2020 and 2021.
5. Legal and Constitutional Affairs Legislation Committee, 23 February 2015.
6. The Treasury, Australian Government, Australian Government response to the Black Economy Taskforce Final Report, May 2018.
7. Tobacco Industry Stakeholder Group (TISG)
8. IRI (scan) databases, Volume of total manufactured cigarettes and RYO.
9. Euromonitor, Legal domestic sales (from trade sources and national statistics), accessed 2013, 2014, 2015.
10. Euromonitor, Tobacco in Australia, 2020 and 2021.
11. Excise Act 1901 (Cth) s 28.
12. Australian Taxation Office, Tobacco excise (15 September 2020).
13. Australian Border Force Tobacco portal (abf.gov.au) (Updated on 3rd August 2021).
14. Tobacco in Australia, www.tobaccoinaustralia.org.au.
15. Australian Taxation Office, New legislation: Excise and excise-equivalent customs duty – index tobacco excise to average weekly ordinary time earnings, 25 June 2013.
16. Customs Tariff Amendment (Tobacco duty harmonisation) Bill 2017.
17. Australian Bureau of Statistics, Consumer Price Index, 2022.
18. Euromonitor, Index of consumer prices; accessed December 2022.
19. Euromonitor, Annual disposable income per capita, accessed December 2022.
20. Express Digest, Surging inflation hits alcohol, cigarette and petrol prices in Australia, 2021.
21. Industry data; December 2021.
22. Foreign exchange rates as on 31st Dec 2021 from ofx.com, accessed on 28th Feb 2022.
23. Industry covert enquiries data shared by the client.
24. Goods Compliance Update February 2021, ABF.
25. Inquiry into illicit tobacco Submission 176.
26. Australian Taxation Office website, (www.ato.gov.au).
27. Department of Home Affairs Annual Report, 2020-21.
28. Department of Home Affairs website media release, November 2021.
29. Australian Taxation Office, Tobacco Tax Gap.
30. Crime syndicates target Oz with illegal tobacco as smokers look for cheap alternatives, 2022, (Goldcoastbulletin.com).
31. Australian Taxation Office, Illegal tobacco crop seized and destroyed, January 2021.
32. ACAIT, Illicit tobacco crops worth millions of dollars uncovered in Hunter Valley, February 2021.
33. Australian Taxation Office, $84.3 million in illegal tobacco seized along the NSW and VIC border in a two-day blitz, March 2021.
34. Australian Taxation Office, ABF, Queensland Police and the ATO seized around $40 million of illegal tobacco – an estimated 25 tonnes, on a property at Linthorpe, 135 km west of Brisbane, May 2021
35. Australian Taxation Office, Illegal tobacco trading (Operation Romeo Serge), Logan and South Brisbane, June 2021
36. myPolice, Illicit tobacco seizure, Gold Coast border, August 2021.

Bibliography (cont.)

A11 Bibliography (cont.)

37. AFP, Warrants executed across Melbourne as part of joint drug operation, Sept 2021.
38. ABF, Over $20 million of illicit cigarette sticks up in smoke, October 2021.
39. Foreign Affairs, MIL-OSI Australia: Three individuals arrested for illicit tobacco offences, November 2021.
40. Border Force seizes nearly half a million cigarettes in northern suburbs raids, WAToday, December 2021
41. 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, H2 2020, H1 2021 and H2 2021.
42. WSPM, empty packs survey, Q2 2019, Q4 2019, Q1 2020, Q4 2020, Q2 2021 and Q4 2021.
43. MSIntelligence Research, Empty Packs 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.
44. AC Nielsen, empty packs survey, 2009, 2010, 2012.
45. Australian Institute of Health and Welfare, National Drug Strategy Household Survey, 2007, 2010, 2013, 2016 and 2019.
46. Euromonitor, smoking prevalence, accessed January 2022.
47. Australian Bureau of Statistics, Health Condition And Risks, Smoking, 2017-18 financial year.
48. Australian Bureau of Statistics, Short-term movement, Residents Returning – Selected Destinations: Trend, 2013, 2014, 2015, 2016, 2017, 2018 and 2019.
49. Australian Bureau of Statistics, Short-term movement, Residents Returning – Selected Destinations: Original, 2020 and 2021.
50. Australian Bureau of Statistics, Short-term Movement, Visitor Arrivals – Selected Countries of Residence: Trend, 2013, 2014, 2015, 2016, 2017, 2018, 2019.
51. Australian Bureau of Statistics, Short-term Movement, Visitor Arrivals – Selected Countries of Residence: Original, 2020 and 2021.
52. Australian Bureau of Statistics, Permanent Movement, Settlers – Country of Birth, Major Groups and Selected Source Countries: Original, 2013, 2014, 2015, 2016, 2017.
53. Euromonitor, Population: National Estimates, accessed January 2022.
54. Euromonitor, Smoking Prevalence Among Total Adult Population, accessed January 2022.
55. Euromonitor, Tobacco in Australia, August 2016, July 2018, July 2019, July 2020 and July 2021
56. Australian Retail Tobacconist, Q4 2021.
57. Australia in 2030: The Future Demographics', Euromonitor, May 2015.
58. Temporal changes of under-reporting of cigarette consumption in population-based studies, Gallus et al, 2011.
59. ABS website, Methods, Classifications, Concepts & Standards.
60. 'Profiles of Health, Australia, 2011-13 – Tobacco Smoking', Australian Bureau of Statistics, June 2013.
61. KPMG Illicit Tobacco Report for 2015.
62. 'Cigarette smuggling in Europe: who really benefits?', Luk Joossens, Tobacco Control.

kpmg.com/uk