KPMG

Illicit tobacco in New Zealand

2017 Full Year Report

25 May 2018

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Important notice

This presentation of key findings (the 'Report') has been prepared by KPMG LLP in the UK ('KPMG UK') for Imperial Tobacco New Zealand Limited, described in this Important Notice and in this Report as the 'Beneficiary', on the basis set out in a private contract dated 21 February 2017 agreed separately with the Beneficiary.

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

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

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

Glossary

ASH	Action on Smoking and Health
BATNZ	British American Tobacco (New Zealand) Limited
CAGR	Compound Annual Growth Rate
CATI	Computer Aided Telephone Interview
CAWI	Computer Aided Web Interview
CCA	Customs controlled area - a secure and controlled environment in which the activities that take place are monitored or conducted by Customs. This includes places where goods are inspected and where duty free or excisable goods are manufactured, sold or stored
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 New Zealand this limit is 50 cigarettes or 50 grams of RYO per person
Counterfeit	Manufactured cigarettes that are illegally manufactured and carry the trademark and/or branding of a legally manufactured brand without the consent of the trademark owner. Counterfeit cigarettes are also known as fake cigarettes. For the purposes of this analysis, data relating to counterfeit is not included within the definition of contraband
CPI	Consumer Price Index
Domestic cigarettes	Cigarettes that are produced for consumption in New Zealand
Domestic Illicit Whites	Flows of Illicit White brands that have packaging designed for the domestic New Zealand market
EoS	Exchange of sales is shipment data 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 three manufacturers
EPS	Empty pack survey
EY	Ernst & Young
FCT	Fine cut tobacco
FMC	Factory manufactured cigarettes
g	Gram
GDP	Gross Domestic Product
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 New Zealand, where they have limited or no legal distribution and are sold without the payment of tax. These flows include Domestic Illicit Whites and Illicit Whites (non-domestic)
Illicit Whites (non-domestic)	Flows of Illicit White brands that originate from countries other than New Zealand

Glossary

Inflows	Total volume of cigarettes coming into New Zealand
ITNZ	Imperial Tobacco New Zealand
kg	Kilogram
LDC	Legal domestic consumption
LDS	Legal domestic sales
Loose tobacco	Loose leaf tobacco sold in pouches used in roll your own (RYO) cigarettes, which is consumed using rolling papers or tubes
LTM 2017	Last twelve months, which refers to the last twelve months to the end of December 2017
m	Million
MOH	Ministry of Health
MSI	MSIntelligence
ND(L)	Non-domestic legal is the legitimate tobacco purchased in duty free or abroad within personal allowance limits.
OECD	Organisation for Economic Cooperation & Development
Outflows	Legitimate tobacco purchase in New Zealand and taken abroad
PDI	Personal disposable income
PML	Philip Morris Limited
Pp	Percentage point
Project Sun	A study of the illicit cigarette market in the European Union by KPMG
RRP	Recommended retail price
RYO	Roll your own cigarettes which have been rolled by consumers using loose tobacco
SFEA	Smoke-free Environments Act
Tobacco grown at home	Home grown tobacco which has been consumed by the grower (legal). In New Zealand it is currently permitted for adults to grow unlimited amounts of tobacco and manufacture up to 15 kilograms of tobacco per year, provided it is exclusively for their personal use
Tobacco returns	Tobacco sales data provided to the Ministry of Health by all tobacco importers and manufacturers, made publicly available and used by KPMG to determine legal domestic sales volumes
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 or inserted into empty cigarette tubes, although according to the industry, there is limited evidence of the use of tubes in New Zealand. Unbranded tobacco can come from either imported product which enters New Zealand illegally, or through tobacco which is grown in New Zealand, but has been sold or given away illegally.
Unspecified	Cigarette packs that do not bear specific market labelling or duty free labelling

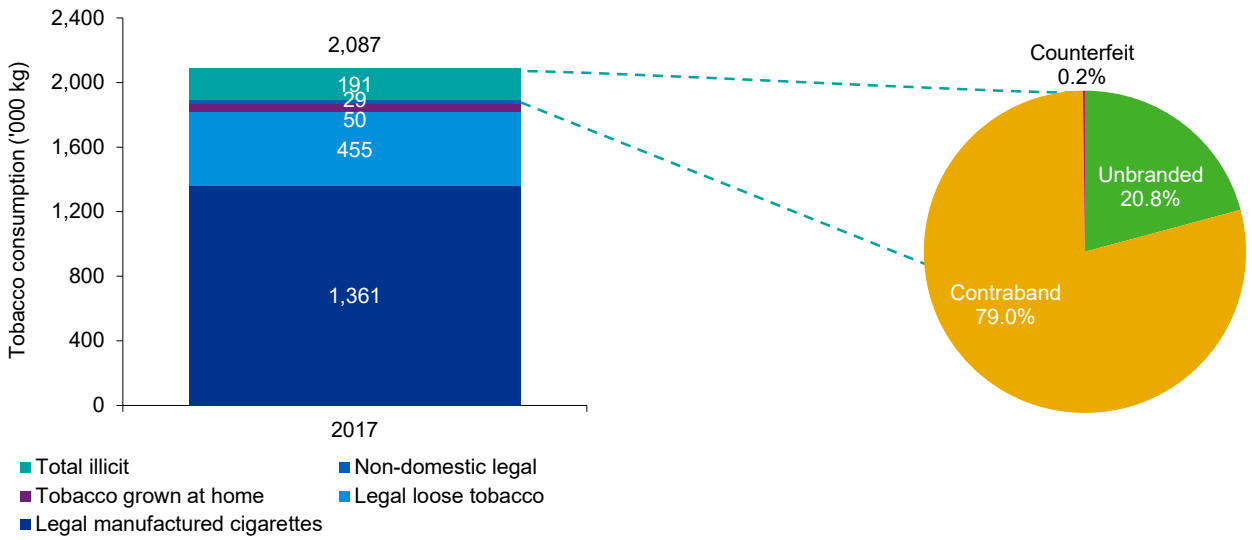
Contents (title only)

1. Executive summary and key findings

Illicit consumption is estimated to be 9.2% of total consumption

1.1 Key messages

Figure 1.1: Consumption of tobacco products in New Zealand 2017[(1)(2)(a)]



Tobacco consumption in New Zealand

- The total volume of tobacco consumption in New Zealand was estimated to be 2.1 million kg in 2017.
- Approximately 9.2% of total consumption (or 0.2 million kg) was estimated to be illicit.
- If this 0.2 million kg of illicit tobacco had been consumed legally, it would have represented an estimated excise value of NZD 181.7 million.[(a)]
- Approximately 2.4% of total consumption (or 0.05 million kg) was estimated to be the consumption of tobacco grown at home.

Consumption of illicit manufactured cigarettes

- The share of contraband consumption in total illicit tobacco consumption was estimated to be 79.0% (approximately 0.2 million kg) in 2017.
  - Flows of Australian and Chinese labelled packs accounted for the majority of non-domestic flows. Almost half of the flows originating from Australia were not compliant with the Australian plain packaging requirements, indicating that these flows were illicit.
  - Flows of Marlboro constituted the largest brand share of non-domestic cigarettes, accounting for 3.3% of total manufactured cigarette consumption.
- Counterfeit represented a very small proportion of the illicit consumption, accounting for 0.2% of total illicit consumption.
- Approximately 1.5% of total illicit consumption was estimated to be Illicit Whites (included within contraband) - 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 New Zealand, where they have limited or no legal distribution.

Consumption of unbranded tobacco

- Unbranded tobacco consumption accounted for approximately 20.8% of total illicit consumption in 2017.

Note: (a) Calculated based on the excise tax rate for 2017, i.e., $ 783.13 per 1,000 cigarettes and $1,051.83 per kilo tobacco content.
Sources: (1) Industry data; see specific report sections for further detail.
(2) KPMG analysis.

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

1.2 The purpose of this report

Imperial Tobacco New Zealand Limited (ITNZ) has commissioned KPMG UK to estimate the size of the consumption of illicit tobacco in New Zealand. The purpose of this report is:

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

This full year 2017 report measures the consumption of illicit tobacco in New Zealand. It reports on events occurring during the twelve month period from January 2017 through to December 2017. This 2017 report is produced using a methodology in line with previous KPMG illicit tobacco measurement, including KPMG's 'Illicit Tobacco in Australia' reports.

1.3 KPMG LLP's anti-illicit tobacco experience

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

Our work was pioneered in Europe where we have published an annual report on illicit cigarette consumption since 2006. In 2013, it was conducted on a pan-industry basis for the first time, being jointly commissioned by British American Tobacco Plc, Imperial Tobacco Limited, JT International SA and Philip Morris International Management ('Project SUN'). The study included all 28 European Union Member States (with previous reports covering all member states at that point in time). Project SUN was conducted for the second time in 2014, the first occasion on which the study also included the non-EU markets of Norway and Switzerland.

Since 2017, Project Sun has been commissioned by the Royal United Services Institute, an independent think-tank focused on defence and security research.

Source: (1) OECD Task Force of Charting Illicit Trade, 2013.

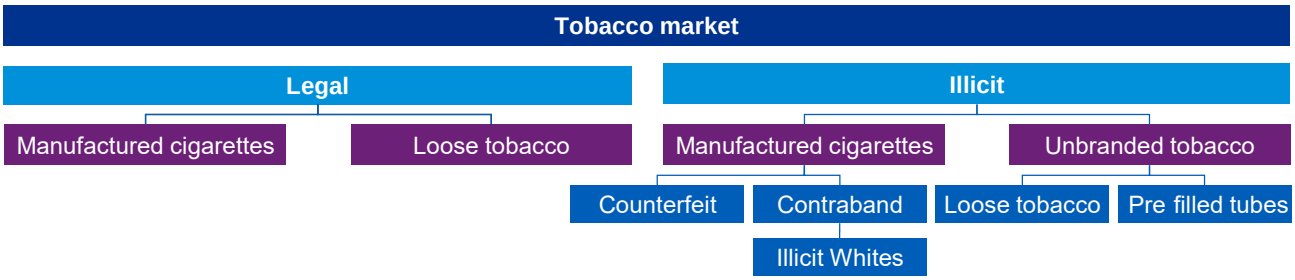
2. New Zealand tobacco market

Both the legal and illicit markets are characterised by the consumption of manufactured cigarettes and loose tobacco

2.1 Tobacco consumption in New Zealand

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

Figure 2.1: New Zealand tobacco market map



Legal tobacco products

There are two types of tobacco products considered in total tobacco consumption:

Manufactured cigarettes - (also known as 'FMC') made for the tobacco market and sold in packets.

Loose tobacco - Loose leaf tobacco sold in pouches used in roll your own (RYO) cigarettes, which is consumed using rolling papers or tubes.

In addition to loose leaf manufactured tobacco, tobacco is also legally consumed through **tobacco grown at home**; a feature of the New Zealand market. Smokers may legally grow unlimited amounts of tobacco and manufacture up to 15 kilograms of processed tobacco at home for personal consumption.[(a)]

Additional legal consumption is possible in the form of non-domestic legal product, that is tobacco purchased by consumers in other countries and imported into New Zealand legally for personal consumption (e.g. under the duty free allowance for travellers).[(b)] This report does not consider any other tobacco products such as cigars, pipe tobacco, shisha, chewing tobacco or e-cigarettes.

Illicit tobacco products

As shown in figure 2.1, the types of tobacco products considered in illicit tobacco consumption are counterfeit cigarettes, contraband cigarettes and unbranded tobacco.

Illicit tobacco is either brought into the country illegally from overseas markets or grown illegally within New Zealand. This tobacco is usually sold to consumers below the recommended retail price in New Zealand, avoiding New Zealand tax obligations, or is brought into the country in amounts exceeding the allowable personal limit.

Counterfeit

These are manufactured cigarettes. They are generally manufactured overseas in countries with large scale tobacco production and sophisticated tobacco manufacturing machinery. Once manufactured they are illicitly smuggled into New Zealand most commonly via ports on large container freight and other channels including airmail and online purchases.

These products have been manufactured without the consent of the trademark owner.

Contraband

These are mainly genuine cigarettes that are manufactured legally outside of New Zealand, compliant with local regulations, and then smuggled into the New Zealand market. This also includes cigarettes which are purchased legally outside New Zealand but exceed the personal import allowance and have no duty paid.

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 New Zealand, where they have limited or no legal distribution and are sold without the payment of tax. Illicit Whites cigarettes have been included in our analysis of contraband.

Unbranded tobacco

Unbranded tobacco is illegal loose leaf tobacco upon which no duty has been paid and which carries no labelling or health warnings. Unbranded tobacco can come from either imported product which enters New Zealand illegally, or through tobacco which is grown in New Zealand, but has been sold or given away illegally. Unbranded tobacco is typically sold in bags as loose tobacco, or can be sold in boxes of pre-rolled tubes. According to the industry, there is limited evidence of the use of tubes in New Zealand.

The product carries no labelling or health warnings and is consumed in roll your own (RYO) form or inserted into empty cigarette tubes and sold in boxes, this product is then sold either in bags or pre-rolled tubes.

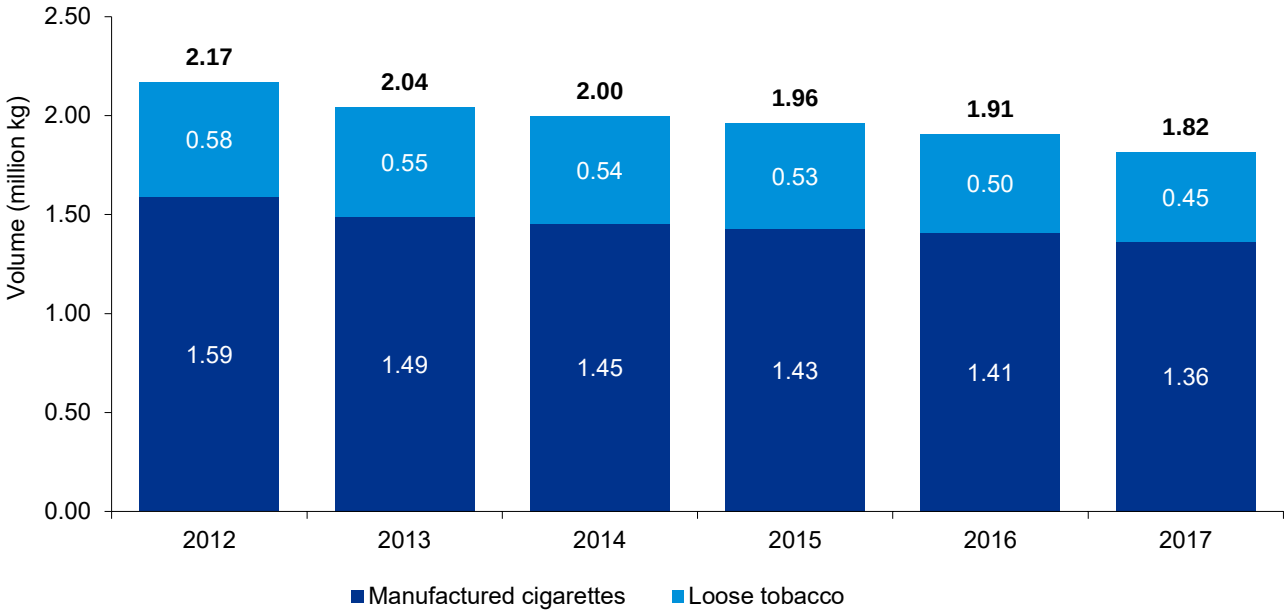
Notes: (a) A reduction in the home grown tobacco limit from 15kg to 5 kg under the Customs and Excise Bill received the Royal Assent on 29th March 2018. However, there is no clarity on when the bill will be implemented.

(b) Maximum duty free allowance of tobacco is 50 cigarettes or 50 grams of tobacco products in New Zealand.

Legal domestic sales have declined at a rate of 3.5% per year since 2012

2.2.1 Legal tobacco market

Figure 2.2.1a: Historic legal domestic sales[1][2][a][b][c][d]



	2012 – 2017 CAGR	2016 – 2017 growth rate
Manufactured cigarettes	(3.1)%	(3.4)%
Loose tobacco	(4.7)%	(8.7)%
Total market	**(3.5)%**	**(4.8)%**

The legal tobacco market in New Zealand is comprised of manufactured cigarettes and loose tobacco. Legal sales of both manufactured cigarettes and loose tobacco have been in decline since 2012. The reduction in the consumption of loose tobacco has been faster than the decline experienced by manufactured cigarettes for the past three years.

The decline in legal domestic sales accelerated in 2017 with manufactured cigarettes declining at 3.4% p.a. (versus a trend of -3.1%) and loose tobacco declining at 8.7% (versus a trend of -4.7%) since 2016.

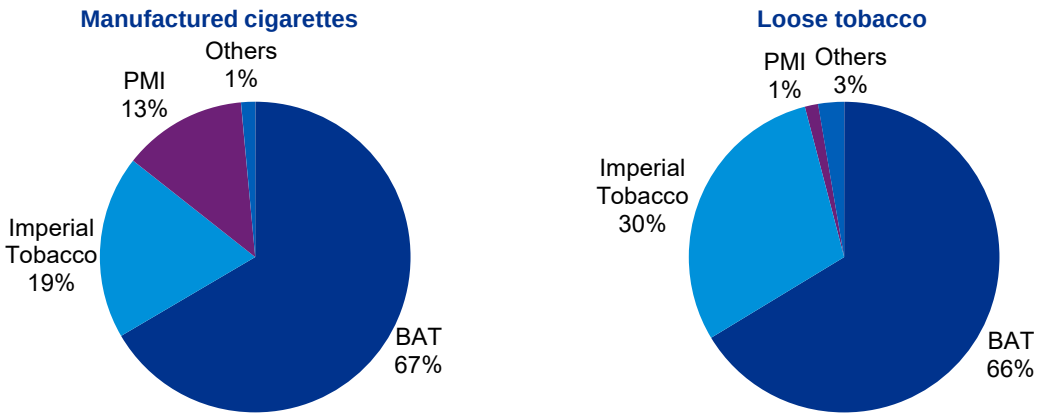
Notes: (a) Conversion of cigarettes to kilograms is based on 0.80 grams = 1 manufactured cigarette, as per the official rates used for New Zealand excise duty purposes.
(b) Duty free sales are not included as part of total sales volumes.
(c) Last Twelve Months January 2017 to December 2017.
(d) Numbers in the above chart may not sum due to rounding.

Sources: (1) KPMG analysis of Aztec IRI – EoS data, 2012 - 2017.
(2) New excise duties rates for tobacco and tobacco products, New Zealand Customs Service.

The top three manufacturers account for over 95% of legally purchased tobacco consumed in New Zealand

2.2.2 New Zealand legal tobacco competitive overview

Figure 2.2.2a: Market share by manufacturer, 2016(1)



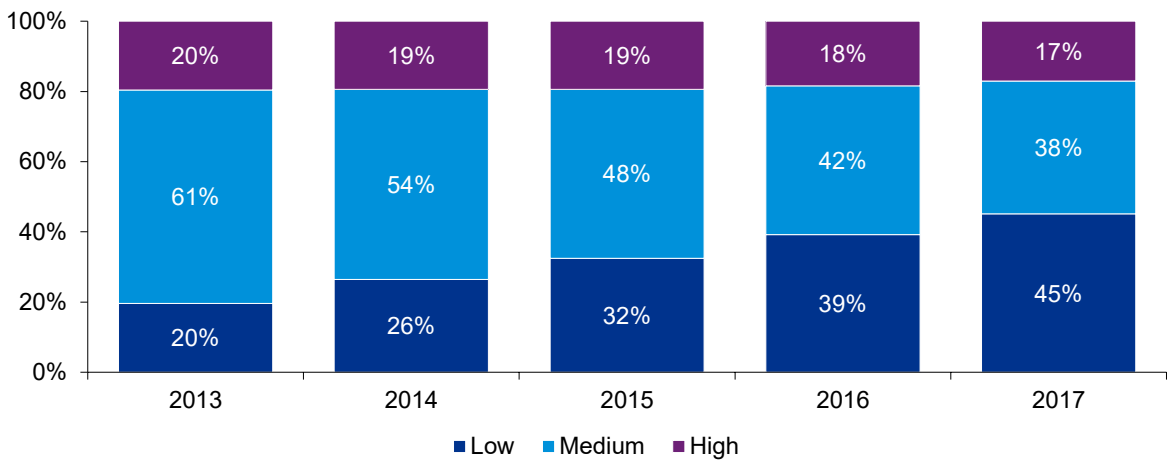
Total market: 1.79 billion cigarettes

Total market: 511,846 kilograms

Market share

The three major tobacco manufacturers have large shares across both the manufactured cigarette and loose tobacco market in New Zealand. British American Tobacco New Zealand (BATNZ) has the largest market share across both.

Figure 2.2.2b: Market share of cigarettes by price category, 2013 - 2017(2)(3)(a)



Price category

Since 2013, economy cigarettes have more than doubled their market share at the expense of mid-priced and premium cigarettes as some people are switching to cheaper options. In 2017, economy cigarettes became the largest segment with a market share of 45%.

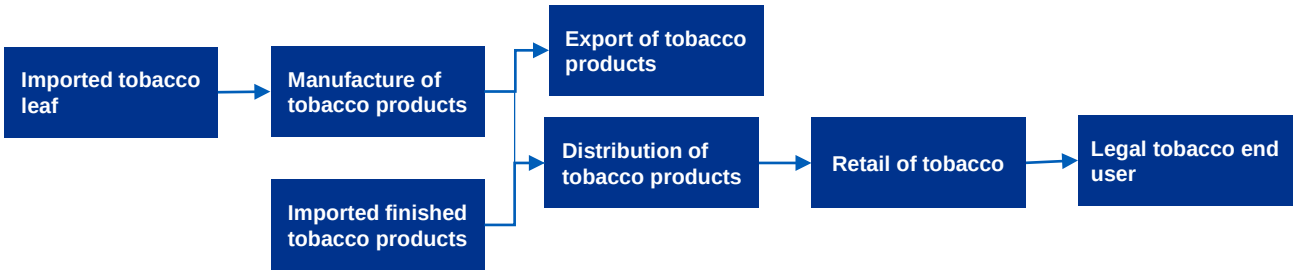
Note: (a) Based on Euromonitor's price point categorisation which is based on RRP of each brand relative to other brands.

Sources: (1) Tobacco Returns, Ministry of Health, 2016.
(2) Scan sales data by value and volume, 2013-2017.
(3) Euromonitor, Cigarettes in New Zealand, July 2017.

All commercially sold tobacco products are manufactured from imported leaf

2.2.3 Supply and distribution of legal manufactured tobacco in New Zealand

Figure 2.2.3a: Supply chain for legal tobacco products in New Zealand, 2017



Distribution and sales channels

All manufactured tobacco products are imported into New Zealand as tobacco leaf or finished products. No tobacco is legally grown in New Zealand for commercial purposes. The manufacturing process, which requires a license from the New Zealand Customs Service requires the payment of additional excise duties. Some of the products manufactured in New Zealand are exported.

Non-domestic legal consumption channel and outflows

A small amount of tobacco is imported into New Zealand by consumers for their own personal consumption. Consumers have a limit of 50 cigarettes or 50g of rolling tobacco or a mixture of cigarettes or rolling tobacco that weighs not more than 50g which can be brought in without paying excise duty. This volume can be brought in from the country of origin or through duty free sales channels which are available on leaving and re-entering New Zealand.[1] The non-domestic legal volume is likely to be a small proportion of consumption and is discussed further in the appendix A4.[a]

Note: (a) Non-domestic legal is estimated to be 29.4 tonnes of tobacco or 1.4% of total consumption in 2017.
Source: (1) New Zealand Government, Arriving in NZ, accessed April 2018.

In New Zealand, tobacco can be legally grown and manufactured at home for personal use

2.3 Home grown tobacco

Legal growing allowance

In New Zealand it is permitted for adults to grow unlimited amounts of tobacco and manufacture up to 15 kilograms of tobacco per year, provided it is exclusively for their personal use. The *Customs and Excise Act 1996*[(1)] allows tobacco to be manufactured for personal use provided that the individual grower is aged over 18, grows the tobacco on their own land and does not sell or dispose the tobacco to any other person. No excise duty will be charged to anyone growing tobacco for their own personal consumption if they do not manufacture more than 15 kilograms.

Figure 2.3: New Zealand home grown tobacco supply chain[(1)]

Figure 2.3 illustrates the four phases of a typical home grown tobacco supply chain:

1 Purchase of tobacco seeds/plant

Individuals can typically buy tobacco seeds from local garden centres, nurseries or over the internet.[(2)] It is not a requirement to pay excise duties on tobacco seeds. A pack of 1,000 seeds is likely to cost no more than NZD10 over the internet.[(3)] Seeds are readily available through online sellers, who harvest their tobacco seeds from excess tobacco plants.

2 Cultivation on own land

There is no limit on the amount of tobacco plant that can be grown by home growers, as long as it is grown on the consumer's land. In practice, tobacco plants can grow to between six and seven feet and therefore growing is likely to be limited to smokers that have enough outdoor space.

3 Manufacture at consumer's property

Growers may 'manufacture' up to 15 kilograms of tobacco per year as long as this is for their own personal consumption.[(a)] The manufacturing process involves harvesting, curing, cutting, pressing, grinding, crushing, or rubbing raw or leaf tobacco.[(4)] This process can take up to a year before the leaf can be cut into strips that can be rolled into cigarettes. The space required to hang and dry the tobacco leaf, along with the time taken before the tobacco is ready for consumption, is likely to further limit the number of legal home growers.

4 Personal consumption

Home grown tobacco is strictly for personal consumption and may not be sold or given away. If the entire 15 kilogram allowance was smoked, KPMG estimate that this would equate to approximately 82 rolled cigarettes per day, depending on the amount of tobacco used in each cigarette.

Note: (a) A reduction in the home grown tobacco limit from 15kg to 5 kg has been proposed under the Customs and Excise Bill which received the Royal Assent on 29th March 2018. However, there is no clarity on when the bill will be implemented. See page 20 for further detail.

Sources: (1) New Zealand Parliamentary Counsel Office, Customs and Excise Act, 1996.
(2) Kantar New Zealand, Consumer Survey: Quantitative and Qualitative Findings, July 2013.
(3) Review of prices on trademe.co.nz.
(4) New Zealand Parliamentary Counsel Office, Custom and Excise Bill.

3. New Zealand macroeconomic environment

New Zealand recovered quickly from a decline in growth in 2008 and has comparatively low levels of unemployment

3.1 Macroeconomic context

This section provides background on the New Zealand economy. Significant changes in gross domestic product (GDP) growth, unemployment, personal disposable income or inflation could impact consumer behaviour and subsequently tobacco consumption.

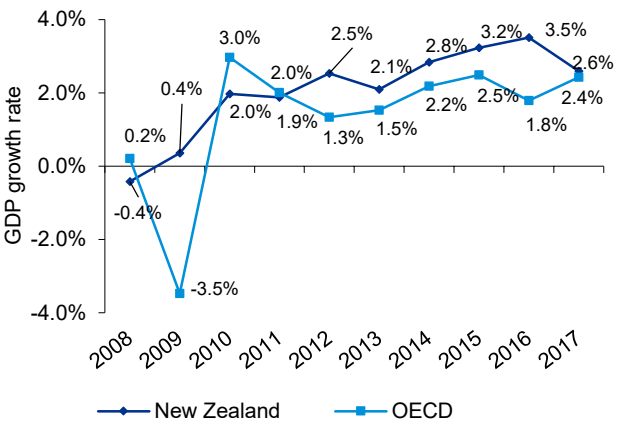
The decline in legal domestic sales since 2012 needs to be examined in the context of the affordability of tobacco products. Personal disposable income (PDI) and the consumer price index (CPI) are examined in order to assess possible reasons for changes to consumer behaviour.

3.2 Gross domestic product growth

The New Zealand economy contracted by 0.4% between 2007 and 2008 during the global financial crisis but has since recovered with GDP exceeding 2007 levels since 2010.

New Zealand has been among the fastest growing developed economies in recent years. Between 2008 and 2017, the economy grew at a compound annual growth rate (CAGR) of 2.7%, with the growth rate in 2017 of 2.6% higher than the OECD growth rate for nine of the past ten years.

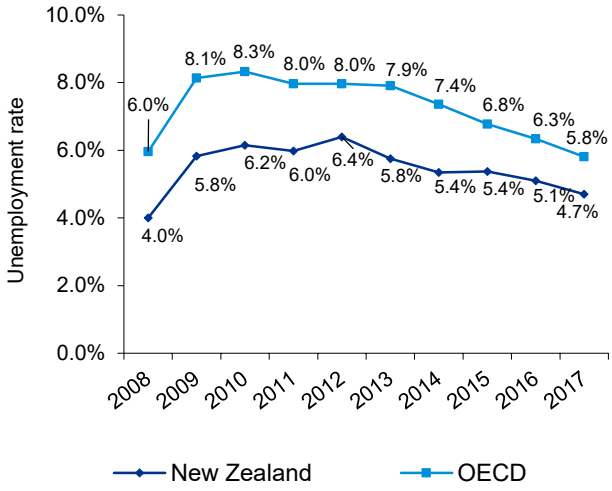
Figure 3.2: Year on Year GDP growth, 2008 - 2017[2][3][a][b]



3.3 Unemployment

The New Zealand unemployment rate peaked at 6.4% in 2012, but has decreased over the past five years. New Zealand's unemployment rate is low in comparison with the OECD average; 1.1 percentage points below the OECD average in 2017.[4]

Figure 3.3: Recorded unemployment, 2008 - 2017[4][5][a][b]



Notes: (a) Historical numbers have been updated and have been based on data from the Economist Intelligence Unit.
(b) Figures for 2017 are based on full year estimates.

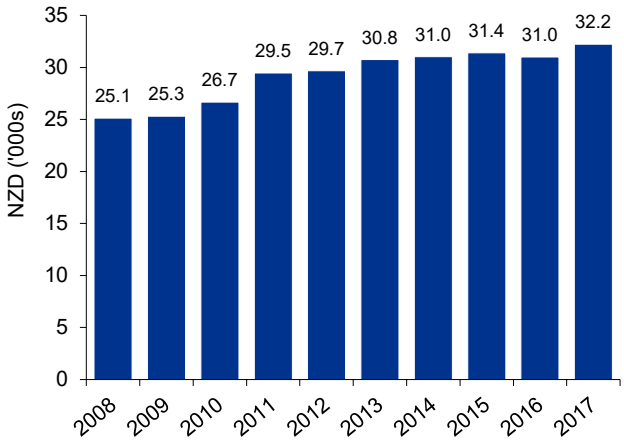
Sources: (1) OECD, Economic forecast summary – New Zealand (November 2017).
(2) The Economist Intelligence Unit, GDP at constant prices, accessed January 2018.
(3) OECD, GDP (expenditure approach), accessed January 2018.
(4) The Economist Intelligence Unit, recorded unemployment as a percentage of total labour force, accessed January 2018.
(5) OECD unemployment rates, accessed January 2018.

Personal disposable incomes in New Zealand showed an increase in 2017 following a slight reduction in 2016

3.4 Personal disposable income per capita

New Zealand experienced consistently increasing Personal Disposable Income (PDI) per capita between 2008 and 2015 with a CAGR of 3.2%. Although there was a decrease in PDI per capita between 2015 and 2016 of 1.3%, this is estimated to have recovered and further increased in 2017.

Figure 3.4: Personal disposable income per capita 2008 - 2017[(1)(a)]

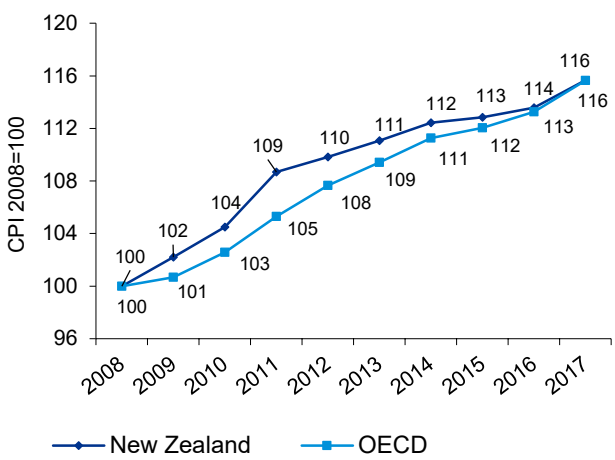


3.5 Consumer price index

New Zealand's CPI has grown consistently since 2007. This is similar to the OECD average, although New Zealand experience slightly higher CPI growth between 2008 and 2011.

Inflation fell between 2011 and 2015 due to lower prices of dairy products and fuel. However, inflation is estimated to have reached a six year high in 2017 as a result of rising fuel, food and housing prices.[(2)(3)]

Figure 3.5: Consumer Price Index 2008 - 2017[(4)(5)(a)]



Note: (a) 2017 data is based on latest available estimates.

Sources: (1) Euromonitor, annual disposable income per capita, accessed January 2018.
(2) Euromonitor, Economy, Finance and Trade: New Zealand: August 2017.
(3) Statistics New Zealand, Consumer Prices Index: September 2017 quarter.
(4) Euromonitor, Index of consumer prices, accessed January 2018.
(5) OECD Economics, Consumer prices, accessed January 2018, rebased to 2008.

4. Regulation and taxation

Successive governments have applied additional tobacco regulations in order to reduce smoking prevalence (1 of 2)

4.1 Tobacco regulation in New Zealand

Introduction

In this section we discuss major pieces of government legislation and activities undertaken in order to control tobacco.

Regulation of the tobacco industry has steadily increased since the 1960s after advertising on television and radio was banned in 1963.(1) New Zealand was one of the first countries to introduce health warnings on cigarette packets in 1974(2) and has continued to adopt new tobacco regulations.(3)

In 2010, a Parliamentary inquiry was conducted by the Māori Affairs Select Committee into the tobacco industry in Aotearoa and the consequences of tobacco use for Māori.(4) In response to the recommendations in that Committee's report(5) the Government adopted a goal known as 'Smokefree 2025'(6). The first recommendation agreed by the Government was to 'set specific mid-term targets as a means to ensure meaningful progress towards the longer term goal of making New Zealand essentially a smokefree nation by 2025'.(7) However, the term 'smokefree' is 'used to communicate an aspirational goal and not a commitment to the banning of smoking altogether by 2025'.(8)

Smoke-free Environments Act 1990 ('SFEA')

Enacted in 1990, SFEA's purpose was to reduce exposure of non-smokers, regulate the marketing and advertising and promotion of tobacco products, monitor and regulate the presence of harmful constituents in tobacco products and smoke and establish funding mechanisms to replace tobacco sponsorship.

SFEA provides firstly for smoke-free workplaces and public areas.(9) With some exceptions, SFEA bans smoking in workplaces and at schools and early childhood education and care centres.(10) SFEA also prohibits smoking on aircraft, passenger service vehicles and areas that are not open in licensed premises, restaurants, casinos and gaming machine venues.(11)

SFEA secondly imposes controls on the marketing, advertising and promotion of tobacco products and sponsorships by the tobacco industry.(12) These controls include a ban on tobacco product supplies to people who are under 18,(13) regulations imposing health warning labelling requirements for tobacco packages,(14) tobacco product display and point of sale restrictions,(15) and annual tests of constituents of manufactured cigarettes and their smoke.(16)

Local authority smokefree policies

Local authorities have sought to create smokefree public areas. For example, in 2013 Auckland Council adopted a smokefree policy extending to parks and other outdoor places. From November 2017, the Auckland Council started focusing on identifying activities to make further public spaces smokefree including plazas, outdoor dining areas and beaches.(17)

Increases in excise duty

The Excise and Excise-equivalent Duties Table (Tobacco Products) Amendment Act 2010 came into force on 29 April 2010. This legislation effectively increased the excise on tobacco in addition to the annual indexation increase based on the movement of Consumer Price Index.(18) One of the purposes of this Act was to increase by 15% the duties on loose tobacco and on higher weight manufactured cigarettes to align those duties by weight with the duties on lower weight manufactured cigarettes.(19) On the same date and on top of this alignment, the legislation increased by 10% the duties on all tobacco products, resulting in a one-off 25% increase of these duties.(20) Two further cumulative 10% increases followed under the legislation in 2011 and 2012.(21)

Sources:
(1) Ministry of health, Tobacco control – New Zealand context (1 August 2016) Ministry of Health.
(2) Ibid.
(3) For recent examples, see Smoke-free Environments (Tobacco Standardised Packaging) Amendment Act 2016 and Smoke-free Environments Regulations 2017.
(4) Māori Affairs Committee, House of Representatives, Inquiry into the tobacco industry in Aotearoa and the consequences of tobacco use for Māori (2010).
(5) Ibid, 5 and 10.
(6) New Zealand Government, Government Response to the Report of the Māori Affairs Committee on its Inquiry into the tobacco industry in Aotearoa and the consequences of tobacco use for Māori (Final Response) (2011), 4-5.
(7) Ibid, 4.
(8) Māori Affairs Committee, above no 4, 10.
(9) SFEA pt 1.
(10) SFEA ss , 5A, 6 and 7A.
(11) SFEA ss 8, 9, 12, 13, 13A and 13B.
(12) SFEA pt 2.
(13) SFEA ss 30 and 30AA.
(14) Smoke-free Environments Regulations 2007 pt 2.
(15) SFEA ss 22, 23 and 23A.
(16) SFEA s 33 and Smoke-free Environments Regulations 2007 cl 28 and 29.
(17) Auckland Council, Implementation Plan of the Council's Smokefree Policy 2017-2025 (October 2017), 1-2.
(18) Excise and Excise-equivalent Duties Table (Tobacco Products) Amendment Act 2010 s 5 and Schedule.
(19) Excise and Excise-equivalent Duties Table (Tobacco Products) Amendment Act 2010 s 3(a).
(20) Excise and Excise-equivalent Duties Table (Tobacco Products) Amendment Act 2010 s 3.
(21) Excise and Excise-equivalent Duties Table (Tobacco Products) Amendment Act 2010 s 3(b).

Successive governments have applied additional tobacco regulations in order to reduce smoking prevalence (2 of 2)

Increases in excise duty (cont.)

With the commencement of the Customs and Excise (Tobacco Products – Budget Measures) Amendment Act 2012, a further 4 cumulative 10% increases were made to the duties on all tobacco products for 2013, 2014, 2015 and 2016.(1) The Government continued this trend with the Customs and Excise (Tobacco Products – Budget Measures) Amendment Act 2016 which imposed yet another 4 cumulative 10% increases to the duties on all tobacco products for 2017, 2018, 2019 and 2020.(2)

Standardised packaging

On 14 March 2018, the Smoke-free Environments (Tobacco Standardised Packaging) Amendment Act 2016 and new Regulations(3) came into force and require the standardised appearance of tobacco products and packages.(4)

These laws only permit packages that have outer surfaces with a matt Pantone 448C background colour.(5) Limitations as to the features and dimensions of, and the content in the packages (20 or 25 cigarettes, or 30 or 50g manufactured tobacco) apply under these laws.(6) The laws also impose restrictions on the permitted characteristics of cigarettes and tobacco.(7)

These standardised packaging laws increase the size of messages required on tobacco packages relating to the harmful effects of tobacco products.(8) In addition, the laws tightly control the displays of other information on the packaging. The controls include limiting text and alphanumeric markings to a single Pantone Cool Gray 2C colour, a normal weighted Lucida sans typeface, and prescribed punctuation.(9) These controls in particular affect brand and variant names, which also must comply with restrictions on where and how they may appear on the packaging.(10)

4.2 Future legislation

Reduction in home grown allowance

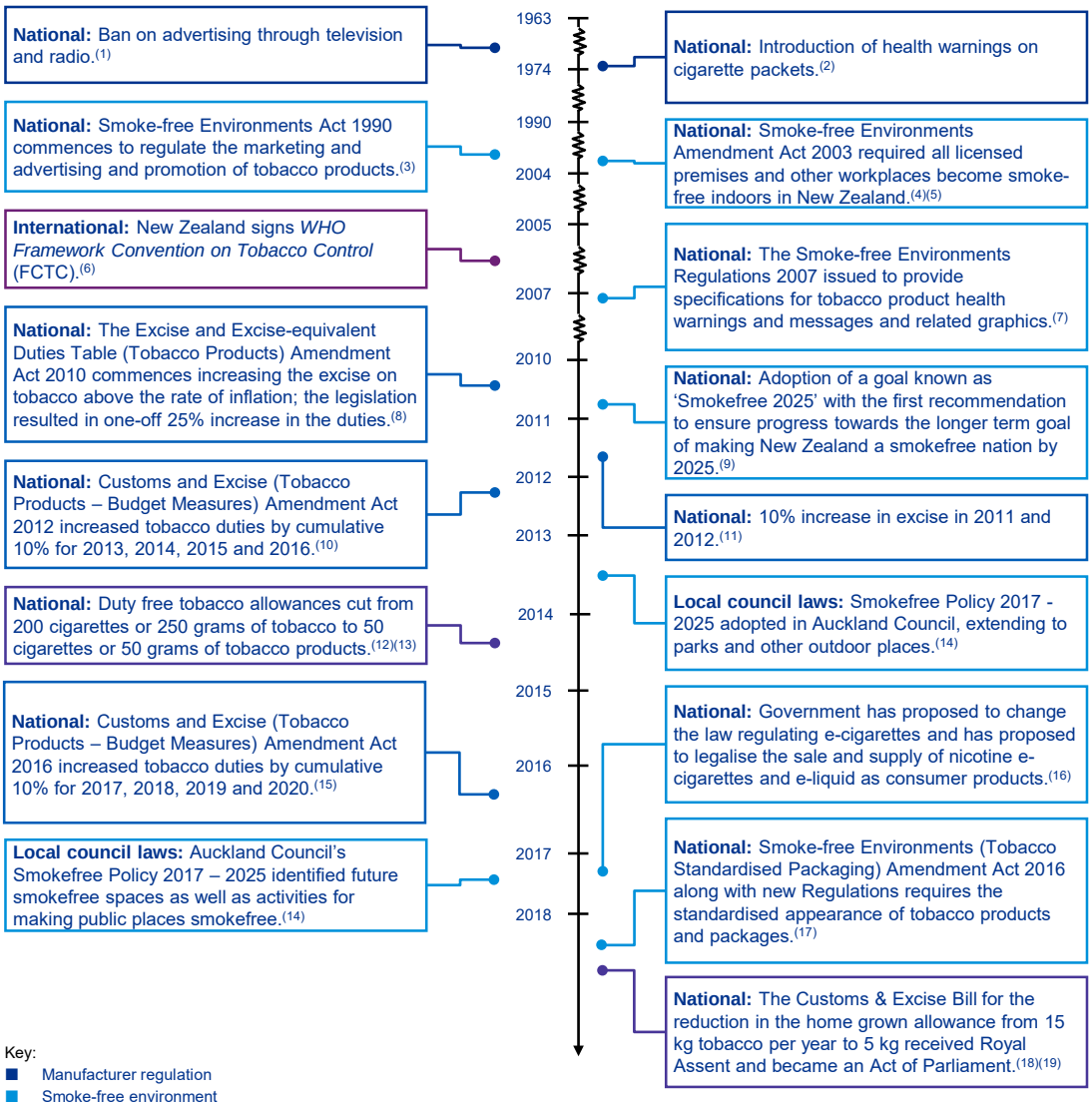
The Customs & Excise Bill for the reduction in the home grown allowance from 15 kg per year to 5 kg per year received Royal Assent and became an Act of Parliament on 29 March 2018.(12) It has not been confirmed when the bill will be implemented.

According to Customs the future legislation will not affect most people who legitimately grow and manufacture tobacco for their own use; the allowance of 5kg a year equates to 19 - 34 cigarettes a day, whilst the average roll your own smoker consumes 14 cigarettes a day.(11)

Sources:
(1) Customs and Excise (Tobacco Products – Budget Measures) Amendment Act 2012 s 4.
(2) Customs and Excise (Tobacco Products – Budget Measures) Amendment Act 2016 ss 4 and 5.
(3) Smoke-free Environments Regulations 2017.
(4) Smoke-free Environments (Tobacco Standardised Packaging) Amendment Act 2016 ss 2 and 6 and Smoke-free Environments Regulations 2017 cl 2.
(5) Smoke-free Environments Regulations 2017 cl 38.
(6) Smoke-free Environments Regulations 2017 cl 39-41 and 44-51.
(7) Smoke-free Environments Regulations 2017 cl 29, 30, 42 and 43.
(8) Smoke-free Environments Regulations 2017 pt 1 and Schedule 3.
(9) Smoke-free Environments Regulations 2017 cl 31.
(10) Smoke-free Environments Regulations 2017 cl 32.
(11) New Zealand Treasury, Customs and Excise Act review: Changes to Tobacco Excise, 15 September 2015.
(12) New Zealand Parliament, Customs and Excise Bill.

A number of regulations have been imposed to reduce smoking in New Zealand

Figure 4.1: Tobacco regulation timeline in New Zealand, 1963 – 2018

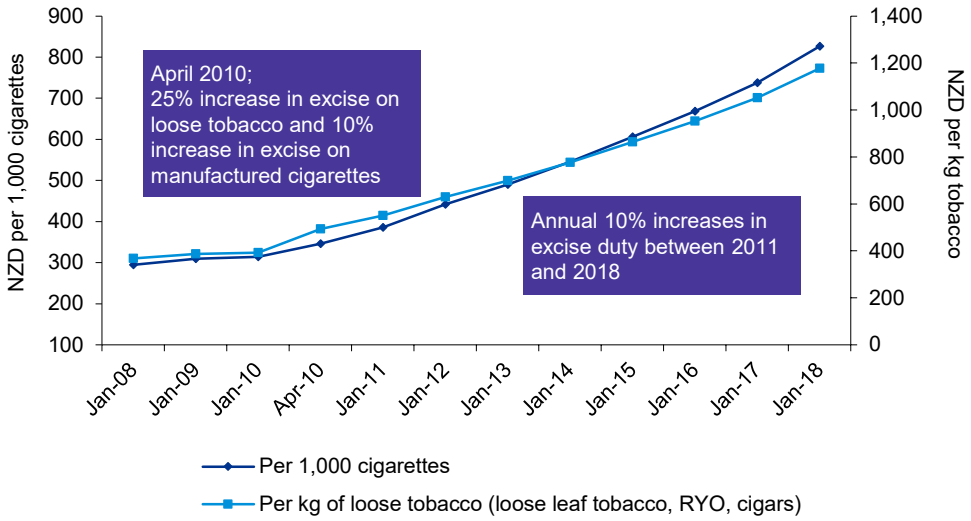


Sources:
(1) Ministry of health, Tobacco control – New Zealand context (1 August 2016) Ministry of Health.
(2) Ibid.
(3) SFEA pt 1.
(4) Ministry of Health, Tobacco control – New Zealand context, accessed March 2018.
(5) Ministry of Health, Smoke-free Environments Amendment Act 2003, accessed March 2018.
(6) Tobacco Control Laws, Country Details For New Zealand, accessed March 2018.
(7) Ministry of Health, Smoke-free law, accessed March 2018.
(8) Excise and Excise-equivalent Duties Table (Tobacco Products) Amendment Act 2010 s 3.
(9) Ministry of Health, Smokefree 2025, accessed March 2018.
(10) Customs and Excise (Tobacco Products – Budget Measures) Amendment Act 2012 s 4.
(11) Excise and Excise-equivalent Duties Table (Tobacco Products) Amendment Act 2010 s 3(b).
(12) New Zealand Government, Arriving in NZ, accessed April 2018.
(13) New Zealand Government, Budget 2014: Duty-free tobacco limits to fall, 9 May 2014.
(14) Auckland Council, Implementation Plan of the Council's Smokefree Policy 2017 – 2025, October 2017.
(15) Customs and Excise (Tobacco Products – Budget Measures) Amendment Act 2016 ss 4 and 5.
(16) Ministry of Health, Vaping (e-cigarettes), accessed March 2018.
(17) Ministry of Health, Tobacco standardised packaging, accessed March 2018.
(18) New Zealand Treasury, Customs and Excise Act review: Changes to Tobacco Excise, 15 September 2015.
(19) New Zealand Parliament, Customs and Excise Bill.

In addition to a 25% excise increase in 2010, excise rates have increased annually since 2011

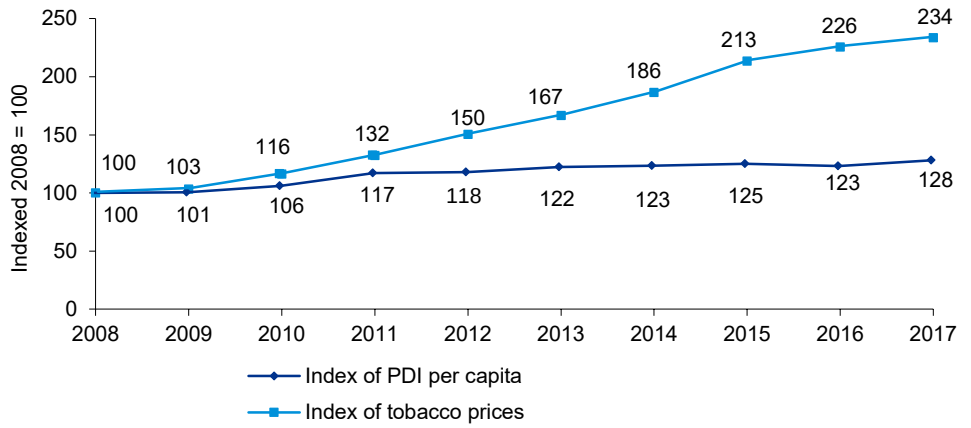
4.3. Tobacco and excise duties and tobacco affordability in New Zealand

Figure 4.3a: Rates of tobacco excise, January 2008 – January 2018[1][a]



Between 2008 and 2009 tobacco excise duty increased at a similar rate to the rate of inflation (i.e. 3.5% p.a). When the Excise and Excise-equivalent Duties Table Amendment Act was introduced in 2010, this signalled a large increase in excise duty.[2] The largest increase was a 25% increase on loose tobacco and higher weight manufactured cigarettes in April 2010. This was intended to align those duties with the duties on lower weight manufactured cigarettes. Further 10% increases (in addition to inflationary increases) have occurred on all tobacco products each year between 2011 and 2018, and additional 10% increases (above inflationary increases) will occur in 2019 and 2020.[2]

Figure 4.3b: Index of tobacco prices and per capita PDI, 2008 - 2017[3][4][b]



The excise tax increases since 2010 have contributed towards tobacco prices increasing at a higher rate than PDI per capita. The increases have resulted in a decline in relative affordability when compared to previous years. This decline in relative affordability is likely to continue with the future planned excise rate increases.

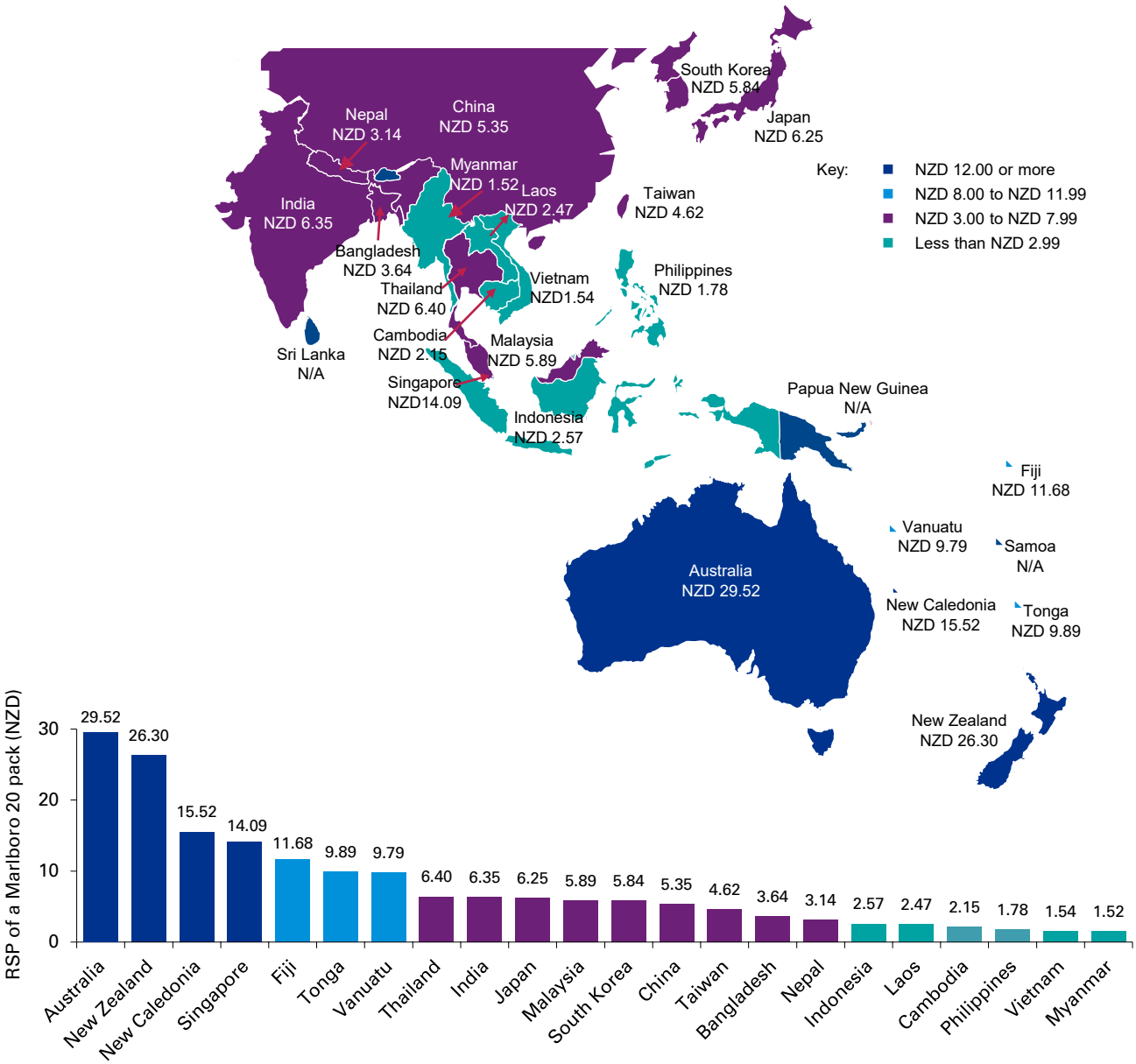
Notes: (a) Each year the new excise rate is calculated by applying any increase as stipulated by the Government, plus the official CPI rate.
(b) Indexed with 2008 values taken as 100.

Sources: (1) Excise data supplied by the industry.
(2) New Zealand Legislation, Customs and Excise (Tobacco Products—Budget Measures) Amendment Act 2016.
(3) Euromonitor, annual disposable income per capita, accessed January 2018.
(4) Euromonitor, index of tobacco prices, accessed January 2018.

Successive price rises have resulted in New Zealand having the second highest cigarette prices in the Asia Pacific region

4.4 Relative regional price of tobacco

Figure 4.4: Price of a pack of 20 Marlboro cigarettes - New Zealand and selected markets, 2017[(1)(2)(a)(b)]



New Zealand is the second most expensive cigarette market in the Pacific and South East Asia and one of the most expensive cigarette markets in the world. New Zealand prices are approximately 70% higher than the third most expensive market in the region.

This large price differential between New Zealand and other relatively nearby markets provides an economic incentive for smuggling opportunities for those involved in the illicit market.

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) Based on prices as per Illicit Tobacco in Australia Report, 2017. Prices have been converted from AUD into NZD at an exchange rate of 1.11.
Sources: (1) Illicit Tobacco in Australia Report, 2017 (KPMG).
(2) PMI Treasury Department.

5. Size of the illicit tobacco market

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

5.1 Estimating the illicit tobacco market

Methodology and validation

As discussed in section 2.1, the illicit tobacco market is split into unbranded tobacco and illicit manufactured cigarettes. Both of these categories are taken together to form total illicit tobacco consumption. It is therefore important to take account of all consumption flows when assessing the amount of illicit tobacco consumed.

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

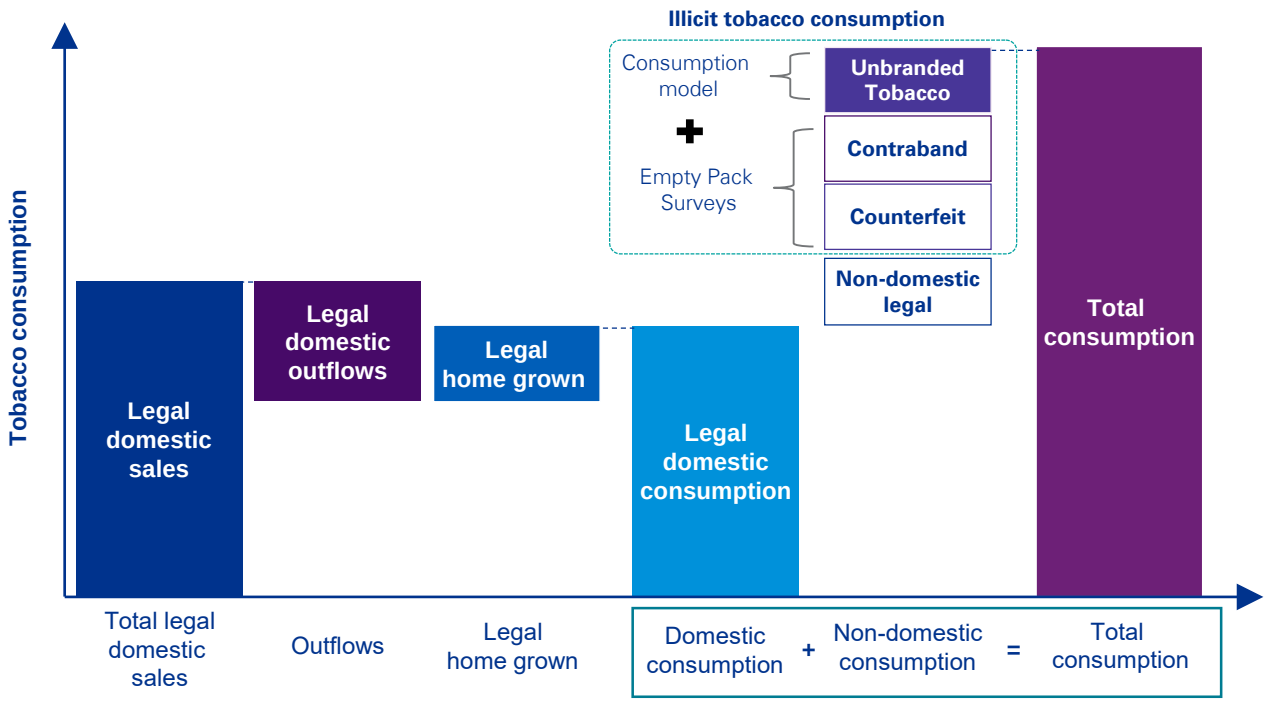
For each of these categories a separate primary approach is used in order to estimate the volume of illicit tobacco. For unbranded tobacco, a consumption model, based on results from a consumer survey is used. The consumption model includes loose tobacco sold in unbranded plastic bags, in tubes or in the form of pre-rolled cigarettes.

For illicit manufactured cigarettes an Empty Pack Survey (EPS) analysis is used, based on the collection of discarded cigarette packs across New Zealand. This approach has been used consistently in other markets including Australia over the past three years, however this is the first time it is being used in New Zealand.

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

In this section each of the approaches is described before the process of estimation and validation is explained. A detailed overview of these approaches can be found in appendix A1 and A2.

Figure 5.1a Estimation of the illicit market[(a)]



Data sources

Exchange of Sales data	Kantar New Zealand consumer survey Tourism statistics	Kantar New Zealand consumer survey	Kantar New Zealand consumer survey MSI Empty Pack Survey Tourism statistics Customs' seizure data	Kantar New Zealand consumer survey Health statistics Smoking indicators

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 produce an estimate for the size of the illicit tobacco market

5.1 Estimating the illicit tobacco market (cont.)

Primary approach

Consumption model

This approach is based on the responses of consumers to a survey conducted by Kantar New Zealand in 2017. The survey is commissioned by British America Tobacco New Zealand (BATNZ), Imperial Tobacco New Zealand (ITNZ) and Philip Morris Limited (PML).

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

The survey was developed using qualitative interviews. The primary insights gained from this qualitative research was an understanding of how consumers refer to illicit products. Detailed results of the consumer survey are discussed in section 6.

Empty Pack Survey (EPS)

An EPS is a study undertaken independently by MSIntelligence (MSI) who collect 2,000 discarded cigarette packs per survey across the five largest cities in New Zealand. The EPS was conducted in Q2 and Q4 in 2017. The brand and country of origin of each collected pack is assessed by MSI to determine whether it is a domestic or non-domestic product. Products from different countries of origin are labelled as non-domestic. The collected packs are then sent to the participating manufacturers for analysis to determine genuine and counterfeit packs. KPMG uses the EPS results to extrapolate overall consumption in the market. The percentages of non-domestic and counterfeit packs are applied to the volume of legal domestic sales in order to establish the total consumption of manufactured cigarettes in New Zealand.

The EPS approach provides an objective and statistically representative estimate of the size of the illicit manufactured cigarette market. The results are not subject to respondent behaviour and are therefore less prone to sampling errors than many other alternative methodologies. The five cities covered by the sample plan covers the equivalent of 52% of New Zealand's population.

A small proportion of non-domestic cigarettes are likely to have been brought into New Zealand legally by New Zealanders travelling overseas or by tourists and permanent and long-term migrants arriving in New Zealand. Travel statistics from Statistics New Zealand are used by KPMG in order to estimate the likely volume.

An analysis of the amount of non-domestic legal brought into New Zealand by these two groups can be found in Appendix A4. Areas that are typically frequented by tourists and international students (e.g. sports stadia, tourist attractions, railway stations) are excluded from the EPS to avoid over-estimating non-domestic legal consumption and to provide a representative sample of the local population's consumption.

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

The empty pack surveys have been jointly commissioned by the industry (BATNZ, ITNZ and PML). Prior to 2017, surveys were also run in Q2 2014, Q2 2015 and Q2 2016 which have been made available to KPMG for use in this report. The methodology and sample walking routes were consistent with those used in 2017.

For the purpose of this report, EPS surveys have been conducted by MSI in Q2 and Q4 2017. The results from these surveys have been used to arrive at an estimate for the illicit manufactured cigarette consumption for 2017. This method is consistent with the approach used by KPMG in Project SUN to assess the level of counterfeit and contraband cigarettes across the EU Member States and our annual report on illicit consumption in Australia. It is a widely accepted method for measuring the illicit market.

Means of validation

Interceptions data

Interceptions data obtained from the New Zealand Customs Service shows the volume and type of tobacco intercepted at ports, airports etc. Using interceptions data to size the illicit market is often unreliable as it is difficult to ascertain the proportion of total illicit product that is seized.

Whilst interceptions data is unlikely to generate an accurate estimate for the illicit tobacco market, the size and volume of individual interceptions can indicate the likely scale of the illicit market. The average size of interceptions can indicate whether illegal smuggling is opportune and small-scale or part of a more sophisticated international criminal network.

Rolling papers analysis

KPMG has used analysis on the quantity of rolling papers sold as a method for validating the quantity of loose tobacco smoked in Project Sun and previous Australian reports. In New Zealand, the scan data available on rolling papers does not have sufficient market coverage, therefore this has not been used as a means of validation.

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

5.1 Estimating the illicit tobacco market (cont.)

Figure 5.1b Overview of methodology for estimating illicit tobacco

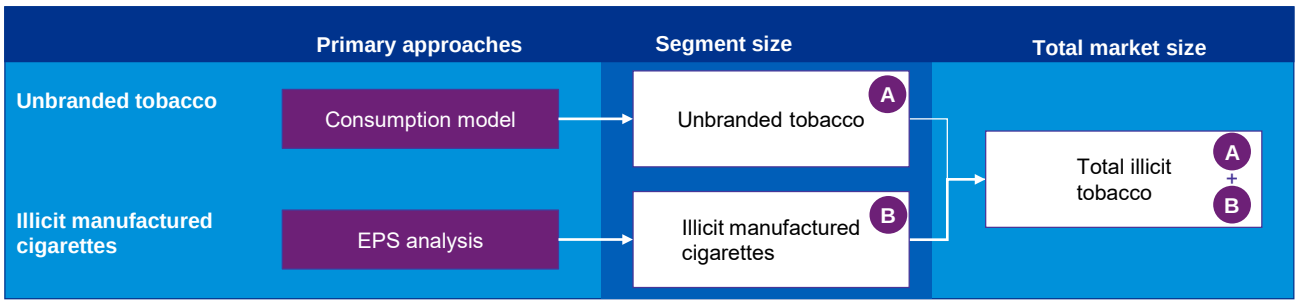


Figure 5.1b shows the process by which the consumption model and EPS analysis is used to estimate the size of the illicit tobacco market

A **Unbranded tobacco:** The consumption model uses data from the Kantar New Zealand consumer survey, external data sources such as the Ministry of Health tobacco returns data and the Health of New Zealand Adults data on smoking prevalence. We consider it to be the best way of sizing the unbranded tobacco market.

B **Illicit manufactured cigarettes:** The EPS, conducted in New Zealand by MSIntelligence, is the most reliable measure of contraband and counterfeit. It also forms the foundation for our Australian report(1) and Project SUN (a study of illicit tobacco consumption in the EU, Norway and Switzerland).(a)

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

Note: (a) A study of the illicit cigarette market in the European Union by KPMG.
Source: (1) Illicit Tobacco in Australia Report, 2017 (KPMG).

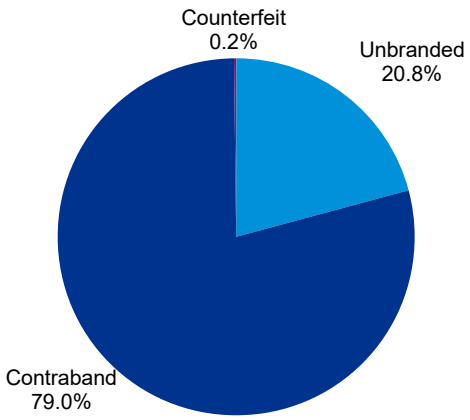
Approximately 9.2% of the total consumption in 2017 is estimated to be illicit consumption

5.2 Illicit tobacco consumption in New Zealand

Figure 5.2a: Consumption of tobacco products by category, 2017[(1)(2)(a)(b)(c)]

	2017 kg'000s	% of total consumption
Counterfeit	0.4	0.02%
Contraband	151.1	7.2%
Unbranded Tobacco	39.8	1.9%
All illicit product	191.3	9.2%
Tobacco grown at home	49.9	2.4%
Non-domestic legal	29.4	1.4%
Legal domestic sales	1,816.0	87.0%
Total consumption	**2,086.7**	

Figure 5.2b: Share of illicit tobacco consumption, 2017[(1)(a)(b)(c)]



The total level of tobacco consumption in New Zealand was estimated at 2.1 million kg in 2017, of which 0.2 million kg was estimated to be illicit.

Of the total consumption in New Zealand, 2.4% is related to the consumption of tobacco grown at home. The volume of non-domestic legal product is small and represents 1.4% of the total consumption.

In 2017, 9.2% of the total consumption was calculated to be illicit.

Consumption of unbranded tobacco represented 1.9% of total consumption. The majority of illicit consumption relates to the consumption of illicit manufactured cigarettes. Contraband is the largest component of illicit manufactured cigarettes consumption and represents 7.2% of total consumption in 2017. Counterfeit represents a very small component of illicit tobacco consumption (0.2%) in 2017.

There is no evidence of Domestic Illicit Whites in New Zealand in 2017. However, a small flow of Illicit Whites, which represents 0.14% of total consumption, was identified. This volume of Illicit Whites is included in our estimate of contraband consumption.

Notes: (a) Contraband includes volumes of Illicit Whites.
(b) The 2017 figures are based on a weighted average of the results from Q2 2017 and Q4 2017. This is discussed further on page 36.
(c) Numbers in the table and chart may not sum due to rounding.
Sources: (1) Industry data; see specific report sections for further detail.
(2) Statistics, New Zealand, accessed February 2018.

There has been a decline in the number of interceptions by the New Zealand customs department since 2013

5.3 Enforcement context

Figure 5.3a: Volume of tobacco intercepted, 2013 - 2017[1](a)(b)(c)

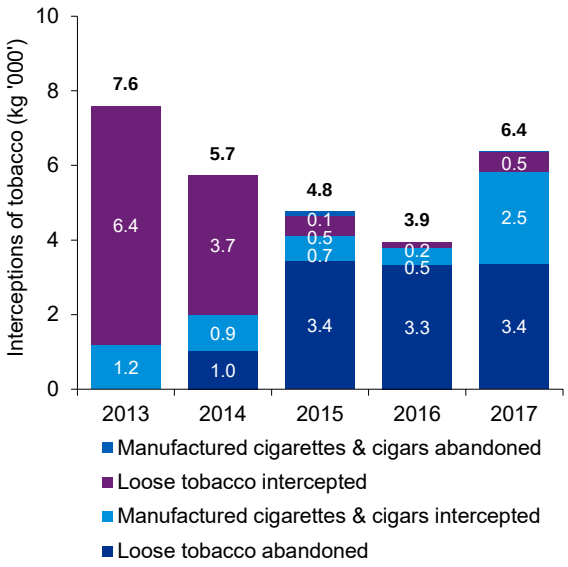
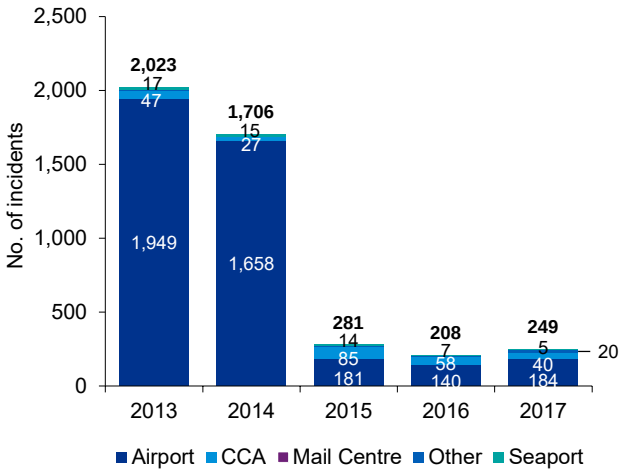


Figure 5.3b: Number of tobacco interception incidents, 2013 - 2017[1](a)(b)(d)



Between 2013 and 2016, the total volume of tobacco intercepted and abandoned followed a downward trend. However, it increased in 2017.

In particular, we observe a large decline in the amount of loose tobacco intercepted versus the amount abandoned. This may be due to changes in the way tobacco was collected and reported following the reduction in the duty free allowance in November 2014 (see box below).

The Custom Service intercept tobacco at airports, mail centres, seaports and Controlled Customs Areas (CCAs).[e] Other locations where tobacco may be intercepted include customhouse, commercial premises and residential premises. The highest number of incidents occur at airports.

The number of incidents from which tobacco was intercepted by the New Zealand Customs Service has declined by 88% since 2013, but has remained broadly stable since 2015. It is likely this is mostly due to changes in the way tobacco was collected and reported following the reduction in duty free allowance in November 2014.

Pre 1 November 2014 if passengers arrived and were found to have in excess of the duty free limit, they had the option to pay the duty and GST. If they decided not to pay, the customs officers had to create an activity report of an intercept and the product would be seized. However, when the duty free allowance was reduced in November 2014, amnesty bins were placed at airports so that travellers had the opportunity to throw excess quantities into the bins. This tobacco was now classified as abandoned and not recorded as an interception incident. This may help to explain why there was shift from interceptions to abandonment and the number of interceptions dropped significantly.

Notes:
(a) When Customs finds prohibited goods or goods that have been undeclared, mis-declared or undervalued for revenue evasion purposes at the border, it is referred to as an 'interception'.
(b) Cigarette sticks have been translated into kg of tobacco based on a conversion rate of 0.8g per stick
(c) Data labels less than 0.1 have been removed from the chart for clarity. Volume of manufactured cigarettes & cigars abandoned in 2017 is 0.001 thousand kgs.
(d) Some data labels with values less than 10 of 'Other' category have been removed for clarity.
(e) Customs Controlled Area (CCA) is a secure and controlled environment in which the activities that take place are monitored or conducted by Customs. This includes places where goods are inspected and where duty free or excisable goods are manufactured, sold or stored.

Source: (1) New Zealand Custom Service.

6. Drivers of results

The consumer survey is conducted by Kantar New Zealand and is conducted via telephone and the internet

6.1 Consumer survey results(1)

6.1.1 Kantar New Zealand overview

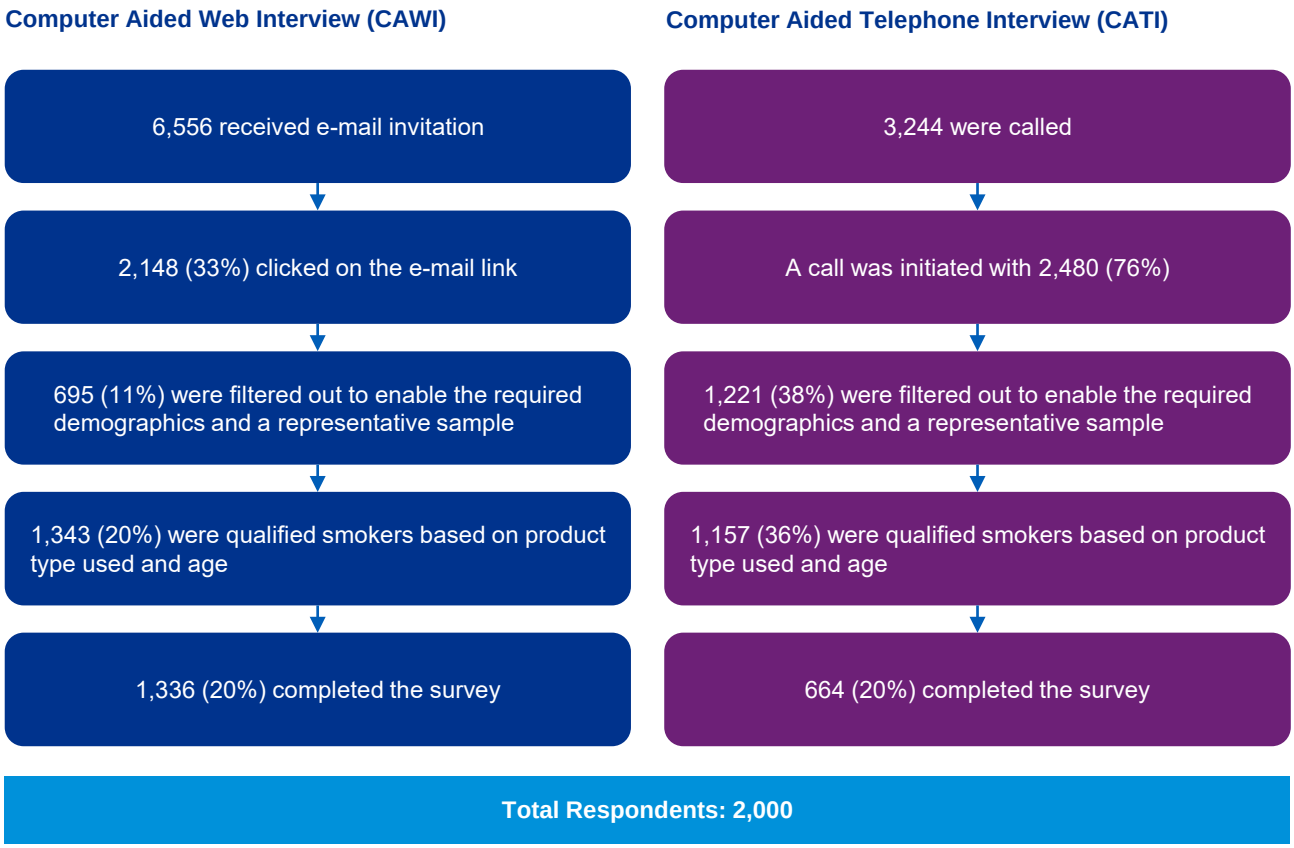
The consumer survey is primary research carried out to establish the size of the illicit tobacco market in New Zealand. The survey, commissioned by the industry (BATNZ, ITNZ and PML), was carried out by Kantar New Zealand.

Kantar is a global data, insight and consultancy company and part of WPP. Kantar has been conducting the consumer survey annually for the industry since 2013.(a) Prior to this, they had conducted three surveys for BATNZ, the first of which was completed in 2009.

The consumer survey interview script was informed by consumer insights obtained from qualitative research undertaken by Kantar New Zealand. Respondents were also asked about their awareness and consumption of illicit tobacco products.

The fieldwork took place between 7th November and 15th December 2017 and was conducted via telephone and the internet. This is in order to provide a balanced sample, as the online panel for CAWI is skewed towards premium brand FMC smokers, whereas the CATI sample gives better coverage of RYO and the value end of FMC. Both methods sampled people previously identified as adult smokers.

Kantar New Zealand Survey Attrition Chart

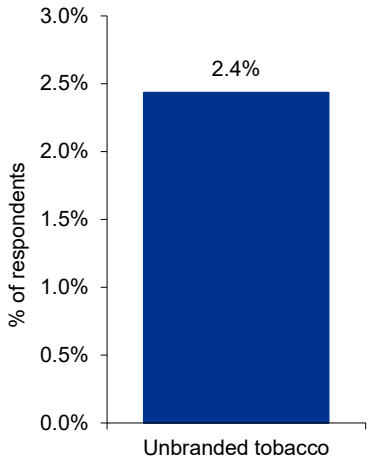


Note: (a) Results from previous consumer surveys have not been included in this report as the questions used were not consistent with those used in 2017.
Source: (1) Kantar New Zealand Research, Consumer survey: Quantitative and qualitative Findings, 2017.

Respondents to the consumer survey reported purchasing unbranded tobacco four times a month

6.1.2 Purchasers of unbranded tobacco

Figure 6.1.2a: Respondents who reported purchasing unbranded tobacco in the last twelve months, 2017[(1)(a)]



Approximately 2% of total respondents reported having purchased unbranded tobacco in the past 12 months. The majority (71%) reported that the tobacco was bought through friends, family or acquaintances.[(1)] Price was cited as the main reason for purchase, with 72% of respondents buying unbranded tobacco because it is cheaper than alternatives.

Figure 6.1.2b: Average volume purchased (grams) per occasion, 2017[(1)(2)(a)(b)(c)]

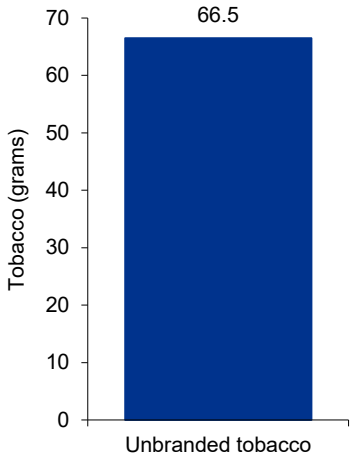
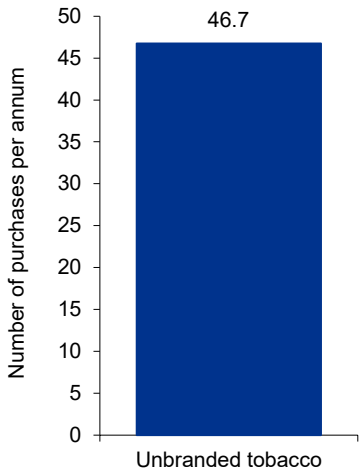


Figure 6.1.2c: Average frequency of purchase per annum, 2017[(1)(a)]



By multiplying the average volume purchased with the average number of purchases per annum, the average annual consumption of unbranded tobacco is calculated. Consumers of unbranded tobacco purchased an average of 3.1 kg per annum. This annual consumption would equate to a total cigarette equivalent of approximately 11 manufactured cigarettes per day, or 17 RYO cigarettes per day.

Notes: (a) Responses are based on CATI and CAWI surveys.
(b) Based on the volume purchased at time of last purchase.
(c) Conversion of cigarettes to kilograms is based on 0.80 grams = 1 manufactured cigarette.
Sources: (1) Kantar New Zealand Research, Consumer survey: Quantitative and qualitative Findings, 2017.
(2) New excise duties rates for tobacco and tobacco products, New Zealand Customs Service.

The survey indicated that 3% of respondents grew tobacco in the last 12 months, of which 73% grew two kg or less

6.1.3 Tobacco grown at home

Figure 6.1.3a: Proportion of respondents who were aware of home grown allowance and have grown tobacco, 2017[(1)(a)(b)(c)]

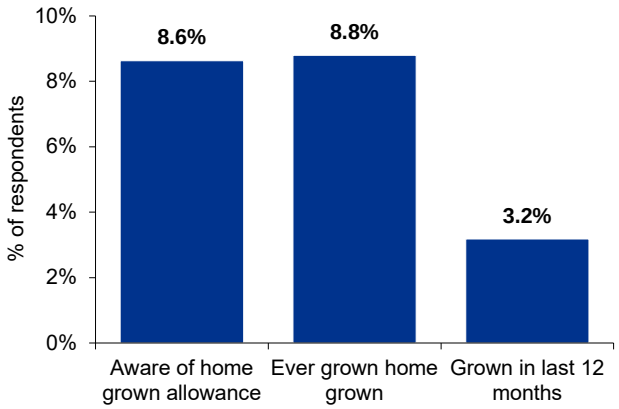
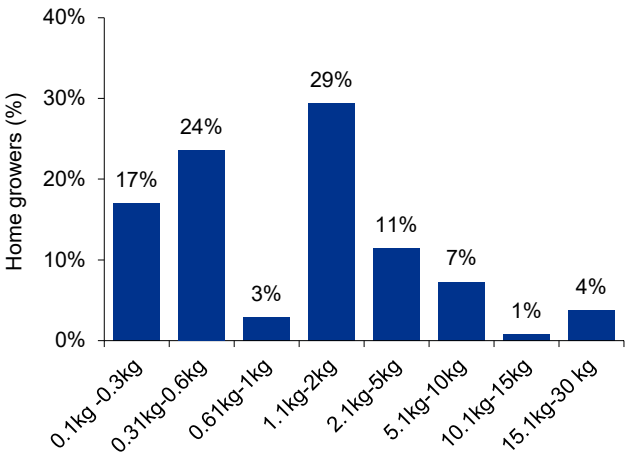


Figure 6.1.3b: Average quantity grown at home, 2017[(1)(2)(a)(d)]



According to the results of Kantar's consumer survey, 8.6% of respondents are aware of the home grown allowance, with a similar proportion reporting having ever grown their own loose tobacco. However, few have grown their own tobacco in the past 12 months.

Most of the home growers in Kantar's consumer survey grew between 0.1 and 2 kilograms, with only 4% of the home growers reporting that they grew more than the legal limit of 15 kilograms. The average amount of tobacco grown at home per annum equates to a total of 3.4 kilograms. This is below the annual manufacturing allowance of 15 kilograms.[(3)]

Notes: (a) Responses are based on CATI and CAWI surveys.
(b) Total sample of 2000 weighted respondents.
(c) Based on the volume purchased at time of last purchase.
(d) Conversion of cigarettes to kilograms is based on 0.80 grams = 1 manufactured cigarette.

Sources: (1) Kantar New Zealand Research, Consumer survey: Quantitative and qualitative Findings, 2017.
(2) New excise duties rates for tobacco and tobacco products, New Zealand Customs Service.
(3) Regulatory Impact Statement, New Zealand Customs Service, 2015.

The EPS sampling plan comprises 2,000 empty packs collected across five population centres in New Zealand

6.2 EPS results

6.2.1 New Zealand EPS sampling plan[1][2]

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

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

For the purpose of this report, an EPS was carried out by an independent market research agency, MSIntelligence (MSI) in Q2 (June) 2017, and Q4 (October-November) 2017. The Q2 and Q4 2017 EPS collection was based on a sampling plan consistent with the EPS sampling plan of previous years: 2,000 packs were collected, the same neighbourhoods were sampled and the same five population centres were covered.(a) This covered approximately 52% of the total population as shown in Figure 6.2.1.

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.

Founded in 2001, MSI is a private company with headquarters in Geneva, Switzerland specialising in market research. MSI has particular experience in the tobacco industry and has conducted over 1,000 EPS in more than 85 countries.

Table 6.2.1 Q4 2017 EPS sampling plan:

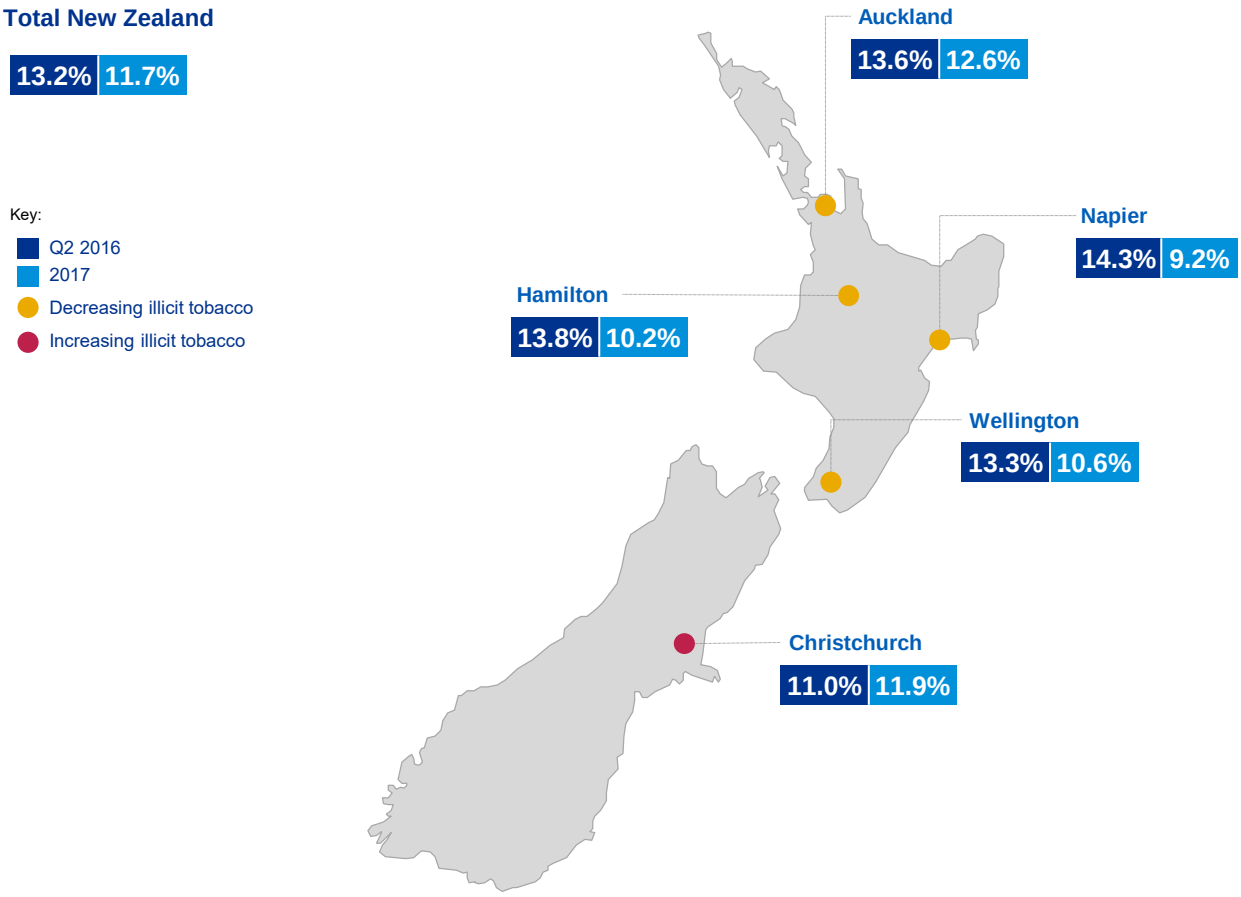
Population centres	Population (000's) 2017 estimate[2]	Number of sampled neighbourhoods	Sample packs	Weighted packs
Auckland	1,657	30	1,064	1,064
Christchurch	382	10	318	318
Wellington	213	10	351	351
Hamilton	165	5	163	163
Napier-Hastings	62	3	104	104
Total sample	2,479	58	2,000	2,000
Total population of New Zealand	4,794			

Note: (a) The 2017 figures used in this report are based on a weighted average of the results from Q2 2017 and Q4 2017. This is discussed further on page 36.
Sources: (1) MSIntelligence Research, Empty Pack Survey, Q2 2015, Q2 2017 and Q4 2017.
(2) Statistics New Zealand, Subnational Population Estimates: At 30 June 2017 (provisional).

Auckland had the highest non-domestic incidence in 2017

6.2.2 New Zealand EPS results – Non-domestic incidence by population centre

Figure 6.2.2: Total non-domestic incidence by population centre, Q2 2016 - 2017[(1)(a)]



The 2017 Empty Pack Survey found non-domestic packs in all population centres sampled. The decrease in non-domestic incidence versus 2016 was driven by the decline found in Auckland and Wellington.

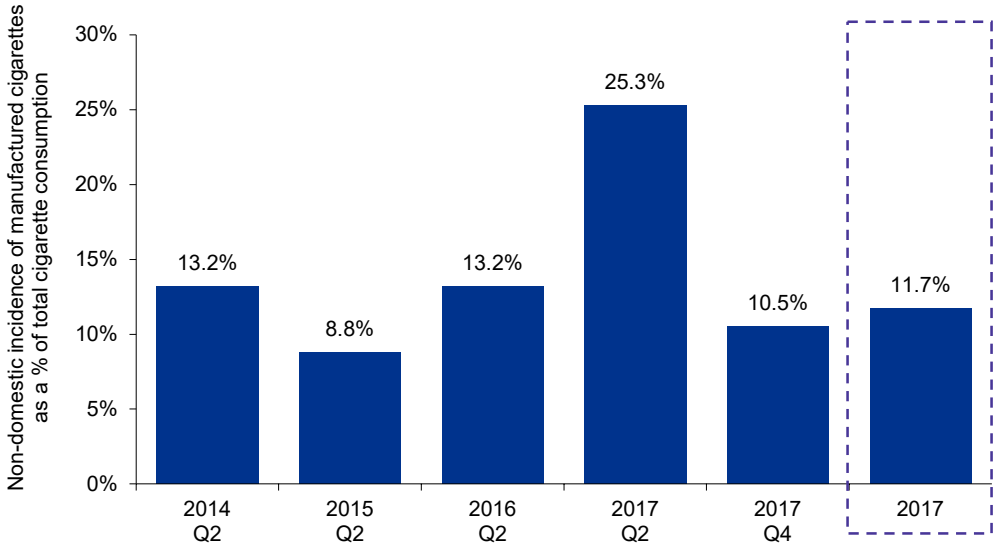
Christchurch was the only area to experience an increase in non-domestic incidence between Q2 2016 and 2017. In 2017, Auckland had the highest level of non-domestic incidence whilst in Q2 2016, non-domestic incidence was the highest in Napier.

Note: (a) The 2017 figures are based on a weighted average of the results from Q2 2017 and Q4 2017. This is discussed further on page 36.
Source: (1) MSIntelligence Research, Empty Pack Survey, Q2 2016 and 2017.

The quarterly 2017 EPS results have been weighted to estimate the volume of illicit manufactured cigarettes in 2017

6.2.3 New Zealand EPS results – Non-domestic flows

Figure 6.2.3: Total non-domestic incidence as a percentage of total manufactured cigarette consumption, Q2 2014, Q2 2015, Q2 2016, Q2 2017 and Q4 2017[1][(a)][(b)]



A blended approach using Q2 2017 and Q4 2017 EPS results has been used to estimate the size of the illicit manufactured cigarette consumption volume for 2017. As highlighted earlier, using the blended method is consistent with the approach used by KPMG in Project SUN and the recent Australian reports undertaken to assess the level of counterfeit and contraband cigarettes.[(c)] A blended approach gives a more accurate view on the full year findings as each bi-annual EPS is reflective of market trends at that point in time only.

For the purpose of this report, we have used different weightings for Q2 2017 and Q4 2017 EPS, assigning a weight of 11/12 to the Q4 2017 EPS, and a weight of 1/12 to the Q2 2017 EPS. This has been done as the Q2 2017 empty pack survey conducted from 12th May 2017 to 6th June 2017 produced a non-domestic incidence result significantly higher than that of previous results and the survey conducted in Q4 2017.

The unusually high findings may be due to the fact the survey was conducted close to the time of the World Master Games, an international multi-sport event hosted by Auckland in April 2017, which may have resulted in an increase in the number of tourists, and a higher than normal non-domestic incidence being recorded in the survey. With more than 28,000 people attending the World Masters Games in late April, the number of overseas travellers in April 2017 increased by 26% from April 2016.[(2)][(3)][(4)] Also, approximately 23,000 inbound travellers from the UK and Ireland arrived for the Lions rugby series in June leading to an increase in the number of visitors.[(3)]

Given these two events and so as to not overstate the level of non-domestic consumption we have taken a prudent approach of assigning a low weight to the Q2 2017 EPS. This weighting provides a 2017 result more in line with historic findings.

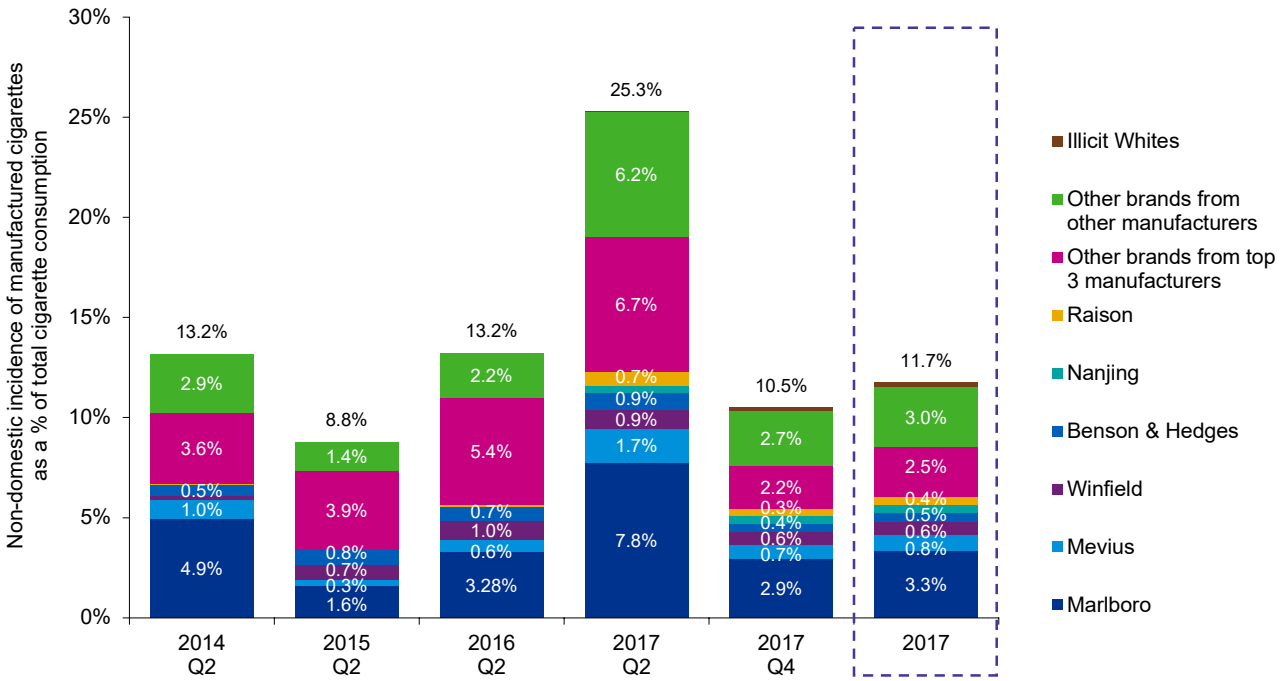
Notes: (a) The 2017 figures are based on the blended results of Q2 2017 and Q4 2017 using the weighted number of cigarettes.
(b) The cigarettes for Q2 2017 and Q4 2017 have been reweighted to assess the incidence.
(c) Project Sun is a study undertaken to assess the level of counterfeit and contraband cigarettes across EU.

Sources: (1) MSIntelligence Research, Empty Pack Survey, Q2 2014, Q2 2015, Q2 2016, Q2 2017, Q4 2017.
(2) International Master Games Association, Description, accessed March 2018.
(3) Retail sale rise in June quarter on Lions tour, National Business Review, August 2017.
(4) Statistics New Zealand, Visitor arrivals by every country of residence and purpose (monthly): Trend, 2015, 2016, 2017.

Flows from brands of the top three manufacturers constituted a large share of non-domestic inflows

6.2.4 New Zealand EPS results – Brand flow

Figure 6.2.4: Total non-domestic incidence by brand flow as a percentage of total manufactured cigarette consumption, Q2 2014, Q2 2015, Q2 2016, Q2 2017 and Q4 2017[(1)(a)(b)(c)(d)]



Based on the blended EPS results, non-domestic incidence was 11.7% in 2017. This represents a decrease of 1.5 percentage points from Q2 2016.

Flows of non-domestic Marlboro constituted the largest share across the years. The flows accounted for 3.3% of total manufactured cigarette consumption in 2017. Flows of Mevius constituted the second largest brand flow. This trend is consistent with Australia, where Marlboro and Mevius were the top two largest brand flows of non-domestic manufactured cigarettes.[(2)]

Whilst the flows of non-domestic Marlboro and Mevius have increased between 2016 and 2017, the flows of non-domestic Winfield have declined by 0.4 percentage points.

The share of Illicit Whites brands flows of non-domestic manufactured cigarettes consumption was 0.2% in 2017.[(e)]

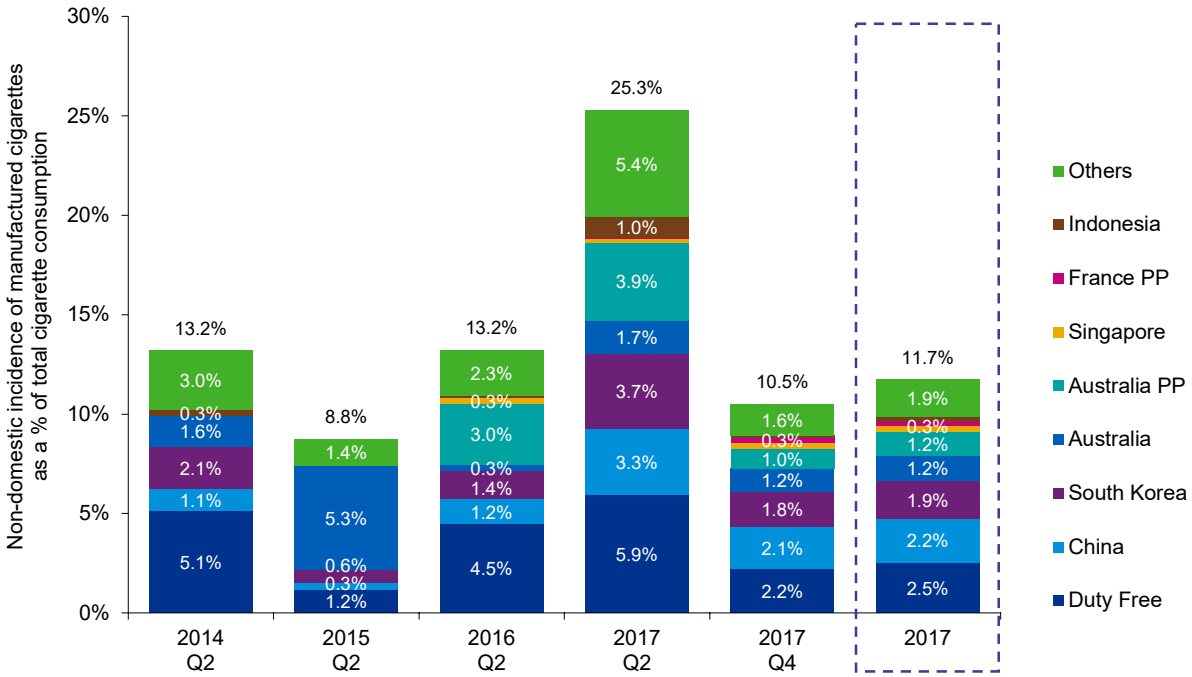
Notes: (a) The 2017 figures are based on the blended results of Q2 2017 and Q4 2017 using the weighted number of cigarettes, which is discussed on page 36.
(b) The cigarettes for Q2 2017 and Q4 2017 have been reweighted to assess the incidence.
(c) Some figures less than 0.4% have been removed from the chart for clarity.
(d) Numbers in the above chart may not sum due to rounding.
(e) We have not analysed illicit white flows for 2014, 2015 and 2016.

Sources: (1) MSIntelligence Research, Empty Pack Survey, Q2 2014, Q2 2015, Q2 2016, Q2 2017, Q4 2017.
(2) Illicit Tobacco in Australia Report, 2017 (KPMG).

Duty free, Australian and Chinese origin flows were the largest component of non-domestic incidence in 2017

6.2.5 New Zealand EPS results – Country of origin flows

Figure 6.2.5: Total non-domestic incidence by country of origin flows as a percentage of total manufactured cigarette consumption, Q2 2014, Q2 2015, Q2 2016, Q2 2017 and Q4 2017[1](a)(b)(c)(d)



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

Australia (including flows of both branded and Plain Packaged Australian products) was the largest individual source country for flows of non-domestic manufactured cigarettes, accounting for over 21% of the non-domestic flows in 2017. This represents a decline of approximately 4.3 percentage points from 2016 and 39.2 percentage points from 2015. Of the total Australian flows in 2017, approximately half of the packs were compliant with the Australian plain packaging regulations. Due to the higher cost of these cigarettes and therefore the lack of economic incentive to illegally import them, these have been classified as non-domestic legal. The rest of the packs were non-compliant with Australia plain packaging legislation and have been classified as illicit. The most common non-compliant brands were Winfield, Benson & Hedges and Rothmans.

Asian countries were a significant source of inflows of non-domestic manufactured products into New Zealand. China was the second largest individual source country in the 2017 EPS accounting for 2.2% of the total incidence (excluding China duty free), an increase of approximately 1 percentage point from 2016.

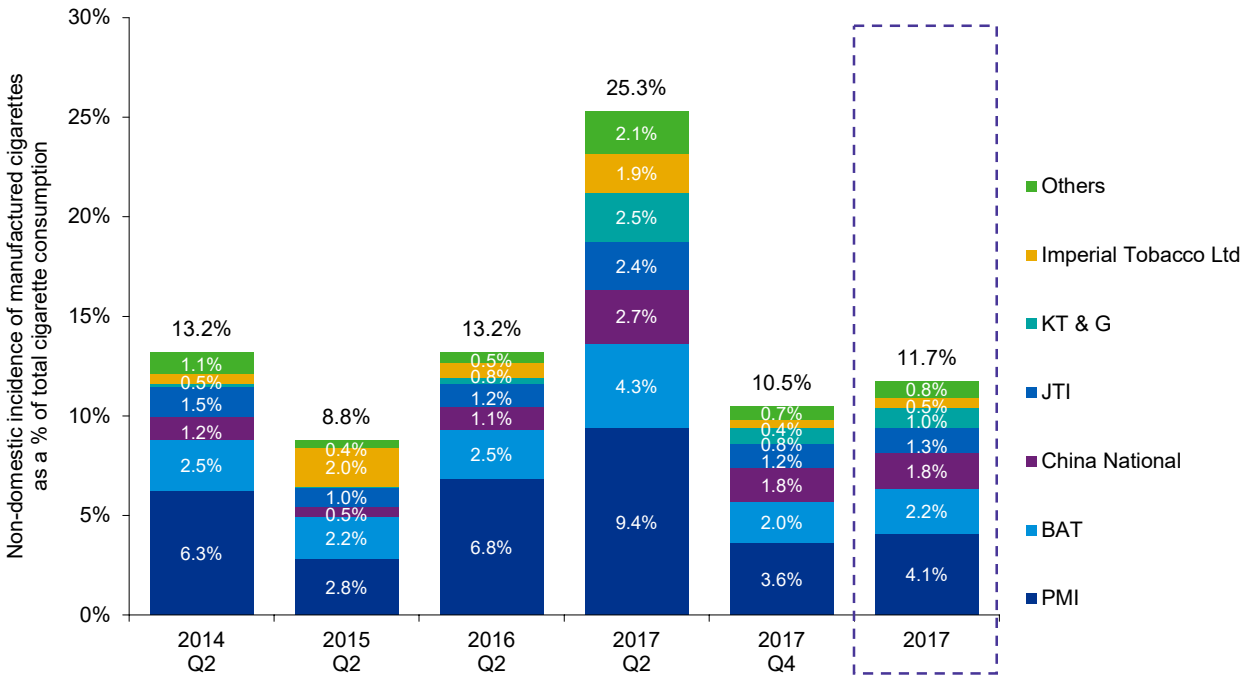
Flows of products from South Korea (excluding duty free) were the third largest flow from an individual country with an annual share of over 1.9% of the total manufactured cigarette consumption in 2017. This represents an increase of approximately 0.5 percentage points from 2016.

Notes: (a) The 2017 figures are based on the blended results of Q2 2017 and Q4 2017 using the weighted number of cigarettes, which is discussed on page 36.
(b) The cigarettes for Q2 2017 and Q4 2017 have been reweighted to assess the incidence.
(c) Some figures less than 0.4% have been removed from the chart for clarity.
(d) Numbers in the above chart may not sum due to rounding.
Source: (1) MSIntelligence Research, Empty Pack Survey, Q2 2014, Q2 2015, Q2 2016, Q2 2017, Q4 2017.

Flows of product with PMI trademarks were the largest non-domestic flows in 2017

6.2.6 New Zealand EPS results – Trademark owner flows

Figure 6.2.6: Total non-domestic incidence by trademark owner flows as a percentage of total manufactured cigarette consumption, Q2 2014, Q2 2015, Q2 2016, Q2 2017 and Q4 2017[(1)(a)(b)(c)(d)]



Flows from brands with trademarks owned by either Philip Morris International (PMI) or British American Tobacco (BAT) accounted for more than half (53.5%) of all non-domestic packs found in New Zealand in 2017; a decline of 15.8 percentage points from Q2 2016.

Flows of brands with trademarks owned by China National were the third largest non-domestic flow, representing over 1.8% of total incidence and an increase of approximately 0.7 percentage points from the Q2 2016 EPS.

The slight decline in non-domestic incidence since 2016 was driven primarily by a reduction in the flows of products trademark owned by PMI and BAT.

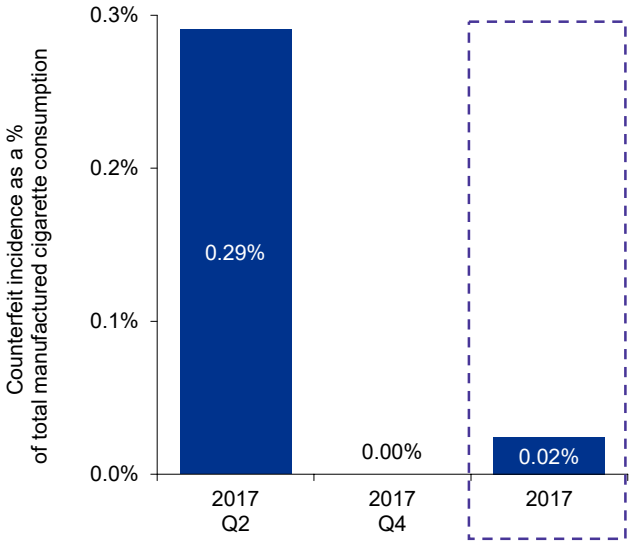
Notes: (a) The 2017 figures are based on the blended results of Q2 2017 and Q4 2017 using the weighted number of cigarettes, which is discussed on page 36.
(b) The cigarettes for Q2 2017 and Q4 2017 have been reweighted to assess the incidence.
(c) Some figures less than 0.4% have been removed from the chart for clarity.
(d) Numbers in the above chart may not sum due to rounding.

Source: (1) MSIntelligence Research, Empty Pack Survey, Q2 2014, Q2 2015, Q2 2016, Q2 2017, Q4 2017.

Illicit White and counterfeit brand flows had a low share of total manufactured cigarettes in 2017

6.2.7 New Zealand EPS results – Counterfeit flows

Figure 6.2.7: Counterfeit flows incidence as a percentage of total manufactured cigarette consumption, 2017[1][a][b][c]

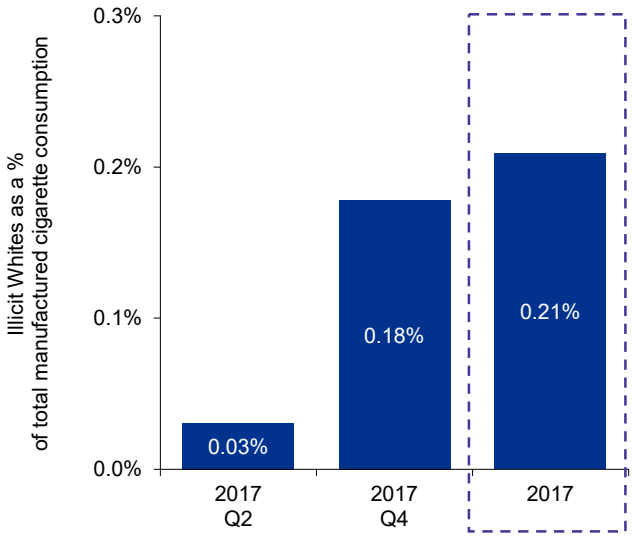


Overall in 2017, EPS indicated that 0.02% of manufactured cigarettes consumed in New Zealand were counterfeit flows. There were no counterfeit flows identified in Q4 2017 EPS and approximately 0.29% of total manufactured cigarettes consumed in Q2 2017 were counterfeit.

All counterfeit flows identified in the Q2 2017 EPS were non-domestic.

6.2.8 New Zealand EPS results – Illicit Whites brand flows

Figure 6.2.8: Consumption of Illicit White flows as a percentage of total manufactured cigarette consumption, 2017[1][a][b]



According to the 2017 EPS, 0.21% of all manufactured cigarettes consumed in New Zealand were Illicit Whites (non-domestic) brand flows. There is no evidence of Domestic Illicit Whites in New Zealand in 2017.

Notes: (a) The 2017 figures are based on the blended results of Q2 2017 and Q4 2017 using the weighted number of cigarettes, which is discussed on page 36.
(b) The cigarettes for Q2 2017 and Q4 2017 have been reweighted to assess the incidence.
(c) The counterfeit volume is reported from manufacturers participating in EPS: BATNZ, ITNZ and PML. No other counterfeit is included in the volumes reported due to lack of information.

Source: (1) MSIntelligence Research, Empty Pack Survey, Q2 2017, Q4 2017.

7. Conclusion

Contraband is the major contributor to illicit tobacco consumption

Table 7.1 Consumption model results[1][2][3][4]

2017 results (kg '000)		
		2017
Illicit manufactured cigarettes	Contraband[a]	151.1
	Counterfeit	0.4
	Total	151.5
Unbranded tobacco		39.8
Total illicit tobacco		**191.3**
Equivalent excise value (NZDm)[b]		**181.7**

The illicit tobacco market in New Zealand

Our study indicates that the consumption of illicit tobacco in New Zealand as a proportion of total consumption represents approximately 9.2% in 2017.

Illicit manufactured cigarette consumption formed the majority of the total illicit tobacco consumed in New Zealand, representing 79.2% of the total illicit tobacco.

Contraband constitutes almost all of the illicit manufactured cigarette consumption. Counterfeit and unbranded tobacco consumption represent a small share of the total consumption, constituting 0.02% and 1.9% of total consumption respectively.

If all of the illicit tobacco had been consumed in the legitimate market it would have represented an excise amount of approximately NZD 181.7 million at the 2017 excise rate.[4]

The legal tobacco market in New Zealand

Legal domestic sales in New Zealand declined by 4.8% between 2016 and 2017 as the consumption of both manufactured cigarettes and loose tobacco declined, by 3.4% and 8.7% respectively.

In New Zealand, it is permitted for adults to grow unlimited amounts of tobacco and manufacture up to 15 kilograms of tobacco per year, provided it is exclusively for their personal use. The legal home grown market is estimated to be just under 50 thousand kilograms; approximately 2.4% of the total consumption.

The New Zealand tobacco market is one of the most expensive markets in the region; second only to Australia. A packet of Marlboro 20s is 70% more expensive than in New Caledonia; the third most expensive market. Both Australia and New Zealand are significantly higher priced than every other market in the region.

Flows from China and South Korea represented a large share of non-domestic inflows in 2017 and a packet of New Zealand Marlboro 20s is over four times the domestic price of both countries. This wide price difference creates an economic incentive for smugglers and other individuals to import and sell tobacco outside of New Zealand legislation.

Notes: (a) Contraband includes volumes of Illicit Whites.
(b) Calculated based on the excise tax rate for 2017, i.e., $ 783.13 per 1,000 cigarettes and $1,051.83 per kilo tobacco content .

Sources: (1) Kantar New Zealand Research, Consumer survey: Quantitative and qualitative Findings, 2017.
(2) MSIntelligence Research, Empty Pack Survey, Q2 2017, Q4 2017.
(3) KPMG analysis.
(4) Excise tax rate, January 2017.

KPMG

Appendices

KPMG has used a consumption based approach to estimate the unbranded tobacco and tobacco grown at home markets

A1 Consumption model

Introduction

The home grown market is comprised of tobacco grown at home for personal use. Some of this is purchased which represents an illicit market (referred to as 'unbranded tobacco'), whilst some is consumed legally (referred to as 'tobacco grown at home').

The primary methodology we have used to estimate the unbranded tobacco market and the tobacco grown at home market in New Zealand is the consumption model approach.

The consumption model uses the results of the Kantar New Zealand consumer survey to determine the core inputs to the model, combined with publicly available information on the legal tobacco market and smoking population.

The consumer survey

The consumption model was based on the responses of 2,000 smokers in New Zealand to a CATI and CAWI based consumer survey undertaken in 2017. Respondents were sampled from Kantar New Zealand online panels and previous tobacco surveys. The sample was weighted to be representative of the market in terms of product range (FMC and RYO consumers), age and gender.

The surveys were conducted between 7th November and 15th December 2017 and took on average of 15 minutes to complete. Consumers were asked about their consumption and purchase of legal and illicit tobacco products; unbranded loose tobacco sold in bags, pre-filled unbranded tobacco, home grown tobacco, as well as counterfeit and contraband manufactured cigarette products.

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

The consumer survey is used to form a view on the unbranded tobacco market and the tobacco grown at home market

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

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

— How many smokers purchase unbranded tobacco, how often these illicit purchasers purchase unbranded tobacco, and how much they purchase on each occasion

— How many smokers grown their own tobacco, how much they grow each year and how much they give away / sell

These responses generate the core assumptions which are used in the consumption model and are illustrated on table A1b and table A1c overleaf.

Additional assumptions

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

— Total adult smoking population – we assumed that the total smoking population was 526,000.[(a)] This assumption is based on data from the New Zealand Health Survey and population data from Euromonitor.

Note: (a) Please see appendix A3 for details of the estimation of the smoking population.

KPMG has used results from the consumer survey to estimate the unbranded and tobacco grown at home markets

A1 Consumption model (cont.)

Calculation approach

Table A1a below provides an overview of how the size of the unbranded tobacco market and tobacco grown at home market have been calculated.

Table A1a: Consumption model approach

Type	Approach	Commentary
Unbranded tobacco	Results from the consumer survey are used to estimate the number of New Zealand tobacco smokers who use unbranded tobacco. This is multiplied by the average amount of unbranded tobacco purchased by survey respondents to estimate the quantity of unbranded tobacco purchased in New Zealand.	— Given the illicit nature of this questioning there is a likelihood that respondents may under report actual purchase.
Tobacco grown at home	Results from the consumer survey are used to estimate the number of New Zealand smokers who smoke tobacco grown at home. This is multiplied by the average amount of tobacco grown by survey respondents to estimate the total quantity grown by those who smoke tobacco grown at home. The average amount that is given away / sold by survey respondents is deducted from the total quantity grown to estimate the quantity of tobacco grown at home that is consumed in New Zealand.	— This approach assumes that all tobacco grown at home is either consumed or given away / sold. There will likely be some wastage which is not captured. — However, the amount calculated is small and so we believe this will have a small impact.

Note: (a) Please see appendix A3 for details of the estimation of the smoking population.

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

A1 Consumption model: Unbranded

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

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

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

In New Zealand it is assumed that unbranded tobacco is solely in the form of home grown tobacco which has been sold illegally.

The 2017 consumption model process and relevant data sources are shown in detail overleaf.

Table A1b Consumption model data sources and process

Consumption model inputs		
Quantity of unbranded tobacco purchased per occasion (g)	(1)	Kantar New Zealand consumer survey
Frequency of unbranded tobacco purchased per annum	(2)	Kantar New Zealand consumer survey
Quantity of unbranded tobacco purchased per annum (kg)	(3)	(1) x (2) = (3)
Total adult smoking population ('000)	(4)	Extrapolated New Zealand Health Survey smoking prevalence data and Stats New Zealand adult population data[(a)]
Unbranded tobacco users as % of New Zealand tobacco users	(5)	Kantar New Zealand consumer survey
Number of unbranded tobacco users, New Zealand ('000)	(6)	(4) x (5) = (6)
Quantity of unbranded tobacco purchased in New Zealand (kg '000)	(7)	(3) x (6) = (7)

Note: (a) Please see appendix A3 for details of the estimation of the smoking population.

The results of the consumption modelling process indicate an illicit volume of 39,800 kg of home grown tobacco purchased

A1 Consumption model (cont.)

The core inputs from the consumer survey and publicly available information are used in the consumption model, Figure A1b: Consumption model results, 2017[(1)(2)(a)]

			Unbranded tobacco
			2017
1	Average quantity of unbranded tobacco purchased per occasion (g)		66.5
2	Average frequency of unbranded tobacco purchased per annum		47
3	Average quantity of unbranded tobacco purchased per annum (g)	1 x 2	3,109
4	Total adult smoking population ('000)		526
5	Unbranded tobacco users as % of New Zealand tobacco users		2.4%
6	Number of unbranded tobacco users, New Zealand ('000)	4 x 5	13
7	Quantity of unbranded tobacco purchased in New Zealand (kg '000)	3 x 6	39.8

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

Based on the responses to the Kantar New Zealand consumer survey, the consumption model estimates the volume of unbranded tobacco consumed in 2017 to be just under 40,000 kg.

Note: (a) Numbers in the above table may not sum due to rounding.
Sources: (1) Kantar New Zealand Research, Consumer survey.
(2) KPMG analysis.

The consumption model is also used in order to calculate the legal home grown market

A1 Consumption model (cont.)

Tobacco grown at home market

The consumption model is also used in order to estimate the size of the legal tobacco grown at home market. In the consumer survey, each respondent was asked if they had smoked their own home grown tobacco within the last twelve months. The percentage that this generated was applied to the total smoking population in order to determine the number of people who smoke their own home grown tobacco.

When estimating the total size of the tobacco grown at home market, the growers were asked how much tobacco they grew. The average volume of dried tobacco grown by each smoker was 3.3 kilograms, well below the 15 kilograms manufacturing allowance. The growers were also asked whether they had given away or sold any of the tobacco they grew, and if so the quantity which was given away or sold. This was deducted from the amount grown to calculate the total amount of tobacco grown at home that was consumed legally. There will likely be some wastage that the survey does not capture.

Table A1c: New Zealand tobacco grown at home consumption volumes[(1)(2)(3)]

Consumption model inputs		
Average quantity of tobacco grown per year (kg)	(1)	Kantar New Zealand consumer survey
Total adult smoking population ('000)	(2)	Extrapolated New Zealand Health Survey smoking prevalence data and Stats New Zealand adult population data[(a)]
Tobacco grown at home smokers as % of New Zealand tobacco users	(3)	Kantar New Zealand consumer survey
Number of tobacco grown at home smokers, New Zealand ('000)	(4)	(2) x (3) = (4)
Quantity of tobacco grown by tobacco grown at home smokers in New Zealand (kg '000)	(5)	(1) x (4) = (5)
Average quantity of tobacco given away or sold (kg)	(6)	Kantar New Zealand consumer survey
% of home growers who have given away or sold tobacco grown at home	(7)	Kantar New Zealand consumer survey
Number of tobacco grown at home smokers who give away or sell tobacco grown at home, New Zealand ('000)	(8)	(4) x (7) = (8)
Quantity of tobacco given away or sold by tobacco grown at home smokers in New Zealand (kg '000)	(9)	(6) x (8) = (9)
Quantity of tobacco grown at home consumed legally (kg '000)	(10)	(5) - (9) = (10)

Note: (a) Data obtained from industry research suggests a conversion rate of 0.4 grams per rolled cigarette.
Sources: (1) KPMG consumption model.
(2) Ministry of Health; New Zealand Health Survey.
(3) Kantar New Zealand Research, Consumer survey.

The results of the consumption model indicate that 49,900 kg of home grown tobacco was consumed legally

A1 Consumption model (cont.)

Figure A1c: Tobacco grown at home results, 2017[(1)(2)(a)]

			Legal home grown
			2017
1	Average quantity of tobacco grown per year (kg)		3.4
2	Total adult smoking population ('000)		526
3	Tobacco grown at home smokers as % of New Zealand tobacco users		2.8%
4	Number of tobacco grown at home smokers, New Zealand ('000)	2 x 3	15
5	Quantity of tobacco grown by tobacco grown at home smokers in New Zealand (kg '000)	1 x 4	50.0
6	Average quantity of tobacco given away or sold (kg)		0.2
7	% of home growers who have given away or sold tobacco grown at home		3.8%
8	Number of tobacco grown at home smokers who give away or sell tobacco grown at home, New Zealand ('000)	4 x 7	0.6
9	Quantity of tobacco given away or sold by tobacco grown at home smokers in New Zealand (kg '000)	6 x 8	0.1
10	Quantity of tobacco grown at home consumed legally (kg '000)	5 - 9	49.9

The consumption model is used in order to size the tobacco grown at home market. Based on the responses to the Kantar New Zealand survey 50,000 kg of tobacco were estimated to be grown by tobacco grown at home smokers in New Zealand. Of this, 100 kg were sold or given away, therefore 49,900 kg of tobacco were estimated to be grown at home and consumed legally. When added to all legal domestic sales, including manufactured cigarettes, this equates to 3% of the total volume of legal purchased and grown tobacco within New Zealand.

Note: (a) Numbers in the above table may not sum due to rounding.
Sources: (1) Kantar New Zealand Research, Consumer survey.
(2) KPMG analysis.

EPS Methodology

A2 EPS Analysis (cont.)

Figure A2c: EPS Methodology

Empty Pack Survey methodology

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

1. Population centre selection

To achieve a sample of cigarette packs that is representative of the cigarette smoking population of New Zealand, five population centres are chosen based, on parameters such as population, size and geographical location. The population centres chosen represent the five largest cities in New Zealand and cover 52% of New Zealand's population.

2. Pack collection

The neighbourhoods sampled include residential, commercial and industrial areas. The EPS collection routes specifically exclude tourist areas, sports stadia, shopping malls and stations, or any other locations where non-domestic incidence is likely to be higher as a result of a skewed population visiting these areas. The EPS is therefore representative of New Zealand's 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.

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 MSI 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). MSI identifies whether the packs are domestic or non-domestic. The details are then entered into the survey 'Data Sheet' provided by MSI. The packs are delivered to the participating manufacturer(s) in a way that enables easy processing and identification.

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. The collected packs are weighted according to the population of each settlement with results then calculated based on the number of cigarettes per pack. Reporting is done on the basis of cigarette sticks (as opposed to packs) to provide a more accurate estimation of total consumption).

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

EPS Methodology (cont.)

A2 EPS Analysis (cont.)

Validation of EPS Analysis

A criticism of the EPS is that it samples discarded cigarette packs rather than household waste and therefore significantly overstates non-domestic incidence. Sampling for household waste is impractical in most countries. It is, however, it is available in Germany. The household waste survey, known as a Yellow Bag Survey (YBS), is possible in Germany because household waste is sorted, mainly for the purposes of recycling, which makes it possible to separate cigarette packs from other waste.

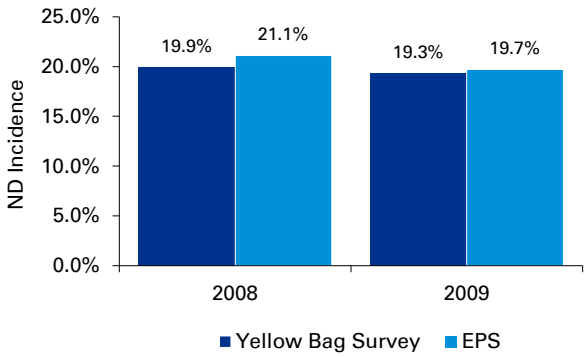
The Yellow Bag Survey collects 500 packs a month from 24 waste disposal centres throughout Germany. As a result, over 120,000 weighted packs collected throughout the year, typically a larger sample than an EPS. A comparison was undertaken by KPMG between different methodologies in 2008 and 2009.

In addition to the benefits of the higher sample size, collections from waste disposal centres resulted in packs coming from both household waste and public bins, demonstrating that consumption of illicit tobacco in the home is unlikely to be significantly different than consumption in public place. This comparison helps to address a common criticism of the EPS.

This analysis enables us to compare the results of the Yellow Bag Survey with the EPS to understand differences in the amount of non-domestic product that is captured.

In 2008 and 2009, EPS were also undertaken in Germany. Four quarterly waves were undertaken in 2008 with waves undertaken in Q1 and Q3 in 2009. Each wave collected 10,000 packs. Each survey was conducted across 52 cities population centres in Germany, representing 27% of the total German population.

Figure A2d: YBS and EPS results, Germany 2008-2009[(1)(2)(a)]



The non-domestic incidence measured by the EPS was 1.2 percentage points higher in 2008 and 0.4 points higher in 2009. Whilst the EPS results are slightly higher, the overall non-domestic incidence is very close. These differences may be due to the following reasons:

1. **Timings of EPS** – the EPS takes place at one point in time during the quarter whereas the yellow bag survey takes place monthly.
2. **Urban/Rural differences** – the EPS covers a lower sample of the total population which excludes smaller population centres.
3. **Number of packs** – given the number of packs collected by the yellow bag survey, it is likely to generate slightly more accurate results.

We recognise this approach is a single point of comparison in one market but it provides us with confidence that the results of EPS are a reliable measure of non-domestic incidence.

Note: (a) The comparison between methodologies is made on a 'sticks basis' in 2008 and 2009 rather than on a packs basis reported in Project SUN.
Sources: (1) MSIntelligence Research, Germany Empty Pack Survey report, Q2 2009.
(2) Ipsos, Yellow Bag Survey, 2008-2009.

The Q4 2017 Empty Pack Survey found that 10.5% of manufactured cigarette flows originated outside New Zealand

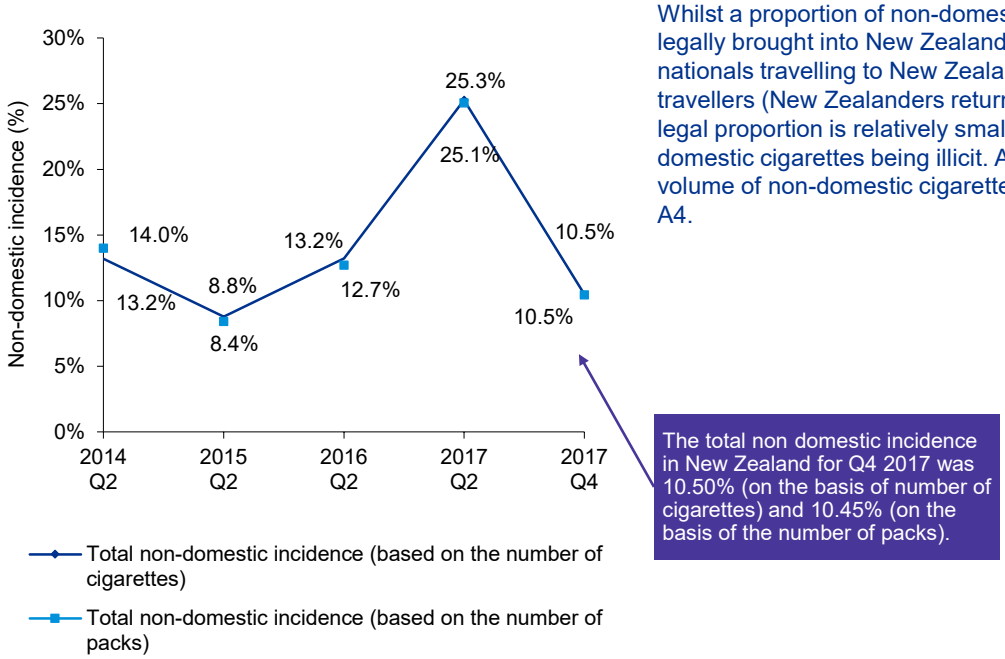
A2 EPS Analysis (cont.)

A criticism of the EPS is that it samples discarded cigarette We have been given access to five Empty Pack Surveys (EPS) which have been carried out in New Zealand over the last four years.

The empty pack surveys have been jointly commissioned by the industry (BATNZ, ITNZ and PML). Prior to 2017, surveys were also run in Q2 2014, Q2 2015 and Q2 2016 which have been made available to KPMG for use in this report. The methodology and sample walking routes were consistent with those used in 2017. These surveys collect 2000 packs across the same 5 centres in New Zealand.

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

Figure A2a: Total non-domestic incidence, Q2 2014 – Q4 2017(1)(a)



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

The total non-domestic incidence in New Zealand for Q4 2017 was 10.50% (on the basis of number of cigarettes) and 10.45% (on the basis of number of packs). These results are slightly lower than the non-domestic incidence recorded in the Q2 2016 survey.

The Q2 2017 results were much higher than the non-domestic incidence in other periods. For the purpose of this report, we have used different weightings for the Q2 2017 and Q4 2017 EPS, assigning a weight of 11/12 to the Q4 2017 EPS, and a weight of 1/12 to the Q2 2017 EPS. This is discussed on page 36.

Whilst a proportion of non-domestic cigarettes will be legally brought into New Zealand by both inbound (foreign nationals travelling to New Zealand) and outbound travellers (New Zealanders 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.

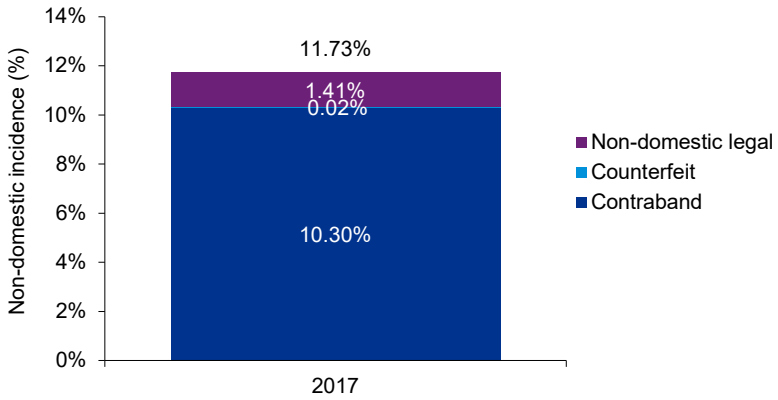
The total non domestic incidence in New Zealand for Q4 2017 was 10.50% (on the basis of number of cigarettes) and 10.45% (on the basis of the number of packs).

Note: (a) No survey was conducted in Q4 2014, Q4 2015 and Q4 2016, trend line is for information only.
Source: (1) MSIntelligence Research, Empty Pack Survey, Q2 2014, Q2 2015, Q2 2016, Q2 2017 and Q4 2017.

The majority of non-domestic manufactured cigarette flows were illicit in 2017

A2 EPS Analysis (cont.)

Figure A2b: Break down of non-domestic incidence, 2017(1)(2)(a)(b) (c)



As discussed on the previous page, not all non-domestic tobacco is illicit tobacco. Non-domestic incidence can be broken down into three separate categories of flows:

1. **Non-domestic legal** – These are cigarettes legally brought into New Zealand as part of travellers' non-domestic allowance.
2. **Counterfeit** – The packs collected in the EPS are examined by the participating companies. They are able to identify packs that are counterfeit versions of their products.
3. **Contraband** – The remainder, and majority, of non-domestic manufactured cigarettes are legitimate products (i.e. non-counterfeit) that have entered New Zealand illegally. Contraband includes Illicit Whites.

Of the total 11.7% non-domestic incidence reported in the 2017, 1.4% can be attributed to non-domestic legal volumes. The majority of non-domestic cigarettes are therefore illicit flows.

Notes: (a) Please refer to appendix A4 for detailed calculation of non-domestic legal volumes.
(b) The 2017 figures are based on the blended results of Q2 2017 and Q4 2017 using the weighted number of cigarettes.
(c) The cigarettes for Q2 2017 and Q4 2017 have been reweighted to assess the incidence.
Sources: (1) MSInteligence Research, Empty Pack Survey, Q2 2017and Q4 2017.
(2) KPMG analysis.

The results of the EPS analysis indicate an illicit volume of 151,500 kg of non-domestic manufactured cigarettes

A2 EPS Analysis (cont.)

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

The 11.7% non-domestic incidence is combined with estimates for legal domestic sales volumes from the industry to create a volume estimate for illicit manufactured cigarettes. This estimate can then be broken down into volume estimates for non-domestic legal, counterfeit and contraband.

Figure: A2e: New Zealand EPS non-domestic consumption and illicit estimate[(1)(2)(a)]

		2017
Legal sales of manufactured cigarettes (kg'000s)	(1)	1,361
EPS non-domestic incidence	(2)	11.7%
Total consumption of manufactured cigarettes (kg'000s)	(3) = (1) / (100% – (2))	1,542
Non-domestic consumption (kg'000s)	(4) = (3) – (1)	**181**
Non-domestic legal volume estimate (kg'000s)	(5)	*29.4*
Illicit non-domestic consumption (kg'000s)	(6) = (4) – (5)	**151.5**
EPS counterfeit incidence	(7)	0.02%
Counterfeit consumption (kg'000s)	(8) = (4) * ((7) / (2))	0.4
Contraband consumption (kg'000s)	(9) = (6) – (8)	151.1

Figure A2e shows the calculation used to estimate the total volume of illicit manufactured cigarettes consumed in New Zealand. The percentage of non-domestic cigarettes is added to legal domestic consumption in order to calculate total consumption in step 3. Total illicit consumption is calculated by removing the non-domestic legal volume estimate in step 6.

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

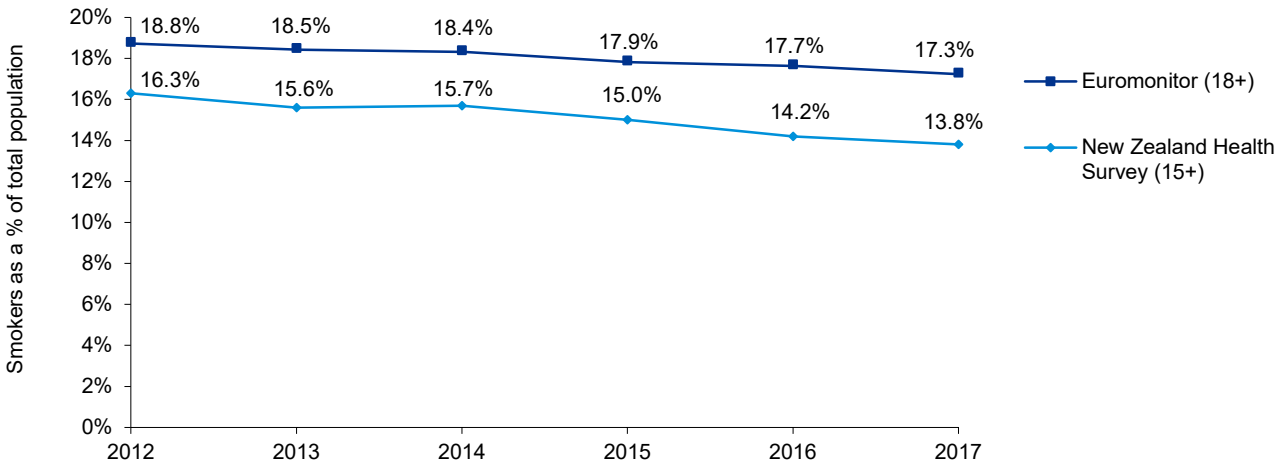
The results of the EPS analysis show that volumes attributable to counterfeit manufactured cigarettes were small, whilst contraband flows accounted for 99.8% of the total illicit consumption of manufactured cigarettes, as indicated by the EPS analysis.

Note: (a) Numbers in the above table may not sum due to rounding.
Sources: (1) MSIntelligence Research, Empty Pack Survey, Q2 2017 and Q4 2017.
(2) KPMG analysis.

Estimates of New Zealand smoking prevalence are available from the New Zealand Health Survey and Euromonitor

A3 Use of smoking prevalence data

Figure A3a Smokers as a percentage of population, 2012 - 2017[(1)(2)(a)]



CAGR (%)	2012 - 17
New Zealand Health Survey	*(3.3)%*
Euromonitor	*(1.6)%*

The smoking prevalence rate measures the total percentage of regular smokers in New Zealand and can be used as an indicator of the level of tobacco consumption. Smoking prevalence data is used in order to calculate the total number of smokers in New Zealand.

Official estimates of smoking prevalence are available from the New Zealand Ministry of Health, based on data from the New Zealand Health Survey which has been collected annually since 2011/12. Euromonitor also provides estimates of smoking prevalence.

Each of the data sources reflects specific age groups. The New Zealand Health Survey estimates reflect prevalence for 15 year olds and above, whilst Euromonitor figures estimated prevalence among those aged over 18. This age difference likely explains part of the higher Euromonitor results. Both estimates indicate a downward trend in smoking prevalence.

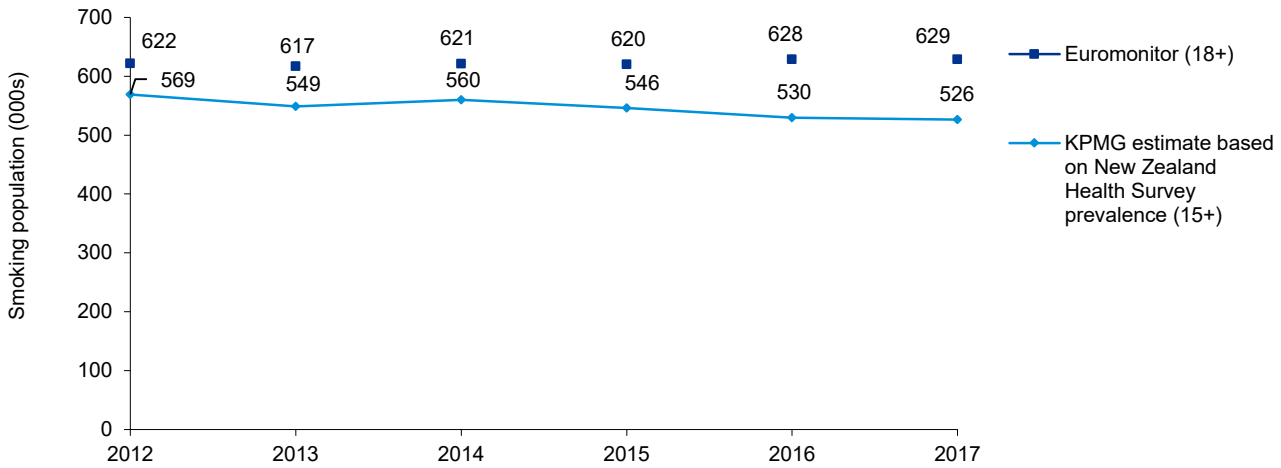
Where KPMG require prevalence data for our modelling process, we have used the New Zealand Health Survey results to ensure that our estimate for the number of smokers in New Zealand is not overstated. Overstating the number of smokers would lead to an incorrectly inflated estimate of the size of the illicit trade.

Note: (a) New Zealand Health Survey data is based on period between July and June.
Sources: (1) Euromonitor, Smoking prevalence in New Zealand, accessed January 2018.
(2) Ministry of Health; New Zealand Health Survey, 2011/12 – 2016/17.

The two different estimates of smoking prevalence suggest very different views on the smoking population

A3 Use of smoking prevalence data

Figure A3b Total number of smokers, 2012 - 2017 (1)(2)(3)(a)



CAGR (%)	2012 17
KPMG estimated based on New Zealand Health Survey	*(1.5)%*
Euromonitor	*0.2%*

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

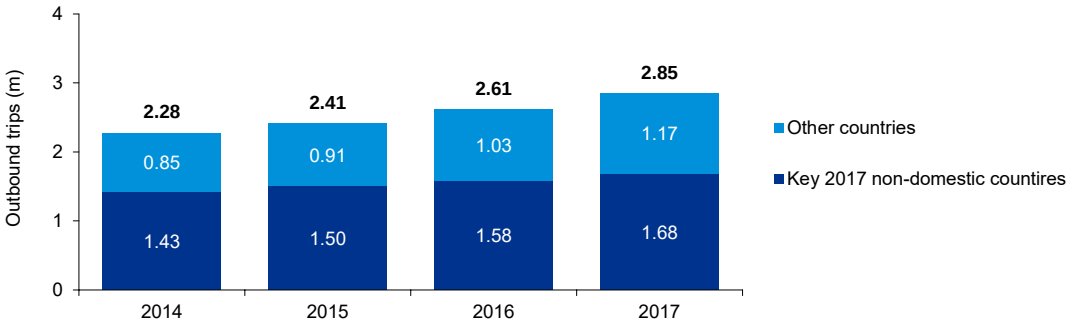
KPMG use the prevalence data provided by the New Zealand Health Survey and population data provided by Euromonitor to calculate the smoking population. This approach indicates a declining population as compared to Euromonitor which represents an increase.

Note: (a) New Zealand Health Survey data is based on period between July and June.
Sources: (1) Euromonitor, smoking population in New Zealand, accessed January 2018.
(2) Ministry of Health, New Zealand Health Survey, 2011/12 – 2016/17.
(3) Euromonitor, New Zealand population data, accessed January 2018.

Outbound trips to non-domestic source countries have increased since 2014

A4 Non-domestic legal calculation

Figure A4a Overseas travel of New Zealand residents, 2014 – 2017[(1)(a)(b)]



CAGR (%)	2014 - 2017	2014 - 2015	2015 - 2016	2016 - 2017
Key 2017 ND source countries	5.6%	5.0%	5.6%	6.4%
Total overseas trips	7.8%	6.0%	8.3%	9.3%

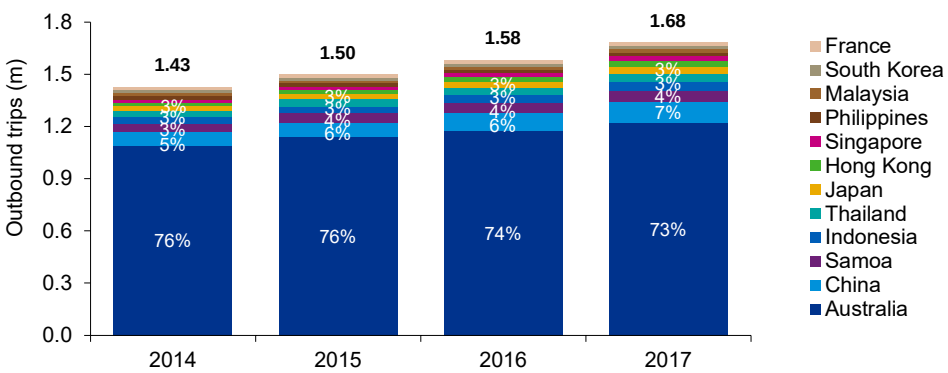
Travel trend data is used by KPMG to estimate non-domestic legal volumes, i.e. tobacco products that are brought into the country legally by consumers, such as during an overseas trip.

The EPS analysis has been used to identify the top 12 countries based on the non-domestic incidence of cigarette sticks. These countries account for approximately 80% of the total non-domestic incidence in 2017 and have been used to calculate non-domestic legal flows.

Trips made to key non-domestic source countries of manufactured cigarettes increased at a lower rate than overall visits; 6.4% versus 9.3% between 2016 and 2017.

Later in the report, this data is used to estimate non-domestic legal sales.

Figure A4b Overseas travel of New Zealand residents to key 2017 non-domestic source countries, 2014 – 2017[(1)(a)(b)(c)]



Visits to key non-domestic source countries reached a total of 1.7 million in 2017, accounting for approximately 59% of all trips made overseas by New Zealand residents.

However, low inbound traveller allowances will likely have tempered growth of non-domestic legal consumption. This is examined in more detail overleaf.

Notes: (a) Key non-domestic source countries have been selected from the EPS carried out in 2017, the countries shown in the graph above accounted for about 80% of the total non-domestic incidence in 2017 in New Zealand.
(b) ND(L) volumes are estimated using actual travel data from January 2017 to December 2017.
(c) Some chart labels less than 3% have been removed for clarity.

Source: (1) Statistics New Zealand, NZ-resident traveller departures by every country of main destination and purpose (monthly): Trend, 2014, 2015, 2016, 2017.

Non-domestic legal volumes due to outbound trips to key source countries is low as a proportion of total consumption

A4 Non-domestic legal calculation (cont.)

Figure A4c: Example non-domestic legal calculation (outbound)

	Overseas visits		ND uplift		% population smokers		Propensity to purchase		Amount per trip		Total (kg '000)
Full year 2017	0.3m	x	1.2[(a)]	x	13.8%	x	61%	x	50g	=	1.6

KPMG non domestic legal calculation for overseas travel of New Zealand residents[(1)(2)(3)(4)(a)(b)(c)(d)(e)]		
	Source	**2017**
Overseas trips to non-domestic source countries in the year (m)	Statistics New Zealand	0.32
Non-domestic source uplift	EPS	20%
% of population that are smokers	Ministry of Health	13.8%
% of smokers that buy tobacco overseas	Kantar New Zealand consumer survey	61.0%
Number of smokers purchasing overseas (m)		0.03
Amount purchased (kg)	Inbound traveller allowance	0.05
Total outbound non-domestic legal (kg)		**1,606**

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

The 2017 consumer survey suggested that 61% of smokers bought cigarettes overseas.

Notes:
(a) The key non-domestic source countries used to calculate non-domestic legal flows accounted for approximately 80% of the total non-domestic incidence in 2017 in New Zealand. Therefore, a 20% uplift has been used to get the total non-domestic legal volume.
(b) Respondents were asked 'OP1. Have you travelled outside of New Zealand in the last 12 months?'.
(c) Respondents were then asked 'OP2. Have you bought any tailor made cigarettes / roll your own tobacco in another country to bring back to New Zealand on any of your overseas trips in the last 12 months?'.
(d) Population above the age of 18 years.
(e) Flows from Australia that were compliant with the Australian plain packaging requirements as per the Q2 2017 and Q4 2017 EPS have been considered to be legal inflows. Our estimate of non-domestic legal includes the volume of these flows, and Australia has therefore been excluded from the above calculation.

Sources:
(1) Kantar New Zealand, Consumer survey, 2017.
(2) Statistics New Zealand, Resident traveller departures by every country of main destination and purpose (monthly): Trend, 2017.
(3) Ministry of Health, Government of New Zealand, Health Survey 2016-17.
(4) IATA, New Zealand Customs, Currency & Airport Tax regulations details, accessed on January 2018.

Visitors from countries indicated by the EPS also serve as contributors to non-domestic packs found in New Zealand

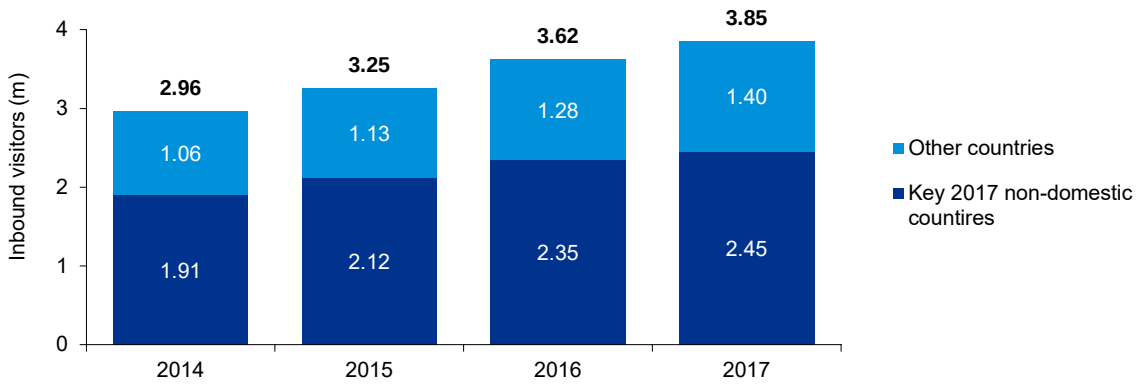
A4 Non-domestic legal calculation (cont.)

Overseas visitors arrivals from key non-domestic countries include both short term arrivals and permanent and long-term migration. As discussed on page 57, the key source countries have been included based on the inflows from each market in the 2017 EPS.

Visitors (short term arrivals and permanent and long-term migration) from the key non-domestic source countries identified by the EPS have increased since 2014.

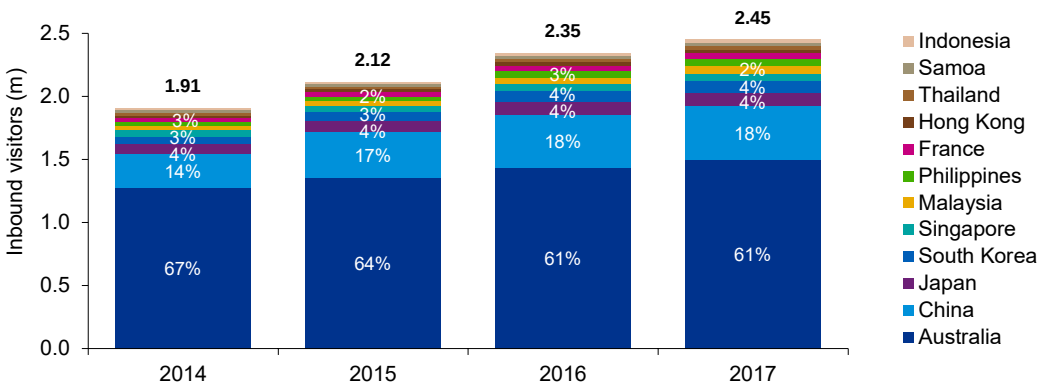
In the absence of data, KPMG has made a prudent assumption that all visitors who are calculated to be smokers bring their full 50 cigarette or 50 gram duty free limit.

Figure A4d: Overseas visitors (short term visitors and permanent and long-term migration) arrivals to New Zealand, 2014 – 2017(1)(2)(a)(b)



CAGR (%)	2014 - 2017	2014 - 2015	2015 - 2016	2016 - 2017
Key 2017 ND source countries	8.7%	11.1%	10.7%	4.6%
Total overseas visitors arrivals	9.2%	9.7%	11.4%	6.4%

Figure A4e: Overseas visitors arrivals from key non-domestic source countries, 2014 – 2017(1)(2)(a)(b)(c)



Notes: (a) Key non-domestic source countries have been selected from the EPS carried out in 2017, the countries shown in the graph above accounted for approximately 80% of the total non-domestic incidence in 2017 in New Zealand.
(b) ND(L) volumes are estimated using actual travel data from January 2017 to December 2017.
(c) Some chart labels less than 3% have been removed for clarity.

Sources: (1) Statistics New Zealand, Visitor arrivals by every country of residence and purpose (monthly): Trend, 2014, 2015, 2016, 2017.
(2) Statistics New Zealand, Permanent & long-term migration by every country of residence and citizenship (monthly): Trend, 2014, 2015, 2016, 2017.

Non-domestic legal estimates calculated on the basis of inbound visitors is a small proportion of total consumption

A4 Non-domestic legal calculation (cont.)

Figure A4f: Example non-domestic legal calculation (inbound)

Example of KPMG non-domestic legal calculation based on overseas visitor arrivals to New Zealand(1)(2)(3)(4)(5)(a)(b)(c)(d)(e)

2017	Inbound visitor arrivals (m)(a)	% population above 18(b)	% population smokers	Number of visitors bringing tobacco (m)(c)	Amount purchased (kg)
Source	Statistics New Zealand	Euromonitor	Euromonitor		
China	0.43	79%	28%	0.094	4,724
South Korea	0.09	83%	21%	0.017	839
France	0.05	78%	28%	0.010	508
Singapore	0.06	84%	13%	0.006	316
Japan	0.10	85%	19%	0.017	840
Indonesia	0.02	67%	36%	0.006	301
Hong Kong	0.06	86%	10%	0.005	239
Malaysia	0.06	70%	21%	0.008	414
Philippines	0.03	62%	27%	0.005	249
Thailand	0.03	79%	23%	0.005	258
Samoa(d)	0.03	57%	24%	0.004	183
Total	**0.96**				**8,872**

Total amount brought into New Zealand by inbound tourists

KPMG's estimate of non-domestic legal volumes indicates that they account for a small proportion of total consumption. This proportion remains insignificant even if arrivals data is included in the non-domestic legal calculation. This analysis has been shown in detail on the next page.

Notes:
(a) Inbound visitor arrivals to include arrivals of short term overseas visitors and permanent and long-term migration.
(b) Population above the age of 18 years.
(c) KPMG has used a prudent approach and assumed that 100% of visitors arriving in New Zealand purchase the maximum inbound traveller allowance.
(d) Prevalence number for Samoa has been calculated based on 2014 prevalence and population data.
(e) Flows from Australia that were compliant with the Australian plain packaging requirements as per the Q2 2017 and Q4 2017 EPS have been considered to be legal inflows. Our estimate of non-domestic legal includes the volume of these flows and Australia has therefore been excluded from the above calculation.

Sources:
(1) Statistics New Zealand, Visitor arrivals by every country of residence and purpose (monthly): Trend, 2017.
(2) Statistics New Zealand, Permanent & long-term migration by every country of residence and citizenship (monthly): Trend, 2017.
(3) Euromonitor, Population: National Estimates, accessed January 2018.
(4) Euromonitor, Smoking Prevalence Among Total Adult Population, accessed January 2018.
(5) Government of Samoa, Demographic and Health Survey, 2014.

Total non-domestic legal consumption represents 1.4% of total consumption in New Zealand

A4 Non-domestic legal calculation (cont.)

KPMG Total non-domestic legal calculation[1][2][3][a][b]	2017
Outbound trips ('000 kg)	1.6
Inbound trips ('000 kg)	8.9
Australia (Plain Packaged) ('000 kg)[c]	19.0
Total ND(L) ('000 kg)	29.4
Non-domestic legal as % of total consumption	**1.4%**

The estimate of ND(L) volumes above comprises the legitimate flows from the main source countries as per the EPS and represents 1.4% of total consumption. If we were to assume that all travellers from the key source markets indicated by the EPS purchased their allowance of 50 grams, we would derive an ND(L) volume of approximately 58,200 kg or 2.8% of total consumption.

One limitation of this methodology is that it does not include cigarettes purchased through mail order and imported legally into New Zealand. Given the limited financial gain associated with paying New Zealand excise duty on cigarettes purchased abroad, compared to those purchased in New Zealand, we believe that the volume consumed is unlikely to be significant.

In addition, whilst internet retailing gained some share as a distribution channel, it still remained small in comparison to convenience stores, forecourt retailers and other traditional retail channels which dominated sales.[4] The Kantar New Zealand consumer survey results indicated that in 2017, none of the purchasers of unbranded tobacco did so via the internet.[5]

Notes:
(a) Inbound visitor arrivals to include arrivals of short term overseas visitors and permanent and long-term migration.
(b) KPMG analysis.
(c) Flows from Australia that were compliant with the Australian plain packaging requirements as per the Q2 2017 and Q4 2017 EPS have been considered to be legal inflows. Our estimate of non-domestic legal includes the volume of these flows.

Sources:
(1) Statistics New Zealand, Visitor arrivals by every country of residence and purpose (monthly): Trend, 2017.
(2) Statistics New Zealand, Permanent & long-term migration by every country of residence and citizenship (monthly): Trend, 2017.
(3) Statistics New Zealand, Resident traveller departures by every country of main destination and purpose (monthly): Trend, 2017.
(4) Euromonitor, Tobacco in New Zealand, July 2017.
(5) Kantar New Zealand, Consumer survey, 2017.

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 New Zealand, where they have limited or no legal distribution and are sold without the payment of tax.

Our analysis includes assessment of Domestic Illicit Whites and Illicit Whites (non-domestic) brand flows.

Domestic Illicit Whites

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

— All domestic cigarette brands in the EPS data were compiled for analysis. The list was corroborated through an analysis of Aztec IRI – EoS data (and pack labelling as per EPS). EPS determined volumes were compared to legally reported sales of these brands to determine an estimated share of total consumption.(1)(2)

— Brand flows were also compared with the brands listed in the Tobacco Returns data published by Ministry of Health New Zealand, which are annual tobacco returns filed by manufacturers and importers pursuant to section 35 of the Smoke-free Environments Act 1990.(3)

— Consistent with our approach in Project SUN, KPMG has conservatively assumed that, where consumption implied by the EPS volumes represented > 99% of total legal consumption, the brand is considered a Domestic Illicit White.

No brands were found to be Domestic Illicit Whites in 2017

Table A5a Domestic Illicit Whites identification process, Illicit Tobacco in New Zealand – worked example

Illicit Tobacco in New Zealand – Illicit Whites identification process, 2017(1)(2)(3)				
	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 White since there is no evidence of legal distribution and all flows are unspecified origin. Brand D is not classified as a Domestic Illicit White where the domestic volumes are 38% of the consumption.

Sources: (1) MSIntelligence Research, Empty Pack Survey, Q2 2017, Q4 2017.
(2) Aztec IRI, Exchange of Sales, 2012 - 2017.
(3) Tobacco Returns, Ministry of Health, 2016.

Illicit Whites flows methodology

A5 Illicit Whites flows analysis (cont.)

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.(1)

— These brands were then compared with the Aztec IRI – EoS(2) (which records brands being sold through most legitimate channels). Brands included in the Aztec IRI – EoS data were then eliminated from the list.

— Remaining brands were then compared with the brands listed in the Tobacco returns data.(3) 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 A5b Illicit Whites (non-domestic) identification process for Illicit Tobacco in New Zealand – worked example

Illicit Tobacco in New Zealand – Illicit Whites identification process(1)(2)(3)				
	2017 non-domestic volume (bn sticks)	Aztec IRI – Exchange of sales data?	Tobacco returns?	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 Aztec IRI – EoS data and the Tobacco returns are categorised as Illicit White flows.

Note: (a) Third party sources include Euromonitor tobacco reports which were used for further verification.
Sources: (1) MSIntelligence Research, Empty Pack Survey, Q2 2017, Q4 2017.
(2) Aztec IRI, Exchange of Sales, 2012 - 2017.
(3) Tobacco Returns, Ministry of Health, 2016.

ASH published reports in 2010 and 2013 which estimated the size of the illicit tobacco market in New Zealand

A6 Alternative illicit tobacco estimates

Action on Smoking and Health (ASH) published a report, 'Illicit Tobacco Trade: Monitoring and Mitigating Risk in New Zealand' in June 2010(1), the purpose of which was to provide an estimate of the level of illicit trade, and options to control the growth of illicit trade alongside regulation of smoked tobacco in New Zealand. The estimate was based on information provided in reports, journals, interviews and personal communication with New Zealand Customs staff, health advocates and researchers with experience in illicit trade. An update was published in 2013 using the same methodology(2). Illicit tobacco consumption was estimated to be between 0.8-2.8% of total tobacco consumption in 2010, and between 1.8-3.9% in 2013. Given the last estimate is 5 years old it is not representative to compare to our estimates. However, we do note a large difference in findings. ASH uses the following approach to estimate illicit tobacco consumption.

Table A6: ASH approach

Type of illicit tobacco	Approach	Evidence point	KPMG commentary
Contraband	The amount of tobacco detained by New Zealand Customs at airports, shipping ports and mail centres was applied to estimated interception rates to calculate the estimated total illegal amount of contraband.	— An average of the amount of tobacco detained at each entry port between 2007-2009 was used. This was taken from the Ernst & Young (EY) report on the New Zealand illicit tobacco market published in 2010(3) which sourced the figures from New Zealand Customs. — Interception rates for airports and mail centres were assumed to be 50%. This rate is an estimate by ASH based on the fact that New Zealand Customs uses X-ray machines and drug detection dogs to screen luggage and mail. — An interception rate of 6-15% was used for shipping ports, based on the interception rate used by EY in their 2010 report on the New Zealand illicit tobacco market(3). This rate was an estimate by Ernst & Young but the ultimate source of the assumption is unclear.	Interception rates and quantities intercepted by customs are likely to vary significantly from year to year. Therefore, over short periods of time, like a year, it may not represent a representative approach.
Unbranded tobacco **(referred to as 'Local illicit' in the ASH report)**	An estimate of the area of land used to illegally commercially grow tobacco in New Zealand was applied to commercial yield rates to calculate a maximum estimate for unbranded tobacco. A minimum estimate was calculated by applying an estimated interception rate to the amount of illegally manufactured tobacco recently detained by New Zealand Customs.	— ASH estimated an area of 20 acres in Moteuka being used to illegally grow tobacco. This was based on an estimate provided via interviewing one Landcare research scientist. It is in contrast to the 50 acres estimated by EY based on aerial surveys. The source of these aerial surveys is unclear. — A yield rate of 1.1 tonnes of cured tobacco per acre was used, based on the average yield of commercially grown tobacco in New Zealand between 1988-1994(4). — An interception rate of 26-31% was used to calculate the minimum estimate. This was based on the seizure rate for cannabis(5) which was assumed to be similar for tobacco.	The ASH report only considers land in Moteuka. Additional areas of land may be used to illegally commercially grow tobacco in other parts of New Zealand. The EY report suggests that illicit tobacco is also grown and manufactured in Northland. This analysis also excludes tobacco grown at home by individuals and sold onwards.

Sources:
(1) Illicit Tobacco Trade: Monitoring and Mitigating Risk in New Zealand, ASH, June 2010.
(2) Update of Illicit Trade in Tobacco Products in New Zealand 2013, U Veng Ian (Esther) & Ali Ajmal, 2013.
(3) Out of the shadows: an independent report of New Zealand's illicit tobacco market, Ernst & Young, 2010.
(4) The Golden Harvest: a history of tobacco growing in New Zealand, O'Shea PK, 1997.
(5) The effectiveness of cannabis crop eradication operations in New Zealand, Drug Alcohol Review 2002.

The ASH methodology is significantly different to the methodology used in this report

A6 Alternative illicit tobacco estimates (cont.)

Table A6: ASH approach (cont.)

Type of illicit tobacco	Approach	Evidence point	KPMG commentary
Misused duty free	The estimate for duty free tobacco exchanged or sold, and therefore illegal was based on Ernst & Young's methodology.(3) This was derived by estimating the proportion of smokers as a proportion of all passengers and assuming 80% buy their full duty free allowance. The difference between this value and the estimate for volume of duty free trade was assumed to be the duty free bought as a gift or exchanged or sold.	— Ernst & Young uses a number of assumptions. The report does not make clear the ultimate source of these assumptions. - 85% of passengers were 18 or older; - 18-20% of passengers were regular smokers; - 80% of smokers were assumed to purchase their full duty free allowance; - Passengers did not purchase more than their duty free allowance; - 70% purchased manufactured cigarettes and 30% loose tobacco; and - What wasn't purchased and consumed by this group of smokers was purchased by non smoking travellers who in turn sold, exchanges or gave away their allocation to family, friends, or acquaintances. — The volume of duty free trade was estimated based on annual returns provided by tobacco companies .	Without further detail on the source of the assumptions it is difficult to comment further.

Sources: (1) Illicit Tobacco Trade: Monitoring and Mitigating Risk in New Zealand, ASH, June 2010.
(2) Update of Illicit Trade in Tobacco Products in New Zealand 2013, U Veng Ian (Esther) & Ali Ajmal, 2013.
(3) Out of the shadows: an independent report of New Zealand's illicit tobacco market, Ernst & Young, 2010.

Notes to this report

A7 Notes to this report

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

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

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

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

Illicit tobacco in New Zealand	
Source	**Overview**
EPS	— The EPS approach provides an objective and statistically representative estimate of the size of the illicit manufactured cigarette market. The results are not subject to respondent behaviour and are less prone to sampling errors than many other alternative methodologies. — Whilst the EPS 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 EPS may not be fully representative of consumption habits in rural areas. The impact in New Zealand is likely to be minimal as only 14% of the population live in rural areas(1). Nevertheless, the EPS covers 52% of the population and so a reasonably large proportion of the population is not covered by the study. - Homes and workplaces are not covered, though analysis of the Yellow Bag Survey results in Germany as discussed on page 51 suggests consumption outside the home is not significantly different. - 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. — Although EPS dates are selected to minimise seasonal factors, there may be specific events that impact the results such as major national events which result in large numbers of overseas visitors. We use a blended result of Q2 and Q4 EPS data to minimise this impact. We have also reweighted the Q2 2017 and Q4 2017 EPS, providing a lower weight to the Q2 2017 EPS as discussed on page 36 to minimise the impact of multiple international sporting events held in New Zealand in 2017, which resulted in an increase in the number of visitors. — 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.

Source: (1) New Zealand in 2030: The Future Demographics', Euromonitor, Feb 2017.

Notes to this report

A7 Notes to this report (cont.)

Illicit tobacco in New Zealand	
Source	**Overview**
Non-major manufacturer (non-participating) counterfeit	— EPS results do not identify counterfeit packs that have been made by manufacturers other than BATNZ, ITNZ and PML as only the manufacturer / trademark owner can confirm whether their brand pack is genuine. - As a result, for brands not trademark-owned by BATNZ, ITNZ or PML, it is not possible to identify counterfeit (non-domestic variants) and contraband product, although the overall volume of illicit would remain unaffected. — The volume of legal domestic consumption may be overstated where domestic counterfeit variants exist, leading to corresponding understatements of illicit volumes for some brands (although the impact is likely to be minimal and would require any counterfeit pack barcodes to operate correctly and to be scanned by retailers). — Illicit White volumes may include counterfeit. However, the presence of counterfeit is unlikely to have a major impact as counterfeit volumes in 2017 only represented a small proportion (0.3%)(1) of the total sample of the three participating manufacturers brand flows and counterfeit is typically concentrated on the most popular brands only.
Consumer surveys	— The sample for the tobacco questionnaire is weighted by location, age and gender in order to be representative of the national population. — 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. As such, the Kantar New Zealand 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).

Sources: (1) MSIntelligence Research, Empty Pack Surveys, Q2 2017 and Q4 2017.
(2) Temporal changes of under-reporting of cigarette consumption in population-based studies, Gallus et al, 2011.

Notes to this report

A7 Notes to this report (cont.)

Illicit tobacco in New Zealand	
Source	**Overview**
ND(L)	— We have used inbound and outbound travel data and inbound settler data from the Statistics New Zealand to calculate the number of trips made. — We have calculated the number of cigarettes purchased by assuming smokers purchase the legal allowance. This approach may overweight ND(L) volumes as a share of total non-domestic flows. — We have used key non-domestic source countries from the EPS to calculate non-domestic legal flows. These countries accounted for approximately 80% of the total non-domestic incidence in 2017 in New Zealand. Therefore, a 20% uplift has been used to get the total non-domestic legal volume. — Flows from Australia that were compliant with the Australian plain packaging requirements as per the Q2 2017 and Q4 2017 EPS, have been considered to be legal inflows. Our estimate of non-domestic legal includes the volume of these flows. — We have not been able to accurately estimate the number of cigarettes purchased through mail order and legally imported into New Zealand. However, as highlighted on page 61, we feel that the volume consumed is unlikely to be material.
Outflows from New Zealand	— Outflows from New Zealand 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 New Zealand in 2017. There are a number of limitations associated with these sources. — There are also differences between our key data sources and other points of corroboration. For example, the Kantar New Zealand consumer survey focuses on those over 18 years old, whilst the New Zealand health survey focuses on those over 15 years old.

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

A8 Scope of work

Full year report on the volume and nature of illicit tobacco in New Zealand 2017.

The description of the services set out below comprises the agreed restrictive scope of our work, and our ability to perform the services is subject in all cases to relevant information being available from the sources of information and documentation to be made available to us.

Scope

— We will analyse and report on:

— The total level of legal domestic sales (LDS) of tobacco products, and consumption in the market.

— If possible, the estimated total consumption of legal home grown tobacco in New Zealand.

— The estimated total consumption of tobacco (legal and illicit) across both manufactured products, loose tobacco and home grown tobacco.

— The estimated proportion of the New Zealand tobacco market accounted for by illicit trade consumption across both manufactured products and illegal home grown tobacco; including contraband, counterfeit and loose/unbranded tobacco products).

— Data on how taxation has evolved over time and report on tobacco regulation in the New Zealand market.

Approach

In order to size the illicit tobacco market, we will use two principal methods and other sources as a means of validation:

— Consumer research methodology utilising responses of a consumer survey undertaken by Kantar New Zealand provided to us by you. The questionnaire developed by Kantar New Zealand will make this process more efficient:
  - Analyse consumer responses to seek to establish the proportion of illicit home grown tobacco consumed.
  - Extrapolate the proportion of illicit tobacco consumed on a national level.
  - Express the findings as a proportion of total tobacco consumption.
  - Analyse consumer responses to establish the overall volume of home grown consumption.

— Empty pack survey methodology utilising Empty Pack Survey (EPS) data; namely
  - Analyse the data output from the EPS undertaken in 2017 to establish the proportion of market accounted for by non-domestic manufactured cigarettes.
  - Extrapolate the non-domestic and counterfeit incidence estimates identified in the EPS against the level of legal domestic sales in New Zealand.
  - Express findings on the estimates of both non-domestic consumption of manufactured cigarettes and consumption of counterfeit product as a proportion of consumption.

— Use additional corroborating data sources in order to demonstrate the robustness of the findings, including, where available, smoking prevalence data, rolling paper sales data, other consumer surveys relating to tobacco consumption and seizures data.

— Use of travel trends and smoking prevalence data in order to estimate non-domestic legal consumption of manufactured cigarettes and loose tobacco.

The overall results from the two methodologies 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.

Questions asked by the consumer survey

A9 Kantar New Zealand questionnaire

Do you, or does any member of your close family work in any of the following companies?

Can you please tell me how old you are?

Are you male or female?

What is your current age?

Which of the following products do you currently consume? (Options provided)

What type of tobacco products do you smoke or use, even if only occasionally? (Options provided)

How often do you normally smoke tailor made / manufactured cigarettes? (Options provided)

How many tailor made / manufactured cigarettes do you normally smoke each day (on average)?

What is your regular brand of tailor made / manufactured cigarettes? That is, the one you smoke more than any other brand?

What other brands of tailor made/ manufactured cigarettes do you currently smoke?

How often do you normally smoke roll your own tobacco?

How many roll your own cigarettes do you normally smoke each day (on average)?

What is your regular brand of roll your own tobacco? That is, the one you smoke more than any other brand?

What other brands of roll your own tobacco do you currently smoke?

Before today, were you aware of tobacco or cigarettes that can be bought for less than the normal price?

How did you become aware of the availability of cheap tobacco or cheap cigarettes?

Since you turned 18 have you ever bought cheap tobacco or cheap cigarettes for your own use?

Have you bought cheap tobacco or cheap cigarettes for your own use in the last 12 months?

Since you turned 18, how long have you been buying cheap tobacco or cheap cigarettes?

Which of the following types of cheap tobacco or cheap cigarettes are you aware of? (options provided)

How did you become aware of the availability of home-grown tobacco?

Since you turned 18 have you ever bought home grown tobacco for your own use?

Have you bought home grown tobacco in the last 12 months?

When did you last buy home grown tobacco?

When you last bought home grown tobacco, where did you get it from?

When you last bought home grown tobacco, can you estimate in grams or cigarettes how much you bought?

When you last bought home grown tobacco, how much did it cost in total?

In the last 12 months, has there been an occasion where you have wanted to get home grown tobacco, but were unable to buy any?

When you smoke home grown tobacco how much do you smoke per day?

How did you usually smoke home grown tobacco?

Do you know where the home grown tobacco you buy usually comes from?

Why do you smoke home grown tobacco?

How did you become aware of the availability of these cheaper RYO tobacco products?

Since you turned 18 have you ever bought any of these cheaper RYO tobacco products for your own use?

Have you bought these cheaper RYO tobacco products in the last 12 months?

In the past 12 months, how often did you buy these cheaper RYO tobacco products?

When did you last buy these cheaper RYO tobacco products?

When you last bought these cheaper RYO tobacco products, where did you get it from?

(If online or over the internet) How was this cheaper RYO tobacco delivered to you?

When you last bought these cheaper RYO tobacco products, can you estimate in grams or cigarettes how much you bought?

When you last bought these cheaper RYO tobacco products, how much did it cost in total?

When you smoke them, how much of these cheaper RYO tobacco products do you smoke per day?

Do you know where this cheaper RYO tobacco products you buy usually comes from?

Why did/do you smoke these cheaper RYO tobacco products?

Since you turned 18, do you think have you ever bought contraband cigarettes?

Do you think or suspect that you have bought contraband cigarettes, in the last 12 months?

Since you turned 18, do you think you have ever bought counterfeit cigarettes?

Do you think or suspect that you have bought counterfeit cigarettes, in the last 12 months?

Source: (1) Kantar New Zealand consumer surveys.

Questions asked by the consumer survey (cont.)

A9 Kantar New Zealand questionnaire (cont.)

If you think you have bought contraband or counterfeit cigarettes which brand(s) was it?

How did you become aware of the availability of contraband/ counterfeit cigarettes?

In the past 12 months, how often do you think you may have bought contraband/ counterfeit cigarettes?

When do you think you last bought contraband/ counterfeit cigarettes?

When you last bought contraband/ counterfeit cigarettes, where did you get them from?

When you last bought contraband/ counterfeit cigarettes, how was it sold?

When you last bought contraband/ counterfeit cigarettes, how many cigarettes did you buy?

When you last bought contraband/ counterfeit cigarettes, how much did it cost in total?

In the last 12 months, has there been an occasion where you have wanted to get contraband/ counterfeit cigarettes, but were unable to buy any?

When you smoke them, how many contraband/ counterfeit cigarettes do you smoke per day?

Do you know where the contraband/ counterfeit cigarettes you buy usually come from?

Why did/do you smoke contraband/ counterfeit cigarettes?

How did you become aware of the availability of cheap cigarettes?

Since you turned 18 do you think you have ever bought cheap cigarettes?

Have you bought cheap cigarettes in the last 12 months?

If you think you have bought cheap cigarettes which brand(s) was it?

In the past 12 months, how often did you buy cheap cigarettes?

When did you last buy cheap cigarettes?

When you last bought cheap cigarettes, where did you get them from?

When you last bought cheap cigarettes, how was it sold?

When you last bought cheap cigarettes, how many did you buy?

When you last bought cheap cigarettes, how much did it cost in total?

In the last 12 months, has there been an occasion where you have wanted to get cheap cigarettes, but were unable to buy any?

When you smoke them, how many cheap cigarettes do you smoke per day?

Why did/do you smoke cheap cigarettes?

Since you turned 18 have you ever grown your own tobacco from a plant or a seed?

Have you grown tobacco from a plant or a seed in the last 12 months?

Can you estimate how much tobacco you grew in the last 12 months?

Since you turned 18, have you ever smoked home grown tobacco that you have grown yourself?

Have you smoked your own home grown tobacco in the last 12 months?

How do you usually smoke your own home grown tobacco?

Are you aware of the personal home grown tobacco allowance in New Zealand?

If you have any of your own home grown tobacco left over (i.e. that you haven't smoked), what do you do with it?

When you last gave it away, what form was it in?

When you last sold it, what form was it in?

In the last 12 months, how much have you given away / sold in total?

Have you travelled outside of New Zealand in the last 12 months?

Have you bought any tailor made cigarettes / roll your own tobacco in another country to bring back to New Zealand on any of your overseas trips in the last 12 months?

What type of tobacco did you buy?

How many trips in the last 12 months did you make where you bought tailor made cigarettes / Roll Your Own tobacco back to New Zealand?

For each type of product, indicate how much you brought back into New Zealand from overseas on average per trip

In which countries did you buy tailor made cigarettes / Roll Your Own tobacco?

Are you aware of the recent reduction to New Zealand's duty free tobacco allowance? This was reduced in 2016 from 200 cigarettes/ grams to 50 cigarettes/grams.

In the last 12 months, have you received or purchased any manufactured cigarettes or roll your own tobacco that was posted from abroad?

How did you order the cigarettes or tobacco from overseas?

Are you aware of the penalties associated with buying, selling or importing illicit tobacco and cigarettes?

Are you currently employed? (other options provided)

Source: (1) Kantar New Zealand consumer surveys.

Questions asked by the consumer survey (cont.)

A9 Kantar New Zealand questionnaire (cont.)

Which of the following occupational categories best describes you? (options provided)

What is your approximate annual personal income (before tax)?

Which of the following best describes the region in which you live? (options provided)

Source: (1) Kantar New Zealand consumer surveys.

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