



Quantifying Māori spend on tobacco, alcohol & gambling

NZIER report prepared for the *Centre of Research Excellence: Indigenous Sovereignty & Smoking* as part of a programme of research supported by a grant from the Foundation for a Smoke-Free World, Inc. The contents, selection and presentation of facts, as well as any opinions expressed herein are the sole responsibility of the author and under no circumstances shall be regarded as reflecting the positions of the Foundation for a Smoke-Free World, Inc.

May 2019

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The assistance of Marilyn Domney from Wellington City Libraries and Sarah Spring is gratefully acknowledged.

Suggested citation: Siddharth, P. 2019. Quantifying Māori spend on tobacco, alcohol and gambling. A report for the Centre of Research Excellence: Indigenous Sovereignty & Smoking. NZIER: Wellington.

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Key points

Māori spent \$1 billion on tobacco in 2018

- Māori have the highest prevalence rates by ethnicity of tobacco consumption (33.5%). This is more than twice the national prevalence rate of tobacco consumption (14.9%)
- Nationwide expenditure on tobacco was \$3.5 billion
- European and others expenditure on tobacco was \$2.3 billion
- Non-Māori expenditure on tobacco was \$2.9 billion
- Māori expenditure on tobacco accounts for 26% of nationwide tobacco expenditure
- Tobacco taxes (excise duty and GST) account for 71% of total tobacco expenditure (\$2.4 billion). This means Māori have paid \$723 million in tobacco taxes.

Māori spent \$731 million on alcohol in 2018

- Nationwide expenditure on alcohol was \$5.5 billion
- European and others expenditure on alcohol was \$4.3 billion
- Non-Māori expenditure on alcohol was \$5.1 billion
- Māori expenditure on alcohol accounts for 13% of nationwide alcohol expenditure
- Alcohol taxes (excise duty, HPA levy and GST) account for 36% of total alcohol expenditure (\$2.0 billion). This means Māori have paid \$264 million in alcohol taxes.

Māori spent \$376 million on gambling in 2018

- Māori have the highest prevalence rate by ethnicity of consumption of gambling machines (inside and outside of casinos) (16.7%)
- Māori prevalence rates of all forms of gambling was higher than the national prevalence rates of all forms of gambling
- Nationwide expenditure on gambling was \$2.4 billion
- European and others expenditure on gambling was \$1.8 billion
- Non-Māori expenditure on gambling was \$2.2 billion
- Māori expenditure on gambling accounts for 15% of nationwide gambling expenditure
- Gambling taxes (PG levy, duty and GST) account for 41% of total gambling expenditure (\$982 million). This means Māori have paid \$161 million in gambling taxes.

Definitions

Excise duty

Excise is a duty imposed on domestically manufactured tobacco, fuel and alcohol. When excisable items are imported, duty is imposed (excise-equivalent duty) which is equivalent to the excise liability that would apply if the goods were manufactured in New Zealand (New Zealand Customs Service, n.d.).

HPA Levy

The Health Promotion Agency (HPA) collects a levy on alcohol produced or imported for sale in New Zealand to fund its work to reduce alcohol-related harm in New Zealand (HPA 2019b).

PG Levy

The Problem Gambling (PG) levy is collected from the profits of New Zealand's four main forms of gambling: gaming machines in pubs and clubs; casinos; the New Zealand Racing Board and the New Zealand Lotteries Commission. The levy funds PG services for controlling the growth of gambling and preventing and minimising the harm caused by gambling (Department of Internal Affairs 2019b).

Gambling duty

Gambling duty comprises of duties on the income brought in by gaming machine profits, casino wins (Inland Revenue Department 2019b), racing (Inland Revenue Department 2019a) and lotteries (Lotto NZ 2019).

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1. The ask

NZIER were asked to quantify annual expenditure by New Zealanders as a whole, Māori as a population specifically, and all non-Māori, on the following categories:

- tobacco
- alcohol
- gambling.

Additionally, we were asked to provide a breakdown of the above total expenditure by excise, tax or levy components, and the total expenditure exclusive of GST and inclusive of GST.

Context

Māori as a population have disproportionately high current smoking rates (McLachlan 2019), alcohol consumption rates (Alcohol Healthwatch n.d.) and gambling rates (Stewart 2018) compared to non-Māori. The over-representation of Māori in these three consumables have social costs such as lost productivity, violence, sexual assault and serious road crashes where alcohol consumption is involved ('Alcohol Harm: Impact on Māori Taken to Tribunal' 2019).

Understanding the level of expenditure on these three consumables by Māori should be of interest to Māori leaders focused on economic development of iwi (tribes) and all Māori. Reducing smoking, drinking alcohol and gambling prevalence rates among Māori represents significant opportunity if spending on these behaviours was positively redirected.¹

¹ Based on a discussion with Dr. Marewa Glover from COREISS.

2. Results

2.1. Tobacco

In Table 1, Table 2 and Table 3 prevalence figures are broken down by ethnicity, gender and select age groups. These prevalence rates are representative of current smokers, i.e. smokers who smoke at least monthly.

Table 1 Prevalence by ethnicity

2017/18; percentages

Total population	Māori	Pacific	Asian	European and others
14.9	33.5	22.9	7.8	13.5

Source: (Ministry of Health 2019b)

Using the ethnic prevalence rates in Table 1 above and ethnic population estimates (see Appendix A.2), the non-Māori prevalence rate of tobacco consumption is 13.2%, which is less than half of the Māori prevalence rate of tobacco consumption (33.5%). The Māori prevalence rate of tobacco consumption has decreased since 2012 (40.2%) (Ministry of Health 2019b).

Table 2 Prevalence by ethnicity and gender

2017/18; percentages

Māori male	Māori female	Pacific male	Pacific female	Asian male	Asian female	European and others male	European and others female
29.8	36.8	28.5	17.8	12.8	2.9	14.8	12.2

Source: (Ministry of Health 2019b)

Additionally, at 18 years of age, 2 in 3 Māori women have never smoked. At 24 years of age, 1 in 3 Māori women have never smoked. Of these women who have smoked, some are current smokers and some are past smokers. Using the data given, we estimate the current smoking prevalence rates given in Table 3 below.

Table 3 Prevalence by select Māori female ages

2017; percentages²

Māori female 18 years	Māori female 24 years
30	45

Source: NZIER, (Ministry of Health 2017)

A pack of 20 cigarettes is estimated to cost \$29.70 (Quitline 2019) and on average, 10.9 cigarettes are consumed per day (HPA 2018). The current excise duty on cigarettes is 82.658 cents per cigarette (Statistics New Zealand 2019). Combining these figures with the ethnic population estimates and the prevalence rates above, the total annual expenditure on tobacco, excise duty and GST (15%) collected are presented in the Table 4, Table 5 and Table 6 below.

Table 4 Expenditure and taxes by ethnicity

2018

	Total population	Māori	Pacific	Asian	European and others
Total expenditure³ (\$m)	3,454	1,023	351	278	2,252
Excise duty (\$m)	1,923	569	196	155	1,253
GST (\$m)	518	153	53	42	338
Total tax (\$m)	2,441	723	248	196	1,591

Source: NZIER

Even though the Māori adult (15 years and over) population (517,000) is less than one fifth (18%) of the European / Other adult (15 years and over) population (2.8 million), the disproportionately high prevalence rate among Māori of tobacco consumption means Māori tobacco expenditure is just under half (45%) of the European / Other tobacco expenditure as shown in Table 4 above.

Māori tobacco expenditure accounts for 26% of total tobacco expenditure, which means Māori spend just over \$1 billion on tobacco and non-Māori spend \$2.9 billion on tobacco. Māori contribute \$723 million in tobacco taxes. Total tobacco taxes account for 71% of total expenditure on tobacco.

² Current smoking and past smoking prevalence rates are presented in a graph without data labels. We have estimated the current smoking prevalence rates by eye-balling the graph.

³ Total expenditure is less than the sum of ethnic expenditure because people can be counted multiple times if they identify as multiple ethnicities.

Table 5 Expenditure and taxes by ethnicity and gender

2018

	Māori male	Māori female	Pacific male	Pacific female	Asian male	Asian female	European and others male	European and others female
Total expenditure (\$m)	433	588	214	140	223	53	1,195	1,050
Excise duty (\$m)	241	327	119	78	124	29	665	584
GST (\$m)	65	88	32	21	33	8	179	157
Total tax (\$m)	306	416	151	99	158	37	844	742

Source: NZIER

Table 6 Expenditure and taxes by select Māori female ages

2018

	Māori female 18 years	Māori female 24 years
Total expenditure (\$m)	13	16
Excise duty (\$m)	7	9
GST (\$m)	2	2
Total tax (\$m)	9	11

Source: NZIER

2.2. Alcohol

In Table 7, Table 8 and Table 9 prevalence figures are broken down by ethnicity, gender and select age groups. These prevalence rates are representative of current drinkers, i.e. drinkers who consumed alcohol in the past year. We assume the same prevalence rates for beer, spirits and wine due to lack of data.

Table 7 Prevalence by ethnicity

2017/18; percentages

Total population	Māori	Pacific	Asian	European and others
78.7	79.7	54.4	55.5	84.9

Source: (Ministry of Health 2019b)

Using the ethnic prevalence rates in Table 7 on the previous page and ethnic population estimates (see Appendix A.2), the non-Māori prevalence rate of alcohol consumption is 77.9%. Māori prevalence of alcohol consumption has remained unchanged since 2011/12 (78.9%) but Pacific prevalence of alcohol consumption has decreased nearly four percentage points since 2011/12 (58.1%) (Ministry of Health 2019b).

Table 8 Prevalence by ethnicity and gender

2017/18; percentages

Māori male	Māori female	Pacific male	Pacific female	Asian male	Asian female	European and others male	European and others female
80.1	79.4	60.0	49.4	66.6	44.5	87.9	81.9

Source: (Ministry of Health 2019b)

Table 9 Prevalence by select Māori age groups

2018; percentages

Māori age 15-24	Māori age 25-34	Māori age 35-44	Māori age 45-54	Māori age 55+
70.6	78.9	75.6	74.5	55.1

Source: (Muriwai, Huckle, and Romeo 2018)

From Statistics New Zealand (Statistics New Zealand 2018), we obtained the total alcohol available for consumption, alcohol imports and exports⁴ broken down by beer, wine and spirits of different alcohol by volume levels to determine the value and volume of alcohol available for *domestic* consumption (see Appendix A.3 for more detail). We then applied the excise duty and HPA levy schedules to the different alcohol types and different alcohol by volume levels (schedules can be found in Appendix B.1). Combining these figures with the ethnic population estimates and the prevalence rates above, the total annual expenditure on alcohol, excise duty, HPA levy and GST (15%) collected are presented in the Table 10, Table 11 and Table 12 below.

Table 10 Expenditure and taxes by ethnicity

2018

	Total population	Māori	Pacific	Asian	European and others
Beer expenditure (\$m)	1,898	253	87	206	1,473
Spirits expenditure (\$m)	2,724	363	125	295	2,114
Wine expenditure (\$m)	858	114	39	93	666

⁴ Imports and exports focusing on alcohol that was ready for consumption and did not require any further processing.

	Total population	Māori	Pacific	Asian	European and others
Total expenditure⁵ (\$m)	5,479	731	251	594	4,253
Excise duty (\$m)	1,151	154	53	125	893
HPA Levy (\$m)	10	1	0	1	8
GST (\$m)	822	110	38	89	638
Total taxes (\$m)	1,983	264	91	215	1,539

Source: NZIER

Māori alcohol expenditure accounts for 13% of total alcohol expenditure, which means Māori spend \$731 million on alcohol and non-Māori spend \$5.1 billion on alcohol. Māori contribute \$264 million in alcohol taxes. Total alcohol taxes account for 36% of total expenditure on alcohol.

Table 11 Expenditure and taxes by ethnicity and gender

2018

	Māori male	Māori female	Pacific male	Pacific female	Asian male	Asian female	European and others male	European and others female
Beer expenditure (\$m)	121	132	47	40	121	84	738	733
Spirits expenditure (\$m)	174	189	67	58	173	121	1,059	1,052
Wine expenditure (\$m)	55	60	21	18	55	38	334	331
Total expenditure (\$m)	350	381	135	116	349	243	2,131	2,117
Excise duty (\$m)	74	80	28	24	73	51	448	445
HPA Levy (\$m)	1	1	0	0	1	0	4	4
GST (\$m)	52	57	20	17	52	36	320	318
Total taxes (\$m)	127	138	49	42	126	88	771	766

Source: NZIER

⁵ Total expenditure is less than the sum of ethnic expenditure because people can be counted multiple times if they identify as multiple ethnicities.

Table 12 Expenditure and taxes by select Māori age groups

2018

	Māori age 15-24	Māori age 25-34	Māori age 35-44	Māori age 45-54	Māori age 55+
Beer expenditure (\$m)	62	49	37	37	38
Spirits expenditure (\$m)	89	70	53	53	54
Wine expenditure (\$m)	28	22	17	17	17
Total expenditure (\$m)	179	141	108	108	109
Excise duty (\$m)	38	30	23	23	23
HPA Levy (\$m)	0.3	0.3	0.2	0.2	0.2
GST (\$m)	27	21	16	16	16
Total taxes (\$m)	65	51	39	39	40

Source: NZIER

Drinking patterns for Māori indicate that 59% of Māori drank in the past four weeks, 49% of Māori were risky drinkers and 57% of Māori consumed two or more drinks in the last occasion (Muriwai, Huckle, and Romeo 2018). A further point of research would be to look at the alcohol consumption of these demographics and their contribution to the aggregate alcohol expenditure.

Further breakdown of alcohol taxes by alcohol type

Table 13 Alcohol taxes by ethnicity

2018

	Total population	Māori	Pacific	Asian	European and others
<u>Excise duty</u>					
Beer (\$m)	389	52	18	42	302
Spirits (\$m)	437	58	20	47	339
Wine (\$m)	325	43	15	35	252
Total Excise duty (\$m)	1,151	154	53	125	893
<u>HPA levy</u>					
Beer (\$m)	5	0.6	0.2	0.5	4
Spirits (\$m)	3	0.3	0.1	0.3	2
Wine (\$m)	3	0.4	0.1	0.3	2
Total HPA levy (\$m)	10	1	0.5	1	8
<u>GST</u>					
Beer (\$m)	285	38	13	31	221

	Total population	Māori	Pacific	Asian	European and others
Spirits (\$m)	409	54	19	44	317
Wine (\$m)	129	17	6	14	100
Total GST (\$m)	822	110	38	89	638

Source: NZIER

Table 14 Alcohol taxes by ethnicity and gender

2018

	Māori male	Māori female	Pacific male	Pacific female	Asian male	Asian female	European and others male	European and others female
<u>Excise duty</u>								
Beer (\$m)	25	27	10	8	25	17	151	150
Spirits (\$m)	28	30	11	9	28	19	170	169
Wine (\$m)	21	23	8	7	21	14	126	126
Total Excise duty (\$m)	74	80	28	24	73	51	448	445
<u>HPA levy</u>								
Beer (\$m)	0.3	0.3	0.1	0.1	0.3	0.2	2	2
Spirits (\$m)	0.2	0.2	0.1	0.1	0.2	0.1	1	1
Wine (\$m)	0.2	0.2	0.1	0.1	0.2	0.1	1	1
Total HPA levy (\$m)	0.6	0.7	0.2	0.2	0.6	0.4	4	4
<u>GST</u>								
Beer (\$m)	18	20	7	6	18	13	111	110
Spirits (\$m)	26	28	10	9	26	18	159	158
Wine (\$m)	8	9	3	3	8	6	50	50
Total GST (\$m)	52	57	20	17	52	36	320	318

Source: NZIER

2.3. Gambling

In Table 15 and Table 16 below prevalence figures are broken down by ethnicity and gender. These prevalence rates are combined prevalence rates of the gambling risks as defined by Problem Gambling Severity Index (PGSI) (Browne et al. 2017).⁶ These risks are:

- Non-problem gambler
- Low-risk gambler
- Moderate-risk gambler
- Problem gambler (Victorian Responsible Gambling Foundation n.d.)

It is helpful to look at the combined prevalence rates of these four risks because due to the nature of gamblers, they may transition between these risk types, in particular between moderate-risk gambling and problem gambling (Abbott, Bellringer, and Garrett 2015). Prevalence rates are also broken down by the different modes of gambling.

Table 15 Prevalence by ethnicity

2018; percentages

	Total population	Māori	Pacific	Asian	European and others
NZ Racing Board (TAB)	11.3	12.5	6.8	4.6	13.3
NZ Lotteries Commission	55.1	56.7	51.5	34.2	59.3
Gambling machines (casinos and outside casinos)	13	16.7	14.2	6.4	13.5

Source: (HPA 2018)

Using the ethnic prevalence rates in Table 15 above and ethnic population estimates (see Appendix A.2), the non-Māori prevalence rates of NZ Racing Board (TAB), NZ Lotteries Commission and gambling machines consumption are 11.4%, 54.6% and 12.4%, respectively, which are all less than the Māori prevalence rates of these forms of gambling.

Māori prevalence rates for all forms of gambling has decreased since 2012. The Māori prevalence rates of NZ Racing Board (TAB), NZ Lotteries Commission and gambling machines consumption in 2012 were 15.7%, 62.6% and 20.5%, respectively.

⁶ The PGSI was designed as a population measure of acute gambling-related problems. It does not intend to quantify harm. Nevertheless, it does contain items that capture the seven harms associated with problem gambling.

Table 16 Prevalence by ethnicity and gender

2018; percentages

	Māori male	Māori female	Pacific male	Pacific female	Asian male	Asian female	European and others male	European and others female
NZ Racing Board (TAB)	13.9	11.2	10	3.7	8.2	1.1	17.4	9.4
NZ Lotteries Commission	54.5	58.7	54.8	48.3	39.7	29	58.1	60.4
Gambling machines (casinos and outside casinos)	14.7	18.5	14.4	14	9.4	3.5	13.1	13.9

Source: (HPA 2018)

If we combine prevalence rates of moderate and problem gambling risks (for all gambling types combined), we see that Māori have disproportionately high rates as shown in Table 17 below.

Table 17 Prevalence for moderate and problem gambling risks by ethnicity

2015; percentages

Total population	Māori	Pacific	Asian	European and others
2.0	8.6	7.6	4.5	4.1

Source: (Abbott, Bellringer, and Garrett 2015)

We retrieved annual gambling expenditure broken down by the different forms of gambling from the DIA website (Department of Internal Affairs 2019a). Combining expenditure with the levy and duty rates (see Appendix B.2), ethnic population estimates and prevalence rates above, the total annual expenditure on gambling, excise duty, PG levy and GST (15%) collected are presented in the Table 18 and Table 19 below.

Table 18 Expenditure and taxes by ethnicity

2018

	Total population	Māori	Pacific	Asian	European and others
NZ Racing Board (TAB) (\$m)	350	51	14	22	296
NZ Lotteries Commission (\$m)	561	76	35	53	434

	Total population	Māori	Pacific	Asian	European and others
Casinos (\$m)	578	98	42	44	432
Gambling machines (outside casinos) (\$m)	895	151	65	68	669
Total expenditure⁷ (\$m)	2,383	376	155	187	1,831
PG Levy (\$m)	24	4	2	2	18
Duty (\$m)	514	86	36	39	386
GST (\$m)	444	71	30	35	339
Total taxes (\$m)	982	161	68	76	744

Source: NZIER

Māori gambling expenditure accounts for 15% of total gambling expenditure, which means Māori spend \$376 million on gambling and non-Māori spend \$2.2 billion on gambling. Māori contribute \$161 million in gambling taxes. Total gambling taxes account for 41% of total expenditure on gambling.

Table 19 Expenditure and taxes by ethnicity and gender

2018

	Māori male	Māori female	Pacific male	Pacific female	Asian male	Asian female	European and others male	European and others female
NZ Racing Board (TAB) (\$m)	27	24	10	4	19	3	188	108
NZ Lotteries Commission (\$m)	35	41	18	17	30	23	206	228
Casinos (\$m)	41	57	21	21	31	12	203	229
Gambling machines (outside casinos) (\$m)	64	88	32	33	49	19	314	355
Total expenditure⁸ (\$m)	166	210	81	74	130	57	910	921
PG Levy (\$m)	2	2	1	1	1	1	9	10
Duty (\$m)	36	49	18	18	28	11	183	203
GST (\$m)	31	40	15	14	24	10	167	173

⁷ Total expenditure is less than the sum of ethnic expenditure because people can be counted multiple times if they identify as multiple ethnicities

⁸ Total expenditure is less than the sum of ethnic expenditure because people can be counted multiple times if they identify as multiple ethnicities.

	Māori male	Māori female	Pacific male	Pacific female	Asian male	Asian female	European and others male	European and others female
Total taxes (\$m)	69	91	34	33	53	22	359	385

Source: NZIER

Further breakdown of gambling taxes by the different forms of gambling

Table 20 Gambling taxes by ethnicity

2018

	Total population	Māori	Pacific	Asian	European and others
<u>PG Levy</u>					
NZ Racing Board (TAB) (\$m)	2	0.3	0.1	0.1	2
NZ Lotteries Commission (\$m)	2	0.3	0.1	0.2	2
Casinos (\$m)	13	2	0.9	1	10
Gambling machines (outside casinos) (\$m)	8	1	0.5	0.6	6
Total PG levy (\$m)	24	4	2	2	18
<u>Gambling duty</u>					
NZ Racing Board (TAB) (\$m)	14	2	0.6	1	12
NZ Lotteries Commission (\$m)	31	4	2	3	24
Casinos (\$m)	353	60	26	27	264
Gambling machines (outside casinos) (\$m)	116	20	8	9	86
Total Gambling duty (\$m)	514	86	36	39	386
<u>GST</u>					
NZ Racing Board (TAB) (\$m)	52	8	2	3	44
NZ Lotteries Commission (\$m)	84	11	5	8	65
Casinos (\$m)	221	37	16	17	165

	Total population	Māori	Pacific	Asian	European and others
Gambling machines (outside casinos) (\$m)	87	15	6	7	65
Total GST (\$m)	444	71	30	35	339

Source: NZIER

Table 21 Gambling taxes by ethnicity and gender

2018

	Māori male	Māori female	Pacific male	Pacific female	Asian male	Asian female	European and others male	European and others female
<u>PG Levy</u>								
NZ Racing Board (TAB) (\$m)	0.1	0.1	0.1	0.02	0.1	0.01	1	1
NZ Lotteries Commission (\$m)	0.1	0.2	0.1	0.1	0.1	0.1	1	1
Casinos (\$m)	1	1	0.5	0.5	0.7	0.3	4	5
Gambling machines (outside casinos) (\$m)	0.5	0.7	0.3	0.3	0.4	0.2	3	3
Total PG levy (\$m)	2	2	1	1	1.3	0.5	9	10
<u>Gambling duty</u>								
NZ Racing Board (TAB) (\$m)	1	1	0.4	0.2	0.8	0.1	8	4
NZ Lotteries Commission (\$m)	2	2	1	1	2	1	11	13
Casinos (\$m)	25	35	13	13	19	7	124	140
Gambling machines (outside casinos) (\$m)	8	11	4	4	6	2	41	46
Total Gambling duty (\$m)	36	49	18	18	28	11	183	203

	Māori male	Māori female	Pacific male	Pacific female	Asian male	Asian female	European and others male	European and others female
<u>GST</u>								
NZ Racing Board (TAB) (\$m)	4	4	2	1	3	0.4	28	16
NZ Lotteries Commission (\$m)	5	6	3	2	5	3	31	34
Casinos (\$m)	16	22	8	8	12	5	78	88
Gambling machines (outside casinos) (\$m)	6	9	3	3	5	2	30	34
Total GST (\$m)	31	40	15	14	24	10	167	173

Source: NZIER

3. Next steps

- We found detailed information on different gambling risks and some information on alcohol consumption risks. There is opportunity for further research in exploration of tobacco consumption risks and the expenditure on these three consumables by demographics that fall in different risk groups. This can help in determining the expenditure contribution of these demographics to total expenditure for the three consumables and create areas of focus for community leaders.
- We have seen Māori prevalence rates for tobacco and gambling consumption decrease since 2012. Further research could look into the effects that decreased prevalence rates have had on societies, which can indicate the possible effects of further reducing consumption rates of these three consumables.
- Using literature identify cost due to loss of productivity and social harm costs due to at-risk levels of consumption of these three consumables.
- Quantifying expenditure on these three consumables by NZ Dep areas (University of Otago 2018) to help determine areas of focus.
- Often consumption of these three consumables go hand-in-hand. Individuals who gamble for example, can also be associated with use of alcohol (The University of Auckland 2015). Further research could look at prevalence and expenditure among groups who use more than one of these consumables.

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Appendix A Methodology

A.1 Literature scan

A quick and selective scan of recent literature was conducted to identify relevant articles and data sources.

A.2 Data reviewed from a wide variety of sources

The latest available prevalence rates, ethnic population estimates, consumption and expenditure data was used in this study.

- Expenditure on tobacco was identified from the Quitline website
- Expenditure on domestic and imported alcohol was retrieved from Statistics New Zealand
- Expenditure on the four main types of gambling was retrieved from the Department of Internal Affairs (DIA) website (Department of Internal Affairs 2019a)
- Total ethnic population estimates (ages 15 and over) were retrieved from Statistics New Zealand⁹
- We drew upon the 2017/18 New Zealand Health Survey (Ministry of Health 2019a, 2019b)¹⁰ for ethnic prevalence data of tobacco and alcohol consumptions
- We drew upon the 2018 Health and Lifestyles Survey (HPA 2019a; HPA 2018)¹¹ primarily for ethnic prevalence data of gambling consumption
- Alcohol excise duty and Health Promotion Agency (HPA) levy rates were retrieved from the New Zealand Customs Service website (New Zealand Customs Service 2019b)
- Tobacco excise duty rate was retrieved from the Statistics New Zealand website (Statistics New Zealand 2019)
- We relied upon New Zealand Legislation, Inland Revenue and Lotto NZ Statement of Performance Expectations for gambling duties and levies.

A.3 Alcohol production for domestic consumption

Adding alcohol available for consumption to imports and subtracting exports gives us the alcohol production for domestic consumption.

⁹ <http://nzdotstat.stats.govt.nz/wbos/index.aspx> [Table Code 7560].

¹⁰ The survey runs between 1st July 2017 and 30th June 2018. A total of 13,869 adults and 4,723 children took part in the survey.

¹¹ The survey runs between 2nd May 2018 and 10th October 2018. A total of 2,725 adults and 827 parents / caregivers took part in the survey.

Appendix B Duty and levy rates

B.1 Alcohol duty and levy rates

Table 22 Excise duty and HPA levy rates

2018

Alcohol class	Excise duty	HPA Levy
1.15 – 2.5% alcohol	44.140 cents per litre of beverage	0.5308 cents per litre
2.5 – 6% alcohol	\$29.432 per litre of alcohol	1.6111 cents per litre
6 – 9% alcohol	\$2.3545 per litre of beverage	2.8308 cents per litre
9 – 14% alcohol	\$2.9432 per litre of beverage	3.5385 cents per litre
14 – 23% alcohol	\$53.605 per litre of alcohol	6.4722 cents per litre
> than 23% alcohol	\$53.605 per litre of alcohol	13.6100 cents per litre

Source: (New Zealand Customs Service 2019a), (New Zealand Customs Service 2019b)

B.2 Gambling duty and levy rates

Table 23 PG levy and gambling duty rates

2018; percentages

	PG Levy (%)	Gambling Duty (%)
NZ Racing Board (TAB)	0.52	4
NZ Lotteries Commission	0.4	5.5
Casinos	0.87	24
Gambling machines (outside casinos)	1.3	20

Source: (New Zealand Government 2019), (Inland Revenue Department 2019a), (Inland Revenue Department 2019b), (Lotto NZ 2019)