



Harmless fun for all?

Class 4 gambling in Lower Hutt

NZIER report to Hutt City Council

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Authorship

This paper was prepared at NZIER by Sarah Hogan and Kevin Tuñaño.

It was quality approved by Todd Kriebel.

The assistance of Sarah Spring is gratefully acknowledged.

Registered office: Level 13, Public Trust Tower, 22–28 Willeston St | PO Box 3479, Wellington 6140
Auckland office: Ground Floor, 70 Shortland St, Auckland
Tel 0800 220 090 or +64 4 472 1880 | econ@nzier.org.nz | www.nzier.org.nz

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Key points

Class 4 gambling policy is a case of decision-making under uncertainty

Like all territorial authorities, Hutt City Council is required under the Gambling Act (2003) to formulate and regularly review policy settings on Class 4 gambling venues and electronic gaming machines (EGMs). But fully informed policy-making regarding Class 4 gambling is hindered by a lack of data on:

- Who gambles, where they gamble and how much they spend
- Where the proceeds of gambling end up and who benefits from those proceeds
- What the social and economic landscape would be in a counterfactual (where an alternative policy is implemented).

These are critical data gaps because they make it impossible to ever know whether the benefits of Class 4 gambling outweigh the costs, and they make it impossible to know whether any population groups are experiencing unacceptable harm as a result of Class 4 gambling. Cost-benefit analysis is the gold standard for policy decision-making. But an incomplete cost-benefit analysis may in many cases not be sufficient to inform public policy.

Because of data gaps, Hutt City Council, like all territorial authorities in New Zealand, is forced into decision-making under uncertainty. This calls for a range of approaches to understanding the problem and the use of subjective judgement.

Using a “what if...?” approach can help policy-makers think about risk when data is lacking

In situations where essential data for policy-making is unavailable but risks of harm exist, policy-makers need to take a range of approaches. One common approach is to ask “What if...?” and identify the potential proportionality of unknown variables. Decision-makers must then consider whether any potential risk identified is realistic and acceptable. The “what if...?” approach also helps to highlight areas where investment is warranted to reduce uncertainty.

This report, commissioned from NZIER by Hutt City Council, is intended to help with this exercise. It is important to understand, therefore, that the analysis presented in this report is not intended to provide answers to the critical questions about harm from Class 4 gambling, indeed those answers will not be possible to obtain until data improves. Instead, this report is intended to stimulate discussion by raising useful questions and offering perspective.

We used a range of data, research, and assumptions to explore the potential for risk

Our “What if...?” analysis of Class 4 gambling in Lower Hutt was based on previously published national research that indicates that gaming machine proceeds (GMP) is disproportionately derived from areas of high deprivation and National survey data indicating the participation rates of New Zealand adults by area deprivation level in Class 4 gambling.

Some results are robust

Analysis of Class 4 gambling exposure and expenditure at the territorial authority level was able to be fully informed by robust data and did not require the use of assumptions. This analysis indicates that:

- Lower Hutt's population has greater exposure to Class 4 gambling, with 4 EGMs per 1000 population, compared with 2.9 EGMs per 1000 population nationally. Lower Hutt also has more venues per 1000 population than nationally.
- The difference in exposure to Class 4 gambling indicates an excess of 100 EGMs and 4-5 venues in Lower Hutt relative to national Class 4 gambling exposure.
- Total gaming machine profits in Lower Hutt amounted to over \$26 million in 2020, representing a 45 percent increase since 2015, despite GMP dropping in 2020 due to the COVID-19 level 4 lockdown.
- Lower Hutt GMP per adult was \$100 higher than the national GMP per adult in 2019.
- The rapid increase in GMP in Lower Hutt cannot be explained by increasing incomes or local economic growth. Personal incomes in Lower Hutt grew by only 8 percent between the 2013 Census and the 2018 Census, and Lower Hutt's economy grew at a slower rate than the national economy from 2015 to 2020.
- GMP per EGM increased 66 percent between 2015 and 2020.
- Lower Hutt has a relatively high and increasing gaming machine profits per capita – it's placed 10th out of all New Zealand territorial authorities.
- Lower Hutt's GMP per adult is over 50 percent higher than national GMP per adult.
- Lower Hutt has the highest GMP per capita and per adult in a group of comparator territorial authorities selected for having a similar sized population (Palmerston North, Hastings, Tauranga and Whangarei) or being a neighbouring territorial authority (Porirua, Upper Hutt and Wellington).
- Lower Hutt's EGMs are disproportionately located in higher deprivation areas, including 93 of the 425 EGMs located in the most deprived areas (NZDep 10) and no EGMs located in the least deprived areas (NZDep 1).

Other results are highly uncertain and illustrate the need for household level data

Results of this "what if...?" analysis indicate that:

- If national estimates apply to Lower Hutt deprivation areas, approximately \$10,805,261 in GMP may have been derived from high deprivation areas (NZDep18 levels 8-10) in 2020; \$10,271,668 from medium deprivation areas (NZDep 18 levels 4-7); and, \$5,602,728 low deprivation areas (NZDep18 levels 1-3).
- Seven of the top ten statistical area units contributing to Lower Hutt's total GMP are areas of high deprivation (NZDep18 levels 8-10), with Glendale and Naenae Central being the biggest contributors at over \$1.2 million and over \$1 million each, respectively).
- When the above statistical area unit Class 4 gambling expenditure estimates are divided by the number of households, the resulting annual expenditure per household in high deprivation areas would be between \$15 per week (at 100 percent participation) and \$193 per week (at 10 percent participation).



The most significant negative impact of Class 4 gambling has traditionally been considered to be problem gambling. But a public health approach to gambling harms considers the potential for financial and economic harm, among other potential harms and applies more broadly than just the small percentage who meet diagnostic criteria for problem gambling. Our analysis indicates that, while highly uncertain, scenarios based on previously published research, national survey data and Hutt City Council's own assumptions show potential for harm in Lower Hutt's most deprived communities that deserves serious consideration.

We recommend investing in research and reducing Class 4 gambling exposure

The first recommendation is to undertake in-depth research into individual gambling behaviour. A lack of data in this area continues to prevent any robust analysis and allows Class 4 gambling policy to be made with a significant blind spot as to the potential harms of this activity on vulnerable individuals and households.

Our second recommendation is to implement a Class 4 gambling policy with a goal of reducing the number of EGMs and Class 4 gambling venues in Lower Hutt to align with the national average (a reduction of 100 EGMs and a reduction of 4 to 5 venues) as a conservative approach to potential risk. Recent research indicates that all three forms of policy intervention (absolute caps, sinking lids and per capita caps) are effective.

Contents

1	Background	1
2	Our approach	5
3	Exposure to Class 4 gambling in Lower Hutt.....	7
3.1	Class 4 gambling venues and EGMs in Lower Hutt.....	7
3.2	Geographic concentration of EGMs in Lower Hutt.....	10
4	Gaming machine proceeds in Lower Hutt.....	13
4.1	Lower Hutt gaming machine proceeds (GMP).....	13
4.2	GMP per EGM	13
4.3	Lower Hutt GMP per capita	14
4.4	How does GMP per capita in Lower Hutt compare to national GMP per capita?.....	15
4.5	How does Lower Hutt’s GMP per capita compare to other territorial authorities?	17
4.6	Participation matters	21
5	A “what if...?” analysis of community gambling expenditure.....	22
5.1	GMP versus Class 4 Gambling expenditure	22
5.2	Methods.....	22
5.3	Lower Hutt Class 4 gambling expenditure in 2020	24
5.4	Community-level Class 4 gambling expenditure	25
5.5	Potential harm to Māori and Pacific communities	28
6	Extension of “What if...?” analysis to Lower Hutt households	31
6.1	Methods.....	31
6.2	Weekly household class 4 gambling expenditure in the “What if...?” scenario	32
6.3	Contextualisation of household expenditure: How much is too much?	34
6.4	Using context to deal with uncertainty	34
7	Discussion.....	35
8	Recommendations	37
9	References.....	39

Figures

Figure 1	Our approach.....	6
Figure 2	The number of EGMs in Lower Hutt, 2015-2020	7
Figure 3	The number of EGMs in New Zealand, 2015-2020	8
Figure 4	EGMs per 1000 population, national and Lower Hutt, 2015-2020	8
Figure 5	Class 4 Gambling venues per 1000 population, national and Lower Hutt, 2015-2020.....	9
Figure 6	Lower Hutt share of national Class 4 gambling venues, EGMs and population.....	9
Figure 7	Reduction in Venues and EGMs in Lower Hutt to ‘fair share’ of national numbers	10
Figure 8	Number of EGMs by venue in Lower Hutt, 2020	11
Figure 9	EGMs by venue area deprivation (NZDep18), 2020.....	11
Figure 10	Lower Hutt total GMP, 2007-2020	13
Figure 11	Lower Hutt GMP per capita and per adult (15+), 2015-2020.....	14
Figure 12	GMP per capita, national and Lower Hutt.....	15
Figure 13	Difference in GMP per capita and per adult, Lower Hutt – National.....	16
Figure 14	Lower Hutt GMP per capita and per adult as a percentage of national	16

Figure 15 Lower Hutt and comparator territorial authorities' GMP per capita.....	19
Figure 16 Lower Hutt and comparator territorial authorities' GMP per adult (15+).....	20
Figure 17 Comparison of growth in GMP per capita and per adult (15+) from 2015 to 2020.....	21
Figure 18 Statistical area units with geographic centre within 5km of a Lower Hutt Class 4 Gambling venue, by area deprivation	23
Figure 19 Attribution of Class 4 gambling expenditure by area deprivation	24
Figure 20 Breakdown of Lower Hutt GMP by territorial authority origin	24
Figure 21 Class 4 gambling expenditure by deprivation level*, 2020.....	25
Figure 22 Class 4 Gambling expenditure by statistical area unit	26
Figure 23 Class 4 gambling expenditure by statistical area unit and deprivation level, 2020	27
Figure 24 Proportion of Lower Hutt population by ethnicity and area deprivation	28
Figure 25 Relationship between statistical area unit Class 4 gambling expenditure and the share of the population identifying as Māori or Pacific	29
Figure 26 Lower Hutt households' weekly Class 4 gambling expenditure under high and low participation scenarios for in-range households.....	33
Figure 27 Household income adequacy by household income decile	35

Tables

Table 1 Comparable areas' national rank for GMP per capita, 2013 and 2018	18
Table 2 Participation in Class 4 gambling by socioeconomic deprivation level	31
Table 3 Weekly participating household expenditure by area deprivation under 2 participation scenarios.....	32
Table 4 Weekly expenditure by household income level on household necessities	34



1 Background

Good policy is challenging when critical data is lacking

Good data is key to good policy. But even in a world of vast and rich data, there are many significant data gaps that hinder policy-makers' ability to confidently decide on a way forward. And yet, policy decisions must still be made. Cost-benefit analysis is the gold standard for policy decision-making. But cost-benefit analysis is of limited use when the counterfactual is unknown and a detailed assessment of the distribution of costs and benefits across all affected parties is not possible. This is the case for Class 4 Gambling.

Gambling, including Class 4 gambling, may have social and economic benefits

Many previously published reports have identified social benefits of gambling as a source of entertainment and a basis for social connections. In some cases, venues may not exist without the revenue generated by gambling, indicating that gambling may create community-based opportunities for social connections beyond those who participate in gambling, such as bars and restaurants. Social connectivity is an important component of healthy and happy communities. But some reports suggest that Class 4 gambling can be socially isolating, particularly for Māori (Levy 2015).

Furthermore, any grants provided to community and sporting organisations through clubs and societies that operate electronic gaming machines (EGMs) may be of wider benefit to the community, including to those who engage in Class 4 gambling. But it is not known to what extent those who contribute through gambling expenditure actually benefit.

In some cases, there may be economic benefits resulting from expenditure in venues that host Class 4 gambling, including employment opportunities for the local community. This impact is debated in the literature due to the potential offsetting effect in sales and employment in other industries (e.g. local retail), but it is possible that under certain conditions, the net sales and employment effect for the local community is positive. Previous studies indicate that on average Class 4 gambling is associated with 3.2 jobs per \$1 million of expenditure (based on Australian data) (Centre for International Economics 2018).

Published cost-benefit analyses have failed to provide robust answers

A 2017 study based on the relatively transparent EGM license process in Victoria, Australia which identified cost-benefit analysis of EGM gambling as generally biased by a poor understanding of both individual and community harms and an overstatement of benefits (Francis, Livingstone, and Rintoul 2017). So, in 2020, NZIER conducted a search of English language published studies that might help to inform a better understanding of the costs and benefits of Class 4 gambling in New Zealand. That search found:

- No study had quantified the impact of Class 4 gambling on other industries in New Zealand.
- Several studies indicated potential costs to other sectors associated with Class 4 gambling, or similar gambling in Australia. For example, Pinge (2001) found that the net effect of gambling was likely to be an overall loss in local output, income and jobs. The study provided compelling evidence that local businesses do not necessarily



benefit from the introduction of, or increase in, EGMs, contrary to what has often been argued. The draining effect that EGMs had had in other jurisdictions was noted in the Gambling Impact Assessment for the Seven Auckland Territorial Authorities (Adams et al. 2004) and was found to be associated in particular with the high EGM density and socio-economically disadvantaged metropolitan areas in Victoria and Sydney (Doughney and Kelleher 1999).

- No study was identified that revealed gambling households' expenditure patterns or how these change when gambling ceases, but a 2000 report (KPMG Consulting 2000) surveyed consumers' perceptions about "what they would spend their money on if they hadn't spent it on gambling". Forty-six percent reported that they would have spent the money on groceries, small household items, personal items, clothing and footwear. Twenty percent would have saved the money. This suggests that a counterfactual for gambling may well include better material well-being for households, including for the partners and children of people who gamble.
- One study looked at the gambling behaviour of users of EGMs when EGMs cease to be available: Lund (2009) conducted a panel study of EGM gamblers in Norway before and after a ban on EGMs in 2007. The study found that, compared with the months preceding the ban, in the months after the ban was enacted, EGM users exhibited a lower prevalence of problem gambling (across all types of gambling), a lower prevalence of lying, betting, chasing, and risk gambling behaviours, reduced gambling participation (all types of gambling), reduced gambling frequency (all types of gambling), and no evidence of substitution from EGM use to other types of gambling (including illegal or internet EGMs) was identified.

New Zealanders are concerned about gambling in their communities

According to the 2016 Health and Lifestyles Survey, New Zealanders have concerns about the level of gambling in their communities. Overall 47 percent of New Zealanders are, to at least some degree, concerned about gambling in their local community. Those who live in high deprivation areas and those who identify as Māori or Pacific are the most likely to express concern about gambling (51 percent, 52 percent and 60 percent, respectively).

In addition to this concern, 66 percent of New Zealanders (71 percent of Māori, 84 percent of Pacific and 69 percent of people in highly deprived areas) believe that raising money through gambling does more harm than good. And yet many community groups rely on grants from trusts and societies that derive their income from EGMS, better known as 'pokies', operated in pubs and clubs (Class 4 gambling).

66 percent of New Zealanders believe raising money through gambling does more harm than good.

Problem gambling is a major concern, particularly for Class 4 gambling

A major issue associated with gambling is problem gambling or gambling addiction. Class 4 gambling has been found to be most strongly associated with problem gambling (Ministry of Health 2019; Dowling, Smith, and Thomas 2005; Abbott 2006; Storer, Abbott, and Stubbs 2009) and the 2014 National Gambling Study identified that more than half of Class 4 gambling expenditure in New Zealand is made by people who are problem gamblers or whose behaviour places them at high risk of problem gambling (Abbott et al. 2016) (Abbott et al. 2016).



Problem gambling has long been a significant public health concern in New Zealand as well as overseas. According to the Department of Internal Affairs (DIA), approximately 11 percent of New Zealanders are affected by problem gambling (Department of Internal Affairs 2008)

But gambling harm goes beyond problem gambling

A Ministry of Health study (2008) found that gambling using EGMs was associated with:

- poorer self-reported mental and physical health
- poorer relationships with family and friends
- poorer child rearing
- lower overall quality of life.

A 2017 study by researchers at Central Queensland University and the Auckland University of Technology (Browne et al. 2017) on gambling harm in New Zealand identified six types of gambling harm:

- negative impacts on the person's health
- emotional or physiological distress
- financial difficulties, diverted financial resources, bankruptcy or reduction of financial situation
- reduced productivity, reduced employment or negative impacts on study
- relationship conflict or breakdown
- criminal activity and neglect of responsibilities and associated consequences.

The study also indicated that a person does not need to have met the criteria for problem gambling to be experiencing these harms (Browne et al. 2017, 11). These harms also indicate that children, intimate partners, flatmates, friends, family, whānau, co-workers, employers, local businesses and other members of the community may experience harms as a result of a person's gambling. The experience of harms by others as a result of so-called 'low risk' and 'moderate' risk gambling is also echoed by the 2016 Health and Lifestyles Survey (Thimasarn-Anwar, Squire, and Trowland 2017).

Crime has also emerged as a significant risk associated more heavily with the use of EGMs than other forms of gambling. Another study commissioned by the Ministry of Health (Sapere Research Group 2020) found that Class 4 gamblers were significantly more likely to have engaged in illegal activities (such as stealing and fraud), with over a quarter of these admitting that their gambling had been the primary cause of their criminal behaviour.

Class 4 gamblers are more likely to engage in illegal activities.

Harms are increasingly being recognised but cannot be captured by cost-benefit analysis

Cost-benefit analysis is the gold standard of evidence for policy decision-making and should be the tool of choice for decisions about Class 4 gambling. But cost-benefit analysis is dependent on the identification, quantification and monetisation of *all* costs and benefits. To the extent that some costs or benefits are not monetised, the cost-benefit analysis (CBA) result will be biased.



On the cost side, CBAs generally treat problem gambling as the most significant issue. But this is largely because the quantification and monetisation of the direct cost of problem gambling is relatively straight forward. A failure to include other potential costs is largely due to a lack of data which has led to weak or inconclusive research. Taking into account that the six types of harm described above can have significant negative impacts not only on the gambler but on partners, children, employers, colleagues, extended family, whānau, and the local community, these costs represent a potentially substantial omission from CBAs.

One area highlighted in both New Zealand and international literature is the link between problem gambling and intimate partner violence. A Canadian study found that problem gambling increased the odds of perpetrating dating violence, severe marital violence and severe child abuse even when adjusted for mental disorders (Afifi et al. 2010).

Problem gambling increases the odds of dating violence, severe marital violence and severe child abuse.

Despite the potential harms associated with Class 4 gambling, efforts to substantiate these concerns are hampered by a lack of data. No direct source of data on Class 4 gambling reliably identifies individual and household behaviour, including participation, location, frequency, duration, and value or number of transactions related to Class 4 gambling. In addition, the DIA only releases data describing GMP at a TLA (Territorial Local Authority, e.g. Lower Hutt, Upper Hutt, etc.) level and does not release data describing GMP at a venue level for reasons of privacy and security, preventing GMP from being attributed to either venues or machines directly, further hampering any ability to identify local community impacts.

These limitations of data have allowed arguments that the vast majority of Class 4 gambling is harmless to persist in the literature and for Class 4 gambling to continue to be regarded by policy-makers as a common form of entertainment and legitimate source of funding for community groups.

The distribution of costs is critically important when households and communities are concerned

The economic theory behind cost-benefit analysis is that when benefits exceed costs, policy-makers can be confident that the issue in question is good for society because it would be possible for the benefits to be redistributed in such a way that those who are hurt can be fully compensated and there would still be a net benefit overall.

But even if it could be shown that the overall benefits of Class 4 gambling outweigh the costs, what redistribution is occurring to compensate those who are hurt by Class 4 gambling? What additional support are the partners and children of gamblers who impose financial hardship on their families getting? What additional support is provided to families where there are tensions resulting from disagreements about spending on gambling? What compensation is going to children neglected as a result of their parents gambling?

Even though the principles of cost-benefit analysis indicate that it only need to be possible in theory to compensate those who lose with the winnings of those who gain, and it is not necessary to actually ensure that compensation occurs, there is a moral and ethical imperative to consider the harms to those who are on the losing end of the CBA, particularly if they are already amongst society's most disadvantaged.



So Class 4 gambling policy must be based on more than cost-benefit analysis and consider the risks associated with uncertainty about harms

With a responsibility to “promote the social, economic, environmental, and cultural well-being of communities in the present and for the future” (Local Government Act 2002, section 10 (1)), the lack of direct sources of data should not prevent local governments from considering the potential for significant harms associated with Class 4 gambling. One common approach is to ask “What if...” and identify the potential implications of scenarios. Decision makers must then consider whether any potential risk identified is realistic and acceptable.

This report, commissioned from NZIER by Hutt City Council, is intended to help with this exercise. It is important to understand, therefore, that the analysis presented in this report is not intended to provide answers to the critical questions about harm from Class 4 gambling, indeed those answers will not be possible to obtain until data improves. Instead, this report is intended to stimulate discussion by illustrating the significance of uncertainties stemming from data gaps and raising important questions.

2 Our approach

Hutt City Council commissioned NZIER to develop an approach to identifying potential household and community social and economic impacts of Class 4 gambling using existing data and evidence, supplemented by the transparent use of assumptions and scenarios where needed.

With this in mind, our analysis focuses on one possible source of gambling harm (financial difficulties and diverted financial resources) and explores the questions:

Is the Lower Hutt population exposed to greater risk of financial harm from Class 4 Gambling than the national population or the populations of similar communities?

Does the amount of funding available for community groups as a result of Class 4 gambling justify the risk of harm?

The primary sources of data for this analysis are:

- Hutt City Council data indicating the precise locations of Class 4 gambling venues
- Department of Internal Affairs data on gaming machine proceeds (GMP)
- Census population data and Stats NZ population projections
- The 2018/19 Household Economic Survey

We also make use of insights from the following sources:

- A New Zealand-based published study of Class 4 gambling expenditure (Ward et al. 2020)
- The national Class 4 gambling participation rate as indicated by the 2016 Health and Lifestyles Survey (Thimasarn-Anwar, Squire, and Trowland 2017).

Our approach is summarised in Figure 1 below.



Figure 1 Our approach

	What can be quantified with certainty*	What cannot be quantified with certainty*	“What if...?” approach
Community participation and expenditure on Class 4 gambling	<ul style="list-style-type: none"> • Total Lower Hutt, other TLA GMP • Number of EGMs by venue and TLA • Number of venues by TLA • Location of Venues • Deprivation level of Lower Hutt statistical area units • Population and households within Lower Hutt statistical area units 	<ul style="list-style-type: none"> • Total Lower Hutt and other TLA Class 4 gambling expenditure • The share of TLA Class 4 gambling expenditure from each area unit 	<ul style="list-style-type: none"> • Hutt City Council assumption of 5km radius for participation • Ward et al. 2020 estimates for shares of GMP by area deprivation based on national data
Individual and household participation, expenditure and impacts	<ul style="list-style-type: none"> • Population/households within area of venues • Average GMP per person or per adult on Class 4 gambling by TLA 	<ul style="list-style-type: none"> • Class 4 gambling expenditure, TLA average or by participating individuals or households • Degree of financial harm or material hardship associated with Class 4 gambling expenditure 	<ul style="list-style-type: none"> • Scenarios based on National Health and Lifestyles Survey data on Class 4 gambling participation by socio-economic deprivation • Contextualisation of estimated household spending on Class 4 gambling against equivalent income level household expenditure from the national Household Economic Survey

* Based on robust available data

Source: NZIER

3 Exposure to Class 4 gambling in Lower Hutt

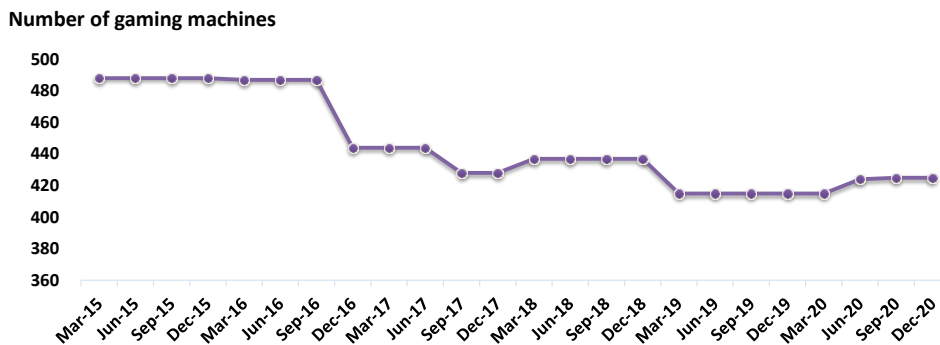
In this section we consider the degree of exposure to Class 4 gambling in Lower Hutt and in Lower Hutt communities, compared with the national average and exposure in similar and neighbouring communities.

3.1 Class 4 gambling venues and EGMs in Lower Hutt

As of December 2020, there were 425 EGMs in Lower Hutt. According to DIA analysis, From March 2015 to December 2020, venues decreased by 5 or 15.2 percent while EGM numbers decreased by 63 or 12.9 percent. However, most of the decline was achieved between September 2016 and December 2017 when machines were reduced by 43 in just over one year (68 percent of the six-year total reduction). Relatively little reduction has been achieved since (19 machines over four years).

Most of the reduction in Lower Hutt EGMs took place in 2016/17.

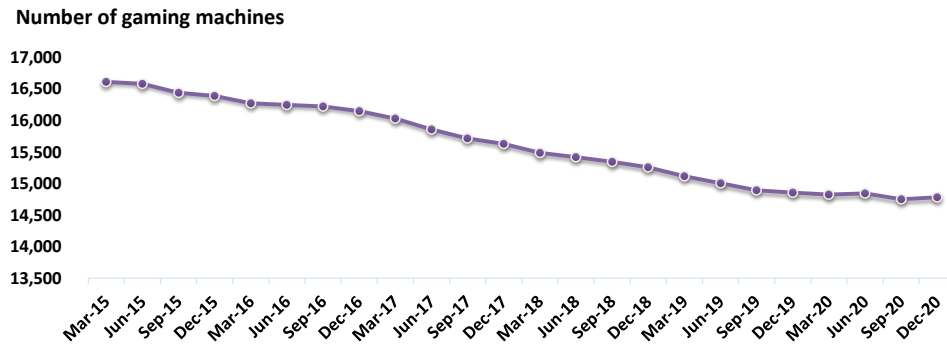
Figure 2 The number of EGMs in Lower Hutt, 2015-2020



Source: Department of Internal Affairs (2021)

Nationally, the number of EGMs has been declining at a relatively constant rate as a result of the smoothing out of the various step changes observed at the local government level (see Figure 3 below).

Figure 3 The number of EGMs in New Zealand, 2015-2020



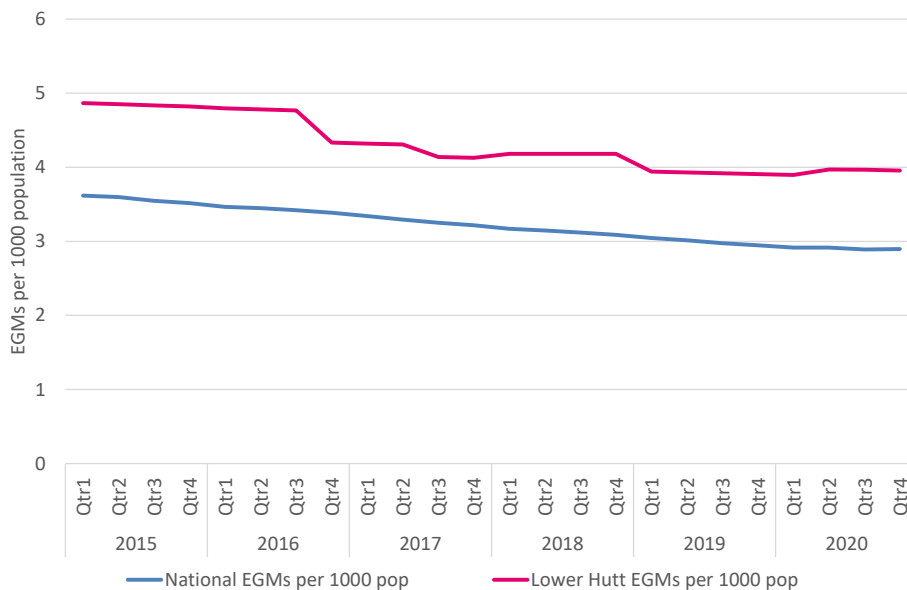
Source: Department of Internal Affairs (2021)

One useful way of thinking about access to Class 4 gambling is to consider the number of EGMs and venues relative to population. Lower Hutt’s number of EGMs per 1000 population has remained above the national average since at least 2015 with little progress in narrowing the gap.

As of December 2020, Lower Hutt has 4 EGMs per 1000 population, compared with 2.9 EGMs per 1000 population nationally. Although the difference between the availability of EGMs in Lower Hutt and the national availability of EGMs has dropped from 1.25 to 1.06 over the past five years, closing the gap in absolute terms, proportionately the gap has slightly widened due to the national availability of EGMs declining faster than the availability of EGMs in Lower Hutt (see Figure 4 below).

Lower Hutt has a high concentration of EGMs relative to population.

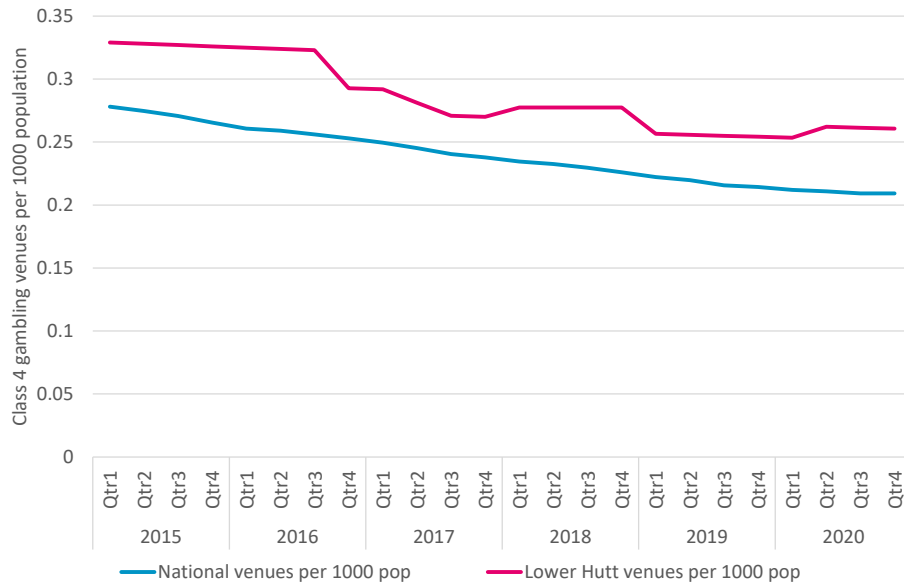
Figure 4 EGMs per 1000 population, national and Lower Hutt, 2015-2020



Source: NZIER

A similar picture emerges when the same calculations are done on the number of venues (see Figure 5 below).

Figure 5 Class 4 Gambling venues per 1000 population, national and Lower Hutt, 2015-2020

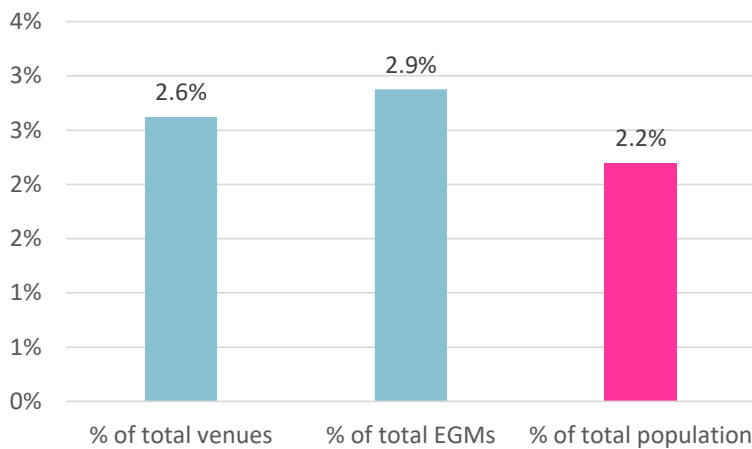


Source: NZIER

These results are due to Lower Hutt having a greater share of Class 4 gambling venues and EGMs than would be expected based on its share of the national population (see Figure 6 below).

Lower Hutt has a high concentration of Class 4 gambling venues relative to population.

Figure 6 Lower Hutt share of national Class 4 gambling venues, EGMs and population



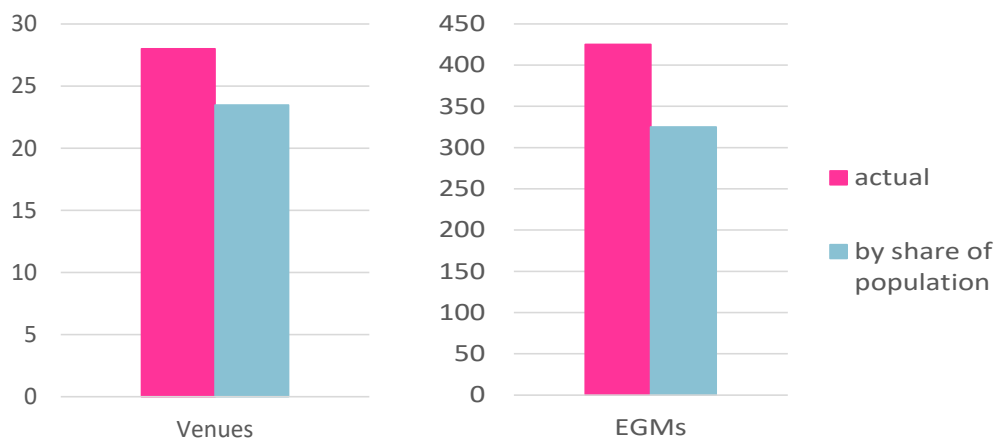
Source: NZIER

The difference between these figures may appear small, but converting these to a number of venues and EGMS shows that if Lower Hutt had its 'fair share' of Class 4 Gambling venues and EGMS, it would have 4-5 fewer venues and 100 fewer EGMS (see A

A 'fair share' approach would mean 100 fewer EGMS and 4-5 fewer venues in Lower Hutt.

Figure 7 below).

Figure 7 Reduction in Venues and EGMS in Lower Hutt to 'fair share' of national numbers



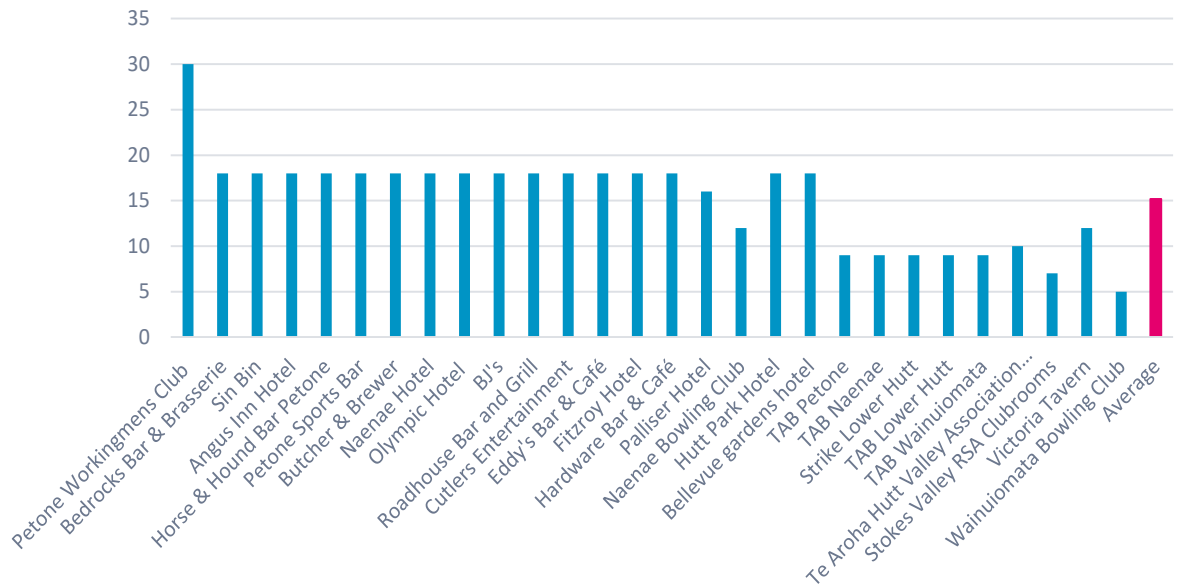
Source: NZIER

3.2 Geographic concentration of EGMS in Lower Hutt

As of December 2020, the 425 EGMS in Lower Hutt were located across 28 venues with an average of 15 EGMS per venue. One venue had 30 EGMS (see Figure 8 below).



Figure 8 Number of EGMs by venue in Lower Hutt, 2020

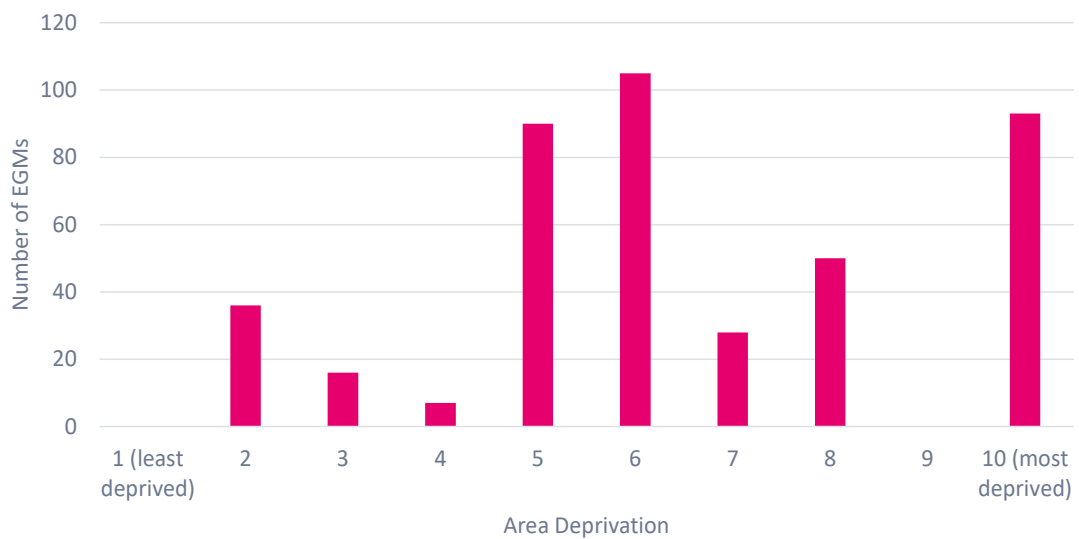


Source: NZIER, Hutt City Council data

EGMs are predominantly located in areas of high and medium deprivation, with a total of 276 EGMs (65 percent of the total) located in areas with deprivation scores of 6 to 10 (10 being most deprived) and 149 EGMs (35 percent of the total) located in areas with deprivation scores of 1 to 5 (1 being least deprived), and the majority of the latter being within deprivation 5 areas. Curiously, there are 93 EGMs in the most deprived communities (NZDep18 level 10) of Lower Hutt and no EGMs in the least deprived communities (NZDep18 level 1).

Lower Hutt EGMs are located in areas of medium to high deprivation.

Figure 9 EGMs by venue area deprivation (NZDep18), 2020



Source: NZIER



While there is considerable debate about the neighbourhood impacts of Class 4 gambling, to the extent that there are impacts, this suggests that mid-deprivation and high deprivation communities would be experiencing these impacts to a significantly greater degree than the least deprived communities. Examples of possible local impacts include crime, negative financial impacts for local businesses, and impacts on the representation of specific businesses:

- A report by the University of South Australia found that the higher per capita expenditure on EGMs within a local area, the higher the income-generating crime rate in that area (Wheeler et al. 2008).
- A SACES (2006) study that found that gambling expenditure generates 3.2 jobs per million dollars in sales whereas beverage sales and food and meals sales generate 8.3 and 20.2 jobs per million dollars in sales. If these figures are accurate and apply to Lower Hutt, and if Class 4 gambling is diverting expenditure away from these sectors, then the net employment effects within the local economy may be negative.
- Geospatial analysis of Class 4 gambling venues show that immediate areas tend to have a higher than usual concentration of pawn shops and ATMs (see for example, Fiedor 2016).

Previous studies have identified a relationship between higher community EGM expenditure and crime as well as a higher concentration of ATMs and pawn shops.

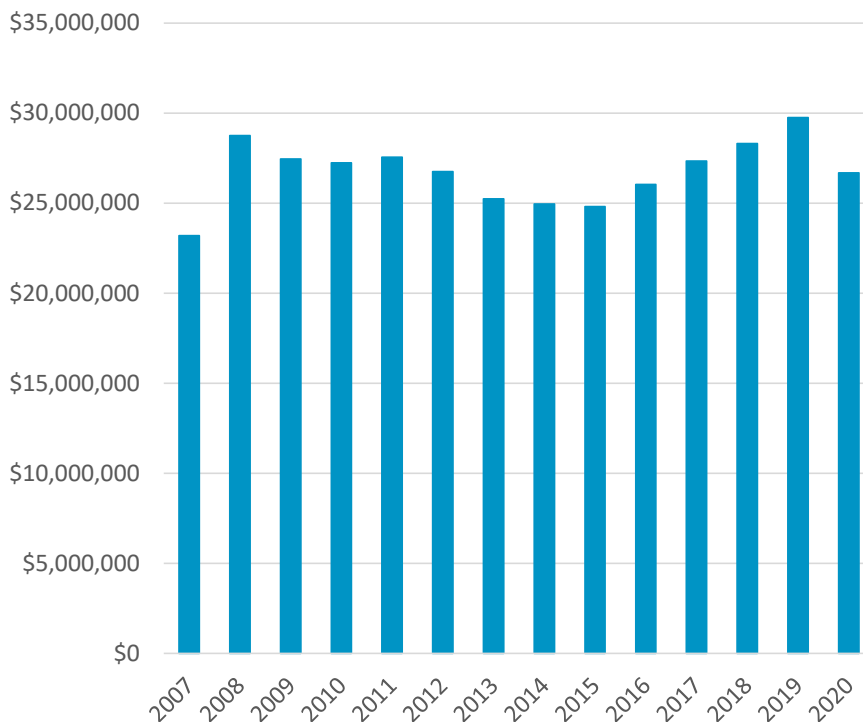


4 Gaming machine proceeds in Lower Hutt

4.1 Lower Hutt gaming machine proceeds (GMP)

Total GMP in Lower Hutt was \$26,679,656 in 2020, down slightly from the 2019 GMP of \$29,753,520 due to the restrictions associated with the COVID-19 Level 4 lockdown. Prior to 2020, there had been an upward trend in Lower Hutt GMP since 2015, following a downward trend that had been observed over the 2008-2014 period.

Figure 10 Lower Hutt total GMP, 2007-2020



Source: NZIER

4.2 GMP per EGM

DIA analysis identifies that from March 2015 to December 2020, GMP for Lower Hutt City increased by \$2,556,514 or 44.5 percent. Over the same period, GMP per EGM has increased by 66 percent or \$7,760.96. The reason for this is not known. The possible reasons include:

- Players spending longer hours gambling on EGMs and betting more in total
- Players betting more per game when they gamble on EGMs
- Class 4 gambling participation increasing.

Whatever the reason for the increase in GMP per EGM, increased affordability of Class 4 gambling as a form of entertainment in Lower Hutt is an unlikely explanation given the economic characteristics of the area:



- Lower Hutt GDP has grown at a rate of 3.1 percent per annum since 2015, compared with national GDP growth of 5.4 percent per annum over the same period (Ministry of Business, Innovation & Employment 2020).
- Lower Hutt GDP per capita has grown at a rate of 1.7 percent per annum since 2015, compared with national GDP per capita growth of 3.4 percent per annum over the same period (Ministry of Business, Innovation & Employment 2020).
- Lower Hutt total personal income grew by 8.0 percent in the 5 years between 2013 and 2018, compared with national total personal income growth of 11.8 percent over the same period (Stats NZ n.d.).
- Unemployment in Lower Hutt has generally stayed above the national average, falling 13 percent (0.7 percentage points) compared with 17 percent nationally (0.8 percentage points on a lower baseline) from the 2013 Census to the 2018 Census (Stats NZ n.d.).

Spending on EGMs in Lower Hutt is outpacing local GDP growth, GDP per capita growth, and personal income growth. It is also occurring alongside relatively high unemployment.

Excluding 2020 which included quarters of unusual growth and unusual contraction of GMP, Lower Hutt’s average quarterly growth in GMP has been 4 percent, compared with only 3 percent at a national level.

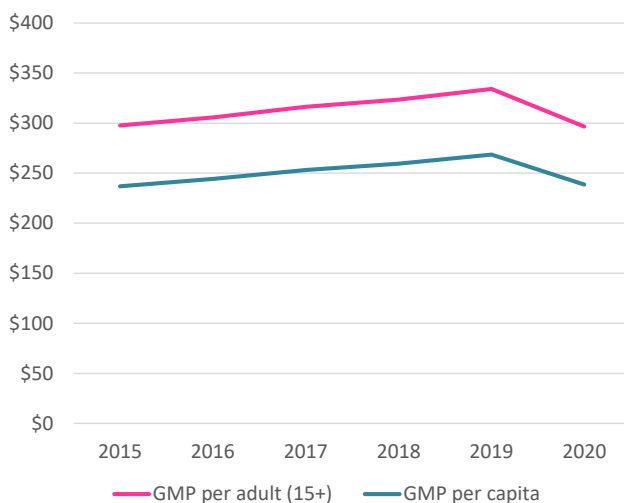
4.3 Lower Hutt GMP per capita

On a per capita basis, Lower Hutt’s 2020 GMP is equivalent to \$239 spent on Class 4 gambling for every individual resident of Lower Hutt. This figure represents a decrease from the 2019 GMP per capita of \$269.

Calculated as GMP per adult (aged 15+), Lower Hutt’s figure for 2020 is \$296, down from \$334 in 2019.

EGM expenditure per adult in Lower Hutt was \$334 in 2019.

Figure 11 Lower Hutt GMP per capita and per adult (15+), 2015-2020



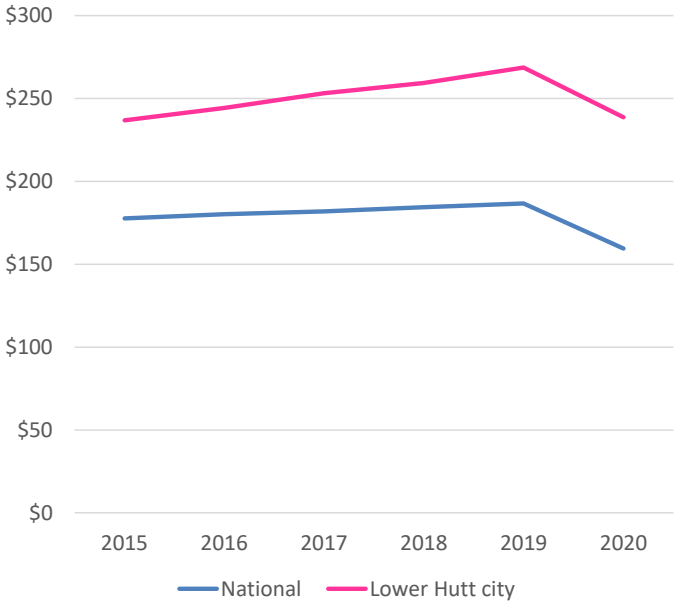
Source: NZIER



4.4 How does GMP per capita in Lower Hutt compare to national GMP per capita?

Nationally GMP per capita was \$160 in 2020, down from \$187 in 2019. GMP per capita in Lower Hutt has been higher than the national average for many years, with a slowly growing difference prior to the 2020 decrease.

Figure 12 GMP per capita, national and Lower Hutt

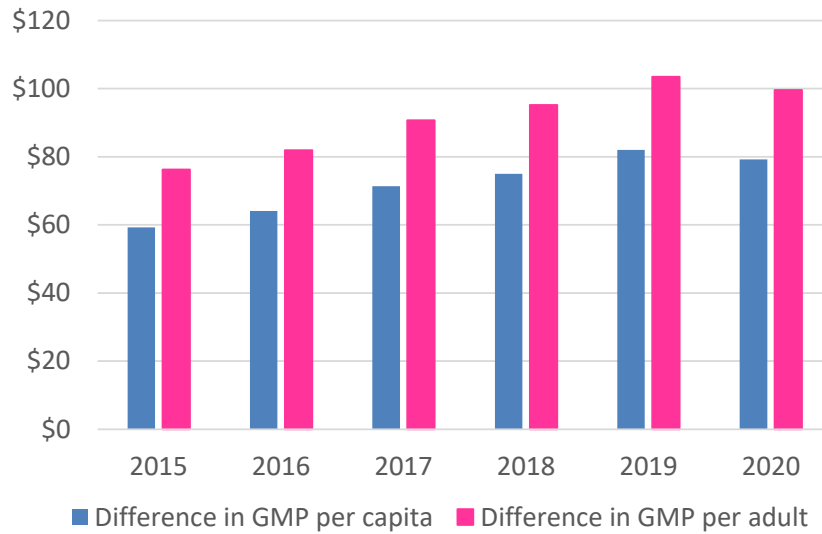


Source: NZIER

The difference between national GMP per capita and Lower Hutt’s GMP per capita has been growing since at least 2015 when it was \$59, reaching \$82 in 2019 before falling slightly to \$79 in 2020 (see Figure 13 below). A similar trend is observed in GMP per adult (15+).

The gap between Lower Hutt GMP per capital and national GMP per capita has been growing.

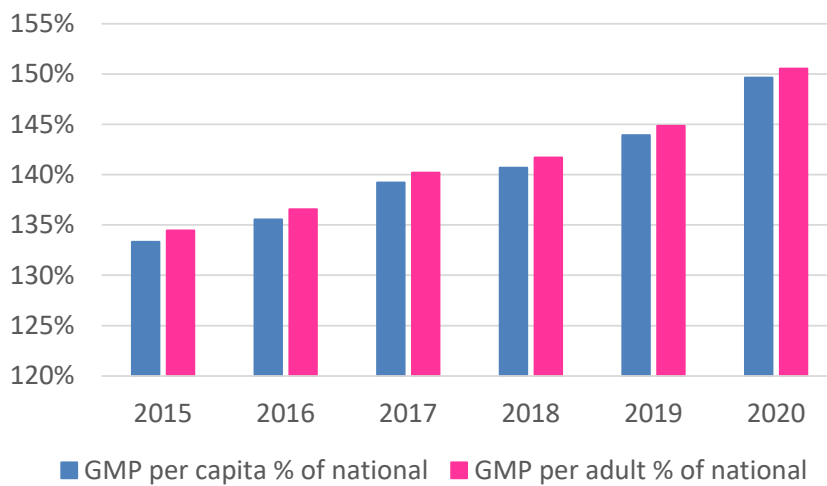
Figure 13 Difference in GMP per capita and per adult, Lower Hutt – National



Source: NZIER

Since 2015, Lower Hutt’s GMP per capita has been increasing relative to national GMP per capita, from 133 percent of the national figure to 150 percent of the national figure (see Figure 14 below). A similar trend is observed in GMP per adult (15+).

Figure 14 Lower Hutt GMP per capita and per adult as a percentage of national



Source: NZIER



4.5 How does Lower Hutt's GMP per capita compare to other territorial authorities?

To compare Lower Hutt's GMP per capital with other territorial authorities, a two-stage process was followed:

- In the first instance, all territorial authorities were compared by calculating GMP per capita using the 2013 and 2018 Census populations and each territorial authority's GMP in the respective years.
- Then, a subset of comparator territorial authorities were selected based on similar population size (a 2018 Census population of between 75,000 and 125,000) or being a neighbouring territorial authority.

Lower Hutt had one of the highest GMP per capita figures in New Zealand in 2018

In 2013, Lower Hutt's GMP per capita was \$257, placing it 12th highest out of 68 territorial authorities. In 2018, Lower Hutt's GMP per capital was \$270, placing it 10th out of 68 territorial authorities.

Also in 2018, Lower Hutt's GMP per capita was higher than all major centres (Auckland City, Wellington City, Christchurch City and Dunedin City).

Lower Hutt's GMP per capita placed it 10th out of 68 territorial authorities in 2018, up from 12th in 2013 – higher than all major centres.

Population projections were applied for comparator territorial authorities

Territorial authorities with populations between 75,000 and 125,000 in 2018 included:

- Lower Hutt City
- Palmerston North City
- Hastings District
- Tauranga City
- Whangarei District.

Territorial authorities neighbouring Lower Hutt were:

- Wellington City
- Upper Hutt City
- Porirua City.

Compared with these other areas, Lower Hutt ranked significantly higher on the national ranking with regards to GMP per capita in both 2013 and 2018. None of the comparator areas are in the national top 10 in 2018.

Lower Hutt's GMP per capita is higher than its neighbouring areas and areas with similar population size.



Table 1 Comparable areas' national rank for GMP per capita, 2013 and 2018

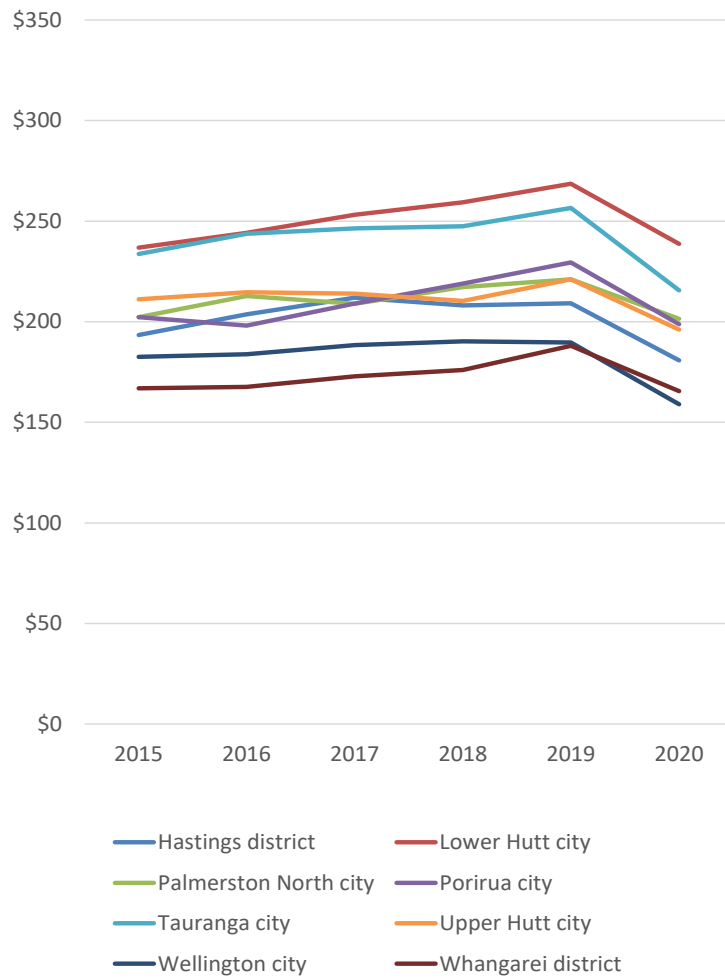
	2013 rank	2018 rank
Hastings District	32	28
Lower Hutt City	12	10
Palmerston North City	31	22
Porirua City	20	20
Tauranga District	19	16
Upper Hutt City	25	26
Wellington City	35	35
Whangarei District	40	39

Source: NZIER

Population projections were applied to these comparators to generate GMP per capita and per adult (15+) figures from 2015 to 2020, based on total GMP by territorial authority. In every year from 2015 to 2020, Lower Hutt had a higher GMP per capita than any comparator.



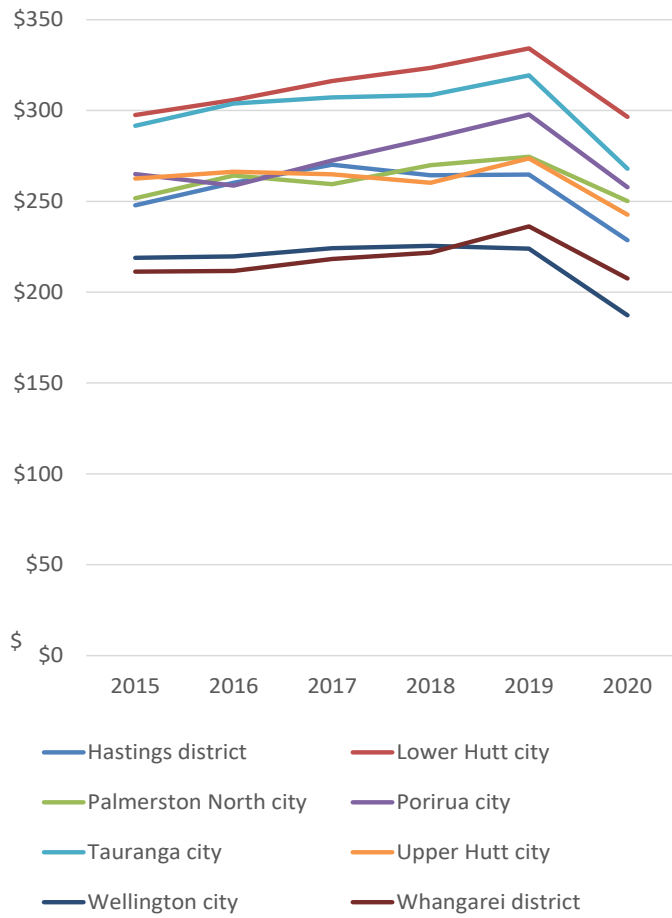
Figure 15 Lower Hutt and comparator territorial authorities' GMP per capita



Source: NZIER



Figure 16 Lower Hutt and comparator territorial authorities' GMP per adult (15+)

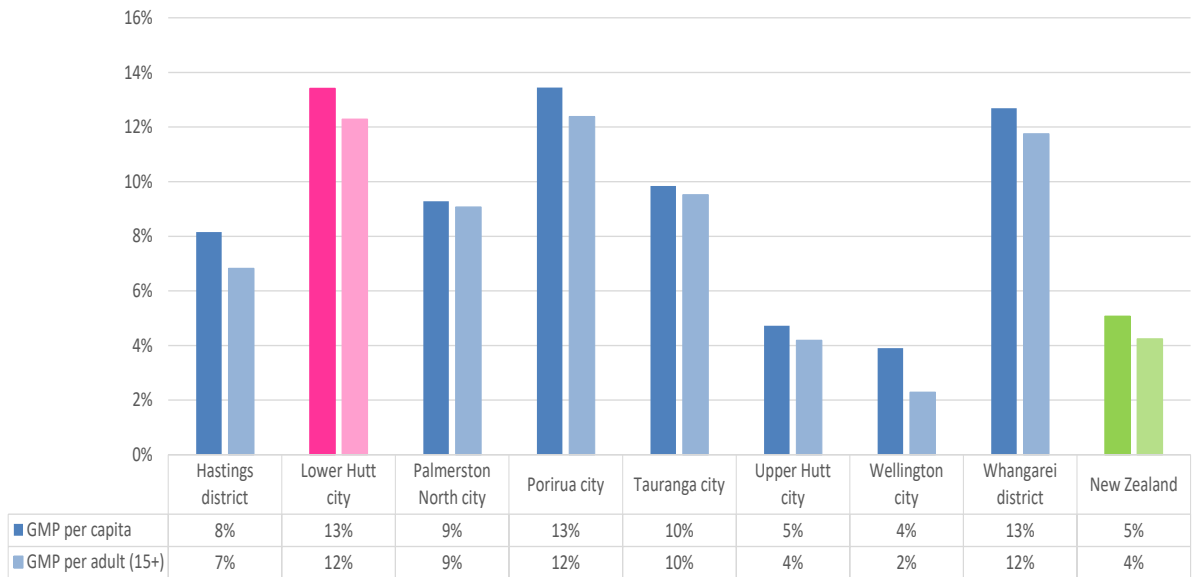


Source: NZIER

Comparing rates of growth between the same comparator territorial authorities show that not only has Lower Hutt's GMP per capita been the highest, it has also been first equal with Porirua City in terms of its percentage growth from 2015 to 2020 (see Figure 17 below).



Figure 17 Comparison of growth in GMP per capita and per adult (15+) from 2015 to 2020



Source: NZIER

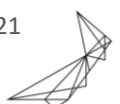
4.6 Participation matters

While the figures calculated for class 4 gambling expenditure per person and per adult do not appear substantial, it is important to note that these figures represent an averaging of total Class 4 gambling expenditure across an entire population and, therefore, are likely to be a significant underestimate of the expenditure of participating individuals.

According to the New Zealand Health and Lifestyles Survey 2016 (Thimasarn-Anwar, Squire, and Trowland 2017), approximately 10 percent of New Zealanders report that they participate in Class 4 gambling. If this is true, the national GMP per capita represents one tenth of an average Class 4 gambling participant’s expenditure. That is, an average Class 4 gambling participant would be expected to have spent \$1,600 in 2020. If the national participation rate applied to Lower Hutt residents, the average participant in Lower Hutt’s Class 4 gambling would have spent \$2,390 on Class 4 gambling in 2020.

Approximately 10 percent of New Zealanders report participating in Class 4 gambling. If this is true for Lower Hutt, average spend is \$2,390 annually (based on the 2020 figure).

No data is available on the participation rate of Lower Hutt residents. It is possible that the national participation rate applies to Lower Hutt, in which case Lower Hutt participants do spend significantly more than the national average, or that Lower Hutt participation rates are significantly higher than the nationally reported rates. We explore what the impact of participation could be on household expenditure in section 6.



5 A “what if...?” analysis of community gambling expenditure

This section describes the results obtained if we assume:

- Previously published estimates of GMP attribution to areas by deprivation level are applicable to Lower Hutt.
- Participation in Class 4 gambling is limited to people living in areas within a specified distance of a Class 4 gambling venue

No evidence is available to verify the validity of these assumptions.

5.1 GMP versus Class 4 Gambling expenditure

The DIA report on Class 4 GMP by territorial authority. GMP represents the profit derived from Class 4 gambling within each territorial authority, and as such, is blind as to the origins of these proceeds. On a national level, it is likely that GMP is very close to equal to national Class 4 gambling expenditure as international tourism is unlikely to contribute substantially to GMP (this is in contrast to EGMs in casinos, where published evidence does suggest tourism can be an important source of GMP).

At a territorial authority level, the certainty that GMP represents local expenditure may be reduced. Critical data gaps related to who gambles and where they gamble mean it cannot be known what share of territorial authority GMP is derived from that territorial authority's local population. This is an important caveat to bear in mind.

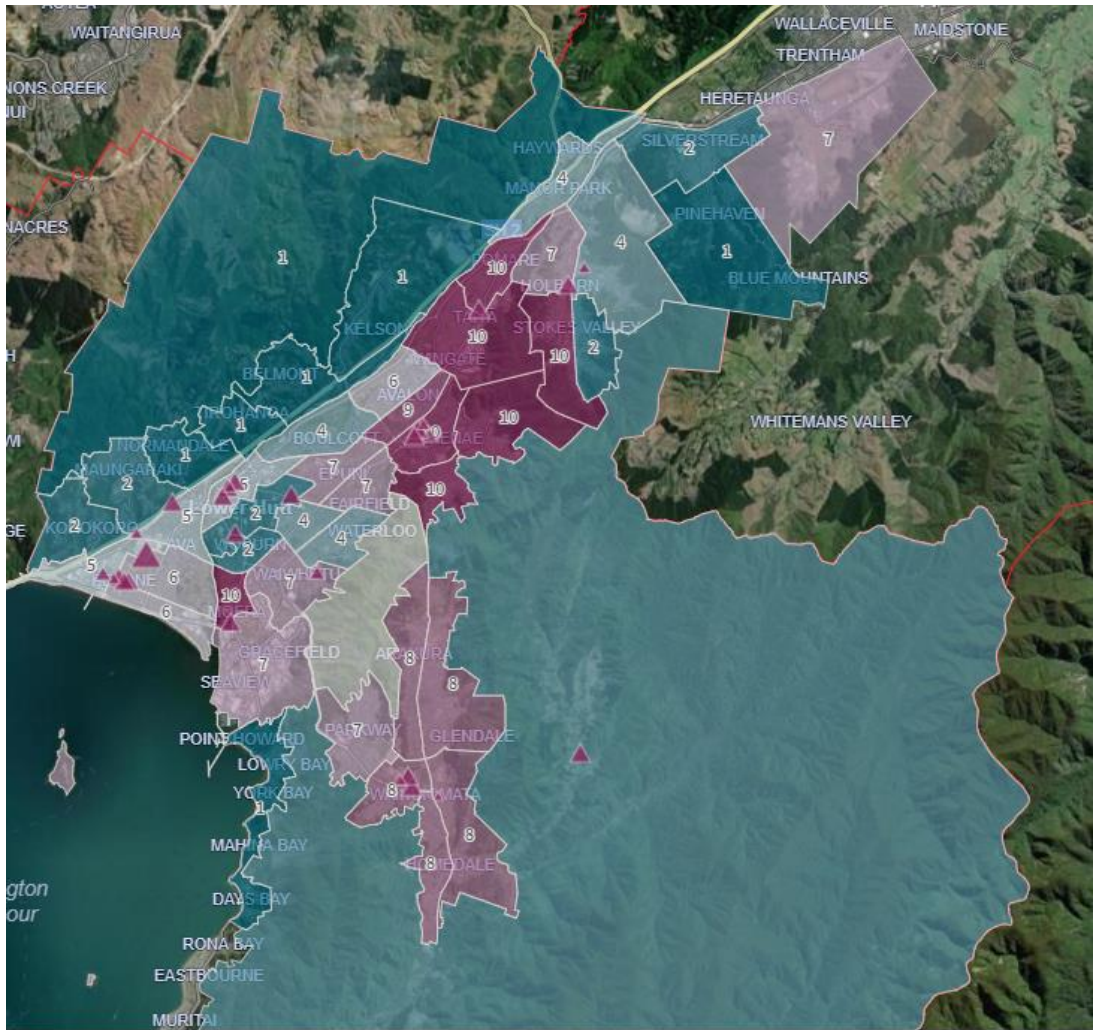
5.2 Methods

Hutt City Council indicated that Class 4 gambling activity is likely to concern the population living within a 5 kilometre radius of a Class 4 gambling venue. To capture this as closely as possible, statistical area units with a geographic centre located within 5 kilometres of a Lower Hutt Class 4 gambling venue were identified (see Figure below).

This means that the assumption of a 5 kilometre radius is relaxed somewhat due to technical requirements. In fact, the practical application of the 5 kilometre radius picked up 97.4 percent of the Lower Hutt total population and excluded only Rona Bay, Eastbourne and Muritai. Changing the radius to 3 kilometres only added Belmont Park to the excluded statistical area units and made little difference to results, so the analysis proceeded with the original assumption.



Figure 18 Statistical area units with geographic centre within 5km of a Lower Hutt Class 4 Gambling venue, by area deprivation



Source: NZIER

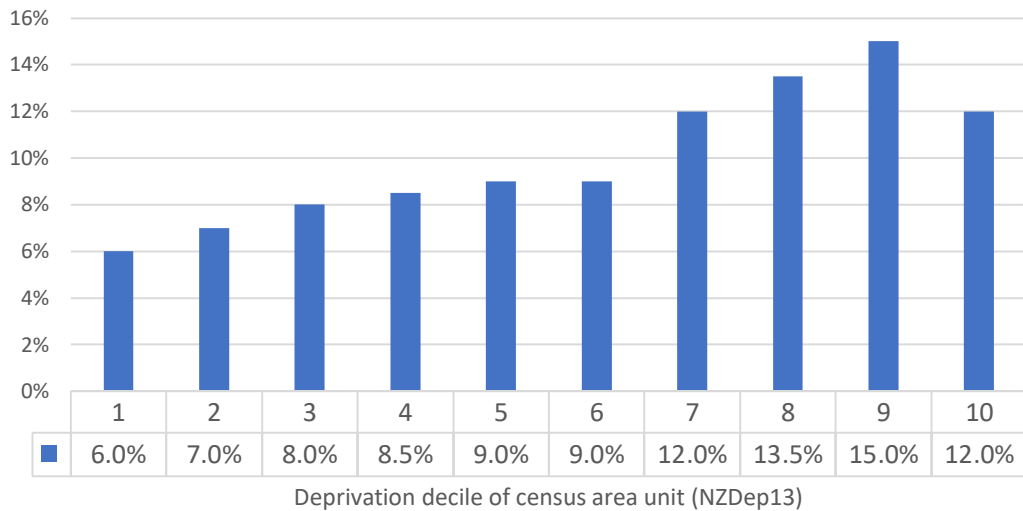
The identification of statistical area units with a geographic centre within a 5 kilometre radius of a Lower Hutt Class 4 gambling venue also picked up three Upper Hutt statistical area units: Pinehaven, Silverstream and Trentham South. Excluding people living in these areas would be arbitrary as nothing prevents them from gambling in Lower Hutt and it may well be more convenient for them to visit Lower Hutt venues than Upper Hutt venues.

The contribution of Lower Hutt and in-range Upper Hutt communities (statistical area units) to Lower Hutt's total Class 4 gambling expenditure was estimated using results from recent New Zealand based published research (Ward, McIvor, and Bracewell 2020) (which identified the proportion of national Class 4 gambling expenditure that is derived from areas based on socioeconomic deprivation. That research identified that over 40 percent of Class 4 gambling expenditure is derived from high deprivation (NZDep13 8-10) areas. See Figure 19 below.

Previous research identified that over 40 percent of GMP is derived from high deprivation (NZDep13 8-10) areas.



Figure 19 Attribution of Class 4 gambling expenditure by area deprivation



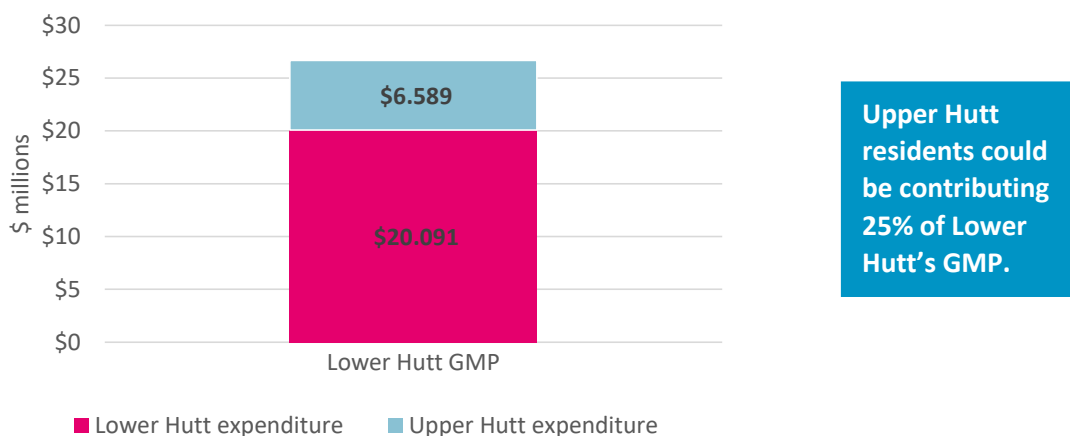
Source: NZIER, based on Ward, McIvor, and Bracewell (2020)

Our analysis used NZDep18 and assumes implicitly that the updated deprivation levels would not materially affect the Ward et al. results. The proportions from this research were applied to Lower Hutt’s total Class 4 gambling expenditure and attributed to in-range statistical area units. In other words, in-range statistical area units with level 1 deprivation were, together, assumed to have contributed 6 percent of the total GMP, while in-range statistical area units with level 10 deprivation were assumed to have contributed 12 percent of total GMP, and so forth.

5.3 Lower Hutt Class 4 gambling expenditure in 2020

Based on a 5 kilometre radius of participation, some of Lower Hutt’s GMP would be derived from residents of Upper Hutt (Pinehaven, Silverstream and Trentham South). Our “what if...?” analysis suggests that roughly \$6.5 million in GMP would be derived from Upper Hutt residents, leaving just over \$20 million being spent by Lower Hutt residents.

Figure 20 Breakdown of Lower Hutt GMP by territorial authority origin



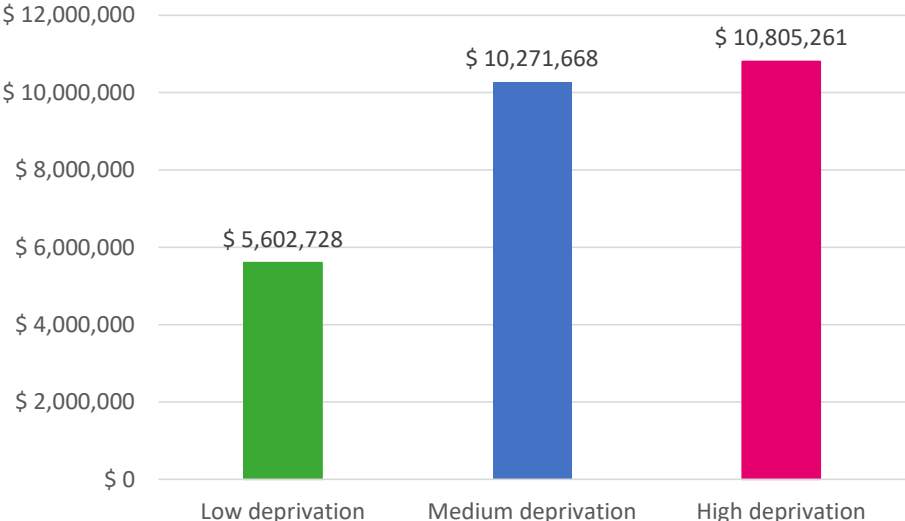
Source: NZIER



5.4 Community-level Class 4 gambling expenditure

The attribution of expenditure by statistical area deprivation to in-range communities follows the proportions identified by Ward, McIvor, and Bracewell (2020), as shown in Figure 21 below.

Figure 21 Class 4 gambling expenditure by deprivation level*, 2020



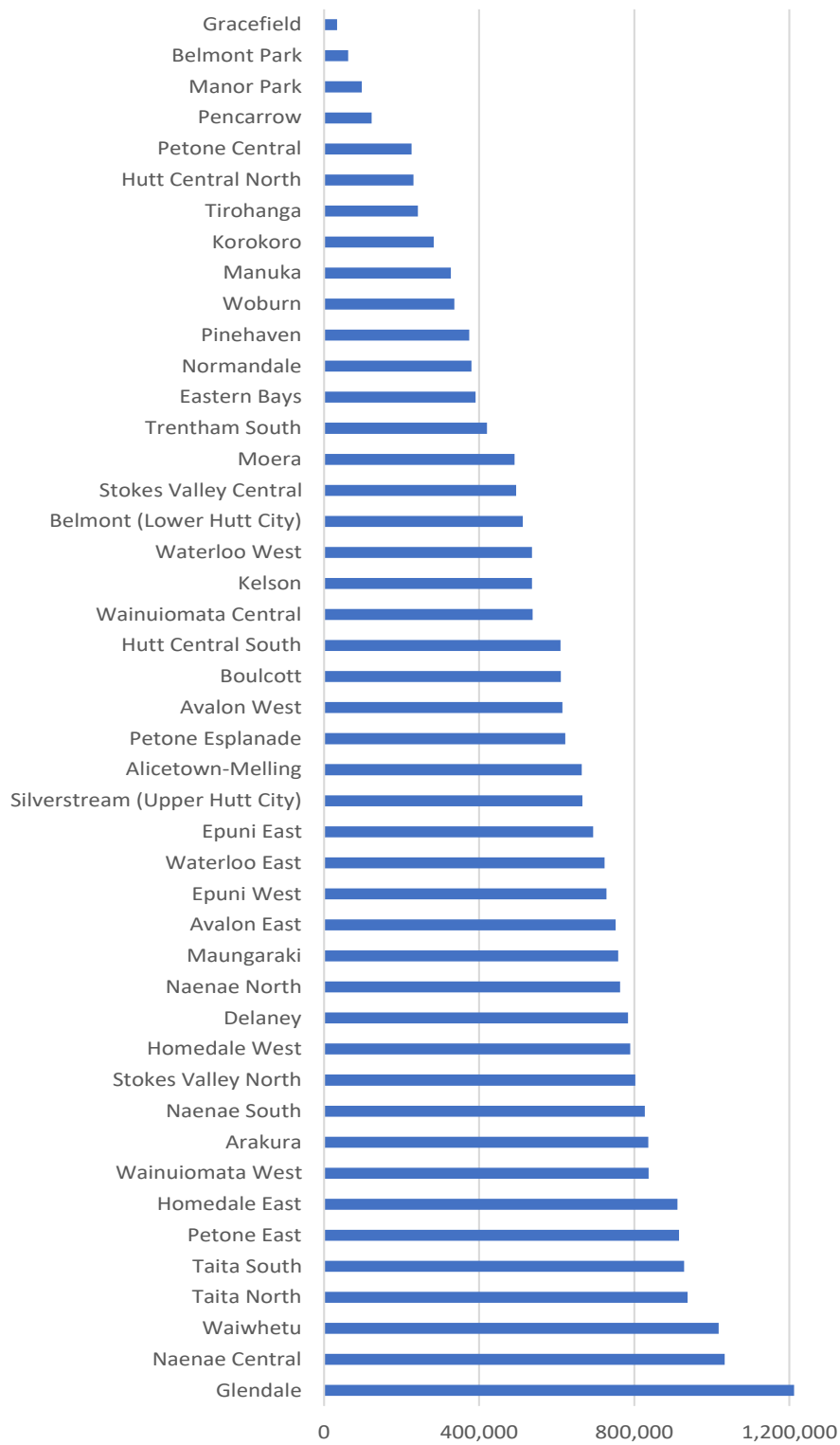
*Includes Upper Hutt statistical area units within 5km of Lower Hutt venues

Source: NZIER

On the basis of an equal Class 4 gambling spend per capita across statistical area units of the same deprivation level, total Class 4 gambling expenditure by statistical area unit is estimated. This results in Glendale, Naenae Central, Waiwhetu, Taita North and Taita South being the top 5 gambling communities in terms of total Class 4 gambling expenditure.

Figure 22 Class 4 Gambling expenditure by statistical area unit

(\$, 2020)

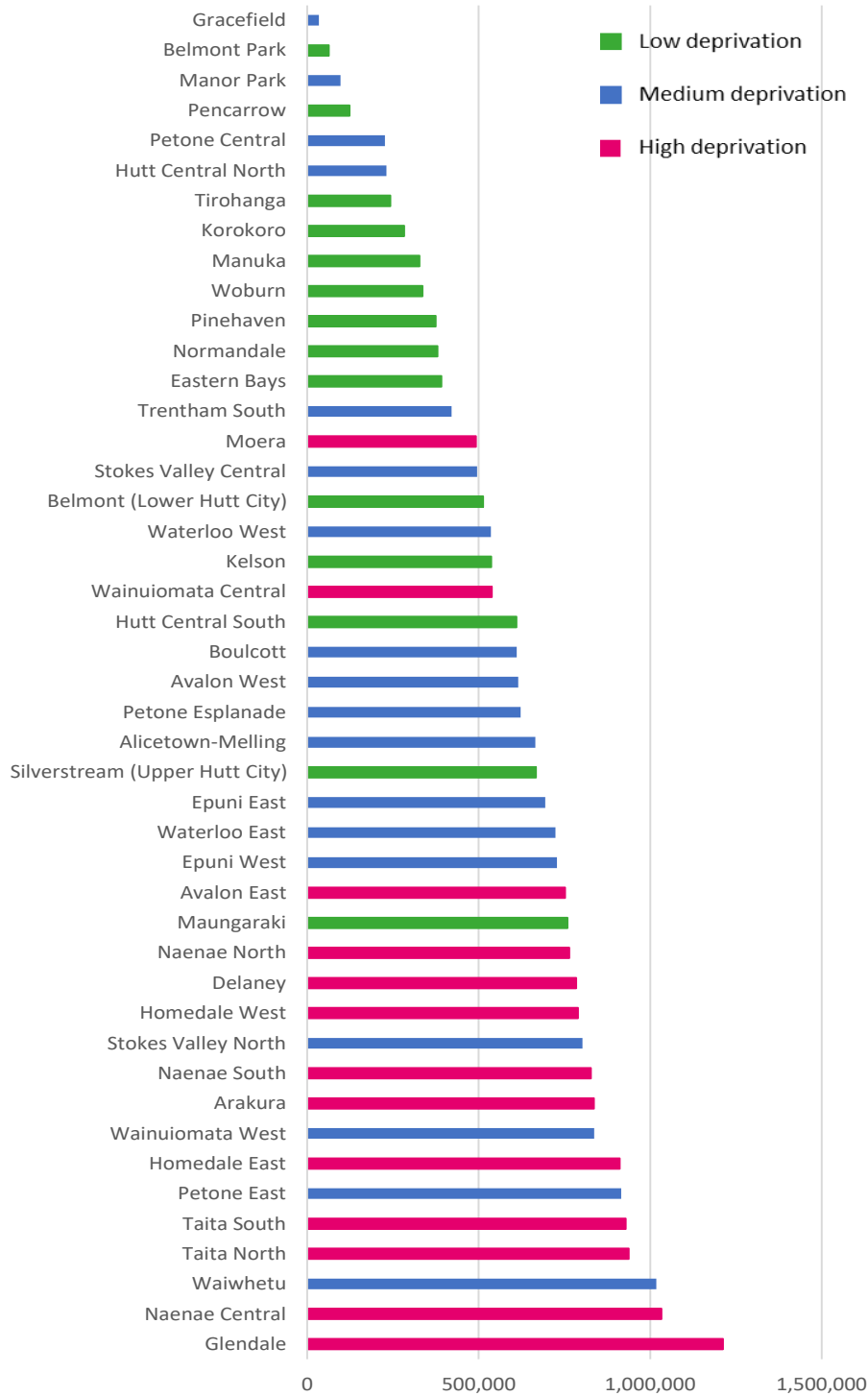


Source: NZIER



Figure 23 below shows the estimated total Class 4 gambling expenditure of the same communities, coloured by deprivation level (grouped as NZDep1-3 = Low, NZDep4-7 = Medium, and NZDep 8-10 = High).

Figure 23 Class 4 gambling expenditure by statistical area unit and deprivation level, 2020



Source: NZIER



Overall, this “what if” approach indicates that high deprivation communities would have spent more than medium deprivation and low deprivation communities on Class 4 gambling. A total of \$10,805,261 out of Lower Hutt’s total GMP is estimated to have been derived from high deprivation. This amounts to 41 percent of the total GMP derived from all communities within the specified range of a Lower Hutt Class 4 gambling venue. Only 21 percent is estimated to have been derived from the least deprived communities.

Applying national research findings to Lower Hutt would suggest nearly \$11 million annually flows out of Lower Hutt’s high deprivation areas into EGMs.

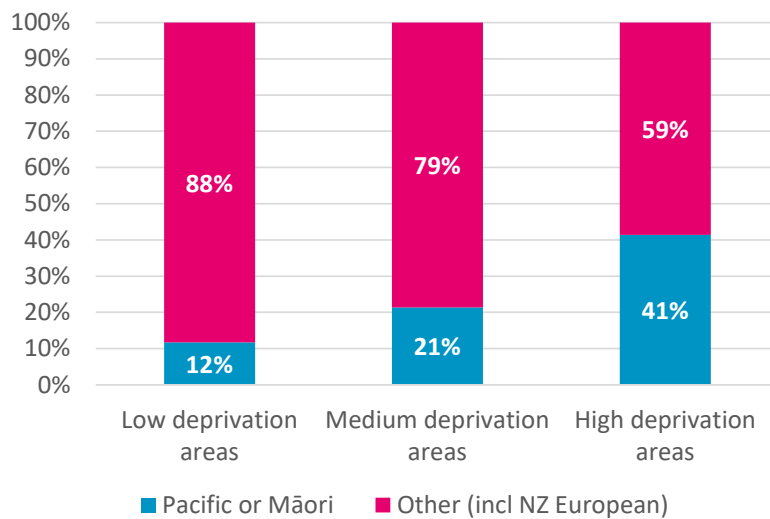
5.5 Potential harm to Māori and Pacific communities

Vulnerability to harm may be associated with factors other than socioeconomic deprivation. According to the 2016 Health and Lifestyles Survey, Class 4 gambling is most prevalent amongst:

- Māori
- Younger people (18-24 and 25-44)
- Moderate-risk and problem gamblers
- People from areas of mid and high socioeconomic deprivation.

Lower Hutt’s population in areas of high deprivation reflects a much higher proportion of people who identify as Māori or Pacific than Lower Hutt’s areas of low deprivation.

Figure 24 Proportion of Lower Hutt population by ethnicity and area deprivation

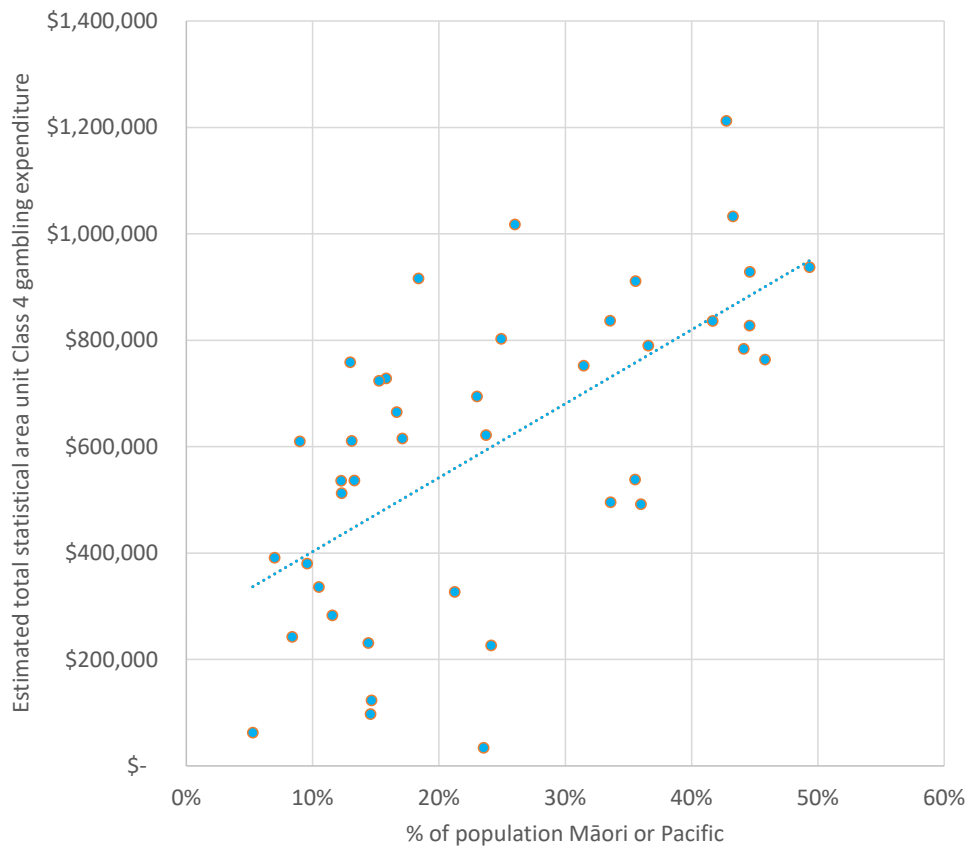


Source: NZIER

The results of the “What if...?” analysis show a positive relationship between the estimated total statistical area unit Class 4 gambling expenditure and the proportion of the statistical area unit population that identifies as Māori or Pacific.



Figure 25 Relationship between statistical area unit Class 4 gambling expenditure and the share of the population identifying as Māori or Pacific



Source: NZIER

Māori participation in gambling, including Class 4 gambling has been well-researched. One study (Levy 2015) which sought to understand the impacts of gambling on Māori identified that there may be social and cultural benefits, with gambling in general described as a whānau activity, actively contributing to strengthening whanaungatanga. But the report noted that this description tended to be applied when gambling was a purposeful activity taking place within whānau controlled environments. Contrary to being a social activity, Class 4 gambling specifically was identified as isolating for many Māori participants explicitly isolating them from their whānau and other social connections (Levy 2015).

In Lower Hutt, Māori are more likely to live in areas with high expenditure on EGMs. Māori experience particular social and cultural harms from Class 4 gambling.

A double impact related to the proliferation of pawn shops in areas with a high density of EGMs may also disproportionately affect Māori wellbeing. The above report noted that previous studies had indicated that items of cultural heritage were sold or pawned to support gambling activities (Lin, Casswell, and You 2008) and that Māori children and young people were also losing cultural heritage, due to the loss of engagement with parents and elders, resulting in negative impacts on socialisation and transfer of indigenous knowledge (Dyall et al. 2012).



According to the New Zealand Health and Lifestyles Survey (Thimasarn-Anwar, Squire, and Trowland 2017), Māori are twice as likely (22 percent) to report being harmed by someone else's gambling than European/Other people.



6 Extension of “What if...?” analysis to Lower Hutt households

When statistical area unit Class 4 gambling expenditure estimates from section 5 are divided by the number of households in each statistical area unit, the resulting annual expenditure per household in high deprivation areas would be \$762 to \$1,004 (\$15 to \$19 per week), but this assumes implicitly a 100 percent household participation rate in those communities. 100 percent participation rates are unrealistic, so it is likely, if the estimates by statistical area unit are reasonable, that participating households in high deprivation areas spend more than these amounts on Class 4 gambling.

This section takes the “What if...?” analysis one step further and asks: What if national survey data on Class 4 gambling participation can be used to describe Class 4 gambling participation in Lower Hutt’s in-range areas identified in the previous section.

6.1 Methods

The “what if...?” analysis described in the previous section produced hypothetical estimates of statistical area unit Class 4 gambling expenditure. To extend this to household level expenditure, we apply an assumption about household participation in Class 4 gambling within the in-range statistical area units. The starting point for the participation rate is the 2016 Health and Lifestyles Survey which describes participation in Class 4 gambling by area deprivation (see Table 2 below).

Table 2 Participation in Class 4 gambling by socioeconomic deprivation level

	Low deprivation (NZDep13 1-3, least deprived)	Medium Deprivation (NZDep13 4-7)	High Deprivation (NZDep13 8-10, most deprived)
Class 4 gambling participation rate	8.2	11	10

Source: Thimasarn-Anwar, Squire, and Trowland (2017)

Participation rates are important because by factoring in participation, expenditure estimates do not reflect an unrealistic averaging of expenditure across an entire population where most people, and potentially most households, do not engage in Class 4 gambling.

Applying national participation rates only to in-range statistical area units, concentrates expenditure on a smaller share of the total Lower Hutt population than the national participation rates indicate. If being in-range of a Class 4 gambling venue is a significant factor for participation, the participation rate of in-range households could be significantly greater than the national rate. To reflect this, we adjust the results to reflect a scenario in which in-range households have double the national Class 4 gambling participation rate.

In Lower Hutt, Māori are more likely to live in areas with high expenditure on EGMs. Māori experience particular social and cultural harms from Class 4 gambling.



6.2 Weekly household class 4 gambling expenditure in the “What if...?” scenario

Under the assumption that national survey-reported participation rates are observed within in-range communities, the weekly household level expenditure on Class 4 gambling ranges from an average of \$125 in participating low deprivation area households to an average of \$173 in participating high deprivation households. But because of the concentration of expenditure within not just 10 percent of the Lower Hutt population, but 10 percent of the in-range population, these figures are likely to be an overestimate of actual household expenditure.

At nationally reporting gambling rates, participating households are spending \$125 to \$173 on EGMs weekly.

Doubling the participation rate for in-range households has the effect of cutting their expenditure in half, to an average of \$62.50 per week for households in low deprivation areas and an average of \$86.50 for households in high deprivation areas.

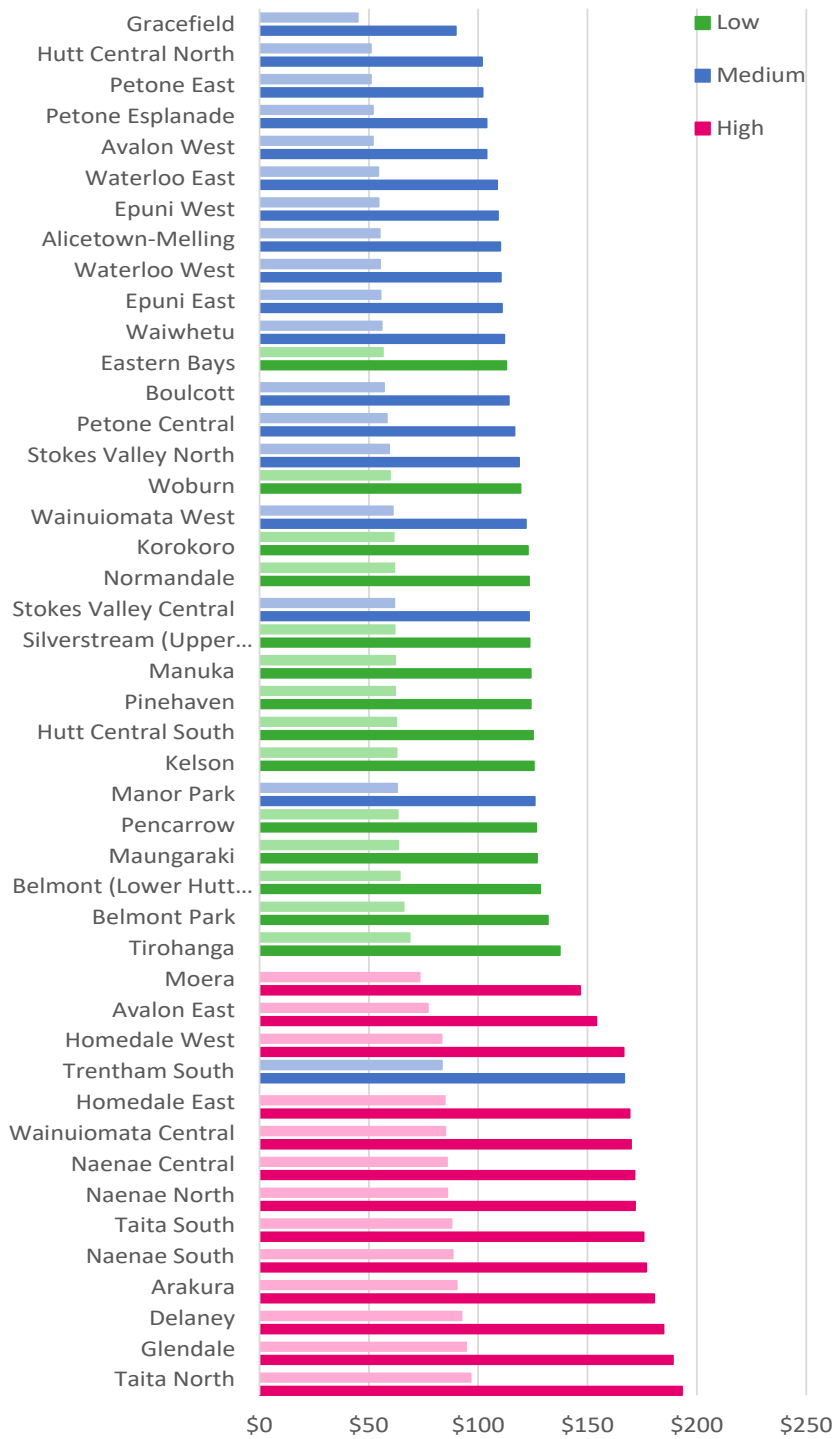
Table 3 Weekly participating household expenditure by area deprivation under 2 participation scenarios

Participation scenario	Area deprivation		
	Low	Medium	High
National participation rate in in-range communities	\$125.12	\$113.88	\$173.05
Double national participation rate in in-range communities	\$62.56	\$56.94	\$86.53

Source: NZIER

The variation in weekly expenditure by statistical area unit is shown in Figure 26 below. It is worth noting that while the amount of weekly expenditure varies depending on the assumed participation rate, the ranking of statistical area units will remain constant unless we also assume participation varies between statistical area units of the same deprivation level. This could very well be true, but no evidence exists to provide a basis for a “what if...?” scenario on this possibility.

Figure 26 Lower Hutt households' weekly Class 4 gambling expenditure under high and low participation scenarios for in-range households



Source: NZIER



6.3 Contextualisation of household expenditure: How much is too much?

To deal with the high level of uncertainty about household level Class 4 gambling expenditure, it is useful to consider the scale other categories of household spending that would be reasonable to expect within deprivation groups.

According to the Household Economic Survey (2018-19) from Stats NZ, household expenditure varies significantly in amount and proportion to specific categories, depending on household income. Unsurprisingly, lower income households tend to spend a lower amount but a greater proportion of their total expenditure on necessities, including food and housing (\$362 per week or 48 percent in total, compared with \$811 or 38 percent in total for high income households) and a smaller proportion on other categories of expenditure.

Expenditure on Class 4 gambling for participating households could represent a significant share of household spending.

Table 4 Weekly expenditure by household income level on household necessities

\$ 2019 (% of total expenditure)

	Low income households	Medium income households	High income households
Food	\$142 (19)	\$213 (17)	\$342 (16)
Housing and household utilities	\$220 (29)	\$325 (26)	\$469 (22)
Health	\$27 (4)	\$34 (3)	\$63 (3)
Transport	\$112 (15)	\$194 (16)	\$329 (16)
Education	\$10 (1)	\$12 (1)	\$35 (2)
Other categories combined	\$239 (32)	\$460 (37)	\$858 (41)
Total	\$750	\$1,238	\$2,096

Source: Stats NZ, Household Expenditure Statistics 2018-19

6.4 Using context to deal with uncertainty

Based on the seemingly more realistic scenario in which in-range households have double the national participation rate in Class 4 gambling, the weekly expenditure on Class 4 gambling for households in high deprivation areas (\$86.53) would equate to 61 percent of the household food expenditure, or 39 percent of the household's housing and household utilities expenditure for low income households. If policy makers believe this participation rate is realistic, they must then ask whether the expenditure level is likely to be harmful.

An alternative way of thinking might be to think about a threshold acceptable expenditure level for a low income household: Given how low income households spend their money, and the significant differences in expenditure on necessities between low and medium income households (\$71 less on food and \$105 less on housing and utilities), what amount of expenditure on Class 4 gambling would be considered as not harmful? And, would the implied participation rate at that level of expenditure be realistic? For example, if \$40 per week represents harmless gambling expenditure for a low income household, the participation rate in Class 4 gambling for high deprivation in-range areas would have to be

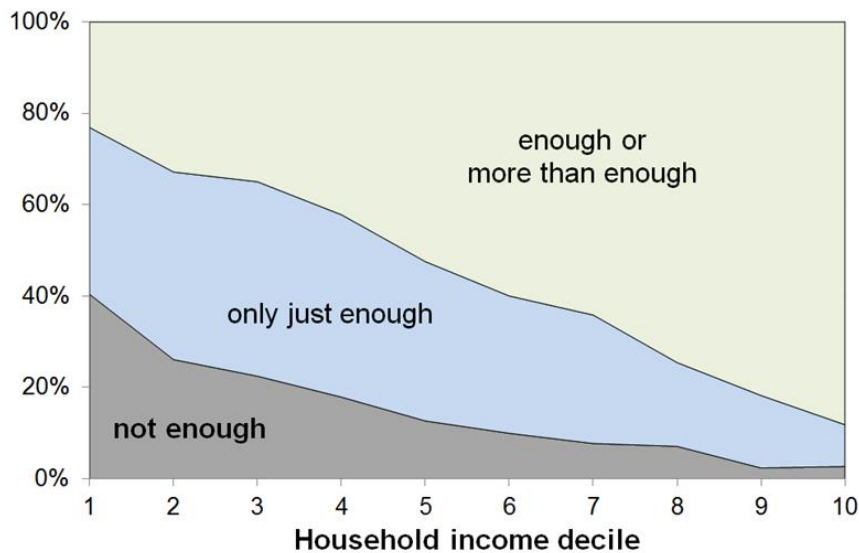


in excess of 40 percent. If this participation rate seems unrealistic, then it is perhaps more realistic to consider that actual household expenditure on Class 4 gambling in high deprivation areas is higher than the \$40 per week acceptable threshold.

Another way of thinking about household expenditure on Class 4 gambling and what an acceptable threshold might be to avoid harm is to consider what households can afford. According to the Ministry for Social Development (Perry 2017), when people are asked if their household’s income is adequate to cover the basics of food, clothing, accommodation and other necessities, those in the lowest income deciles are more likely to report that it is not enough, or only just enough, indicating that few households in low income deciles can afford to spend on non-essentials and that any Class 4 gambling expenditure by such households is likely resulting in material hardship.

How much Class 4 gambling can Lower Hutt households afford without significant implications for basic necessities?

Figure 27 Household income adequacy by household income decile



Source: Perry (2017)

7 Discussion

There are obviously major limitations to some of the analysis presented in this report. This section discusses how results may be used in light of varying degrees of robustness.

Some analysis contained in this report describes actual Class 4 gambling trends

Analysis of Class 4 gambling exposure and GMP at a territorial authority level, including national comparisons and comparisons with other territorial authorities is robust due to the availability of good data and no use of assumptions or scenarios. Results presented in this report in sections 3 and 4 are only limited in terms of the insights they offer on community and household impacts.



However, the analysis does suggest that the population's exposure to Class 4 gambling and the level of Class 4 gambling expenditure Lower Hutt are unusually high. Unless Lower Hutt is unusual and actual gambling patterns in Lower Hutt are significantly different from what is reported nationally, any harms that may be associated with the high level of Class 4 gambling expenditure in Lower Hutt are occurring disproportionately in high deprivation areas, including those with a high proportion of Māori and Pacific residents.

While some results come from a "what if" exercise, there can be no doubt that Lower Hutt residents face a high level of exposure to Class 4 gambling.

The "what if...?" analysis may only serve to raise important questions

Our "what if...?" analysis made use of previously published research which estimated that over 40 percent of GMP is derived from high deprivation areas. If this is true for Lower Hutt, nearly \$11 million was drained from high deprivation areas into EGMs in 2020. Policy-makers will want to consider this possibility alongside other considerations, including the amount of funding received by community groups as a result of the legal requirement that 40 percent of GMP is returned to communities.

Where the money goes is as important as where it comes from

A study by Queensland University of Technology, Southern Cross University and the University of Glamorgan (Brown et al. 2011) noted that Class 4 gambling functions as a type of tax, and expressed concerns about its inefficiency and regressive nature, recognising that these issues were not new, having been raised in previously published research:

The use of gambling by government is also sometimes seen as an inefficient mechanism for raising taxation revenue (Borg & Mason, 2001). Additionally, increased gambling can reduce taxation revenue from other sources, because of the opportunity cost impact of decisions to gamble, i.e. what would have otherwise happened to the money spent on the gambling product (see Borg, Mason & Shapiro, 1993; Moore, 1994). (Brown et al. 2011, 12)

Layton and Worthington (1999) also cite previous work (Madhusudan, 1996; Rivenbark & Roonsaville, 1996; Szakmary & Szakmary, 1995) as evidence that 'the pattern of expenditure may work to the relative detriment of low income individuals and deepen the economic problems that must be addressed by other public support programs'. Consequently, there is a need to understand the effect of gambling generally — and EGMs specifically — on low-income communities. (Brown et al. 2011, 12)

The last time the DIA published data on grants derived from the profits of Class 4 gambling was 2011. That report revealed that Lower Hutt's allocation per capita was well below the national average (\$8.31 compared with \$19.26 nationally) and was also lower than the allocation per capita received by all of the comparator territorial authorities used in the analysis in section 4 of this report, except Hastings.

Little is known about where the money goes. Last time data was published, it indicated that Lower Hutt got less than its fair share of grants.

That report also identified that only 70 percent of funds distributed went to the communities where the money was raised (it is unclear what the definition of 'communities' is in this context, i.e. money raised



in Lower Hutt may have been distributed to Lower Hutt groups but not necessarily in a way that benefited the Lower Hutt communities that contributed the most).

If 40 percent of GMP is returned to communities as grants and 70 percent of this goes back to the local community, then Lower Hutt's expected community grants from Class 4 gambling in 2020 would amount to \$7,470,304. That figure is significantly less than the amount that is estimated to be derived from high deprivation Lower Hutt communities. Furthermore, this amount represents a 'fair share' allocation – not the 43 percent of the national average per capita allocation that the report indicates was the case for Lower Hutt in 2011.

Class 4 gambling in Lower Hutt may be characterised as an inefficient and regressive tax.

Household impacts are the most difficult to identify but the most important to consider

According to the 2016 Health and Lifestyles Survey (Thimasarn-Anwar, Squire, and Trowland 2017):

- People from high deprivation groups are more than two and half times as likely to be frequent, continuous gamblers than people from the least deprived groups and are seven times as likely to be moderate-risk/problem gamblers.
- Māori are nearly six times as likely to be moderate-risk/problem gamblers as European/Other people.
- Almost half (49 percent) of people who played pokie machines in pubs or clubs at least once a month had at least some level of gambling harm.
- 19 percent of Class 4 gamblers participate at least once a month.
- Almost 10 percent of people contributing to community grants through Class 4 gambling are directly harmed by this activity.

Our “what if...?” analysis of household expenditure is heavily assumption-based and serves only to guide discussions about household level impacts with regards to participation rates versus expenditure. It illustrates that either participating household Class 4 gambling expenditure is very high in Lower Hutt, or household Class 4 gambling participation rates are very high in Lower Hutt. Even though it cannot be known which of these is true, it may be useful to Hutt City Council to consider the potential for harm given that one of these, or some combination, is likely to be true.

8 Recommendations

The first recommendation that should be made in any report on Class 4 gambling is to undertake in-depth research into individual gambling behaviour. A lack of data in this area continues to prevent any robust analysis and allows Class 4 gambling policy to be made with a significant blind spot as to the potential harms of this activity on vulnerable individuals and households.

In-depth research is needed to answer important questions about Class 4 gambling impacts.



Our second recommendation is to implement a Class 4 gambling policy with a goal of reducing the number of EGMs and Class 4 gambling venues in Lower Hutt to align with the national average (a reduction of 100 EGMs and a reduction of 4 to 5 venues). This recommendation is made due to:

- The significant uncertainty regarding household impacts and the risk of harm due to the low level of disposable income available for Class 4 gambling in low income households.
- The risk of harm occurring to those who do not participate in Class 4 gambling (e.g. partners and children of gambling participants, particularly where household financial harm may result in relationship tension and material hardship).
- The high concentration of EGMs in or in close proximity to high deprivation areas in Lower Hutt.
- The relatively high exposure to Class 4 gambling that currently exists in Lower Hutt (based on EGMs per 1000 population and venues per 1000 population).
- Evidence that nationally, it is the areas of high deprivation that are contributing the most to GMP and a lack of any evidence suggesting the contrary might be true in Lower Hutt.
- The low share of GMP that is likely being returned to the Lower Hutt community.

We recommend a policy goal of reducing the number of EGMs by 100 and venues by 4 or 5 to align with national average Class 4 gambling exposure.

Recent research indicates that all three forms of policy intervention (absolute caps, sinking lids and per capita caps) are effective in reducing Class 4 venues and EGMs and that sinking lids and per capita caps are the most effective at reducing spending (Erwin et al. 2020).



9 References

- Abbott, Max. 2006. "Do EGMs and Problem Gambling Go Together like a Horse and Carriage?" *Gambling Research: Journal of the National Association for Gambling Studies (Australia)* 18 (1): 7.
- Abbott, Max, Maria Bellringer, Nick Garrett, and S Mundy-McPherson. 2016. "New Zealand National Gambling Study: Wave 3 (2014)." Prepared for the Ministry of Health. Auckland University of Technology, Gambling and Addictions Research Centre.
- Adams, P, F Rossen, L Perese, S Townsend, R Brown, P Brown, and J Garland. 2004. "Gambling Impact Assessment for Seven Auckland Territorial Authorities." Centre for Gambling Studies, University of Auckland.
https://www.fmhs.auckland.ac.nz/assets/fmhs/faculty/Centre%20for%20Gambling%20Studies/documents/2004adams2_overview.pdf.
- Afifi, Tracie O., Douglas A. Brownridge, Harriet MacMillan, and Jitender Sareen. 2010. "The Relationship of Gambling to Intimate Partner Violence and Child Maltreatment in a Nationally Representative Sample." *Journal of Psychiatric Research* 44 (5): 331–37.
<https://doi.org/10.1016/j.jpsychires.2009.07.010>.
- Browne, Matthew, Maria Bellringer, Nancy Greer, Komathi Kolandai-Matchett, Vijay Rawat, Erika Langham, Matthew Rockloff, Katie Palmer Du Preez, and Max Abbott. 2017. "Measuring the Burden of Gambling Harm in New Zealand." Prepared for the Ministry of Health.
- Centre for International Economics. 2018. "Economic Contribution of the Australian Gaming Machine Industry." http://www.thecie.com.au/wp-content/uploads/2018/08/CIE-Report_GTA_Economic-contribution-of-the-Australian-gaming-machine-industry.pdf.
- Department of Internal Affairs. 2008. "Problem Gambling in New Zealand – a Brief Summary." https://www.dia.govt.nz/diawebsite.nsf/wpg_URL/Services-Casino-and-Non-Casino-Gaming-Problem-Gambling-in-New-Zealand-A-Brief-Summary?OpenDocument.
- . 2017. "Class-4 Gambling Expenditure by Quarter and District." <https://catalogue.data.govt.nz/dataset/class-4-gambling-expenditure-by-quarter-and-district>.
- . 2021. "Gaming Machine Profits (GMP Dashboard)." Excel spreadsheet.
<https://catalogue.data.govt.nz/dataset/gambling-expenditure-statistics/resource/941f3304-75a7-48b7-8af0-8d6733881a36>.
- Doughney, James, and Tony Kelleher. 1999. "The Impact of Poker Machine Gambling on Low-Income Municipalities." Victoria: Workplace Studies Centre, Victoria University.
- Dowling, Nicki, David Smith, and Trang Thomas. 2005. "Electronic Gaming Machines: Are They the 'crack-Cocaine' of Gambling?" *Addiction (Abingdon, England)* 100 (1): 33–45.
<https://doi.org/10.1111/j.1360-0443.2005.00962.x>.
- Dyall, Lorna, Zoe Hawke, Ruth Herd, and Papa Nahi. 2012. "Housework Metaphor for Gambling Public Health Action: An Indigenous Perspective." *International Journal of Mental Health and Addiction* 10 (5): 737–47. <https://doi.org/10.1007/s11469-011-9370-1>.
- Erwin, C., Lees, K., Pacheco, G., & Turcu, A. (2020). *Capping problem gambling in NZ: The effectiveness of local government policy intervention*. New Zealand Work Research Institute.
- Fiedor, David. 2016. "Gambling and Its Accessibility: Case Study of Olomouc Czech Republic." *Acta Universitatis Palackianae Olomucensis—Geographica* 47 (1): 5–20.
- Francis, Louise, Charles Livingstone, and Angela Rintoul. 2017. "Analysis of EGM Licensing Decisions by the Gambling Regulator, Victoria, Australia." *International Gambling Studies* 17 (1): 65–86.
<https://doi.org/10.1080/14459795.2016.1263353>.
- Health Promotion Agency. 2018. "Health and Lifestyles Survey." Te Hiringa Hauora/Health Promotion Agency. September 10, 2018. <https://www.hpa.org.nz/our-work/research/our-surveys>.



- KPMG Consulting. 2000. "Longitudinal Community Impact Study: 1999 Report, Volumes 1 and 2." Melbourne: VCGA and KPMG Consulting.
- Levy, Michelle. 2015. "The Impacts of Gambling for Māori Families and Communities: A Strengths-Based Approach to Achieving Whānau Ora," 165.
- Lund, Ingeborg. 2009. "Gambling Behaviour and the Prevalence of Gambling Problems in Adult EGM Gamblers When EGMs Are Banned. A Natural Experiment." *Journal of Gambling Studies* 25 (2): 215–25. <https://doi.org/10.1007/s10899-009-9127-y>.
- Ministry of Business, Innovation & Employment. 2020. "Modelled Territorial Authority GDP 2020 Release." 2020. <https://www.mbie.govt.nz/business-and-employment/economic-development/regional-economic-development/modelled-territorial-authority-gross-domestic-product/modelled-territorial-authority-gdp-2020-release/>.
- Ministry of Health. 2008. "Assessment of the Social Impacts of Gambling in New Zealand." Auckland: Centre for Social and Health Outcomes Research and Evaluation.
- . 2019. *Strategy to Prevent and Minimise Gambling Harm 2019/2020 TO 2021/22*. Wellington, New Zealand: Ministry of Health.
- Pinge, Ian. 2001. "Measuring the Economic Impact of Electronic Gaming Machines in Regional Areas: Bendigo, a Case Study." Melbourne: Centre for Sustainable Regional Communities, La Trobe University.
- Sapere Research Group. 2020. "Gambling Harm Reduction Needs Assessment." Wellington: Ministry of health. <https://www.health.govt.nz/publication/gambling-harm-reduction-needs-assessment>.
- South Australian Centre for Economic Studies. 2006. *The South Australian Gambling Industry: Final Report*. Adelaide, S. Aust: Independent Gambling Authority.
- Stats NZ. 2020. "Household Expenditure Statistics: Year Ended June 2019." 2020.
- . n.d. "Census Place Summaries: Lower Hutt City (2018 Census)." Accessed May 17, 2021. <https://www.stats.govt.nz/tools/2018-census-place-summaries/lower-hutt-city>.
- Storer, John, Max Abbott, and Judith Stubbs. 2009. "Access or Adaptation? A Meta-Analysis of Surveys of Problem Gambling Prevalence in Australia and New Zealand with Respect to Concentration of Electronic Gaming Machines." *International Gambling Studies* 9 (3): 225–44. <https://doi.org/10.1080/14459790903257981>.
- Thimasarn-Anwar, T, H Squire, and H Trowland. 2017. "New Zealanders' Participation in Gambling: Results from the 2016 Health and Lifestyles Survey." G. Wellington: Health Promotion Agency. Research and Evaluation Unit. <https://www.hpa.org.nz/research-library/research-publications/new-zealanders-participation-in-gambling-results-from-the-2016-health-and-lifestyles-survey>.
- Ward, Adam D., Jack T. Mclvor, and Paul Bracewell. 2020. "The Geographic Distribution of Gaming Machine Proceeds in New Zealand." *Kōtuitui: New Zealand Journal of Social Sciences Online* 15 (1): 54–74. <https://doi.org/10.1080/1177083X.2019.1640752>.
- Wheeler, Sarah, David Round, Rick Sarre, and Michael O'Neil. 2008. "The Influence of Gaming Expenditure on Crime Rates in South Australia: A Local Area Empirical Investigation." *Journal of Gambling Studies / Co-Sponsored by the National Council on Problem Gambling and Institute for the Study of Gambling and Commercial Gaming* 24 (April): 1–12. <https://doi.org/10.1007/s10899-007-9070-8>.

