Te Matapaeroa 2019 – looking toward the horizon

Some insights into Māori in business

Foreword

To get a better picture of the contribution of Māori to the wider economy, Te Puni Kōkiri commissioned research on the scope of economically significant Māori-owned businesses.

The research, undertaken by Nicholson Consulting, provides data to help inform future policy work by Te Puni Kōkiri that can lead to building the Māori economy, lifting employment, improving Māori wellbeing and addressing equity of outcomes as part of the broader data strategy. It also highlights the untapped opportunities and needs of Māori businesses by sharpening our understanding of the scale and makeup the Māori small and medium enterprise (SME) sector.

This data is vital for Te Puni Kōkiri to lead policy development across the government sector and is integral to the Te Puni Kōkiri strategy to be the authoritative public sector voice on the status of Māori wellbeing. Te Puni Kōkiri is developing an enterprise information and knowledge strategy as part of a broader Māori economic resilience strategy, and the data on Māori businesses is an early example of the value of this work.

All data is anonymised and managed under the security and confidentiality provisions of the Statistics Act.

In June 2020, as part of the COVID-19 Manaaki project (www.manaakipromise.co.nz), Te Puni Kōkiri commissioned Nicholson Consulting to use Statistics NZ's Integrated Data Infrastructure (IDI), Longitudinal Business Database (LBD), and Linked Employer-Employee Data (LEED) to identify Māori businesses, and some of their key variables and characteristics. It compares these findings with previous research on Māori businesses.

These linked databases were used to identify the number and breadth of Māori businesses, or businesses important to the Māori economy in the following three categories as at December 2019:

- Māori-owned Businesses
- Māori Sole Traders
- Significant Employers of Māori.

The research uses pre-COVID-19 data and will be refreshed regularly as new information is collected.

Geoff Short
Hautū, Te Puni Kaupapa Here, Te Puni Kōkiri

Summary of what the data tells us

The research confirms the existence of more than 10,000 **economically** **significant Māori-owned** **businesses** – eight times more than previously reported. The data, based on 2019 (pre-COVID) information, includes 1,300 Māori-owned enterprises, previously identified by Statistics NZ, and **8,800 newly identified** **businesses**, where at least 51% of wages paid to directors, partners or active shareholders, was to individuals of Māori ethnicity or descent. Those figures exclude sole traders.

This analysis is limited to businesses with active directors, partners, or shareholders who receive a salary from the business.

Māori-owned businesses represent 6% of such businesses across New Zealand. This suggests there is substantial **growth potential** for Māori small and medium sized enterprise (SME) within the overall economy.

Regional level analysis has provided new insights in both absolute and comparative terms. For example, the absolute number of identified **Māori-owned businesses in Tamaki Makaurau increased from 27 to 1362.** **In Gisborne, one in five businesses from the identified dataset are Māori-owned.**

Our understanding of sector focus has also improved. **Professional services have entered the top three** – construction, professional services, and agriculture, fishing, and forestry – with manufacturing and logistics-related activity completing the top five.

Positively, the data indicates the **turnover and employee size profile of Māori-owned business is** **comparable to that of non-Māori.**

Less encouraging is information showing that on average **Māori businesses in most industries appear to be** **generating lower financial margins – less than 70% of those of non-Māori-owned businesses.**

The data confirms the widely accepted view that **Māori are more likely to employ other Māori.** On average, **43% of employees of Māori-owned businesses are Māori**, compared to **14% for non-Māori-owned businesses.**

Additionally, the study identified **10,200 'Significant Employers of Māori', of which 2,200 are Māori-owned** **businesses.**

The research also identified further enterprise-related insights about Māori sole traders and rental income.

The new approach unlocks a whole new level of insights, building on previous foundational research by BERL, Statistics NZ and other government and Māori partners. Richer information and deeper insights will also emerge in the future due to the recent addition of a Māori identifier to the data collected for the NZBN Register.

How these insights can be used

The new insights into regional and industry sector splits among the small and medium sized business sector will lead to improved targeting of government policy, support, and services. It shows the breadth of the Māori business sector.

For example, more research is needed to understand why Māori businesses appear to generate lower margins – is it because they are more socially focused, or are they in need of business development support, and/or other reasons?

A deeper understanding is also needed as to why Māori-owned businesses employ three times more Māori than non-Māori business. Similarly, the statistic showing that Māori-owned businesses comprise 6% of the total, while a major increase, also suggests that Māori business elements of the economy are disproportionately smaller, and the full potential of Māori to contribute to the wealth, resilience and wellbeing of whānau is not being realised.

Industry sector and regional insights can also be used to inform future targeting across the government sector COVID-19 recovery stimulus, and future policy development to support Māori economic growth. For example, government can consider what might be developed to support Māori business where sectors are significantly under-represented, or where financial performance may be lagging. Also, how can Māori businesses' propensity to employ Māori be augmented by government policy to further improve Māori career pathways into management and enterprise leadership, such as through cadetships.

How we identified a 'Māori-owned Business'

Our approach to identify Māori businesses was to link businesses to Māori individuals. We identified Māori individuals if they were either of Māori ethnicity in the IDI (collected via a range of survey and administrative sources) or identified as having Māori descent from the NZ Census 2013.

As a result of the available data, we identified three categories of business, fundamental to the Māori economy.

We identified a **Māori-owned Business** if it meets at least one of the following criteria:

- **Māori business based on Statistics NZ identifier (1,300 businesses)** – The business is an enterprise and is flagged as Māori by Statistics NZ and used in their Tatauranga Umanga Māori reports
- **Majority shareholders are Māori (8,800 businesses)** – A business where at least 51% of wages paid to directors, partners or active shareholders are to individuals of Māori ethnicity or descent.

By using the LEED, we identified 618,000 businesses in New Zealand. We then determined whether these were Māori or non-Māori using tax filing data from active shareholders – including partners and directors.

For the 162,200 businesses with active shareholders:

- 1,300 were identified as Māori by Statistics NZ (SMEs, Māori Authorities and Māori Trusts)
- 8,800 paid ≥ 51% of active shareholder salary to Māori, and were identified as Māori businesses
- 152,000 did not meet the 51% threshold of active shareholder salary paid to Māori, and so were identified as non-Māori businesses, using active shareholder data.

The remaining 455,800 businesses for which there was no active shareholder data were unable to be classified into Māori and non-Māori.

We also identified **Māori Sole Traders (14,700 sole traders)** – a sole trader of Māori ethnicity or descent.

Finally, we identified businesses of significance to the Māori economy based on their workforce contribution. **Significant Employers of Māori (10,200 businesses)** were businesses where at least 75% of the total number of employees were individuals of Māori ethnicity or descent.

Additionally, we determined that **2200 of these Significant Employers of Maori were also Maori-owned businesses** based on our previous definition.

Note: these are rounded counts and numbers may not always add up correctly.

While there have been several attempts to identify Māori businesses in previous research, this is the first attempt at making use of the data in the LBD, LEED and IDI. The benefit of this approach is it uses more complete administrative sources – a record of all registered enterprises in New Zealand. It is not based on statistical sampling or imputations, and all key analysis variables are based on tax filing data.

For some purposes, users may require a definition of Māori businesses based on concepts not easily quantifiable, such as cultural connectedness. The approach of this report was to begin with data already available that could be used immediately. Further work is possible to include aspects such as culture into these definitions, using survey-based data such as Te Kupenga or the General Social Survey.

The associated 'Technical Details Report' sets out more information on the definition of output variables.

Key findings

In addition to the 1,300 Māori businesses Statistics NZ has identified in Tatauranga Umanga Māori[1] 2019, we have identified 8,800 Māori-owned businesses using our active Māori shareholder approach.
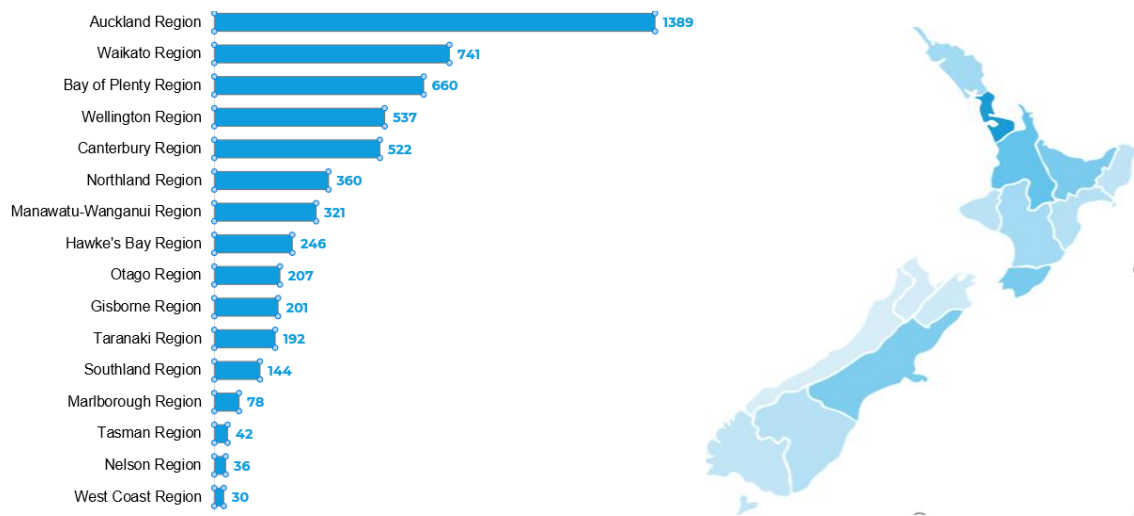

Figure: Number of Māori-owned businesses by region[2]

Key findings include:

A further 8,800 Māori-owned businesses.

These include:

- More than 2,400 Māori-owned businesses in Construction
- More than 1,000 Māori-owned businesses in Professional, Scientific and Technical Services
- More than 450 Māori-owned businesses in Transport, Postal and Warehousing
- More than 450 Māori-owned businesses in Agriculture, Forestry and Fishing.

The proportion of Māori-owned businesses vs non-Māori-owned businesses is 6%.

Using active shareholder data and Statistics NZ's definition of a Māori business, we have identified 10,200 Māori-owned businesses and 152,000 non-Māori-owned businesses.

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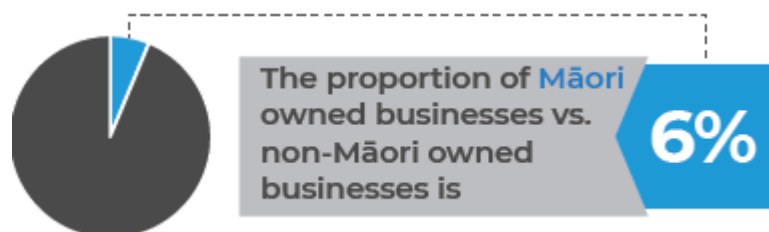
1 Tatauranga umanga Māori – Statistics on Māori businesses presents information on two subsets of Māori businesses that contribute to our country's economy – Māori authorities and small and medium-sized enterprises. https://www.stats.govt.nz/information-releases/tatauranga-umanga-maori-statistics-on-maori-businesses-201718

2 Note that these figures do not add to 8,800 due to 3,100 businesses unable to be allocated to a region.

At least 1 in 5 businesses in Gisborne identified from the data are Māori owned.

When we compare the number of Māori-owned businesses vs non-Māori-owned businesses across regions, Gisborne has the highest proportion of Māori-owned businesses with 23%, followed by Northland with 14%, and Bay of Plenty with 12%.


The distribution of the size of Māori-owned businesses is similar to non-Māori-owned businesses.

Both Māori-owned and non-Māori-owned businesses follow similar patterns for enterprise size, based on employee count and on GST size. Refer to the Technical Details Report for the definitions of these enterprise sizes.

Māori-owned businesses employ more Māori.

On average, 43% of employees of businesses we identified as Māori-owned are Māori, compared to 14% for non-Māori-owned businesses.
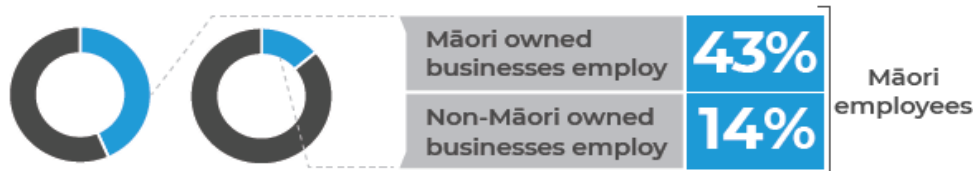
Industry sectors

In most industries, Māori-owned businesses appear to be operating with significantly lower margins than non-Māori businesses.

Based on the net income and expenses from GST returns, Māori-owned businesses appear to be generating margins less than 70% of that of Māori-owned businesses, and in some sectors much lower. While this approach to estimation does not deliver a full picture of net profitability (as non-GST rated expenses such as salaries are excluded), it does point to differences that deserve further research.

The manufacturing sector produces the highest average estimated operating margin for Māori-owned business types. But these margins are only 39% of what non-Māori-owned businesses generate in Manufacturing.

Māori-owned businesses in Wholesale Trade are making margins only 59% of those made by non-Māori-owned businesses in Wholesale Trade.

There are two industries where Māori-owned businesses are making higher margins than non-Māori-owned businesses in the same industry. These are Accommodation and Food Services; and Rental, Hiring and Real Estate Services.

We have also found that Māori-owned businesses in the Financial and Insurance Services industry on average operate with a negative margin, while this industry represents the highest average margin for non-Māori-owned businesses.

Construction is the dominant industry for Māori-owned businesses across regions.

In most regions, there are more Māori-owned businesses in Construction than any other industry. The exception is in Southland, where there are more Agriculture, Forestry and Fishing Māori-owned businesses.

In four regions, the number of Māori-owned businesses in other industries is similar to the number in Construction:
- o   Tasman: Construction and Retail
- o   West Coast: Construction and Agriculture, Forestry and Fishing
- o   Gisborne: Construction and Agriculture, Forestry and Fishing
- o   Nelson: Construction and Professional, Scientific and Technical Services.

We identified 537 Māori tourism businesses.

Using our active Māori shareholder approach, we have identified 300 Māori-owned businesses in Accommodation and Food, 141 Māori-owned businesses in Arts and Recreation, and 96 Māori-owned businesses in other tourism industries (including Transport Services, Motor/Transport Equipment Rental/Hiring, and Travel Agency Services). Refer to the technical document for how we defined a tourism business.

The proportion of Māori-owned vs non-Māori-owned tourism businesses is 4%.

Using active shareholder data and Stats NZ's definition of a Māori business, and our tourism business definition, we have identified 537 Māori-owned tourism businesses and 11,568 non-Māori-owned tourism businesses.

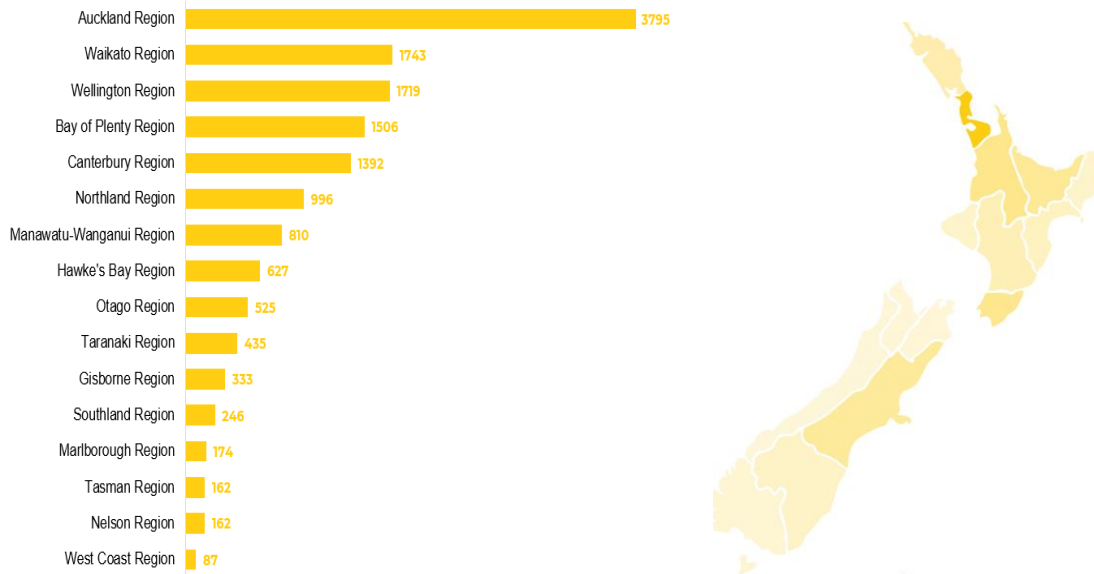**Māori-owned tourism businesses in the Bay of Plenty employ more Maori.**

The percentage of Māori employed in Māori-owned tourism businesses by region is highest in the Bay of Plenty with 26%, followed by Waikato with 15%, and Auckland with 11%.

1 in 8 tourism businesses in Gisborne are Māori-owned.

When we compare the number of Māori-owned tourism businesses vs non-Māori-owned tourism businesses across regions, Gisborne has the highest proportion of Māori-owned tourism businesses with 12.5%, followed by Northland with 11.9%, and Bay of Plenty with 9.5%.
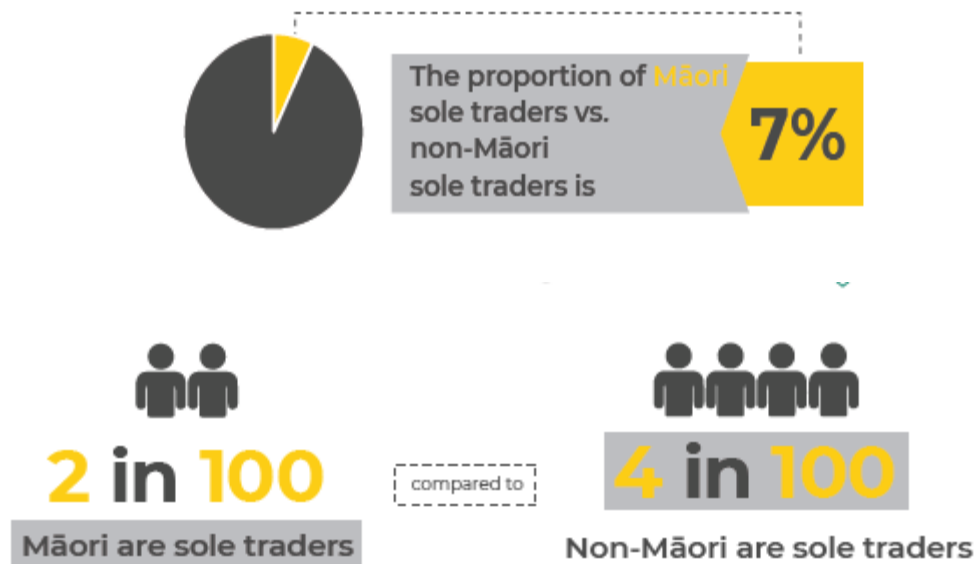
Sole Traders

We have identified 14,700 Māori **Sole Traders** by linking to ethnicity and descent data.

Region	Value
Auckland Region	3795
Waikato Region	1743
Wellington Region	1719
Bay of Plenty Region	1506
Canterbury Region	1392
Northland Region	996
Manawatu-Wanganui Region	810
Hawke's Bay Region	627
Otago Region	525
Taranaki Region	435
Gisborne Region	333
Southland Region	246
Marlborough Region	174
Tasman Region	162
Nelson Region	162
West Coast Region	87

The proportion of Māori sole traders to non-Māori sole traders is 7%.

Using our definition of a Māori sole trader, we have identified 14,700 Māori sole traders and 190,800 non-Māori sole traders.

The proportion of Māori sole traders vs. non-Māori sole traders is **7%**

2 in 100
Māori are sole traders

compared to

4 in 100
Non-Māori are sole traders

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MINISTRY OF MĀORI DEVELOPMENT

nicholson
CONSULTING

Of all Māori sole traders, 8,000 have rental income.

54% of all Māori sole traders have rental income, while 62% of non-Māori sole traders have rental income.

Of all Māori sole traders,

8000
have rental income.

1 in 5 Māori sole traders in Gisborne have rental income.

In Gisborne, 21% of sole traders with rental income are Māori, compared to Northland with 13%, and Bay of Plenty with 9%.

Significant Employers of Māori

We have identified 10,200 **Significant Employers of Māori** by linking employee data to ethnicity and descent data. A 'Significant Employer of Māori' is defined as a business where at least 75% of the total number of employees are individuals of Māori ethnicity or descent.
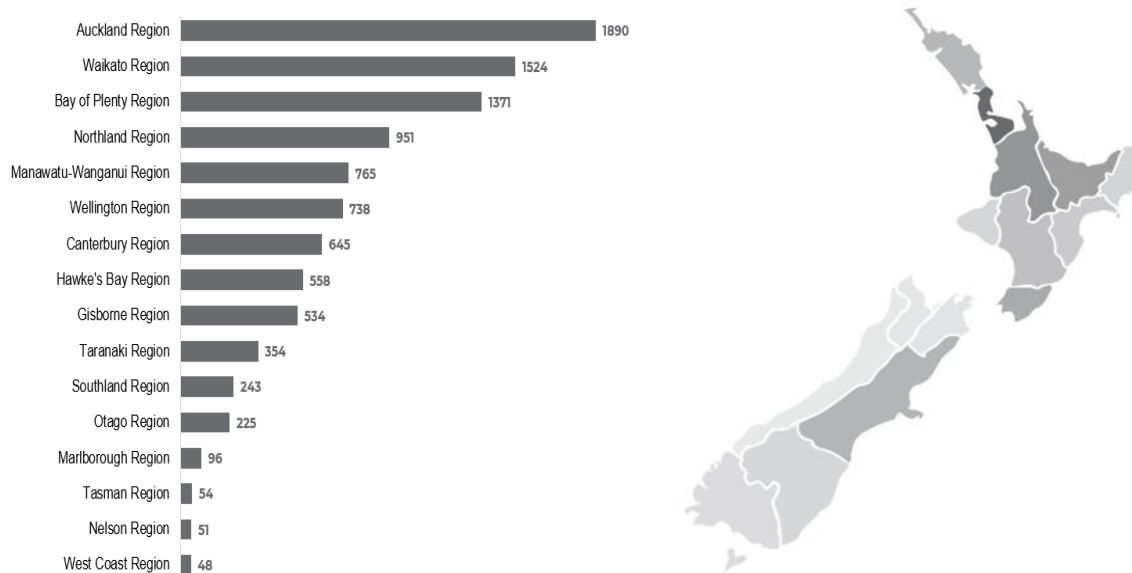
6% of employers are classified as significant employers of Māori.

Using our definition, we have identified 10,200 significant employers of Māori and 362,800 lower employers of Māori.

2,200 of the 10,200 significant employers of Māori were also identified as Māori-owned businesses.

Using our definition of a significant employer of Māori and that of a Māori-owned business, we have identified an overlap in the datasets of 2,200.

1 in 4 businesses in Gisborne are significant employers of Māori.

When we analyse the regional distribution of significant employers of Māori, Gisborne has the highest proportion with 27%, followed by Northland with 16%, and Bay of Plenty with 12%.

More significant employers of Māori are found in primary industries.

The Agriculture, Forestry and Fishing sector employs the largest numbers of Māori with 2,295 businesses, followed by Construction with 2,163 businesses, and Other Services with 750 businesses.

Significant employers of Māori make up a greater proportion of Education and Training businesses.

When we look at the proportion of significant employers of Māori by industry, Education and Training has the highest proportion at 16%, followed by Electricity, Gas, Water and Waste Services at 10%, and Agriculture, Forestry and Fishing at 9.7%.

Technical details

Māori businesses in the Longitudinal Business Database

Introduction

There are vast quantities of available data about businesses in New Zealand. In particular, the Longitudinal Business Database (LBD) contains over a decade of information pertaining to economically significant enterprises' activities and characteristics, derived from a range of survey and administrative data sources.

Alongside this, Statistics NZ's Integrated Data Infrastructure (IDI) offers individual-level person data. This includes data from the NZ Census, social sector administrative sources such as health, welfare, education, employment, and justice, as well as a range of survey-based data sources.

The IDI and the LBD are linked through Linked Employer-Employee Data (LEED). This means enterprise data is linked to individuals – both active shareholders and employees. Using these linked databases, we have identified several ways to identify Māori businesses, or businesses important to the Māori economy. These include:

- Māori-owned Businesses
- Māori Sole Traders
- Significant Employers of Māori.

These definitions have been constructed using a set of chosen bounds, but readers should be aware these bounds can be easily changed for different purposes. For example, our identification of Māori-owned businesses is where at least 51% of wages paid to directors, partners, or active shareholders, were to individuals of Maori ethnicity or descent, excluding sole traders. For different purposes, other users can easily move these bounds.

This paper serves as a description of what is possible with the IDI and LBD, noting different definitions of Māori businesses can and should be used for different purposes.

While there have been several attempts to identify Māori businesses in previous research, this is the first attempt making use of the big data stored in the LBD and IDI. The benefit of this approach is it uses complete administrative sources – a record of all registered enterprises in New Zealand. It is not estimation based and all analysis variables are based on true tax filing data. There are no estimations or imputations with this method.

Another key benefit is, in identifying Māori businesses (in any one of these three definitions), we are also identifying non-Māori businesses. This means, for the first time, this method allows a comparison between Māori and non-Māori businesses.

This document captures the technical details used to define three types of Māori businesses and defines all output variables used in the attached analysis.

Microdata disclaimer

The results in this report are not official statistics. They have been created for research purposes from the Integrated Data Infrastructure (IDI), managed by Statistics New Zealand.

The opinions, findings, recommendations, and conclusions expressed in this report are those of the author(s), not Statistics NZ or individual data suppliers.

Access to the anonymised data used in this study was provided by Statistics NZ under the security and confidentiality provisions of the Statistics Act 1975. Only people authorised by the Statistics Act 1975 are allowed to see data about a particular person, household, business, or organisation, and the results in this report have been kept confidential to protect these groups from identification and to keep their data safe.

Careful consideration has been given to the privacy, security, and confidentiality issues associated with using administrative and survey data in the IDI. Further detail can be found in the Privacy Impact Assessment for the Integrated Data Infrastructure available from www.stats.govt.nz.

The results are based in part on tax data supplied by Inland Revenue to Statistics NZ under the Tax Administration Act 1994. This tax data must be used only for statistical purposes, and no individual information may be published or disclosed in any other form or provided to Inland Revenue for administrative or regulatory purposes.

Any person who has had access to the unit record data has certified that they have been shown, have read, and have understood section 81 of the Tax Administration Act 1994, which relates to secrecy. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes and is not related to the data's ability to support Inland Revenue's core operational requirements.

Defining a business using the IDI and LBD

In this report we identify businesses as all significantly economic enterprises in the LBD, which are not:

- Central government organisations
- Government-owned trading entities
- Local government organisations
- Local government trading enterprises
- Consulates and foreign embassies.

A business can be called an "enterprise" if it has an enterprise number in the LBD and an IRD number. Enterprises are considered "economically significant" if they meet any of the criteria in Table 1.

An economically significant enterprise meets at least one of the following:
Greater than $30,000 annual GST expenses or sales
More than 3 paid employees
In a GST exempt industry, other than residential property leasing and rental
Part of a Business Register (BR) group
Has a new GST registration and has registered for salaries and wages PAYE but has not yet started filing GST returns or has a new GST registration and part of an IRD GST group return. The former has a 12-month window of being considered an enterprise before the other criteria in this table are applied.
Has a live GEO classified to agriculture
IRD10 income is greater than $40,000

Table 1: Stats NZ criteria for a business to be classified as an economically significant enterprise

Businesses in this report include:

- Branches of Companies Incorporated Overseas
- Charitable Trusts
- Co-operative Companies
- Incorporated and Unincorporated Societies and Associations
- Individual Proprietorships
- Joint Ventures and Consortia
- Other Business Types
- Partnerships
- Registered Limited Liability Companies (non-Co-op)
- Trusts/Estates.

No economically insignificant enterprises have been included

> Within Statistics NZ microdata (the LBD and IDI) non-economically significant businesses can be identified but have been excluded from this analysis.

Ways of identifying a Māori-owned business

Our approach to identify Māori businesses was to link businesses to Māori individuals.

We identified Māori individuals if they were either of Māori ethnicity in the IDI (collected via a range of survey and administrative sources) or identified as having Māori descent from the NZ Census 2013.

The approach of using ethnicity and descent to identify a Māori business is consistent with Stats NZ approach, as for both businesses registered with Poutama Trust and NZ Māori Tourism (key inputs to Tatauranga Umanga Māori) there is a requirement they are owned by Māori.

From the Business Operations Survey (BOS) from 2015 to 2018, respondents were asked to self-identify if their business was Māori and selected a reason for this choice. Māori ownership and Māori employees or management were both among the most popular reasons as to why a business self-identified as Māori. This provides reasoning for this approach.

From the available data, we can identify businesses, and Māori individuals. Using these linked sources, we developed three ways of identifying Māori businesses:

- Māori-owned Businesses
- Māori Sole Traders
- Significant Employers of Māori.

For some purposes, users may require a definition of Māori businesses based on more abstract concepts, such as cultural connectedness. The approach of this report was to begin with less complex data, that could be used immediately. Further work is possible to include aspects such as culture into these definitions using survey-based data such as Te Kupenga or the General Social Survey.

As a result of the available data, we identified a **Māori-owned Business** if it meets at least one of the following criteria:

- **Māori business based on Statistics NZ identifier (1,300 businesses)**

  The business is an enterprise and is flagged as Māori by Stats NZ and used in their Tatauranga Umanga Māori reports.

- **Majority shareholders are Māori (8,800 businesses)**

  A business where at least 51% of wages paid to directors, partners or active shareholders are to individuals of Māori ethnicity or descent

We also identified:

- **Māori Sole Traders (14,700 sole traders)**

  A sole trader of Māori ethnicity or descent

Finally, to identify businesses that were not necessarily Māori owned but were significant to the Māori economy due to their workforce emphasis, we identified:

- **Significant Employers of Māori (10,200 businesses)**

  A business where at least 75% of the total number of employees are individuals of Māori ethnicity or descent.

Using these criteria, we identified 10,200 Māori-owned Businesses, 14,700 Māori Sole Traders and 10,200 Significant Employers of Māori.

Māori businesses based on Statistics NZ identifier

In the LBD, Statistics NZ provides an indicator for Māori enterprises that are economically significant. This definition encompasses companies, incorporated clubs and societies, state-owned enterprises, trusts, central and local government bodies, sole traders and partnerships.

A Māori enterprise can be further split into two broad sub-categorises:

1. An enterprise that is a Māori Authority or is eligible for the tax code MA/MT, is majority owned by a Māori Authority, or whose business operations supports a Māori Authority's business and social activities and sustains or builds a Māori Authority's asset base.

2. A small-to-medium size enterprise (fewer than 100 employees) that is not owned by another enterprise and is not a Māori Authority, where the owner has self-identified the business as Māori in the BOS, or either Poutama Trust or New Zealand Māori Tourism has identified the enterprise as Māori.

Businesses meeting these criteria are identified as Māori enterprises by Stats NZ. We filtered out state-owned enterprises and central and local government bodies. This criterion excludes the case where a Māori enterprise that was not a Māori Authority was owned by a non-Māori enterprise – in other words, has a non-Māori parent enterprise.

The BOS coverage was also limited to enterprises with at least 6 employees, a higher employee cut-off than that listed in table 1 as the definition of an economically significant enterprise. Any individual of Māori ethnicity or descent who was a small sole trader was not recognised in this criterion.

Majority shareholders are Māori

To identify Māori business that are Māori owned used shareholding data from IR4S and IR20 filings, along with IR number relationship mappings.

The available shareholder data in the LBD does not provide information on distribution of shares between multiple shareholders. However, it does provide wages paid to active shareholders, partners or directors. We identified a Māori-owned business if at least 51% of wages to active shareholders, partners or directors of a business were paid to individuals of Māori ethnicity or descent.

Wages were identified through IR4S filings, along with the employer-employee relationship of either directors, shareholders or executive office holders. Partnerships were identified through IR20 filings and the employer- employee relationship of the partner.

Since this classification looks at IR filings, it captured both enterprises and non-enterprises in our definition of a Māori business, although most of these businesses were enterprises.

This ownership criterion was only applied to an individual enterprise and not to any child or parent enterprise. We also filtered out state-owned enterprises and central and local government bodies.

Many businesses have missing shareholder data

By using LEED, we identified 618,000 businesses in New Zealand. We then determined whether these were Māori or non-Māori. This was done using tax filing data, and for many enterprises (455,8000) there was no tax filing information available for the 2019 financial year. Therefore, out of the 618,000 businesses:

- 1,300 were flagged as Māori by Stats NZ
- 8,800 had >=51% Māori active shareholders (using active shareholder data)
- 152,000 were non-Māori (using active shareholder data)
- 455,800 remained with no data to determine either way

This does not mean the remaining businesses are non-Māori, but rather the information is missing.

Māori sole traders

To identify Māori sole traders, we identified employees' IRD numbers that matched their employers on their IR3 filings. A subset of sole traders was also identified with just IR3 filings, as they lacked either director, shareholder, or partnership relationship.

Since this criterion looks exclusively at tax filings, this allowed for non-enterprise businesses to be captured by our definition of a Māori business. Most sole trader businesses were non-enterprises. The count of sole traders was taken as the count of businesses which met this criterion.

Significant employers of Māori

To identify businesses that may not be owned by Māori but represent a significant employer to Māori, we also identified enterprises who employ high proportions of Māori individuals. While not all of these businesses are Māori owned, they are important to the Māori economy.

To do this we defined a significant employer of Maori as any business where at least 75% of the total number of employees within the last tax year (April 1st to March 31st) comprised of individuals that are of Māori ethnicity or descent. This is an easily moveable bound.

This criterion of a significant employer of Maori was applied at the individual enterprise level and not to any child or parent enterprise.

Although this definition captures enterprises that employ a large proportion of Māori individuals, it may exclude enterprises that have large seasonal variations in employment which are important to the Māori economy. Further work could be undertaken on seasonal employers.

Data dictionary

These details relate to output variables that were used to describe Māori businesses. The title of the variable is given, while the variable name as it appears in our output is in parentheses.

Majority Māori shareholder business indicator (Ownership based Māori Business Ind)

Our derived indicator that is true ("1") when a business met our definition of a business that had majority Māori shareholders, and false ("0") when most shareholders were non-Māori. If there was no shareholder data available, then there was no way to determine whether the business was Māori owned or not. For these instances, the indicator was set to "(Missing)".

Statistics NZ Māori business indicator (Stats Māori Business Ind)

An indicator in the LBD where a business is flagged either Māori ("y") or non-Māori ("n") by Statistics NZ. If there was no determination by Statistics NZ if the business was Māori or not, the flag was "(Missing)".

Māori-owned business indicator (Combined Māori Business Indicator)

Our derived indicator that combined the majority Māori shareholder business indicator and the Statistics NZ Māori business indicator. This allowed us to compare the business activities between Māori-owned and non-Māori-owned businesses. Businesses were identified as either Māori owned ("1") or non-Māori owned ("0").

A positive indicator meant that either the Stats NZ flag or our majority Māori shareholder business indicator was positive. A negative indicator meant any of the following:

- Both the Statistics NZ flag and our majority Māori shareholder business indicator were false.
- The Statistics NZ flag was false, and our indicator was "(Missing)"
- Our indicator was false, and the Statistics NZ flag was "(Missing)"

If both indicators were "(Missing)", this indicator was set to "(Missing)".

Significant employer of Māori indicator (EmpCount based Māori Business Indicator)

Our derived Māori indicator for enterprises based on employee headcounts that is true ("1") when an enterprise meets our definition of a significant employer of Māori and false ("0") if the employee count threshold was not met. This indicator allowed us to compare the business activities between significant employers of Māori and other businesses.

Since our criterion for a significant employer of Māori is dependent on the availability of employee data, if there was no employee data then there was no way to determine whether the business was a significant employer of Māori or not. For these instances, the indicator was set to "(Missing)".

Sole trader identifier (SOL Māori Ind)

Our derived indicator to identify whether a sole trader was Māori ("1") or otherwise ("0"). This allowed us to compare the number of sole traders that are Māori with non-Māori sole traders. Sole traders were also further categorised on whether they received rental income or not. There was no overlap between our Māori owned indicator and the sole trader indicator since sole traders do not have shareholding data.

Counts of Businesses (Count of enterprises – RR3, Count of enterprises with Employees-RR3, Count of enterprises with GST data-RR3)

To count the number of Māori-owned businesses, non-Māori-owned businesses, Māori sole traders, non-Māori sole traders and significant employers of Māori employers, businesses counts were defined. Suppressed and random-rounded (to base 3) counts of enterprises were used.

'Live' businesses in the LBD can be counted as the number of businesses that have GST data (IR filing) or the number of businesses that have employment data (EMS). These two counts overlap significantly but are not always equal.

Where a bulk count of businesses was (i.e. number of business in a region) was required, Count of Enterprises- RR3 was used.

Where determination of employment metrics was required (i.e. business size by employee count), the count of businesses was taken as the number of businesses with employment data (Count of enterprises with Employees-RR3).

Where determination of financial metrics was required (i.e. business size by GST count or average estimated operating margin), the count of businesses was taken as the number of businesses with GST data (Count of enterprises with GST data-RR3).

Geographic location (rc name text)

The geographic location of the business in terms regional council areas was taken from the LBD. This is because smaller geographic divisions (i.e. territorial authorities) could lead to supressed output from the LBD.

Enterprises in the LBD do not have geographic location. To solve this issue and to identify where enterprises are located, we assumed that the location of an enterprise corresponds to that of its permanent business number (PBN). This also allowed for regional comparisons of both employment and financial metrics of businesses, since financial metrics (i.e. net GST, total sales and total purchases) are only available at the enterprise level.

Around 80% of enterprises exhibited a one-to-one enterprise to PBN relationship. For these enterprises, we created a one-to-one relationship between an enterprise and its geographical unit (GEO) and corresponding PBN in the LBD.

For the remaining 20% of enterprises that had a one-to-many relationship between the enterprise number and PBN, the enterprise was assigned to the region corresponding to the PBN that had the greatest number of employees. By doing this, we localised an enterprise to the region where it had the most employees.

However, on some occasions this may not be the same region (PBN) that has the highest GST turnover, which is potentially an equally adequate measure of business activity. Since we were more interested in characteristics and distributions Māori employees, we went with the former method to localise enterprises.

In the case of a sole trader, the residential address of the individual employee was used to assign region. In the case of a business which had no employee data, an address was more difficult to ascertain since IR filings were the only method of identifying a business's geographic location. In some circumstances, IR forms of these businesses had multiple addresses. On these occasions, it was deemed there was no determination of the business's region and it was set to "(Missing)".

Employee Counts (Sum- Employee Count)

Total employee headcounts were derived by averaging over 12 months of EMS data. Values were suppressed for monthly employee counts less than 20.

Where an enterprise had multiple PBNs, employment data was summed over the enterprise level to account for the total number of employees across an entire business. A unique IRD number that appears on an Employer Monthly Schedule (EMS) represents an employee of that business. This captured employees at any position of that business.

Employee counts were done over the previous tax year (March 1st – April 31st) and consisted of employees that had worked in any capacity for that business, including under full-time, part time or casual contracts. The average monthly count of employees was then summed to get the total number of employees within the year.

As a result, this was an over-estimation of the number of employees that a business has, and a more accurate method of deriving full-time equivalence (FTE) for each employee may be

pursued later. Additionally, any employees that work two different jobs were double counted in this method since they would appear as a unique IRD number on two separate business' EMS filings.

Māori Employee Counts (Sum- Maori Employee Count)

The number of Māori employees were a subset of the employee count. In order to quantify the number of Māori employees, if an individual (manifested as a unique IRD number) had indicated that they were of Māori descent in the 2013 census or if they were otherwise of Māori ethnicity, we considered them to be Māori.

Business Activity (overall division description, overall subdivision description)

Business activity was taken from ANZSIC06 codes and subdivision codes from the LBD.

We assumed that the industry ANZSIC06 code at the enterprise level corresponded to activity that was occurring at the GEO level. This assumption follows on from our previous method of using PBNs to identify the locality of the enterprise.

Since ANZSIC codes only exists for enterprise numbers, the business activity of non-enterprise businesses and sole traders was set to "(Missing)". There were a small minority of instances where businesses had shareholding data but had no ANZIC06 code.

Net GST (Sum- Net GST)

To quantify business size, annual net GST was used. This was found from a company's IR filing and is available if a business has an enterprise number in the LBD.

Total Sales (Sum- Total Sales)

The total sales in NZ dollars was available from the LBD for enterprises with GST data.

Total Purchases (Sum- Total Purchases (incl. Zero GST))

The total purchases in NZ dollars was available from the LBD for enterprises with GST data.

Indicative Margin

For businesses, an indicative margin is calculated from GST returns by subtracting *total purchases and expenses* from *total sales and income.* As a result of this approach, this figure is only available for businesses with an enterprise number and for which GST filing data is available.

While this doesn't tell the full picture (as expenses such as salaries are not included in GST returns), this figure does provide some indication of the margins generated by businesses, and it does point to possible differences that deserve further research.

For sole traders, net profit is based on total annual income from personal income tax filing. Because of this difference in methodologies, sole trader profits were not compared to business profits

Enterprise Sizes (Enterprise Size- Employees, Enterprise Size- Net GST)

To compare the size and distribution of businesses, categories of business size were developed based on employee counts and GST data. The sizes for employee counts are seen in table 2, and the sizes for net GST data is given in table 3.

Category	Number of employees
XS	≤ 5
S	>5 to ≤10
SM	>10 to ≤20
M	>20 to ≤100
L	>100

Table 2: size of enterprises based on employee size.

Category	Net GST
NEG	<0
XS	≥0 to ≤ $5,000
S	>$5,000 to ≤$20,000
M	>$20,000 to ≤$60,000
L	>$60,000

Table 3: Size of enterprises based on GST turnover.

Sole traders who have rental income indicator (Rental Indicator)

Our derived indicator that identifies whether a sole trader has received non-zero rental income ("1") or not ("0") on an IR3 form. Rental income is a significant proportion of the income of both Māori and non-Māori sole traders, and this indicator allowed us to compare rental income across New Zealand.

Tourism indicator (Tourism Indicator)

Our derived indicator that indicated whether a business was engaged in tourism ("1") or not ("0").

Tourism is an important part of the Māori economy. As there was no ANZSIC code to identify tourism-based businesses, a tourism indicator needed to be derived. To do this we used the definition of a business that engages in tourism from Tatauranga Umanga Māori 2019. Here, tourism had been defined as a list from NZ Māori Tourism, plus any Māori business that is engaged in any of the ANZIC06 industries:

- All of division H Accommodation and food services
- I4621 Interurban and rural bus transport
- I472 Rail passenger transport
- I482 Water passenger transport
- I501 Scenic and sightseeing transport
- L661 Motor vehicle and transport equipment rental and hiring
- N722 Travel agency services
- All of division R Arts and recreation services.

Since the list from NZ Māori Tourism did not exist in the IDI, we flagged tourism-based Māori businesses as those businesses which meet our definition of a Māori business and have the above ANZIC06 codes.

Additions to Māori businesses from Tatauranga Umanga

Stats NZ laid the foundations of the work we undertook to identify Māori businesses across New Zealand. Stats NZ had previous identified 1,300 Māori businesses. This was done using Māori Authorities data, data from NZ Māori Tourism, Poutama Trust, and the Business Operations Survey.

Using shareholder data, we identified an additional 8,800, along with 14,700 sole traders. The approach of using ethnicity to identify a Māori business is consistent with Stats NZ approach, as for both businesses registered with Poutama Trust and NZ Māori Tourism there is a requirement they are owned by Māori.

There were notable differences in business activity between a Stats NZ Māori business and a majority Māori shareholder business.

Figure 4 shows that while Stats NZ identified the main business activity of a Māori business as rental, hiring and real estate services, we identified the main activity of a Māori-owned business as construction.
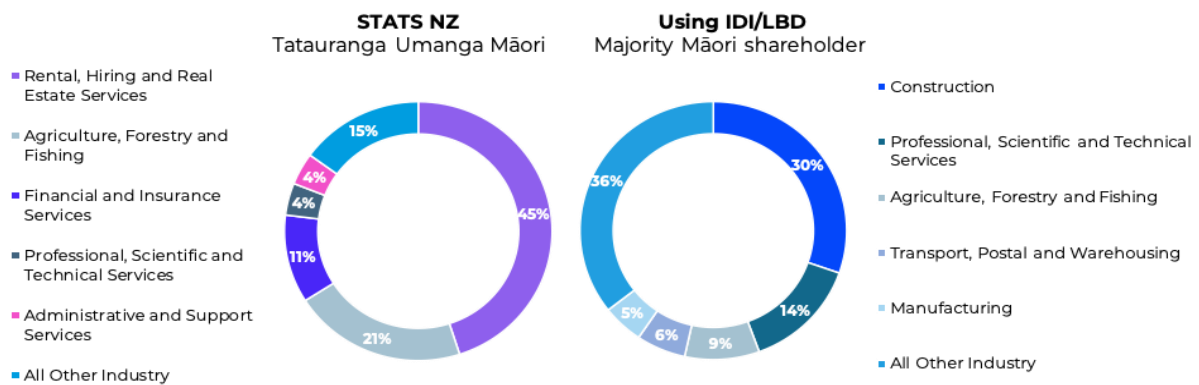

Figure 1: Difference between business activity between a Stats NZ Māori business and a majority Māori shareholder business, both of which are classified as Māori-owned businesses.

There was no non-suppressed overlap between Stats NZ Māori businesses and majority Māori shareholder businesses. This is likely because Māori Authorities are unlikely to have IR data that would allow us to make a determination using LEED if the business was Māori or not, and if they do, there are only a small number of them.

However, there was a significant overlap between the businesses that had shareholding data, but were non-Māori, and Stats NZ flagging the business as non-Māori.

Methodological differences between using the IDI/LBD to define employees and enterprise and the business demography statistics

The business demography statistics released annually by Stats NZ is an excellent resource that contains data regarding the count of employees and enterprises across industries, geographic locations. However, our enterprise and employee counts differ slightly from this data.

A summary of these differences is given in table 4. The business demography statistics do not contain any data on descent or ethnicity of individual employees. Therefore, to find Māori individuals of ethnicity or descent, we used LEED. We then counted employees as Māori using IDI data. However, this is not the same method as business demography, which has several conceptual differences to LEED statistics.

The main differences are:

- Business demography counts employees of all ages, while LEED excludes employees under 15 years old
- Business demography counts people employed at any time during the February month, while LEED statistics only count those employed on the 15th of the reference month.
- Business demography uses the EMS data before all returns are finalised.

We also counted significantly more enterprise/businesses than the business demography survey. The primary reason for this is because we used IR filings that included non-enterprise businesses (i.e. businesses with GST turnover of less than $30,000 per year).

Field	Business Demography Statistics (2019)	IDI/LBD	Difference
Number of enterprises	546,735	618,000	+13%
Employee count	2,285,000	2,126,000	-7%

Table 4: Difference between the 2018 business demography survey and Nicholson Consulting.

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COVER: Principals and staff of three Wellington creative businesses – VAKA, Soldiers Rd Portraits, and Psychoactive Studios, from left: Callum Mudgway, Taaniko Nordstrom, Andrew Hillstead, Jesse Armstrong and Vienna Nordstrom. Photo credit: Adrian Heke.

See this website for stories how they share knowledge to help their kaimahi and businesses to thrive.

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