TE ŌHANGA MĀORI I TĀMAKI MAKAURAU

AUCKLAND'S MĀORI ECONOMY

HAKIHEA
DECEMBER 2021

The Southern Initiative

The Western Initiative

AMOTAI
SUPPLIER DIVERSITY AOTEAROA

The Southern Initiative
MĀORI & PASIFIKA TRADES TRAINING

This research was commissioned by the Community and Social Innovation team of Auckland Council.

Our mission is to support south and west Auckland to become prosperous, resilient places where tamariki and whānau thrive.

We are not in the business of BAU: our job is to demonstrate that a just, inclusive, circular and regenerative economy, where prosperity is equitably shared, is not just desirable but also possible. We do this through ground-up innovations, learning what it takes to achieve real and enduring socio-economic transformation and using our practice-based evidence to influence systems change and shape new markets.

You can find out more about us and our work on the new economy at www.tsi.nz.

We hope you find it useful :)

Knowledge is power and our thanks go to the team at BERL for providing us with this comprehensive picture of Auckland's Māori economy. He mihi nui ki a koutou katoa.

Authors: Hillmarè Schulze, Konrad Hurren, Connor McIndoe

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Hakihea 2021

Making sense of the numbers

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HE HUATAU

— COMMENTARY

Tāmaki Makaurau, the land of a hundred lovers, its desirability evidenced by the numerous iwi who were drawn here for eons, producing and trading food and resources from its bountiful blue and green environment.

Today, Tāmaki Makaurau still beckons people to it because of its harbours, gulf islands, maunga, cultural vibrance, diversity and economic opportunities. Boasting the single largest concentration of Māori talent anywhere in the country, this is the city's unique selling point on the global stage.

The Māori population in Tāmaki Makaurau is a dynamic mix. Firstly, there are the mana whenua who whakapapa to the region, their lineage rooting them to the whenua, maunga, moana, awa and ngahere. And there are those from other iwi, often referred to as mataawaka, many of whom are the legacy of the rural-urban drift—which saw whānau leave their tribal areas and move to the city to fill the growing demand for labour—which accelerated after World War II. Others have been drawn to the city in more recent times for employment, play, culture, love and education. Most of us live in south and west Tāmaki Makaurau, which is where the work of our team is focussed.

About the Community and Social Innovation team

The Community and Social Innovation team's portfolio of economic development activity includes: the place-based Southern and Western initiatives; Māori and Pasifika Trades Training (we are the only local government-led consortium in the country); our programmes of work on the Youth Economy and fourth industrial revolution; and our flagship projects of Uptempo and Amotai.

Our work spans training and education, entry and attachment to employment, progression in the labour market, enterprise and movements for change, but what underscores it all is our firm belief that the economy should uphold and enhance the mana of ordinary people and our natural world. It should serve people in ways which enables them to live their lives with agency, dignity, meaning and purpose. That requires levelling the playing field so that everyone gets a fair go and disrupting the status quo so that wealth and opportunity are equitably distributed.

EMPLOYMENT SHOULD BE DECENT AND ADEQUATELY PAID AND WE DISAGREE WITH THE TROPE THAT 'ANY JOB IS A GOOD JOB'. THIS IS PATENTLY FALSE; POOR JOBS KEEP POOR PEOPLE POOR. SHUFFLING PEOPLE FROM JOBLESS POVERTY TO IN–WORK POVERTY IS NOT JUST MORALLY REPREHENSIBLE BUT IS A FALSE ECONOMY TOO.

It is a privilege to do what we do. People who are experiencing the worst of the economy let us in to the intimacy of their complex lives. And we have the joy of witnessing the success of those who beat the odds despite barriers and discrimination. Our responsibility is to then engage the macro systems which affect them because beating the odds is slow and incremental; we need to *change the odds* if we want transformation.

Increasing our knowledge of the Māori economy in Tāmaki Makaurau

When Business and Economics Research Limited (BERL) released their national report on the Māori economy, *Te Ōhanga Māori 2018*, earlier this year, it confirmed the major fact that we already knew: that the Māori economy here in Tāmaki Makaurau is different to the rest of the country.[1] Auckland is different to the rest of the country because it is the powerhouse of the economy and the only international city, so it is unsurprising that the Māori economy is different too.

And yet, like the rest of the Aotearoa, Māori here still feature prominently in poor economic wellbeing indicators. But our difference is sheer scale – Tāmaki Makaurau is home to almost a quarter of all Māori in the country. The region with the next highest proportion of Māori in the country is Waikato at 14 percent; only one percentage point higher than the Māori population of south and west Auckland alone. But what we have observed, over recent years, is the increasing chasm between national Māori economic development policy and these well-known facts about Tāmaki Makaurau – why are the experiences of such a large proportion of the Māori economy so invisible?

Data is an important ingredient in how we design and iterate our activities. We asked BERL to mine the Auckland data of their national report to provide us with a more granular assessment of what makes the Māori economy tick in Tāmaki Makaurau. That deep dive has uncovered highs and lows, challenges and opportunities; confirmed some of what we already knew, and also revealed a few surprises.

1 See BERL's full report Te Ōhanga Māori 2018 at https://berl.co.nz/sites/default/files/2021-01/Te%20%C5%8Changa%20M%C4%81ori%202018.pdf

A helicopter view of the microeconomic situation

The BERL research provides a snapshot of the dynamics at the heart of the Māori economy: that of households and businesses. As the late Professor Mānuka Henare noted in a 2019 interview with Auckland Council, "The real wealth is in households and people working in the market place....that's the microbusinesses, household businesses, wages and salary earners – that's greater than the tribal assets".[2] This research unequivocally confirms that.

We know that Tāmaki Makaurau is a tale of two cities: the city's economic growth has not been equitably shared with Māori and far too many are being left behind. BERL's research showed us how this was manifesting and provided a helicopter view of the primary economic unit, the household. Worryingly, the need for government assistance has grown despite employment gains and general economic growth and, on average, Māori households spend considerably more than their income because they simply don't earn enough. Māori home ownership, which provides an asset and greater security of tenure and stability for whānau, is lowest in Tāmaki Makaurau than anywhere else in the country.

Māori employment

Whilst there has been some encouraging diversification of occupations and industries of employment, including more highly paid employment, Māori still tend to be clustered in low paid work that is vulnerable to economic shocks. BERL's national research shows that this is the plight of *half* of all employed Māori.

As Dr Eru Tarena, from Ngāi Tahu-led Māori futures collective Tokana te Raki, would describe it (playing on the parlance of current events), this concentration means we have no 'herd immunity' to recessions or disastrous exits of large businesses or, as seen with Covid-19, entire industries. The research also showed us something else; that there is a growing divide within our Māori populace: the difference in income between Māori as employers and Māori as employees is stark.

Māori businesses

We have always been ardent supporters of Māori and Pasifika owned businesses. We recognised early on that they were the overlooked and undervalued change agents hiding in plain sight. That's why we have driven the supplier diversity and development kaupapa in Aotearoa and established Amotai, the intermediary that connects buyers with Māori and Pasifika businesses and provides expert support in business-to-business procurement.

In the last 12 months, Amotai has grown to become the national intermediary and, at the time of publication, had 880 Māori and Pasifika registered businesses of which 445 were based in Tāmaki Makaurau. The average FTE of Amotai Māori businesses in Auckland is 12. Amotai Māori businesses employ 47% Māori employees on average. This is over three times the national average.

2 See Our Auckland article 'Measuring the Māori economy' (28/052018) at: https://ourauckland.aucklandcouncil.govt.nz/news/2019/05/measuring-maori-economy/

3 https://www.tpk.govt.nz/en/a-matou-mohiotanga/business-and-economics/te-matapaeroa-2019

THIS RESEARCH IS FURTHER VALIDATION OF HOW CRITICAL MĀORI BUSINESSES AND ENTREPRENEURSHIP IS TO THE ECONOMY AND DRIVING MĀORI ECONOMIC SUCCESS. ALMOST 90 PERCENT OF THE MĀORI ECONOMY'S ASSET BASE IN TĀMAKI MAKAURAU IS IN THE HANDS OF PRIVATELY OWNED MĀORI BUSINESSES.

The income of Māori employers – Māori who own their own businesses and employ others – is almost equal to that of non-Māori, and this is not seen anywhere else in the country and certainly not in employment data. Māori becoming employers has risen faster than other forms of earning income; we don't just want jobs, we want to own the businesses too.

This is a glimpse of the potential of Māori businesses – imagine what would be possible if roadblocks and biases against them were removed. The findings have also prompted us to imagine what might be possible if, for example, we combined our strength in high value manufacturing with the fourth industrial revolution and sunrise industries.

BERL's research shows that we need to surge in our support of Māori entrepreneurship, and that's what we intend to do. They are one of our best bets for insulating against the all too predictable impacts of a Covid-19 induced recession (and future economic shocks), and for growing more entrepreneurs. But this foundation must be supported to both withstand the pressures facing small and medium sized enterprises and help them to leapfrog; there are still significantly fewer Māori employers in comparison to non-Māori, and they are not indomitable. Complacency or indifference to the health of Māori businesses would be both foolish and reckless.

An equitable economic recovery

This research examines pre-Covid-19 data. The impacts of this global public health and economic shock make it more imperative to double down on creating an equitable economy. Tāmaki Makaurau will continue to bear the brunt of breaches and lockdowns. Te Ōhanga Māori i Tāmaki Makaurau provides important cues as to what needs accelerating and investing in, as well as identifying where we are failing Māori so we can intervene effectively and change course.

WHAT IS CLEAR FROM THE RESEARCH IS THAT THE MĀORI ECONOMY CANNOT BE IGNORED. WE ARE A FAST-GROWING PROPORTION OF THE WORKING AGE POPULATION AND WILL CONTINUE TO BE SO.

As our society ages, it is in NZ Inc's best interests to prioritise the growth of economic equity more so than the amorphous concept of 'economic growth' (for whom exactly and how in a world of finite natural resources?) or continue to focus our evaluation of success on that highly imperfect measure, Gross Domestic Product (GDP).

Te Ōhanga Māori i Tāmaki Makaurau has provided us with some invaluable insights; many of them illustrate the slow violence of poverty that has atrophied the potential of south and west Auckland, but there are also bright spots too. It will inform our next steps of what we resource and our advocacy for the south and west of Tāmaki Makaurau. Our thanks to the team at BERL for adding to our kete of knowledge.

Kua takato te mānuka, kawea ake!

The mānuka sprig - the challenge - has been laid down at our feet and we will pick it up.

Mauri ora.

Tania Pouwhare
General Manager
Community and Social Innovation

1. NGĀ KAUPAPA MATUA

— KEY THEMES

Māori are an integrated part of the Tāmaki Makaurau economy, contributing to every sector and creating wealth and wellbeing for all in Tāmaki Makaurau.

THE FUTURE IS MĀORI

The Māori asset base in Tāmaki Makaurau is valued at

$12.5 BILLION

The Māori asset base is slowly diversifying and has assets in a broad range of sectors outside of the traditional agriculture, forestry and fishing

Māori employers, employees and self-employed people are in more diverse, high-skill and high-wage occupations than Māori in the rest of Aotearoa

The Māori population of Tāmaki Makaurau is very young and their

LABOUR FORCE PARTICIPATION IS GROWING SIGNIFICANTLY FASTER

than non-Māori

THE PROPORTION OF MĀORI BECOMING EMPLOYERS IS INCREASING FASTER THAN MĀORI BECOMING EMPLOYEES OR SELF–EMPLOYED

and they have a growing asset base and income and are employing more and more Māori workers

89%

of the asset base is in the businesses of Māori employers and self-employed people, demonstrating the importance of entrepreneurship to the Māori economy

Māori employers in Tāmaki Makaurau are high-skilled and have an income on par with non-Māori; a characteristic that's not seen elsewhere in the country

OPPORTUNITIES TO TAP AND UNCAP

Despite the large increase of Māori in high skill jobs, there is still a significant proportion of Māori in low skill, low wage jobs. This unequal distribution of income and wealth limits delivery of wellbeing for Māori, and is exacerbated by two main factors:

IN-WORK POVERTY

where Māori are working but still require social benefit assistance to meet needs

LOWEST MĀORI HOME OWNERSHIP

compared to non-Māori in Tāmaki Makaurau and Māori in all other rohe of the country

Invest in programmes and support that engage taiohi in education and training that creates a future high skill and high value Māori workforce such as

PROFESSIONAL, SCIENTIFIC AND TECHNICAL SERVICES

A concerted effort is needed to implement active labour market policies which lift Māori households' incomes above the need for government assistance and reduces the deficit between income and expenditure

INCREASE SKILL LEVELS

across all Māori in Tāmaki Makaurau, including those in business

Provide far easier access to capital or the ability to leverage existing assets, as this continues to be a barrier for Māori businesses growth and productivity

ENCOURAGE MORE MĀORI ENTREPRENEURSHIP

and the growth of Māori businesses, particularly in high value areas

2. TIMATANGA KŌRERO

— INTRODUCTION

Community and Social Innovation commissioned Business and Economics Research Limited to produce Te Ōhanga Māori i Tāmaki Makaurau Auckland's Māori Economy report based on the same methodology as Te Ōhanga Māori 2018.

This research presents financial measures of the core resources (assets) available to Māori, as well as the flows of income, expenditure, and Gross Domestic Product (GDP) received, spent, produced, and delivered by Māori in Tāmaki Makaurau in the 2018 year.[4]

However, we emphasise that there are many interactions and connections within and between Māori, within Tāmaki Makaurau, and Aotearoa as a whole. Consequently, we adopt broad-ranging perspectives in line with both the Treasury Living Standards Framework, and relate a more generalised approach considering people, planet, and profits.

Where at all possible, we retain consistent definitions and categorisations with our previous Te Ōhanga Māori 2018 report. This report makes use of Statistics New Zealand Integrated Data Infrastructure (IDI) datasets.

The glossary section of this report provides definitions of kupu Māori, technical terms and abbreviations (Appendix C).

Ngā mihi.

Hillmarè Schulze
Director/Chief Economist
BERL

4 Te Ōhanga Māori 2018 report is available at https://berl.co.nz/sites/default/files/2021-01/Te%20%C5%8Changa%20M%C4%81ori%202018.pdf

3. TIROHANGA WHĀNUI

— OVERVIEW

The Tāmaki Makaurau Māori population is a large growing component of the wider Aotearoa Māori economy. It is impossible to place numerical values on the entire Māori economy, and for this reason we have taken a broader view of the economic system accounting for wellbeing through people, planet, and profit, and the Living Standards Framework.

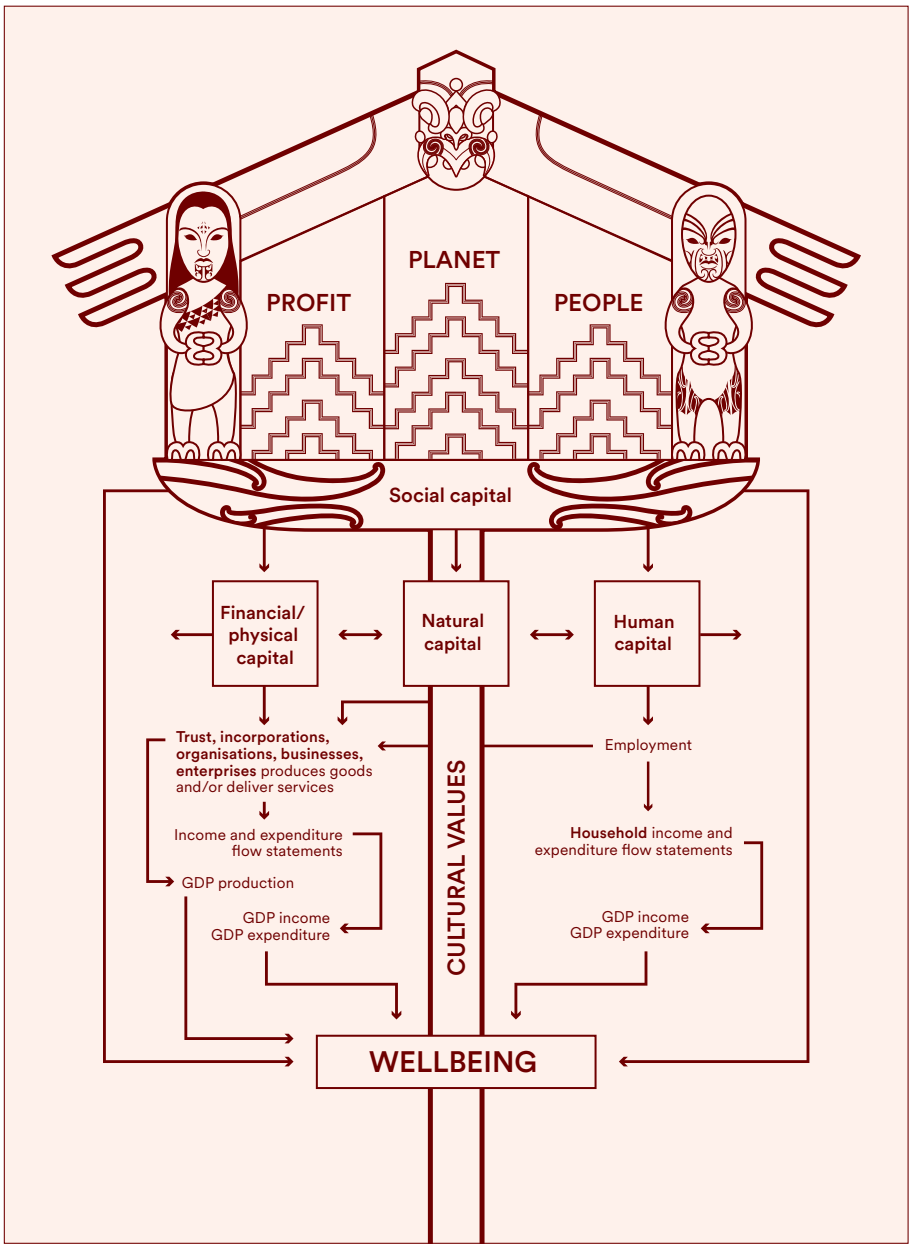
Māori wellbeing is delivered through participation, contribution, and connection in several areas which include:

- Households that purchase goods and services for whānau
- Unpaid members of households and/or whānau engaged in nurturing and caring for members of their whānau, hapū, iwi, and/or community
- Businesses employing others to produce goods or deliver services, while competing for sales in Aotearoa and offshore markets
- Skilled workers engaged in the production and trading of activities of businesses and institutions
- As whānau who whakapapa to an iwi, trust, or incorporation, and enjoy benefits in the form of owner dividends, scholarship grants and other education or training assistance, papa kāinga developments, and contributions to retirement savings, as well as many other benefits
- Whānau representatives setting and agreeing on kaupapa for a range of financial and natural resources
- Incorporations, trusts, or rūnanga enterprises and ventures, operating under Te Ture Whenua Māori Act 1993, and Incorporated Societies Act 1908, the Charities Act 2005, the Trusts Act 2019, or other legislation, while answerable to Māori communities of yesterday, today, and tomorrow
- Contracted entities delivering a broad range of health, education, training, whānau, and social services by Māori, for Māori

3.1 Te horopaki – Context

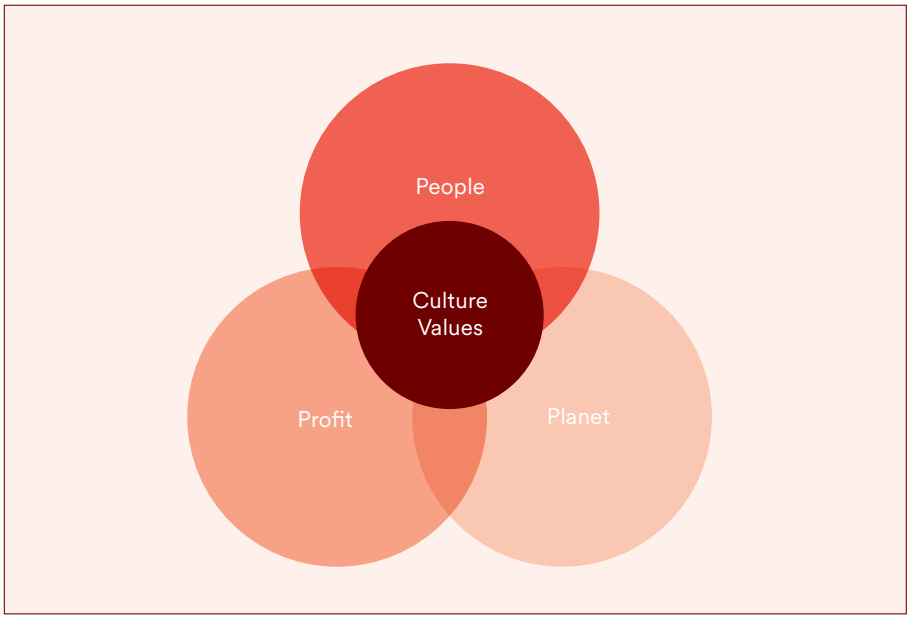
These numerous forms of participation, contribution, and connection can be reflected through different approaches to describing the economic system (Figure 3.1)

Figure 3.1: Perspectives for Tāmaki Makaurau Māori



People, planet and profit

Figure 3.2: People, planet, and profit perspective



Source: Elkington, 2004

The people, planet, and profit perspective, or the triple bottom line (Elkington, 2004), introduces a different way to perceive an economic system. In a sense, this perspective transcends both stocks and flows, with both stocks of resources and flows of activity reinforced.

Culture is at the heart of this perspective, but, instead of measuring culture, this model recognises that people, planet, and profit stem from culture. These three elements share equally important roles in the economy and are connected through overlaps and flow on effects which all deliver wellbeing outcomes.

People

People, as employees, employers or as members of households play an important role in the economy. Through employees and employer's contribution of labour, or through household's consumption of goods and services.

For Māori, the delivery of wellbeing outcomes relies on both, the income of people but more importantly kotahitanga, manaakitanga, and whānaungatanga of community.

Planet

The planet dimension captures all activity that utilises and impacts on natural resources, such as land, water and minerals. This includes all businesses and enterprises engaged in activity and maintenance with natural resources, but also all recreational benefits gained. The production of goods and delivery of services spring from the use of natural resources by these entities.

Natural resources are fundamental to Māori identity and culture through whakapapa. Māori support the mauri of all natural resources, enabling flow on effects of wellbeing outcomes to flourish. It must be noted that the true value of the planet dimension cannot be reflected in numerical values.

Profit

Profit captures all activity that creates, manages, improves, and utilises non-natural resources to produce goods and deliver services.

The importance of profit does not lie within profit alone, but it's the ability to encourage innovation and industry which is driven by profit. The innovation that pushes people to do more, to do something new, this is the importance of profit. Undoubtedly leading to improved wellbeing outcomes.

People, planet and profit together

All three – people, planet, and profit – share clear overlaps between each of them that result in income flowing to and expenditure flowing from.

Households and people are essential for enterprises operating in both the planet and profit dimensions. For people, as employees and employers in these enterprises, they receive incomes which enables them to play their role as households. As households, they consume goods and services, which leads to a stream of revenue into enterprises.

Planet and profit, predominantly focussed on by businesses and enterprises, have clear overlaps between the two dimensions. It may be that entities in the profit dimension utilise natural resources from the planet dimension, or they may be engaged in the upkeep of natural resources. Similarly, it may be that entities in the planet dimension may require non-natural resources to continue in the production of their goods or services.

These key overlaps are the root cause for the delivery of wellbeing outcomes. Whether it be the overlaps between planet and profit, or the overlap between employees, employers and households as people engaging with both planet and profit. All three dimensions are interconnected, no dimension more important than the other, and all three deliver wellbeing outcomes.

The importance of viewing Māori within a broad framework, is crucial. The engagement Māori have through their whakapapa with all three dimensions cannot be understated.

Living Standards Framework

The Living Standards Framework takes the view that the four capitals are inputs, assets, or core resources, available to maintain and sustain the future wellbeing. They represent the stock of resources that are within our possession or under our guardianship. The application and utilisation of them generate income and expenditure flows, which lead to the delivery of wellbeing outcomes.

A noted absence is cultural capital. The identities of whānau, hapū and iwi, expressed through their different tikanga, kawa, mātauranga, dialects, and whakapapa are not easily measured by Eurocentric frameworks.

Natural capital

Land, water, fisheries, and forests are all natural resources within our ecosystem. Some may be renewable, while some may be limited; some are free while many others require time. Ecosystem services deliver wellbeing outcomes through the use, maintenance, and extraction of natural capital that produce material and non-material benefits.

These resources contribute to mātauranga Māori, the wairua of communities, to whanaungatanga and to health and wellbeing. While some natural capital can be translated into numerical form, the full value of natural capital cannot be easily translated.

Human capital

Human capital is often considered an expense or a cost, yet it is often an organisation's greatest intangible asset. Elements of human capital shine through and are reflected in people's participation in education, employment and recreation, and in society more broadly. These elements include loyalty, skills, education and innovation, but most importantly physical and mental health and wellbeing. Without good levels of these, people are limited in their participation. Additionally, without human capital, organisations cannot achieve their goals.

It is through the maintenance and nurturing of these elements that wellbeing outcomes are delivered. The presence of human capital enjoyed by Māori will be applied to multiple economic endeavours. Wellbeing also flows through the manaakitanga and voluntary effort in caring for whānau and hapori.

Physical and financial capital

Physical and financial capital may be tangible or intangible assets, or may be fixed, as cash, stocks, or shares. The stock of these assets are spread across enterprises and households, and play a direct role in delivering wellbeing outcomes.

Māori enterprises receive a steady long-term income from the assets, cash or investments they hold. Through the application of their income, in the form of payments to iwi, whānau, scholarships, grants or other opportunities, wellbeing outcomes are delivered.

Delivery of wellbeing outcomes for Māori households stem from actions of support, shelter, unity and belonging with and to whānau, hapū and iwi, but also through the opportunity to explore business ventures by leveraging financial equity.

Social capital

Arguably the most important capital of the four, social capital is crucial to the smooth functioning of economic activity and in the delivery of wellbeing outcomes. Social capital is the norms and values that underpin society, the structure and rules for economic activity. Generating wellbeing outcomes derives from society's acceptance of and trust in social capital.

Social capital cannot be expressed in numerical form, but the value of it cannot be understated. It has a fundamental place in te ao Māori and Māori cultural norms through the presence of whanaungatanga in communities, whānau, hapū and iwi, and through the importance of upholding mana. These elements only reiterate how social capital is the thread that weaves through te ao Māori.

GDP – production, income and expenditure

While the capitals focus on the stocks of resources to apply to deliver wellbeing, the GDP framework captures the financial flows of goods, services, incomes and expenditure. Doing so provides a measure of the economy over a period of time.

This framework consists of the following perspectives of GDP:

- Production GDP directly measures the market value of the flow of goods and services.
- Income GDP directly measures the market value of the financial returns flowing to resource owners.
- Expenditure GDP directly measures the market value of spending by households on goods and services consumed. Including, exports and imports.

Māori are integrally connected to all three perspectives of GDP and the flows produced from these lead onto the delivery of wellbeing outcomes. These flows of activity can be depicted using a Social Accounting Matrix (SAM). It must be noted that GDP measures are limited to market transactions and measure flows over a single period of time.

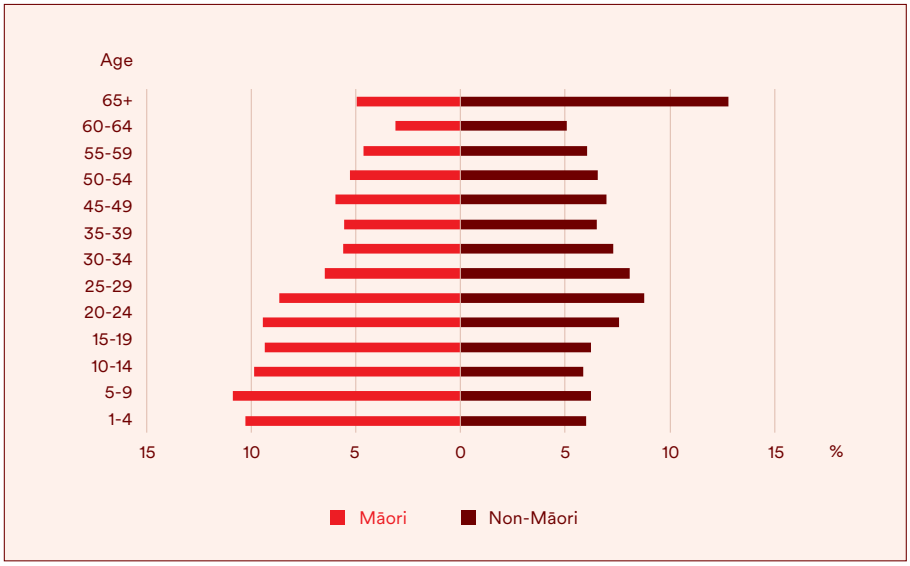
4. HE TĀTAI

— HIGHLIGHTS

4.1 Population age structure

The Tāmaki Makaurau Māori population totalled 181,194 in 2018, an increase of 27 percent since 2013, accounting for 13 percent of the total Tāmaki Makaurau population. However, the Māori population in Tāmaki Makaurau, and Aotearoa as a whole, is very young compared to the much older non-Māori population.

Figure 4.1: Population age group tree as share of total, 2018



Source: BERL

The difference in age structure is shown in Figure 4.1 above, with the share of rangatahi in the Māori population significantly higher than non-Māori. The shares of different age groups are:

- 40 percent of the Māori population is under 19 years of age compared to 22 percent of non-Māori
- Five percent of the Māori population is over 65 years of age compared to 13 percent of non-Māori

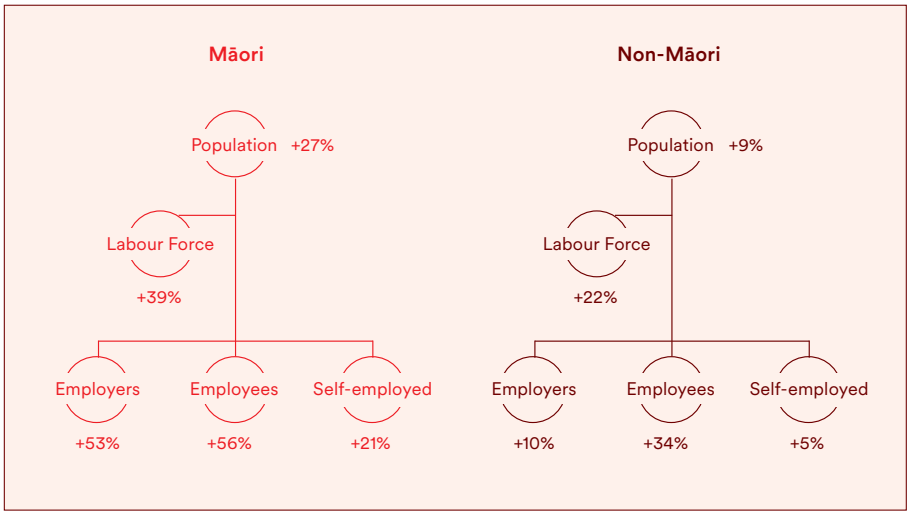
Fast forward ten or so years, the large proportion of Māori currently aged between zero and 19 years will be entering the workforce and will play a key role in the future of not only the Māori economy but the overall Aotearoa economy.

Fast forward 20 more years and the large proportion of Māori will now be aged between 25 and 35 years, and the significant proportion of non-Māori will be aged between 50 and 60 years. The older non-Māori population will, on average, be in more established jobs with a longer list of experience, as opposed to the large majority of Māori still being relatively young without the same level of experience yet. Of course, this will be reflected in income levels.

4.2 Population and labour force growth

The Māori population is very young, but it is also growing significantly faster than the non-Māori population in Tāmaki Makaurau. The associated higher growth in the number of Māori flows through to dramatic contrasts in population, workforce, and employment growth. The Māori population has increased at a much faster rate than non-Māori – between 2013 and 2018 the population grew by 38,000 (27 percent).

Figure 4.2: Change in population and labour force, 2013 to 2018 of total



Source: BERL

Māori are a growing part of the workforce and will make up a larger share of the working age population in the future. Figure 4.2 above shows the number of Māori in the labour force between Census 2013 and Census 2018 has grown by 39 percent (24,000) compared to 22 percent for non-Māori. This includes growth in:

- Māori employers by 53 percent compared to ten percent for non-Māori (and 45.8 percent for Māori across Aotearoa)[5]
- Māori employees by 56 percent compared to 34 percent for non-Māori (and 47 percent for Māori across Aotearoa)
- Māori self-employed by 21 percent compared to nine percent for non-Māori (and 24.9 percent for Māori across Aotearoa)

5 See Te Ōhanga Māori 2018 for Auckland comparisons with national data: https://berl.co.nz/sites/default/files/2021-01/Te%20%C5%8Changa%20M%C4%81ori%202018.pdf

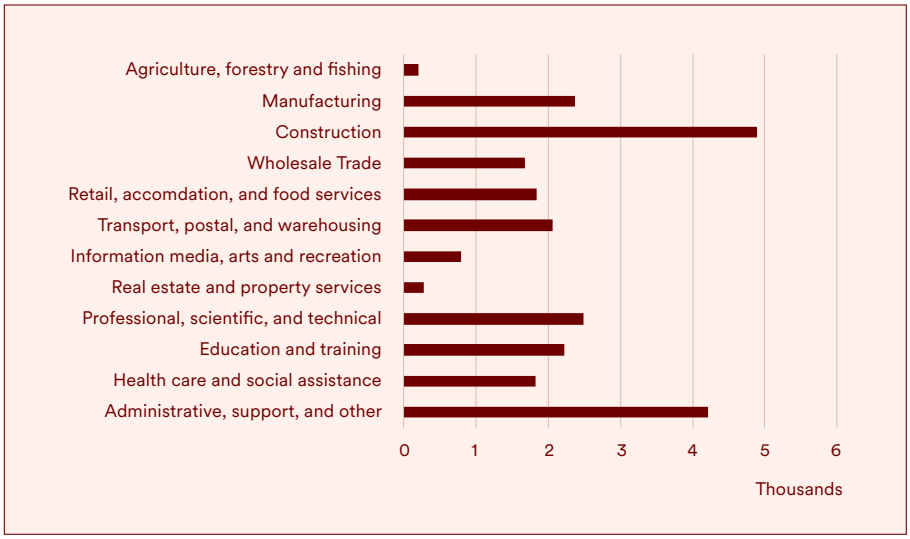
The overall working age population of Tāmaki Makaurau Māori increased by over 28,000 people (30 percent). The working age population captures all people aged 15 years or over. It is the total of the number of employed (47 percent growth), the number of unemployed (five percent decrease), and the number of people not in the labour force (14 percent growth). In comparison, the non-Māori population grew by nine percent, the working age population by 11 percent, and the labour force by 22 percent.

Fast forward 20 more years and the large proportion of Māori will now be aged between 25 and 35 years, and the significant proportion of non-Māori will be aged between 50 and 60 years. The older non-Māori population will, on average, be in more established jobs with a longer list of experience, as opposed to the large majority of Māori still being relatively young without the same level of experience yet. Of course, this will be reflected in income levels.

4.3 Labour force

The Tāmaki Makaurau Māori labour force has been growing at a rapid pace, and will continue this pace for the foreseeable future, due to the young population. Within ten years an additional 20 percent of the Tāmaki Makaurau Māori population will be of working age.

Figure 4.3: Increase in Māori in employment by sector, 2013 to 2018



Source: BERL

Over 24,000 Māori have entered employment across different sectors. As shown in Figure 4.3, since 2013, the largest growth in Māori employment has been in construction with over 4,800 more Māori employed in that sector (13 percent of total employed). This is followed by administrative, support, and other services with 4,212 more Māori employed (ten percent of total employed). Increases in construction reflect a combination of economy-wide drivers with infrastructure investment spending from the growing housing demand, particularly in Tāmaki Makaurau.

Other notable sectors are:

- Professional, scientific, and technical services (2,487 increase)
- Manufacturing (2,376 increase)
- Education and training (2,217 increase)

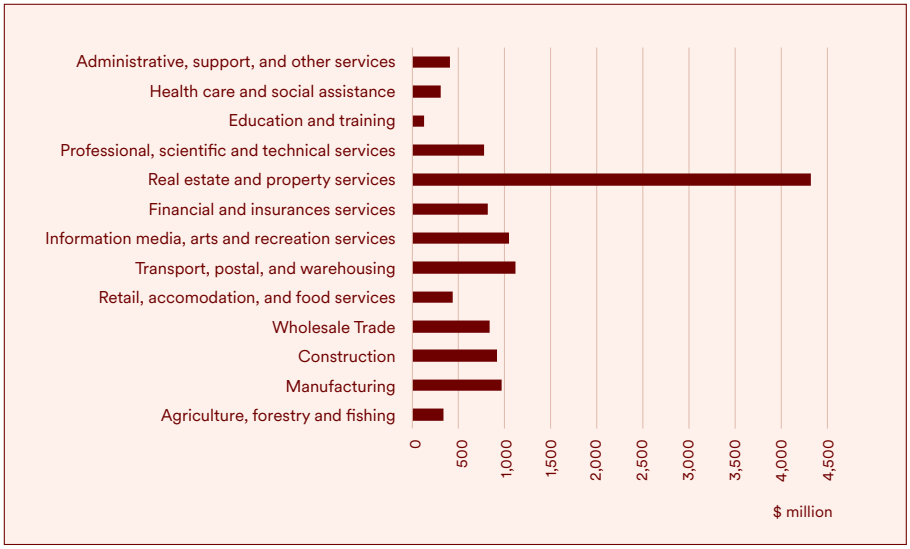
Increases across a variety of sectors show a gradual shift towards a more diversified Māori workforce, although there is still a large concentration in a few sectors.

4.4 Asset base

In 2018, the financial value of the Tāmaki Makaurau Māori asset base totalled $12.5 billion comprising of:

- $9 billion assets in the businesses of 2,393 Māori employers
- $1.4 billion assets in trusts, incorporations, and other Māori entities
- $2.1 billion assets in the businesses of 4,965 self-employed Māori

Figure 4.4: Financial asset base of Tāmaki Makaurau Māori by sector, 2018



Source: BERL

Real estate and property services dominates the asset base totalling $4.3 billion, which is 35 percent of the total asset base as shown in Figure 4.4.

The compilation of this asset base is very different from the overall Māori asset base, that is dominated by agriculture, forestry and fishing. Agriculture, forestry and fishing totalled $340 million, just three percent of the Tāmaki Makaurau asset base, as opposed to agriculture being 35 percent of the Aotearoa Māori asset base.

Another point of difference is manufacturing, in Tāmaki Makaurau – it is more high-value manufacturing like fabricated metal, rather than food manufacturing that dominates the rest of the Aotearoa Māori asset base.

Other sectors with considerable assets include:

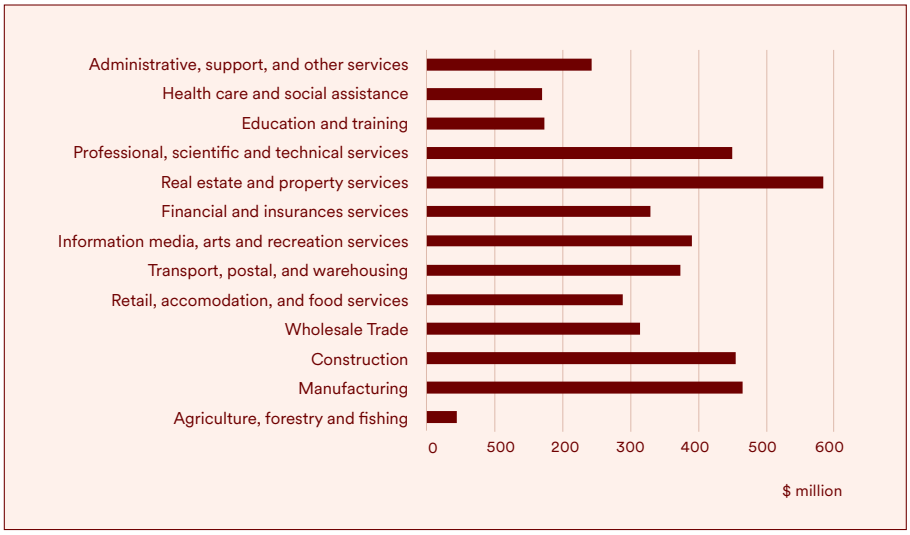
- $1.1 billion of assets in transport, postal and warehousing
- $1 billion of assets in information media, arts and recreation services
- $919 million of assets in construction
- $848 million of assets in wholesale trade
- $820 million of assets in financial and insurance services

4.5 Value added (GDP)

Real production GDP in the 2018 year for the Tāmaki Makaurau Māori economy totalled $4.3 billion. The value added was spread across a range of industries, with the largest contributors reflecting the spread of the asset base, i.e. from real estate, and property services, construction and manufacturing.

There are also noticeable contributions from professional, scientific and technical services, and information media, arts and recreation services. These reflect, in the main, the value added by businesses of Māori employers and self-employed Māori.

Figure 4.5: Value added of Tāmaki Makaurau Māori by sector, 2018



Source: BERL

Professional, scientific, and technical services contributed $450 million to Tāmaki Makaurau Māori value added (11 percent). This is a much higher contribution to total value added than the wider Aotearoa Māori economy (seven percent).

The difference in the Tāmaki Makaurau and Aotearoa Māori economy is expressed clearly again in Figure 4.5. Agriculture, forestry and fishing account for only one percent of total value added in Tāmaki Makaurau.

Value added from education and training, and health care and social assistance sectors includes whare wānanga and whānau ora providers. The value added in other services will also include the activities of recreation services as well as attractions and facilities.

4.6 Māori households

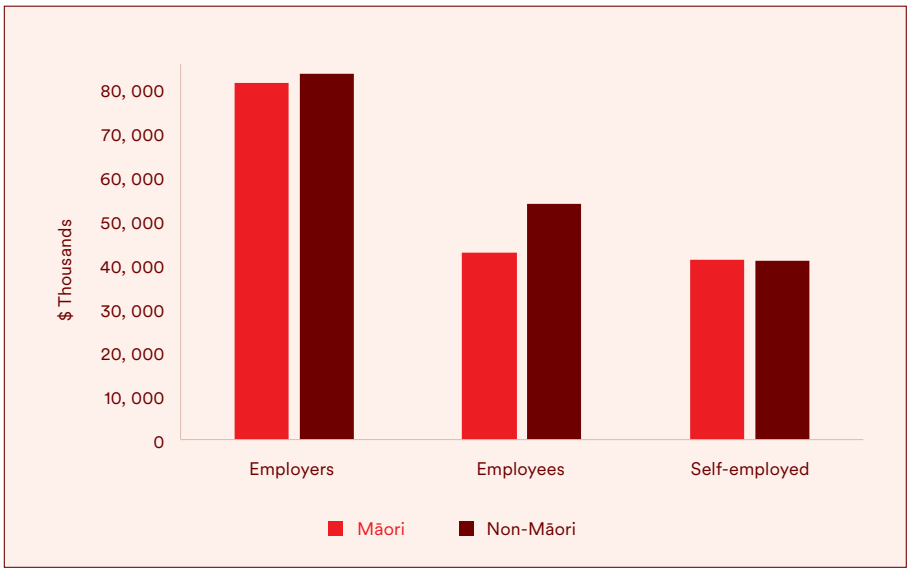
In Tāmaki Makaurau, there were 63,486 Māori households in 2018. This includes 36,855 households who did not own their own homes and 26,631 owner-occupied homes.

The Māori home ownership rate in Tāmaki Makaurau is 42 percent, which is not only below the average Aotearoa Māori rate but the lowest Māori home ownership rate seen across all rohe. For non-Māori in Tāmaki Makaurau, the home ownership rate is 62 percent.

4.7 Māori income

As shown in Figure 4.7 below, Māori employers increased significantly and the mean income of Māori employers are nearly on par with non-Māori.

Figure 4.7: Tāmaki Makaurau Māori mean income by employment status, 2018



Source: BERL

Māori employers in Tāmaki Makaurau earn more than Māori employers in anywhere else in Aotearoa. Māori earn just below the non-Māori mean income in Tāmaki Makaurau ($84,000). This is significantly higher than the second highest rohe, in terms of Māori employer income, with Waitaha Māori employers earning a whole $15,000 less. It highlights Tāmaki

Makaurau Māori employers being ahead of the curve, in more high-value industries and with higher skill levels.

Self-employed Māori are on par with non-Māori self-employed in Tāmaki Makaurau, but they still earn half of what employers earn. Te Ōhanga Māori 2018 showed that employers earn much higher incomes than self-employed across all ethnicities across Aotearoa. It is a reflection of the industries, skills and difficulties faced in building from a self-employed enterprise into one that offers employment to others.

The difference between Māori and non-Māori employees is substantial, with Māori earning $43,000 and non-Māori earning $54,000. The younger Māori population is partially accountable for this income disparity, but not completely. The mean incomes for Māori employees in Auckland is slightly less than for Wellington and slightly more than the South Island.

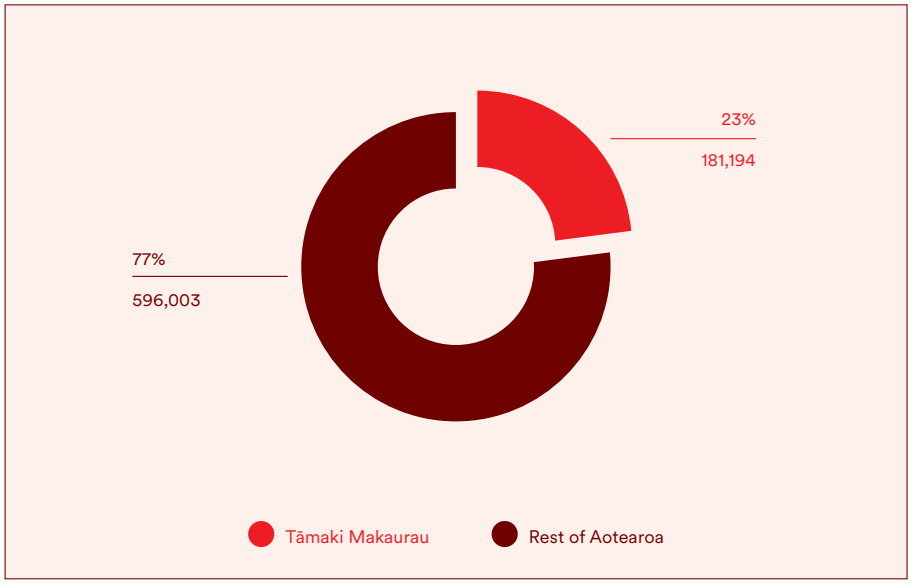
5. NGĀ HUA

— OBSERVATIONS

5.1 Proportion of population

A significant proportion of the Māori population reside in Tāmaki Makaurau, representing 23 percent of the total Māori population as shown in Figure 5.1 below.

Figure 5.1: Tāmaki Makaurau Māori in Aotearoa, 2018



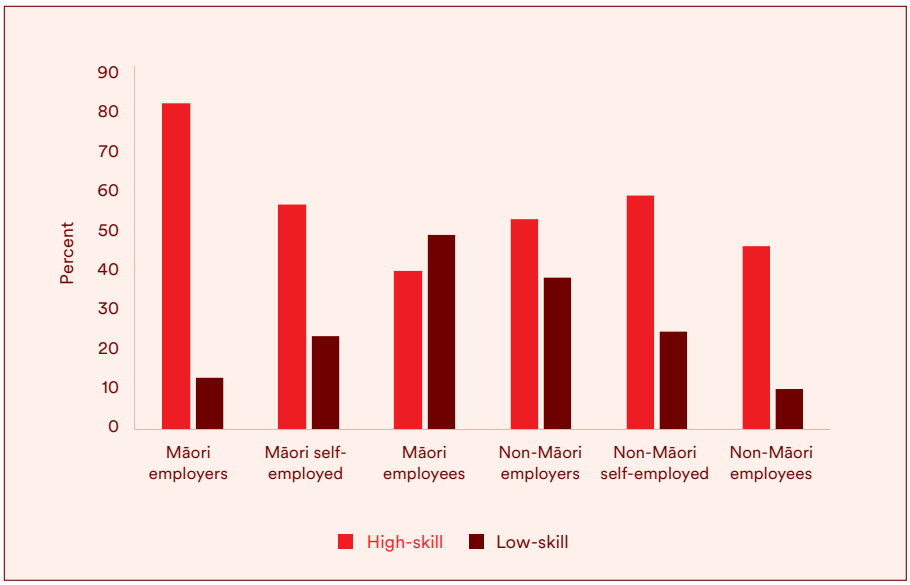
Source: BERL

In 2018, Māori in Tāmaki Makaurau accounted for just under one quarter (23 percent) of the total Māori population across Aotearoa. This is one of the largest proportions of Māori seen in a rohe in Aotearoa. The benefits of having this large proportion are created through opportunities in the future workforce and employment opportunities through Māori employers, along with future growth in assets.

5.2 Skill levels

Skill level is determined by the Australia and New Zealand Standard Classification of Occupations (ANZSO) which calculates skill level based on the relevant qualifications or equivalent experience required to obtain employment in a given occupation. Jobs that require a bachelor's degree or higher are classified as skill level one. Skill level five indicates formal qualifications and relevant prior experience are generally not required.

Figure 5.2: Tāmaki Makaurau skill composition of employed, 2018



Source: BERL

5.2.1 Employees

Of the 70,231 employees in Tāmaki Makaurau, 27,649 are employed in high-skill jobs (39 percent of total employees). This is notably below non-Māori in Tāmaki Makaurau, with 46 percent being employed in high-skill jobs. Of those in high-skill occupations, 17 percent of Māori are employed in education and training. This reflects the high level of investment of Māori individuals in areas with long standing Māori equity challenges. The rest of high-skill Māori are relatively evenly spread across most industries.

The difference between Māori and non-Māori low-skill employees is partially a reflection of the young population. Retail, accommodation, and food services employs 21 percent of all low-skill Māori employees, which is an industry heavily weighted to low-skill occupations.

However, Aotearoa Māori employees are more high-skilled (65 percent) and less low-skilled (18 percent) than Tāmaki Makaurau Māori.

5.2.2 Employers

Categorisation of employer skill levels is not always a direct representation of skills. For example, employers who only hire one employee can title themselves a CEO and be regarded as high-skilled.

For Māori operating their own businesses, either as sole-traders or employers, the skill level of occupations is much higher, with 81 percent being in high-skill jobs. This is a very large share, and towers over non-Māori where only 58 percent of employers are high-skilled. Wholesale trade is the largest industry of high-skill Māori employers with 31 percent of all high-skill Māori employers. This is due to Tāmaki Makaurau being a major city in Aotearoa for the distribution and supply of goods.

Low-skill Māori employers are most common in transport, postal and warehousing, with 45 percent of all low-skill Māori employers in this industry. The share of low-skill Māori employers in this industry, outweighs the share of high-skill Māori employers. Transport, postal and warehousing has a relatively large asset base, with good contribution to value added, and is also a notable employer of Māori (5,584 employees). Professional development of these low-skill Māori employers, and low-skill Māori employers as a whole, would see benefits flow through to employees and the Tāmaki Makaurau Māori economy.

In Aotearoa as a whole, 65 percent of Māori employers are high-skill and 18 percent are low-skill. Which means Tāmaki Makaurau Māori employers are on average more high-skilled than in other rohe.

5.2.3 Self-employed

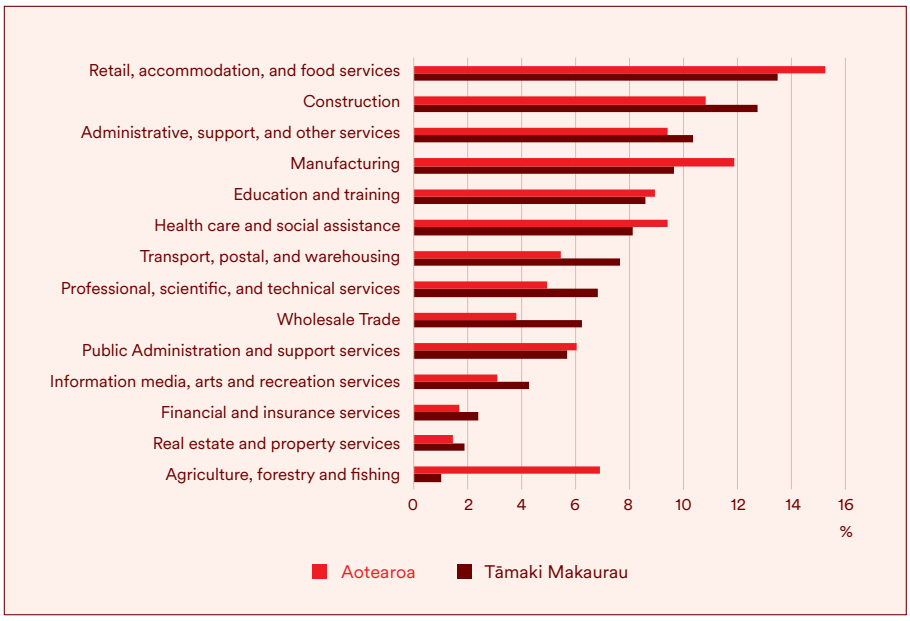
Self-employed covers a very wide range of different types of work. Individuals may start a small business working in the community, or work as a contractor for larger businesses. Of those Māori operating as self-employed, 56 percent are high-skill occupations, with over one third in professional, scientific and technical services (17 percent) and construction (16 percent).

These findings for high-skill Māori self-employed are similar to that seen more widely across Aotearoa, with 51 percent of self-employed Māori being of high-skill. Following this, 27 percent of Aotearoa Māori self-employed are of low-skill compared to 23 percent in Tāmaki Makaurau. The overall findings for skill-levels in Tāmaki Makaurau are relatively on par with the wider Aotearoa economy.

5.3 Employment differences

The Tāmaki Makaurau Māori labour force is different to the rest of Aotearoa. As a result of the large urbanisation in Tāmaki Makaurau, the regional composition is different. One of the most prominent industries for Māori employment in Aotearoa is agriculture, but, as seen in Figure 5.3 below, agriculture in Tāmaki Makaurau is the smallest employer of Māori (one percent of total employed). Tāmaki Makaurau also differentiates itself from Aotearoa with larger employment shares in more high-value industries.

Figure 5.3: Aotearoa and Tāmaki Makaurau employment as a share of their total employed, 2018



Source: BERL

Largest employers

Retail, accommodation and food services is the largest employer of Māori both in Tāmaki Makaurau, and Aotearoa as a whole (13 percent and 15 percent respectively). This reflects the young population with first time/ part-time jobs making up the majority of the industry. Other noticeable employers of Māori in Tāmaki Makaurau are:

- Construction (9,889)
- Administrative, support, and other services (8,033)
- Manufacturing (7,480)
- Education and training (6,668)

The education and training sector is growing relatively fast and employs nine percent of all Māori employees in Tāmaki Makaurau, reflecting the high presence of tertiary education institutions. The benefits delivered from this sector is much wider than just employment and plays a key role in educating and training for Māori today and in the future.

Contrasts in employment

The glaring difference between Tāmaki Makaurau and Aotearoa is the agriculture sector. Agriculture is one of the most prominent sectors for the Aotearoa Māori economy, employing a large proportion of Māori across Aotearoa and holding the largest proportion of the total Māori asset base. Yet there are only 785 Māori employed in agriculture in Tāmaki Makaurau, representing only one percent of the region's Māori employees, compared to seven percent for Aotearoa.

Professional, scientific and technical services include occupations like consultants, engineers and economists. These are high-value, high-wage occupations with opportunities for professional development and wage growth. More people are employed in this industry (seven percent) as a total of Tāmaki Makaurau Māori employment, compared to employment in the wider Aotearoa (five percent). This is an important growth sector not only for Māori but for Aotearoa in the long-run.

Tāmaki Makaurau is one of the leading cities in Aotearoa across a range of measures. Due to its large population and urbanisation, there is a large degree of wholesale trade, more than what you would see in most other rohe. This industry employs six percent of Māori in Tāmaki Makaurau and offers another avenue for Māori which is not as prominent in other rohe.

Unlike the rest of Aotearoa, manufacturing in Tāmaki Makaurau is high-value manufacturing that goes beyond food, with more fabrication and a bit of technology. This sector employs ten percent of all Māori in the Tāmaki Makaurau Māori workforce, which is slightly below the wider Aotearoa Māori employment (12 percent). Due to the more high-value manufacturing operations this sector is a good avenue for future employment for Māori.

Concentrations of employment

More than a third (37 percent) of all Māori in Tāmaki Makaurau are employed in just three sectors. The three sectors are: retail, accommodation, and food services; construction; and administrative support and other services. All three sectors have their limitations or vulnerabilities for the Māori economy.

- Retail, accommodation and food services is dominated by entry level jobs which are great for starting off but limit future wage growth and professional development
- Construction sector has a significant proportion of low-wage occupations with limited growth opportunities
- Administrative, support and other services are vulnerable to the short-term business cycle, inferior pay and employment conditions and reduced training opportunities

5.4 Tāmaki Makaurau asset base – disaggregated

The financial value of assets underpinning the Tāmaki Makaurau Māori economy in 2018 was estimated at $12.5 billion (Table 1). This compares with $8.8 billion in 2013.

Table 1: Financial asset base of Tāmaki Makaurau Māori by sector, 2018

Tāmaki Makaurau, $ million				
Industry	Self-employed	Employers	Collectives	Total
Agriculture, Forestry and Fishing	54	219	68	340
Mining				
Meat Processing	1			1
Dairy Processing				
Other Food Manufacturing	10	100		110
Wood and paper manufacturing	7	66		73
Fabricated metal products	23	278		489
Other Manufacturing	37	452		489
Manufacturing total	78	896		974
Electricity, Gas, Water and Waste Services				
Construction	206	712		919
Wholesale Trade	64	784		848
Retail Trade	23	248		271
Accommodation and Food Services	10	162		172
Transport, Postal and Warehousing	104	1,018		1,122
Information Media and Telecommunications	127	701		828
Financial and Insurance Services	88	732		820
Rental, Hiring and Real Estate Services	1,066	1,954	1,300	4,320
Professional, Scientific and Technical Services	148	634		782
Administrative and Support Services	33	173		206
Public Administration and Safety				
Education and Training	6	128	1	135
Health Care and Social Assistance	21	286	9	316
Arts and Recreation Services	44	181		225
Other Services	40	165	7	211
Not Elsewhere Included				
Total	2,113	8,993	1,384	12,491

Source: BERL

The Tāmaki Makaurau Māori asset base accounts for 18 percent of Aotearoa's total Māori asset base. With the largest shares of the Aotearoa asset base held in wholesale trade (44 percent), information media, arts and recreation services (43 percent), and professional, scientific and technical services (34 percent).

5.4.1 Employers' asset base

The asset base is dominated by the businesses of more than 2,300 Māori. In 2018, this component totalled $9 billion, up from $6.3 billion in the businesses of over 1,500 Māori employers in 2013. These assets are broadly spread across a variety of sectors.

Dominating the Māori employer's asset base is real estate and property services which totalled $1.95 billion. Transport, postal and warehousing followed with a total asset base of $1 billion, an increase from $641 million in 2013. This reflects Tāmaki Makaurau being a major hub for the distribution of goods domestically and internationally. There was also a significant amount of asset base in manufacturing, totalling $896 million in 2018.

5.4.2 Self-employed asset base

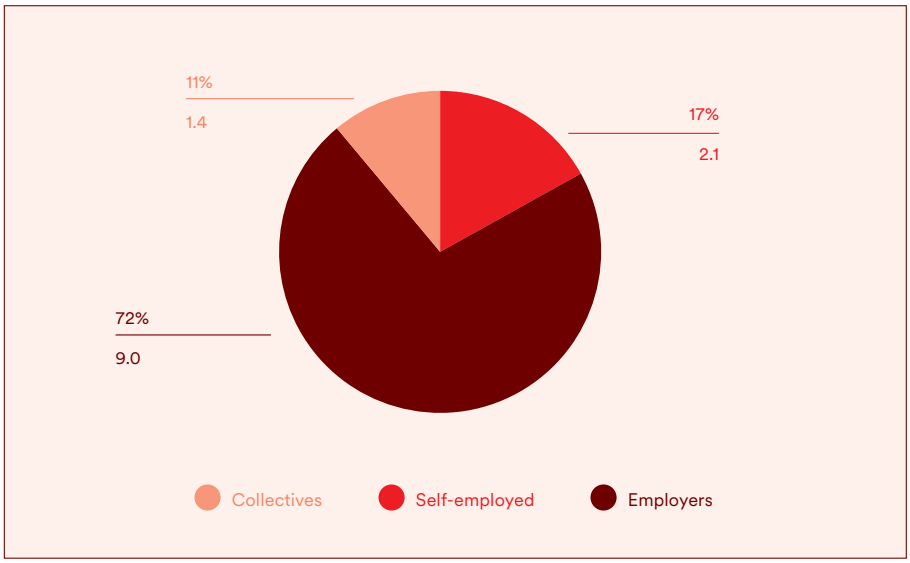
The $2.1 billion worth of asset base of the self-employed is the combination of assets from over 4,900 self-employed Māori in Tāmaki Makaurau. This has increased from $1.8 billion worth of assets and just over 4,100 self-employed Māori in 2013. These businesses are, by definition of not having any employees, much smaller enterprises (hiring just one single employee categorises them as an employer).

As seen with Māori employers, real estate and property services dominates the asset base of the self-employed at 50 percent ($1 billion). The rest of the asset base is spread across sectors, with construction holding the second largest asset base at $200 million between over 1,100 self-employed Māori in this sector in 2018.

5.4.3 Iwi and collectives' asset base

The asset base of iwi and collectives in Tāmaki Makaurau totalled $1.38 billion in 2018. This represented 11 percent of the total Tāmaki Makaurau Māori asset base. This has increased from $787 million in 2013, which represented nine percent of the total Tāmaki Makaurau Māori asset base. Although, the share of the asset base has increased since 2013, iwi and collectives still hold a relatively small share of the Tāmaki Makaurau Māori asset base.

Figure 5.4: Iwi/Collectives share of Tāmaki Makaurau Māori asset base, $ billion, 2018



Source: BERL

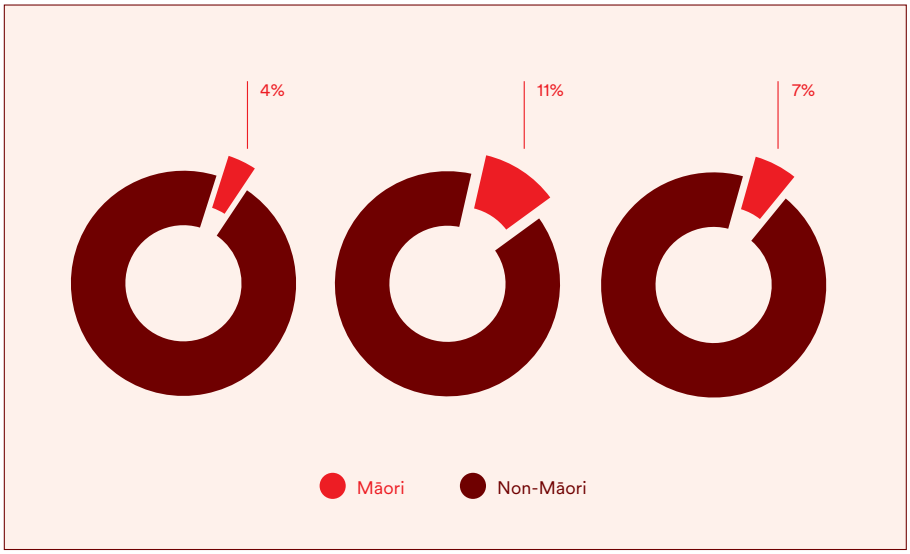
The financial asset base of iwi and collectives in Tāmaki Makaurau is concentrated in real estate and property services, worth $1.3 billion, which accounts for 94 percent of their total asset base. This is dominated by mostly high-value commercial property around Tāmaki Makaurau. The rest of the asset base is made up of agriculture ($68 million), health care and assistance ($9 million) and education and training plus other services making up the rest ($1 million and $7 million respectively).

5.5 Social accounting matrix

A social accounting matrix (SAM) summarises the many payments or transactions in an economy. It resembles the flow of money between households, enterprises, government, foreign customers and suppliers. It comprises a combination of inter-industry transactions, and the accounting flows of income and outlays for particular institutional sectors of an economy.

A SAM enables us to accurately detail the transactions of both the household sector and producer enterprise sector and depict a detailed image of the economy through three perspectives of GDP, these being production, expenditure and income.

Figure 5.5: Three perspectives of GDP from Tāmaki Makaurau Māori, 2018



Source: BERL

Production measure of GDP

The production measure of GDP focuses on value added of the production of goods or delivery of services of Māori entities as well as businesses of Māori employers and self-employed Māori. For Māori in Tāmaki Makaurau in 2018, production GDP totalled $4.3 billion (four percent), compared to $95.9 billion for all of Tāmaki Makaurau. Māori in Tāmaki Makaurau account for 25 percent of Māori production GDP across Aotearoa.

Expenditure measure of GDP

The expenditure measure of GDP estimates the spending of households, businesses, government and overseas entities on goods produced and services delivered in Tāmaki Makaurau.

The spending of Māori households totalled $10.1 billion (11 percent) in 2018, compared to $78.7 billion for all of Tāmaki Makaurau. Māori in Tāmaki Makaurau account for 30 percent of the Māori expenditure GDP across Aotearoa.

Income measure of GDP

The income measure of GDP estimates incomes received by individuals and organisations as a result of mahi in employment and organisational operations. This totalled $5.8 billion (seven percent) in 2018 for Māori, compared to $83.3 billion for all of Tāmaki Makaurau. Māori in Tāmaki Makaurau account for 27 percent of Māori income GDP across Aotearoa.

5.5.1 Household income and expenditure

Total Māori household income of $7.9 billion was largely due to $4.3 billion of wages and $2.2 billion in social security transfers (Table 2). Social security and assistance benefits account for 28 percent of total income for Māori, compared to only eight percent for non-Māori.

As stated in the Te Ōhanga Māori 2018 report, social security transfers have been increasing over the last few years for Māori as a result of working Māori receiving additional government support. Across Aotearoa, social security payments have increased by 197 percent between 2013 and 2018 for Māori ($3.2 billion to $9.6 billion). Systematic and persistent inequality is reinforced by a lack of effective policies to address labour market failures, leaving Māori in low-skill, low-security, and low-paid occupations increasingly seeking financial assistance (BERL, 2020).

Table 2: Tāmaki Makaurau household sector income and expenditure, 2018

Household sector	$ million		
	Māori	Other	Total
Income			
Wages	4,322	50,789	55,111
Social security and assistance benefits	2,193	6,077	8,269
Entrepreneurial and dividend income	677	10,620	11,297
Operating surplus in owner-occupied dwellings	318	3,189	3,507
Interest, pension fund earnings and insurance receipts	338	7,666	8,004
Overseas transfers	28	190	218
Sub-total	**7,876**	**78,531**	**86,406**
LESS Outlays			
Consumer expenditure	8,775	56,339	65,114
Income and other taxes, social security contributions, fines and penalties	1,241	13,800	15,041
Interest on consumer debt and housing	205	2,060	2,266
Net investment by households	603	6,049	6,652
Pension fund contributions	589	11,141	11,730
Overseas transfers	25	166	191
Sub-total	**11,437**	**89,556**	**100,993**
Net savings	**-3,561**	**-11,026**	**-14,587**

Source: BERL

Table 2 shows that Tāmaki Makaurau's total Māori consumer expenditure was $8.8 billion in 2018, which is $1 billion more than Māori household income ($7.8 billion). Consumer expenditure includes day-to-day spending needs households engage, whether it be food, clothes or any other human needs. This shows Māori are not earning enough. The difference is particularly stark when compared to non-Māori who earn approximately $22.2 billion more than their consumer expenditure.

Net savings is negative for both Māori and non-Māori in Tāmaki Makaurau and Aotearoa as a whole. Māori in Tāmaki Makaurau have a net debt savings position of $3.6 billion. Negative savings is a concern that is observed nationally across Aotearoa.

5.5.2 Enterprise income and spending

Total gross output of all Māori enterprises across Tāmaki Makaurau in 2018 was $8.5 billion (Table 3). The gross output measure is akin to the turnover or total revenue of a business. After deducting wages (compensation of employees) for the use of labour and other production costs, the operating surplus of Māori totalled $1.2 billion.

Table 3: Tāmaki Makaurau producer sector income and expenditure, 2018

Producer enterprises sector	$ million		
	Māori	Other	Total
Gross output of enterprises	8,487	175,054	183,541
LESS Costs of production			
Compensation of employees	2,463	52,649	55,111
Intermediate and other input costs	4,518	89,846	94,363
Sub-total	**6,980**	**142,494**	**149,475**
Gross output less costs of production	**1,507**	**32,560**	**34,067**
LESS Surplus in own dwellings	318	3,189	3,507
Operating surplus of enterprises	**1,189**	**29,371**	**30,560**
Other income - insurance claims	25	280	305
Other income - overseas	-	2,219	2,219
Sub-total	**1,214**	**31,869**	**33,084**
LESS Outlays			
Distributions to households: entrepreneurial income and dividends	677	10,620	11,297
Corporate tax	78	3,295	3,373
Overseas payments	-	4,800	4,800
Capital spending	757	16,356	17,113
Sub-total	**1,512**	**35,070**	**36,583**
Net savings	**-298**	**-3,201**	**-3,499**

Source: BERL

There are three principal outlays for the Māori enterprise sector. Of similar magnitudes are distributions of dividends and income to households and capital investment spending, while the third category of corporate tax payments is of a smaller magnitude.

Dividends and income to households from the Māori enterprise sector constitute, in the main, the proceeds of the businesses of self-employed Māori as well as payments from trusts and incorporations.

Capital investment spending by the Māori enterprise sector comprises spending on new or replacement machinery or equipment, as well as spending to maintain or improve the value of other land assets.

Similarly seen in the household sector, net savings for producer enterprises in 2018 was negative for Māori and non-Māori at $298 million and $3.2 billion respectively. This is different from the total Māori enterprises in Aotearoa, as shown in the Te Ōhanga Māori 2018 report, where both Māori and non-Māori enterprises in Aotearoa recorded positive net savings in 2018.

5.6 Wellbeing

In the face of enduring income and wealth inequality, Māori entities are investing in people and communities. Māori entities employ Māori workers, and pay out millions in grants for secondary education, kaumātua grants, health care and tangihanga. Thousands of kilograms of seafood is provided for tangihanga from fisheries quota each year. Tonnes of firewood are delivered to kaumātua and fresh vegetable parcels are distributed to whānau from community gardens.

Māori entities also provide health, education, social and environmental services to communities, improving wellbeing and outcomes for Māori and non-Māori whānau in the following ways:

- Health care and social services
    - Delivering care of new mothers and pēpi, including distributing pēpi packs and delivering Tamariki Ora Well Child programmes
    - Providing suicide prevention wānanga, mental health and addiction services and counselling
    - Whānau ora providers delivering navigation support for whānau
    - Undertaking kaumātua research and wellbeing programmes
- Education for all ages
    - Educating tamāriki through early childhood centres, kōhanga reo, and kura kaupapa Māori, and providing school starter packs
    - Offering financial mentoring, driver licence courses and road safety initiatives
    - Providing tertiary education on te reo, tikanga, hauora and indigenous business to thousands of people across Aotearoa
    - Developing Māori media with locally made and fluent content on radio and televisions and in print and cinemas

    - Supporting arts, language and cultural programmes through targeting strategies and activities, locally, nationally and internationally
    - Developing, promoting and protecting mātauranga Māori
    - Providing scholarships from secondary to tertiary education and trades training
- Community wellbeing
    - Improving digital equity by supporting fibre laying and running shared, open learning facilities, tech hubs and incubators
    - Running papakāinga toolkit workshops and other programmes for home ownership
    - Providing social housing
- Kaitiakitanga of natural assets
    - Regenerating native vegetation on marginal land, native nurseries, worm farms, riparian plantings, protecting kauri from dieback, managing native forests and reserves and other whenua restoration activities
    - Joint management of waterways and lakes, including monitoring water quality
    - Developing climate change strategies

APPENDICES

APPENDIX A METHODOLOGY

Social accounting matrix (SAM)

A social accounting matrix (SAM) summarises the many payments or transactions in an economy. These transactions or payments may involve a person, an industry, a household, an enterprise, the Government, a foreign customer or a supplier. The SAM summarises the source and destination of these transactions, i.e. who are making and who are receiving the payments. A matrix is another word for a table of numbers. In general, each column of the table represents payments by a person; and each row of the table represents payments received by that person. For example, take the case of a household paying income tax. This transaction will be represented by an appropriate figure in the intersection of the 'household' column and the 'government' row of the matrix.

There are other entries in the matrix. For example, there are some figures representing transfers within sectors and other notional transactions.[6] In a more formal sense, a SAM comprises a combination of an inter-industry transactions (or input-output) table and the accounting flows of income and outlays for particular institutional sectors of an economy.

Inter-industry transactions and production GDP

Transactions between the various industries of the economy form the basis of the production component of the SAM. For example, the fish processing industry buys the raw fish catch from the fishing industry along with other inputs from other industries (e.g. energy from the electricity industry) in order to make its fish product or commodity. Thereafter, the processing industry is also likely to purchase transport services from the transport industry to convey its product to its final customer (whether to an export port ready for foreign customers or for internal distribution to retail consumers or other domestic users).

Of course, industries do more than just purchase and sell between them. They combine both the raw and material inputs they purchase from other industries and in such transformations they 'add value' to the products or commodities they ultimately produce. Such 'value added' is, in an economic sense, equivalent to the GDP contribution of each production industry.

This value added constitutes the payments (or returns) to the primary resources used in the production of each commodity. In its simplest form, primary resources (or factors of production) are limited to labour and physical capital. Consequently, production GDP is captured in a SAM as payments by industries to the owners of labour and capital – that is, wage and profit payments.

These wage 'transactions' are listed in a SAM at the intersection of the relevant industry columns and the owners of labour row. Similarly, the profit transactions are placed at the intersection of the relevant industry columns and the owners of capital row. The sum of these wage and profit 'payments' is conceptually equivalent to the total 'added value' contributed by the producers in an economy and is termed the production measure of GDP.

Thus, the added value of the fishing industry, for example, is equivalent to the wage payments to those employed in the industry and the surplus of the industry. The latter represents payments to the owners of the machinery, equipment and buildings used in the industry.

Income GDP and disposable income

From the production segment of an economy, we move on to the income segment. In this context, a SAM firstly captures the 'conceptual transactions' that translate the income of labour and capital owners into income of households and those of the owners of the producer enterprises.

The entries in a SAM have, for example, figures at the intersection of the 'owners of labour' column and the household row. Other income payments received by households from the 'owners of capital' row would include returns to self-employed persons in their role as business owners across the various industries.

The income of enterprises, predominantly at the intersection of the producer enterprises column and the owners of capital row, represent the conceptual transfer of the surplus of industries into profits of producer enterprises.

It is true that the translation of the incomes of the factors of production (labour and capital) into the incomes of households and enterprises captures, in the main, 'notional' rather than 'actual' transactions. Nevertheless, this segment of a SAM enables an economy's value added to be expressed in an alternative form, namely income GDP. Consequently, we can capture another dimension to the participation of Māori in the Aotearoa economy, i.e. the participation via the income measure of GDP of Māori households.

6 Notional transactions are those recorded for economic or accounting purposes, but do not take place as a real-world transaction. For example, the notional payment by those residing in their own home to themselves reflects the economic rental value of their owner-occupied property. This is included by Statistics New Zealand to ensure that the economic operation of rental and owner-occupied property is treated equally in the National Accounts.

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Very generally, for example, the wage payments of those employed in the fishing industry are likely to be predominantly translated into household income. Similarly, the surplus of this industry is likely to form the basis of the income of producer enterprises.

Disposable income

Having established the income GDP of households and producer enterprises, a SAM moves on to summarise the transactions that lead to the disposable income of these components of the economy. In contrast to the previous segment of the SAM, most of these transactions are actual rather than notional. Entries in this segment include income and corporate tax payments to government by households and producer enterprises, as well as social security and benefit payments from government to households. In addition, mortgage and other debt interest payments by households are recorded here in the financial institutions row. Household receipts from financial institutions represent interest as well as superannuation income along with insurance pay-outs.

Expenditure GDP and net savings

Given the disposable income of households and producer enterprises, the final set of 'core' transactions captured by a SAM are the expenditure on goods and services (i.e. the commodities) that are produced by industries.

The expenditure by households on consumer goods would be included in the intersection of the household column and the row for the industry producing each consumer commodity. For example, purchases of fish products by the household are likely to be predominantly in the row of the fish processing industry (noting that the household is unlikely to be purchasing the raw fish catch of the fishing industry). Other consumer spending, like fuel (purchased from the fuel retailing industry) to enable consumers to drive to the supermarket to purchase fish products, will also be included here.

Expenditure by producer enterprises on goods and services predominantly involves capital expenditure (investment) on machinery, equipment and buildings. This expenditure is required to maintain and expand the physical resources available to the industry for use in its production processes. For example, the purchase of a fishing boat by a producer enterprise active in the fishing industry would appear in the producer enterprise column and the row relating to the marine equipment making industry.

This set of transactions also includes government purchases of goods and services – for example, the purchase of health services from the health services industry.

The remaining set of transactions here are the purchases by overseas customers of the goods and services produced by Aotearoa industry. These export transactions are captured in the intersection of the overseas column and the relevant industry row. Conversely, there will be a set of transactions representing the purchase by households in Aotearoa and industries of goods and services produced abroad. These import transactions will be represented by figures in the overseas row across the various columns for the range of households and industries. For example, the petroleum refining industry will be purchasing crude oil imports, which gets translated into petrol purchased by a household via transactions with the fuel retailing industry. Similarly, the purchase of a fishing boat by a producer enterprise active in the fishing industry is likely to require the purchase of a variety of mechanical and electrical components from abroad by the marine equipment making industry.

The total of the expenditure in this segment of the SAM, net of imports, is equivalent to the expenditure measure of GDP. Consequently, a further dimension to the Māori participation in the Aotearoa economy can be described – namely, through the expenditure of Māori households.

Net balance or savings

Finally, the SAM enables the calculation of the net balance position of the household, government and producer enterprise sectors. This is calculated directly from the calculated disposable income of each of the sectors minus their expenditure.

In addition, the net balance of transactions with the overseas sector can also be calculated from the figures contained in a SAM. Note, as well as exports and imports of commodities, other transactions with the overseas sector are also included in a SAM. In particular, interest, profits and/or dividends from producer enterprises active in Aotearoa industries may be remitted to foreign owners. This will be shown in the intersection of the producer enterprise column and the overseas row.

Similarly, transfers or other transactions from the overseas sector to, for example, Aotearoa households will be shown in the intersection of the relevant row and the overseas column in a SAM. Consequently, the net balance of transactions with the overseas sector is equivalent to the balance on the current account of the Balance of Payments. This balance comprises the balance on trade flows (i.e. export revenue minus import payments), as well as the balance on financial transactions (i.e. interest, profits and other asset income and payments) with the rest of the world.

A cross-check of the net savings figure is provided by the macro-

economic identity. This states that the sum of the net savings of all these domestic sectors plus the net balance of transactions with the overseas sector must equal zero. In other words, if the balance of the overseas sector is a positive (i.e. surplus or savings) then the sum of the balances of all the domestic sectors would have to be a negative (i.e. deficit or dissaving) of the same magnitude.

Enterprises

Output and income

Gross output of producer enterprises begins with the estimate of gross output from the input-output tables.

Costs of production

The costs of production for each industry, including compensation of employees, purchase of intermediate commodities (including imports) and other input costs arise from the input-output inter-industry transactions table. In generating these costs, their proportions in relation to each industry's gross output are set the same as those implied by the input-output table.

Outgoings

Distributions to households in the form of entrepreneurial and dividend income are the converse of those in the household account. All entrepreneurial income accruing to Māori households are assumed to source from Māori producer enterprises. However, the proportion of the dividend distribution from Māori producer enterprises allocated to the Māori household sector is equal to the Māori proportion reporting income from the interest, dividend, rent or other property income category in the 2018 Census.

Corporate tax from the Government Financial Statements is allocated to Māori enterprises according to the proportion of gross output in Māori enterprises to total gross output.

The proportion of the total for capital spending from the input-output table allocated to Māori enterprises is calculated as the Māori proportion in the consumption of fixed capital in industries from the input-output table.

Households

The majority of the components of income are derived from a division of the income listed in the Household Income and Outlay Accounts. In all cases, where relevant, figures from the input-output table are retained for consistency with industry data. The division between Māori and non-Māori households is undertaken using appropriate proportions from the 2018 Census and/or other sources.

Income

- The income for Māori households is obtained by applying the Māori proportion of the income earned by paid employees as reported in the 2018 Census.
- Social security assistance and benefits for all households is from Household Income and Outlay Accounts. The income for Māori households is obtained by applying the Māori proportion reporting income in the 2018 Census from the following sources: New Zealand Superannuation or Veterans Pension, Unemployment Benefit, Sickness Benefit, Domestic Purposes Benefit, Invalids Benefit, or Student Allowance.
- Entrepreneurial income and dividend income for all households is accessed from Household Income and Outlay Accounts. Entrepreneurial income for Māori households is obtained by applying the Māori proportion of income earned by self-employed from the 2018 Census. Dividend income is split according to the proportion reporting income from the interest, dividend, rent or other property income category in the 2018 Census.
- Operating surplus accruing from ownership of owner-occupied dwellings is from the input-output table. The income for Māori households is obtained by applying the Māori proportion from the 2018 Census reporting those that live in owner-occupied dwellings.
- Pension fund benefits including equity changes and interest and insurance receipts is from the Household Income and Outlay Accounts. The former component is split according to the Māori proportion reporting income from the Other Superannuation, Pensions, Annuities category in the 2018 Census. The latter component is split according to the Māori proportion reporting income from the interest, dividend, rent or other property income category in the 2018 Census.
- Overseas transfers are from the Household Income and Outlay Accounts. This is split according to the Māori proportion in the number of households from the 2018 Census.

Outgoings

Determining the outgoings from the household sector accounted for by Māori households was achieved, predominantly, using appropriate shares from Census data. Key points include:

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- Consumer expenditure from the input-output tables is split according to the Māori proportion in the number of households and adjusted by the relative average household income from the 2018 Census.

- Income tax, other current taxes, social security contributions and fines and penalties are from Household Income and Outlay Accounts. These are split according to the Māori proportion of total individual employment income from the 2018 Census.

- Interest on consumer debt and interest on housing are from Household Income and Outlay Accounts. These are split according to the Māori proportion from the 2018 Census reporting they live in their own dwellings.

- Investment in owner-occupied dwellings is from the input-output tables. This is split according to the Māori proportion from the 2018 Census reporting they live in their own dwellings.

- Pension fund contributions are from Household Income and Outlay Accounts. This is split according to the Māori proportion reporting income from the Other Superannuation, Pensions, Annuities category in the 2018 Census.

- Overseas transfers are from Household Income and Outlay Accounts. This is split according to the Māori proportion in the number of households from the 2018 Census.

Net savings reconciliation

The Household Income and Outlay Accounts indicate net savings. The difference between these two estimates can be attributed to data limitations as well as conceptual differences between input-output and National Accounts information.

APPENDIX B SCOPE AND LIMITATIONS

Scope

Based on the methodology established in Te Ōhanga Māori 2018, the definition of 'Māori' was retained to ensure that all entities and enterprises that self-identify as part of the te ōhanga Māori is included. This report presents:

- Statistics on Tāmaki Makaurau Māori participation in the workforce.
- A calculation of Tāmaki Makaurau Māori contribution to GDP from enterprises in 2018.
- An adjusted SAM to depict the 2018 income and expenditure flows within the Tāmaki Makaurau Māori economy.
- Asset base calculations of Tāmaki Makaurau Māori in 2018.
- A maintained narrative as seen in Te Ōhanga Māori 2018, to retain broader objectives and outcomes that are being enabled through Māori trusts, incorporations, enterprises, iwi settlement entities, and businesses.

Data sources, robustness and comparability

This report has been compiled using a variety of data sources, supplemented by modelling. The data has been obtained from the best available sources, such as official statistics.

As noted above, the methodology adopted and the data sources used are similar to those used in Te Ōhanga Māori 2018. In particular, core data used from Statistics New Zealand (StatsNZ) include:

- 2013 and 2018 Censuses
- Annual Enterprise Survey
- Consumer Price and Capital Goods Price Indices, various dates
- Business Demography Statistics
- Household Sector Income and Outlay Accounts
- National Accounts
- Inter-industry Transactions.

The range of data we have secured, along with BERL's experience and knowledge of Māori activities in Tāmaki Makaurau, ensures we are confident of the robustness of our indicative estimates at the headline level. However, the greater the degree of disaggregation in the estimates, the greater the margins for error and inaccuracy. Hence, the more disaggregated estimates should be treated with appropriate caution.

All the data and tables in this publication have been estimated by BERL, using a variety of official and unofficial sources. Estimates have been rounded and also aggregated to ensure confidential information is not released. Consequently, the sum of the components may not add precisely to the totals shown. All data unless otherwise stated, refer to the year March 2019.

We use Australian New Zealand Standards Industrial Classification (ANZSIC) to present industry data, as detailed in Table 4. The 2006 version of ANZSIC classification is used, which is the most recent version. At the broad industry level we have described some comparisons that we believe are valid.

Abbreviation	ANZSIC code	Industry description
A1A2	A012-A013	Horticulture
A3	A014	Sheep and beef farming
A4	A016	Dairy
A5A7	A02+A04	Fishing and aquaculture
A6	A03	Forestry
A8	A011+A015+A017-A019+A05	Other agriculture and services to agriculture
B	B	Mining
C1	C111	Meat processing
C2	C113	Dairy processing
C3	C112+C114-C119	Other food manufacturing
C4	C14-C15	Wood and paper manufacturing
C5	C21-C25	Fabricated metal products
C6	C12-C13+C16-C20	Other manufacturing
D	D	Electricity, gas, water, and waste services
E	E	Construction
F	F	Wholesale trade
G	G	Retail trade

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H	H	Accommodation and food services
I	I	Transport, postal, and warehousing
J	J	Information media and telecommunications
K	K	Finance and insurance services
L	L	Rental, hiring, and real estate services
M	M	Professional, scientific, technical services
N	N	Administrative and support services
O	O	Public administration and safety
P	P	Education and training
Q	Q	Health care and social assistance
R	R	Arts and recreation services
S	S	Other services
Other abbreviation		**Description**
COE		Compensation of employees
OPS		Operating surplus
OTX		Indirect taxes
MHD		Māori households
NMH		Other households
FII		Financial institutions
MPE		Māori enterprises
NMP		Other enterprises
GOV		Government

Data limitations

Using data from a variety of sources causes difficulty when ensuring consistency of treatment. If we limit ourselves to one data source we can obtain a large degree of sector disaggregation, but at the expense of less than comprehensive coverage of transactions. Using a variety of sources may improve the coverage of the information available but the sector detail of this information is likely to be more highly aggregated.

For this reason, industry and sector definitions have been kept broad to reduce the degree of detail required to be extracted from the data. For similar reasons, many of the non-core transactions between and within sectors have not been explicitly identified in the SAM developed for this project.

The use of Census data has advantages in its comprehensive coverage. However, information here is obtained from the perspective of individual details, rather than business details. Where appropriate we have had to imply relevant variables from individual data rather than from business data. This has limitations in that obtaining data relevant to businesses distinguished by ethnicity is difficult, except, for example, the income of Māori and non-Māori self-employed businesses.

Of particular importance in the generation of this SAM and the consequential estimates for Māori participation is the calculation of the Māori asset base.

Due to the lack of reliable information, we have not attempted to disaggregate the export dimension of producer enterprises by the ethnicity of these businesses. This reduces the analysis that can be supported by the SAM. Thus, any survey of businesses should also look to extract information on the export orientation of comparative businesses (ideally, Māori compared toother businesses).

The primary aim was to obtain a credible picture of the Māori participation in the Tāmaki Makaurau economy. To do this, we retained reliable and robust data plans seen in Te Ōhanga Māori 2018 to support the estimated core transactions identified in the SAM. We believe we have been successful in this aim.

Use of the StatsNZ DataLab has meant rohe breakdown of Tāmaki Makaurau led to confidentiality issues. As users of this, BERL must adhere to all confidentiality agreements and laws set out in the terms. Attempting to extract data at a disaggregated level resulted in the need for large amounts of suppression that devalued the use and scope of the data.

APPENDIX C GLOSSARY

Kupu Māori	English
Hapū	A social unit comprised of related families based in a geographical area, who whakapapa to a common ancestor, although people affiliated to a hapū may not live in that area.
Hapori	Section of a kinship group, family, society or community
Hauora	Health, wellness, vigour.
Iwi	A number of related hapū sharing a territory, a confederation of tribes.
Kaitiaki	Guardian.
Kaitiakitanga	Guardianship, stewardship, and protection of the environment.
Kaumātua	An older person within a whānau.
Kawa	Protocol and customs for particular events, such as opening of new houses or on the marae.
Kōhanga reo, Te	Preschool operating under Māori cultural customs and using te reo Māori as the language medium.
Kotahitanga	Unity, togetherness, and collective action.
Kura kaupapa Māori	Primary school operating under Māori cultural customs and using te reo Māori as the language medium. Wharekura are immersion secondary schools.
Mana	Prestige, status, authority or mandate.
Mana whenua	Territorial rights, power from the land, authority over land or territory, jurisdiction over land or territory – power associated with possession and occupation of tribal land.
Manaakitanga	Hospitality, generosity, showing respect and care for others.
Marae	Meeting place for where formal greetings are exchanged and discussion takes place. Can be more generally thought of complex of buildings surrounding this meeting place. Can also be broader term to encompass the institution combining community, physical and spiritual support for Māori culture, language and identity.
Mātauranga Māori	Māori body of knowledge that arises from a worldview based upon kinship relationships between people and the natural world. Humans are not seen as superior to the natural order but rather as existing within it (Royal Society).
Maunga	Mountain, mount or peak.
Mauri	Life force, vital essence – the essential quality and vitality of a being or entity. Also used for a physical object, individual, ecosystem or social group in which this essence is located.
Moana	Sea, ocean or large lake.
Mokopuna	Child or grandchild of a son, daughter, nephew, niece, etc. or descendant.
Ngahere	Bush or forest.
Noa	To be free from the extensions of tapu, unrestricted or ordinary.

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Ora	Health, wellbeing or vitality.
Papa kāinga	Communal Māori land.
Pēpi	Baby or infant.
Rohe	District, region or area of land.
Rūnanga	Council, tribal council or assembly.
Takiwā	District, area or territory.
Tamariki	Children.
Tāngata whenua	Local people, hosts, indigenous people - people born of the whenua i.e. of the placenta and of the land where the people's ancestors have lived and where their placenta are buried.
Tangihanga	Funeral rites for the dead – one of the most important institutions in Māori society, with strong cultural imperatives and protocols.
Taonga	Something of value, may include goods or possessions, resources, ideas, and valuable items (culturally, socially or financially).
Tapu	To be sacred, restricted or set apart.
Te Ao Māori	The Māori world.
Te Ōhanga Māori	The Māori economy.
Te Reo Māori	The Māori language.
Tikanga	The correct procedure, custom, way, protocol - the customary system of values and practices that have developed over time and are deeply embedded in the social context.
Toi	Art, knowledge.
Tūpuna maunga	Ancestral mountains.
Urupā	Burial ground or cemetery.
Wairua	The non-physical spirit or soul, separate from the body and the mauri (life force).
Wānanga	Educational forum, learning or tertiary institution that caters for Māori learning needs.
Whakapapa	Lineage or genealogical descent.
Whānau	Family.
Whanaungatanga	Family connections, kinship rights and obligations, close and reciprocal relationships.
Whare	House, home or building.
Wharekai	Dining hall, usually in context of a marae.
Whenua	Land, ground or country.

Source: Adapted from https://maoridictionary.co.nz/

APPENDIX C GLOSSARY

Technical terms

Italics within a definition signals the term is defined elsewhere within this glossary.

Term	Definition
Assets	Land, buildings, machinery, equipment, vehicles, cash, shares that can be used to produce goods and services. Includes fishing quota, forest cutting rights, exploration and mining rights.
Compensation of employees	Payments to employees working in an enterprise, including wages, salaries, overtime payments, bonuses, and other remuneration.
Consumption spending	Spending by households on goods and services, for example food, clothing, motor vehicles and servicing, petrol, electricity, gas and other energy, entertainment, visits to doctor and other medical supplies, insurance. Includes notional rent paid by owner-occupiers to themselves (refer owner-occupied housing). Contrast with investment spending.
Enterprises	Organisations that engage in producing goods and services for others to consume. Includes trusts, incorporations, businesses, service providers (profit and not for profits), iwi holding companies, rūnanga, Mandated Iwi Organisations (MIOs), Post-Settlement Governance Entities (PSGEs) and other similar entities.
Expenditure	Equivalent to spending. Sometimes termed outlays.
Final goods and services	Goods and services produced by enterprises that are purchased by or supplied to households, government, or foreigners. Also includes goods and services purchased by or supplied to enterprises as a result of their investment spending. Contrast with intermediate goods and services.
Gross Domestic Product (GDP)	A measure of the total value added generated by all enterprises in an area, region, or country. GDP is equivalent to the sum of all compensation of employees and operating surplus (including all forms of profits) earned by workers and owners engaged in all enterprises in an area. Strictly speaking, GDP also includes indirect taxes levied on production. This is also equivalent to the total expenditure on final goods and services produced by enterprises in the area.
Income	For enterprises, this is equivalent to the total revenue gained through the sale of their goods and services. For households, this includes compensation of employees; interest or dividends received; social security benefit or other welfare payment transfers; superannuation payments.
Industry	All enterprises in an area (region or country) that produce similar goods, or deliver similar services. They can be defined broadly (e.g. primary), narrowly (agriculture), or precisely (apples). Industry data for this study is based on Statistics New Zealand's Australian New Zealand Standard Industrial Classification (ANZSIC), as detailed in Table 6.9.

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Intermediate goods and services	Goods and services produced by enterprises that are purchased by or supplied to other enterprises to be used in the production of other goods and services. For example, the purchase by a meat processor of a sheep carcass from a farmer who then processes the carcass into meat products. Contrast with final goods and services.
Investment spending	Spending by enterprises on goods and services that are new assets. Includes spending on maintaining assets or on improving their value; for example, research activities aimed at restoring the nutrient balance in pastoral land; rewiring school buildings to improve computer network connections.
Labour force	Comprises all those employed (part-time or full-time), or those unemployed. Note to be unemployed the individual must be available for and be actively seeking work. The measure of the labour force will exclude those retired, studying or otherwise not available for work. The labour force is a subset of the working age population.
Nominal growth	The rate at which the sales of final goods and services increases. For example, if sales in one year totalled $100 and then $105 the next year, then nominal growth is said to be five percent per year (or 5% p/a). Note this growth includes the effect of changes in prices, as well as changes in the quantity, of final goods and services produced. Contrast with real growth.
Not in the labour force	The subset of the working age population that are not employed and are not available for work. Includes those retired, studying, at home looking after relatives, or otherwise not available for work.
Operating surplus	Total revenue from sales of an enterprise less payments for intermediate goods and services and compensation of employees. This is equivalent to the income return to the owners of the assets being used by the enterprise. While not strictly precise, this can be thought of as akin to profit. A component of this return will be the equivalent of consumption of fixed capital (akin to depreciation), being the portion of assets that have been used up during the period.
Owner-occupied housing	Industry defined as householders living in residential property that they themselves own. This is included in measures of GDP so that its treatment is consistent with that of landlords renting residential property to others.
Productivity	A measure of how much well assets are being used in the production of goods and services. An improvement in productivity occurs where more goods and services are produced this period (year) from the same group of assets than were produced last period (year). Equivalently, productivity can improve if fewer assets are required this period (year) to produce the same quantity of goods and services than were used the previous period (year). This definition, more correctly, relates to what is termed capital productivity. There is a parallel definition for labour productivity, e.g. how well labour is being used in the production of goods and services. Further, if we consider the use of assets and labour together, then there is a concept with a parallel definition termed total factor productivity.

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Real growth	The rate at which the quantity produced of final goods and services increases. For example, if the quantity of items produced was 100 in one year then 103 the next year, then real growth is said to be three percent per year (or 3% p/a). Note, this growth excludes the effect of changes in prices and so is a measure of the change in production. Contrast with nominal growth.
Resources	Equivalent to assets.
Social Accounting Matrix (SAM)	A table summarising the payments or transactions within or between enterprises, industries, households, government and/or foreigners.
Sector	Equivalent to industry.
Value added	The result of the production processes or service delivery activities of enterprises. This is total revenue from sales less payments for intermediate goods and services used in their processes or activities. Value added is the equivalent of the compensation of employees plus the operating surplus generated by enterprises. Closely related to GDP.
Unemployed	Those who are without a job, but who are available for and are actively seeking work. The unemployed are a subset of the labour force.
Wealth	Equivalent to assets.
Wellbeing	Holistic perspective (or measure) of standard of living.
Working age population	The resident, non-institutionalised, civilian population aged 15 or more years old.

APPENDIX D SKILL LEVELS BY INDUSTRY

This section presents a breakdown of skill levels in the Ngā hua section on the skill level of Māori in each employment status, by industry occupation. Figure 5.2 presents skill level composition through high-skill and low-skill, the following classifies those plus 'skilled' workers:

- High-skill includes skill levels one and two
- Skilled includes skill level three
- Low-skill includes skill levels four and five.

Table 5: Tāmaki Makaurau Māori occupational skill level by industry, 2018 - Employers

Māori Employers Skill Level					
Industry	1	2	3	4	5
Agriculture, forestry and fishing					
Manufacturing	152		36		
Electricity, gas, waste and water services					
Construction	10	1	5	2	1
Wholesale trade	603			65	
Retail, accomodation and food services	65	42		15	12
Transport, postal and warehousing	135			116	22
Information media, arts and recreation services	125				
Financial and insurance services	85				
Real estate and property services	28				
Professional, scientific, and technical services	54		3		
Public administration and safety	283				
Education and training	30			6	
Health care and social assisatnce	56	8		8	
Administrative, support, and other services.	55		26	14	16
Not elsewhere included	153	26	79		26
Total	1835	78	148	226	78

APPENDIX D SKILL LEVELS BY INDUSTRY

Table 6: Tāmaki Makaurau Māori occupational skill level by industry, 2018 - Employees

Māori Employees Skill Level					
Industry	**1**	**2**	**3**	**4**	**5**
Agriculture, forestry and fishing	136	27	66	185	290
Manufacturing	1,392	467	1,273	2,428	1,594
Electricity, gas, waste and water services	159	53	92	270	118
Construction	1,633	694	2,290	2,054	1,353
Wholesale trade	1,109	382	341	1,898	787
Retail, accomodation and food services	930	1,270	713	2,988	4,010
Transport, postal and warehousing	816	312	427	3,192	837
Information media, arts and recreation services	1,060	305	337	681	357
Financial and insurance services	667	244	158	595	87
Real estate and property services	309	150	215	313	176
Professional, scientific, and technical services	2,268	469	392	818	432
Public administration and safety	1,263	953	744	867	425
Education and training	4,275	420	339	1,049	290
Health care and social assistance	2,835	961	268	1,512	329
Administrative, support, and other services.	1,391	698	1,003	2,096	1,893
Not elsewhere included					
Total	**20,242**	**7,406**	**8,659**	**20,945**	**12,978**

Table 7: Tāmaki Makaurau Māori occupational skill level by industry, 2018 – Self-employed

Māori Self-employed Skill Level					
Industry	**1**	**2**	**3**	**4**	**5**
Agriculture, forestry and fishing					
Manufacturing	133		44		66
Electricity, gas, water and waste services	31				
Construction	406	29	471	143	150
Wholesale trade	73	31		31	45
Retail, accomodation and food services	120	58	37	50	21
Transport, postal and warehousing	51			110	56
Information media, arts and recreation services	433		62		
Financial and insurance services					
Real estate and property services	136		94		
Professional, scientific, and technical services	401	68	102	68	
Public administration and safety	58	19	26	13	
Education and training	136		24	40	24
Health care and social assisatnce	208		24	24	37
Administrative, support, and other services.	227	73	126	90	150
Not elsewhere included					
Total	**2,412**	**277**	**1,009**	**569**	**549**