



Economic value of te reo Māori

Te Māngai Pāho

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Executive summary

Te reo Māori is a taonga that enriches Aotearoa New Zealand's cultural fabric and strengthens our collective identity. Over the past four decades, revitalisation efforts have transformed the presence of te reo Māori in homes, classrooms, workplaces, and communities.

This research, commissioned by Te Māngai Pāho and Whakaata Māori, quantifies the economic dimensions of te reo Māori using data from the Integrated Data Infrastructure (IDI), linked to the 2013, 2018, and 2023 Censuses. It examines how reo Māori proficiency relates to labour market participation, sectoral engagement, income outcomes, and longer-term opportunities for individuals who speak te reo Māori.

The evidence shows that te reo Māori is both a cultural and an economic asset. Speaker numbers are increasing, proficiency levels are strengthening, and the labour-market presence and relevance of reo Māori capability are becoming more visible across sectors and regions.

Key findings

- **A rising wave of highly proficient young speakers is shaping the future of te reo Māori.** High proficiency among those aged 15–34 points to a strong and expanding base of future leaders, workers, and cultural contributors, supporting the long-term sustainability of te reo Māori.
- **The presence of te reo Māori in the workforce has grown rapidly.** The share of workers who speak te reo Māori increased from 1.8 percent in 2013 to 3.3 percent in 2023. This growth is driven primarily by younger generations, with many speakers within the 15–34 age group being highly proficient speakers.
- **Proficiency levels matter.** Māori speakers remain significantly more proficient on average than non-Māori, reflecting the combined influence of Māori-medium education and culturally grounded learning environments.
- **Economic outcomes for speakers of te reo Māori have improved.** Income gaps between speakers and non-speakers have closed and, for Māori speakers, reversed. Speakers now earn slightly more on average than non-speakers, reflecting rising demand for cultural capability and changes in the composition of the workforce.

- **Reo Māori capability is concentrated in key sectors.** Education, public administration, health, and broadcasting have the highest proportions of speakers of te reo Māori, aligning with workforce demand and policy expectations for cultural competency.
- **Reo Māori capability is shaped by workforce and sector composition.** Females account for the majority (55 percent) of highly proficient speakers of te reo Māori, reflecting both participation patterns and the concentration of speakers in key sectors such as education, health, and community services. These sectors are characterised by strong cultural competency expectations and high levels of engagement with Māori communities.
- **System-level drivers of this shift include the expansion of Māori-medium education and the role of Māori media** in supporting the normalisation, accessibility, and everyday use of te reo Māori across Aotearoa New Zealand.

These trends can be understood as a distributional shift rather than uniform growth. The data shows a gradual rebalancing, with speakers of te reo Māori increasingly represented across higher participation and income outcomes over time. This shift is consistent with the nature of human capital development, which occurs cumulatively and across generations, rather than as a single step change.

What this means for Aotearoa New Zealand

The revitalisation of te reo Māori represents one of Aotearoa New Zealand's most significant social transformations. The emergence of a younger generation with high reo Māori proficiency signals long-term sustainability and expanding economic participation.

These speakers are entering roles that value cultural capability, supporting Māori engagement across organisations and contributing to Māori-led enterprises and services.

Strong educational foundations through Māori-medium pathways are associated with both linguistic and academic success. These capabilities are shaping a workforce that is increasingly confident, skilled, and in demand. As these cohorts move into mid-career roles, the economic relevance of reo Māori proficiency is likely to become more pronounced. This pattern reflects a long-term, system-wide change, where increased proficiency, education pathways, and sector demand are gradually reshaping outcomes for speakers of te reo Māori.

While this report focuses on measurable economic outcomes, the wider benefits of te reo Māori remain fundamental. The language strengthens whanaungatanga, cultural identity, social cohesion, and community resilience. Its revitalisation supports equity, partnership, and a more inclusive national identity.

Conclusion

This report has examined the economic dimension of te reo Māori, while recognising that its broader cultural, social, and intergenerational value is fundamental and extends beyond what can be captured in quantitative data. Proficiency is increasing, income outcomes are improving, and te reo Māori is becoming embedded across a wider range of sectors. Sustaining this momentum is likely to depend on ongoing investment in education, broadcasting, cultural infrastructure, and workforce capability.

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1 Foreword

Matariki te whetū tapu o te tau

Matariki whanaunga kore

Matariki whakaiwikore

E hao nei i ngā mate ki te rangi

E hora nei i ngā manako ki te whenua

Ko te tāwharautanga o ngā mate ki te rangi

Ko te tāwharautanga o ngā mātāwaka e ū nei

Kei ngā mana whakatiketike o te rāngai rongo o te wā, tēnā koutou.

Over the past four decades, the revitalisation of te reo Māori has been one of the most significant cultural developments in Aotearoa, reflecting the commitment of whānau, iwi, communities, educators, and broadcasters across generations.

Te Māngai Pāho, with the support of Whakaata Māori, commissioned Business and Economic Research Limited (BERL) to examine the economic value of te reo Māori using population-level data. This research provides an evidence base to better understand how proficiency in te reo Māori is associated with labour market participation, sector engagement, income outcomes, and longer-term opportunities across Aotearoa.

Whakaata Māori welcomes this research as an important contribution to strengthening the evidence base for te reo Māori revitalisation. Together, the findings deepen our understanding of the wider social and economic benefits associated with te reo Māori proficiency and reinforce the importance of continued investment in our language, our people, and our future.

Beyond the findings, this research helps us better understand the long-term outcomes of collective investment in language revitalisation and the conditions that support its continued growth. The findings contribute to the wider Maihi Karauna aspiration to strengthen te reo Māori as a living language across Aotearoa. They reinforce the importance of a system-wide approach, where education, media, public services, iwi, communities, and whānau each play a role in supporting language revitalisation and capability development.

Importantly, this report should be read as part of a broader picture. While it focuses on measurable economic outcomes, the value of te reo Māori extends well beyond the labour market. It underpins

identity, belonging, cultural confidence, intergenerational transmission, and whānau well-being. These are outcomes that are fundamental to revitalisation, but not always fully captured in economic data.

Within that broader picture, one of the most significant findings of this research is the emergence of a younger generation with high levels of reo Māori proficiency. Increasing numbers of highly proficient young speakers aged 15-34 are entering, or have recently entered, the labour market, shaping both current and future workforce capability.

These patterns reflect more than 40 years of revitalisation efforts, including the expansion of Māori-medium education and the role of Māori media in supporting the normalisation, accessibility, and everyday use of te reo Māori.

Māori media, in particular, plays a wider role than is captured through workforce measures alone. It functions as critical language infrastructure by supporting passive acquisition, building confidence, reinforcing identity, and contributing to wider public attitudes and everyday use of te reo Māori.

These wider contributions highlight why the findings should be understood within a broader context of language revitalisation. Economic measures provide one lens, but they do not fully capture language use, confidence, intergenerational transmission, or the strength of te reo Māori within whānau and communities.

In the context of the Maihi Karauna, this report reinforces the importance of continued investment and coordination across the system to support the growth of te reo Māori and its use in everyday life. Sustaining this momentum will depend not only on investment in workforce capability, but also in the wider systems that enable language use, including education, broadcasting, cultural infrastructure, and community-based transmission.

By continuing to invest in the systems that support revitalisation, Aotearoa can strengthen te reo Māori as both a living language and a source of cultural, social, and economic value for current and future generations.

Larry Parr (Ngāti Raukawa, Muaūpoko)
Kaihautū/ Chief Executive
Te Māngai Pāho

2 Key insights at a glance

The numbers that matter

Te reo Māori in the workforce

- **3.3 percent** of the workforce could speak te reo Māori in 2023, **up from 1.8 percent** in 2013
- This represents a **near doubling over a decade** and reflects sustained growth across multiple sectors.

Where te reo Māori is most visible

- **Education: 8.2 percent** of workers can speak te reo Māori (the highest of any sector)
- **Broadcasting: 7.2 percent** of radio workers and **7 percent** of television workers can speak te reo Māori, more than **double the national average**
- **Public administration: 4.9 percent**
- **Health care and social assistance: 4.2 percent.**

These sectors are characterised by public-facing roles, cultural competency expectations, and strong engagement with Māori communities.

Sector growth

- Uptake of te reo Māori has increased across nearly all industries between 2013 and 2023
- Some traditionally low engagement sectors, such as **construction and retail**, recorded the fastest relative growth (from a low base), signalling a broadening recognition of the value of bilingual capability.

Proficiency and future workforce capacity

- Younger people show markedly higher reo Māori proficiency than older cohorts, reflecting decades of investment in immersion, media content, and Māori-medium education
- This creates a growing pipeline of confident speakers entering the labour market, with implications for future workforce capability across education, public services, broadcasting, and Māori-led enterprises.

Income outcomes: What has changed

- **For Māori**, the earnings gap between speakers and non-speakers has **closed and reversed**
 - By **2023**, Māori who speak te reo Māori earned **0.7 percent more**, on average, than Māori non-speakers
- **For non-Māori**, a large historic earnings gap has narrowed substantially.
 - In **2013**, non-Māori speakers earned almost **10 percent less** than non-speakers; by **2023**, this gap had reduced to **near zero**
- Speakers of te reo Māori are increasingly represented in **higher income deciles**, indicating an upward shift in income distribution over time.

3 Introduction

Te Māngai Pāho commissioned BERL, with support from Whakaata Māori, to examine the economic value of te reo Māori using population-level data from Statistics New Zealand's Integrated Data Infrastructure (IDI). The purpose of this research is to understand how proficiency in te reo Māori functions as a form of human capital, and how this capability is associated with education, workforce participation, income, and sectoral engagement across Aotearoa New Zealand.

The findings show that te reo Māori is increasingly visible in the labour market. Speaker numbers have grown, proficiency levels have strengthened, and the economic outcomes associated with reo Māori capability have improved over time. These trends are most evident among younger cohorts, reflecting the long-term effects of Māori-medium education and revitalisation pathways.

While this report focuses on measurable economic outcomes, these represent only one dimension of value and should be understood alongside the broader cultural, social, intergenerational, and identity-based significance of te reo Māori as a taonga.

3.1 Why this report matters now

Recent Census and administrative data provide the first opportunity to observe how several decades of investment in the revitalisation of te reo Māori are translating into workforce and income outcomes at a population level. For the first time, a large cohort of highly proficient speakers educated through immersion and Māori-medium pathways is entering, or has recently entered, the labour market.

At the same time, expectations for Māori language capability have expanded across public services, education, health, broadcasting, and other public-facing sectors.

These changes mean proficiency in te reo Māori is no longer confined to cultural domains alone, but is increasingly relevant to employment, organisational capability, and economic participation.

This report provides an evidence base to inform understanding of these changes. It does not assess the impact of specific programmes or funding decisions, but instead describes how proficiency in te reo Māori is distributed across the population, how it is used across sectors, and how it is associated with economic outcomes over time.

3.2 Scope and approach

This analysis draws on linked IDI datasets, integrating information from the 2013, 2018, and 2023 Censuses with administrative records from Inland Revenue, the Ministry of Social Development, the Ministry of Education, and the Household Labour Force Survey. These data allow us to examine the following:

- Who speaks te reo Māori, and at what level of proficiency
- How speakers of te reo Māori are participating in the workforce
- How income and labour market outcomes differ by proficiency level.

The report focuses on associations observed in population-level data. It does not attribute outcomes to individual organisations, initiatives, or funding streams, and it does not model future scenarios. The results presented in this report can be interpreted as reflecting a gradual distributional shift in labour market outcomes over time, rather than a discrete or uniform change. This aligns with the nature of language proficiency as a form of human capital, which develops over long timeframes and across cohorts.

3.3 Māori media in context

Māori media and language institutions play distinct but complementary system roles within the broader te reo Māori ecosystem. Together, they function as critical language infrastructure that supports capability development, demand generation, quality assurance, and everyday use of te reo Māori. This ecosystem also includes education, broadcasting, public services, iwi and community initiatives, and whānau-based transmission. Many of the sectors where reo Māori capability is most visible, particularly broadcasting and other public-facing roles, sit within, and are reinforced by, this wider system.

Within this system:

- Te Māngai Pāho – Demand generation and capability activation
 - Funds Māori language content across broadcasting and digital media
 - Supports sustained demand for reo Māori skills in content production, media, and associated industries
 - Expands the visibility and accessibility of te reo Māori, reinforcing its everyday use across audiences

- Whakaata Māori – Delivery platform and capability development
 - Delivers Māori language broadcasting, including high-proportion and full-immersion reo Māori content
 - Acts as a primary platform for dissemination, enabling audiences to access and engage with te reo Māori
 - Builds workforce capability by employing and developing reo Māori speakers within the media sector.

While the IDI does not allow us to identify engagement with, or outcomes from, specific activities funded or delivered by these agencies, the patterns observed in this report help to contextualise their combined contribution across these system functions. Collectively, they support the growth of reo Māori capability, reinforce demand for its use, and enable its normalisation within the workforce and the economy more broadly.

3.4 Te reo Māori as human capital

In economics, ‘human capital’ refers to the skills, knowledge, and capabilities embodied in people that contribute to productivity and participation in work and society. Language proficiency is widely recognised as a form of human capital because it requires sustained investment to develop and can influence employment opportunities and earnings.

This report applies that framework to te reo Māori. Proficiency in te reo Māori is treated as a productive capability that can enhance participation in particular roles, especially those requiring cultural competency, communication, and engagement with Māori communities. While te reo Māori carries cultural, social, and spiritual significance beyond economic measures, examining it through a human capital lens allows us to understand one important dimension of its value in contemporary Aotearoa New Zealand.

3.5 Proficiency rather than speaking status

A key methodological choice in this report is to focus on proficiency, rather than simply on whether someone can speak te reo Māori. Speaking status alone masks meaningful differences in capability.

Proficiency better reflects how confidently individuals can use the language in real-world settings, including workplaces, and is therefore more relevant when examining economic outcomes.

Proficiency is measured on a five-point scale derived from Census responses, where levels one to three indicate the ability to hold a conversation in te reo Māori. Throughout the report, this range is referred to as “conversational” or “high” proficiency.

3.6 Revitalisation context

The patterns observed in this analysis reflect more than 40 years of revitalisation of te reo Māori. Since the establishment of Kōhanga Reo in the early 1980s and the subsequent growth of Māori-medium education, a growing share of the population has had access to immersion-based language learning from an early age.

Many of the speakers captured in this data include people now in their late twenties through to mid-career, as well as younger cohorts still in education. They represent the most proficient generation of speakers of te reo Māori seen in many decades. This historical context is essential for understanding why reo Māori proficiency is rising, and why its economic relevance is becoming more visible across sectors.

3.7 Beyond economic measures

The revitalisation of te reo Māori encompasses a wide range of outcomes that extend beyond economic participation. These include identity formation, cultural expression, confidence, whānau well-being, and intergenerational transmission.

While these outcomes are central to the long-term health of the language, they are not directly measurable using administrative datasets. This report therefore presents a partial view, focused on economic associations, and should be interpreted alongside kaupapa Māori and community-based understandings of value.

4 Who is speaking te reo Māori? Understanding proficiency across Aotearoa New Zealand

Key findings

- **Younger people are driving proficiency gains.** Those aged 15–34 consistently demonstrate significantly higher proficiency than older groups, reflecting the long-term impact of Kōhanga Reo, Māori-medium education, and revitalisation initiatives
- **Māori speakers are far more proficient overall.** Nearly half of Māori speakers of te reo Māori are in the highest proficiency levels, compared to fewer than one in 10 non-Māori speakers of te reo Māori, highlighting the enduring strength of Māori-led language transmission
- **Females lead among high proficiency speakers.** Females are in the majority among high-proficiency speakers, accounting for 55 percent of all highly proficient speakers of te reo Māori. This reflects the gender composition of sectors where te reo Māori is most visible, particularly education and health care.

Drivers and influences

- **Education pathways:** The growth of Māori-medium education has created a new generation of highly proficient young speakers.¹ Their reo Māori capability reflects immersion-based learning and strengthened intergenerational transmission
- **Cultural access and connection:** Māori communities continue to sustain environments where te reo Māori is spoken, reinforced, and valued across formal and informal contexts, with Māori broadcasting and media extending the reach and visibility of te reo Māori
- **Learning later in life:** Non-Māori learners often begin learning te reo Māori as adults, whether through workplaces, community programmes, or personal interest. This can constrain opportunities to reach high-proficiency levels compared to those who have early exposure.

¹ <https://web-assets.education.govt.nz/s3fs-public/2024-05/BN-1321550-Maori-education-overview.pdf>

4.1 Understanding proficiency across Aotearoa New Zealand

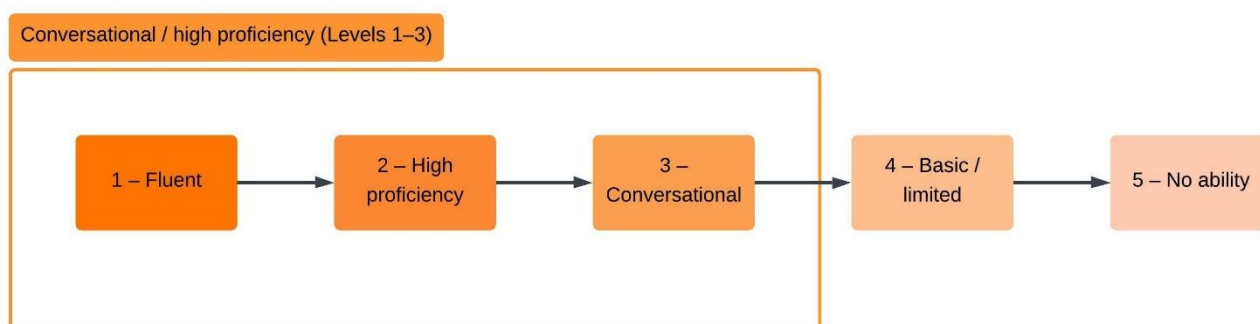
This section examines who is speaking te reo Māori across Aotearoa New Zealand, and at what level of proficiency, using population-level data from the IDI. It provides an overview of reo Māori capability across the population and establishes key patterns that are explored in more detail in later sections. These patterns reflect a combination of language acquisition pathways and broader socioeconomic, educational, and labour market factors, and should not be interpreted as driven by reo Māori proficiency alone.

The focus here is on self-reported ability to speak te reo Māori, rather than language use, exposure, or the influence of specific initiatives. The results describe broad population trends and differences between groups, and do not attribute outcomes to particular programmes, organisations, or funding settings. The research focuses on measurable proficiency outcomes, and should be considered alongside wider revitalisation impacts not captured in the data.

4.1.1 How reo Māori proficiency is measured

Reo Māori proficiency is measured using responses from the New Zealand Census, where individuals are asked whether they can speak te reo Māori. Respondents are grouped into standard Census proficiency categories, ranging from no ability to higher levels of fluency.

Figure 1 Proficiency in te reo Māori (Census scale)



Source: BERL analysis

Proficiency in te reo Māori is measured on a five-point scale (Figure 1). Levels 1 to 3 indicate conversational or high proficiency and are used throughout this report to represent functional language capability.

These measures capture self-reported speaking ability rather than frequency or context of use, such as home, work, or media, how proficiency was acquired, or the strength of language use within whānau and communities. As such, they should be interpreted as an indicator of capability rather than a direct measure of language use.

4.2 Proficiency by age group

Across Aotearoa New Zealand, age is one of the strongest predictors of proficiency in te reo Māori. Younger people, particularly those under 35, show markedly higher capability. This pattern underscores the role of immersion models and revitalisation settings in supporting reo Māori acquisition.

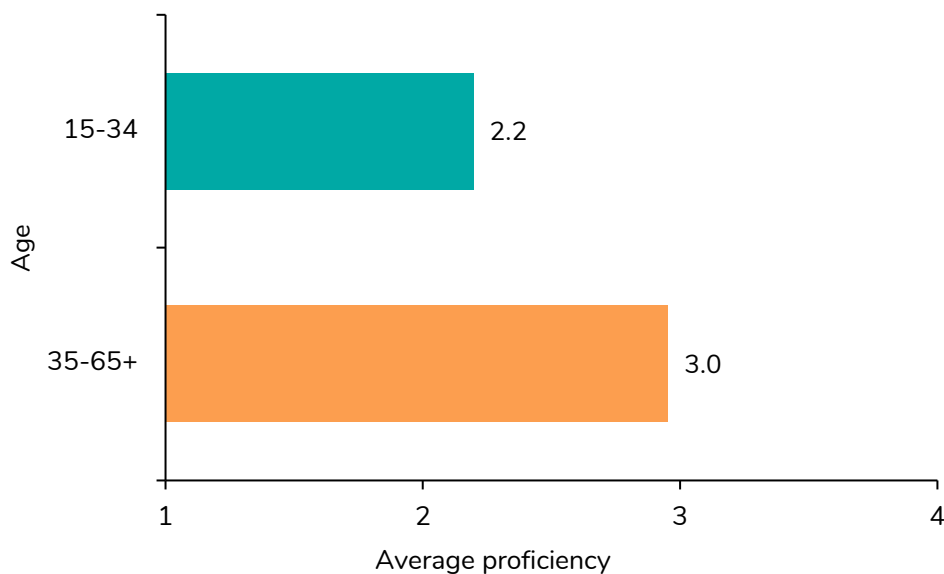
Early exposure is central to this trend. Research suggests that early second language exposure is associated with stronger long-term language outcomes, including vocabulary, grammar, and conversational skills.² In the Aotearoa New Zealand context, this aligns directly with the emergence of the Kōhanga Reo generation, whose formative experiences in Māori-medium education environments have translated into enduring language confidence.

Key narrative points

- The proficiency gap between 15–34-year-olds and those aged 35–65+ is nearly a full level on the five-point proficiency scale (Figure 2)
- Many highly proficient speakers are at the early stages of their careers or are still in education, shaping both current and future labour market dynamics
- As these cohorts age into mid-career roles, the availability of bilingual capability in key sectors is expected to expand.

² Barac, R., Bialystok, E., Castro, D. C., & Sanchez, M. (2014). The cognitive development of young dual language learners: A critical review. *Early childhood research quarterly*, 29(4), 699–714. <https://pmc.ncbi.nlm.nih.gov/articles/PMC4180217/>

Figure 2 Age group proficiency for those who identify as having learnt te reo Māori, 2023



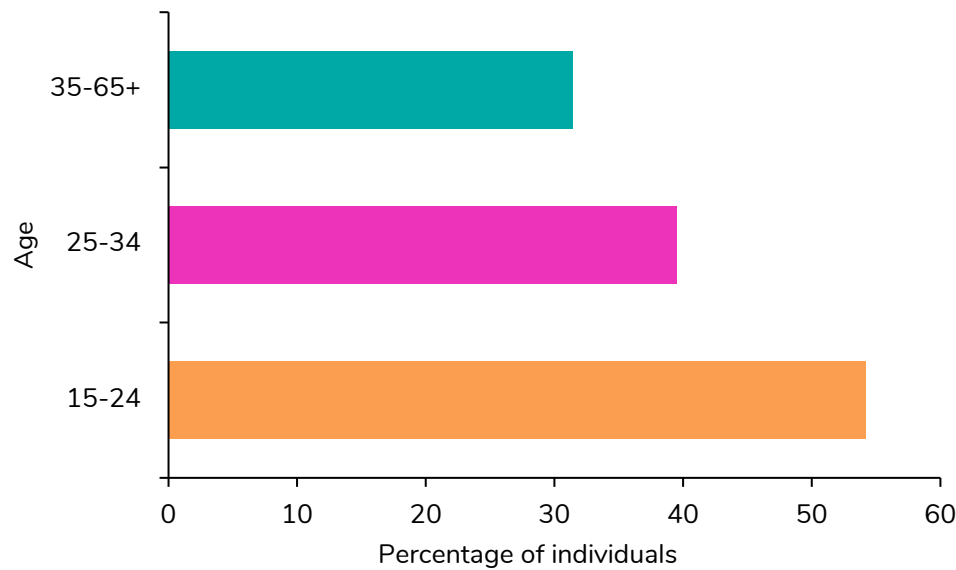
Source: BERL analysis

Kōhanga Reo generation

The Kōhanga Reo movement, established in the early 1980s as one of the foundational pillars of language revitalisation, has reshaped the demographic profile of reo Māori proficiency. Speakers under 35 demonstrate almost 50 percent high proficiency, nearly 1.5 times the rate observed in older age groups (Figure 3).

This points to a strong pipeline of confident speakers moving into the workforce. As this generation matures, opportunities expand across areas such as bilingual services, Māori-led enterprises, cultural industries, and reo Māori-related goods and services.

Figure 3 Speaker age group percentage at proficiency level one or two, 2023



Source: BERL analysis

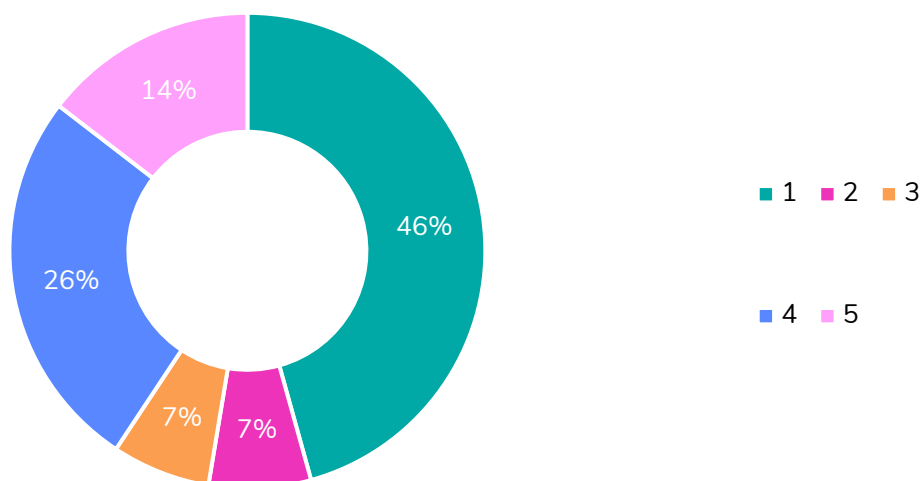
4.3 Proficiency by ethnicity

Ethnicity remains the most important determinant of proficiency. Māori speakers are substantially more likely to reach high proficiency levels, with 46 percent at the top proficiency level, compared to nine percent of non-Māori speakers (Figure 4). Conversely, over half of non-Māori speakers are at the lowest proficiency level, compared to only 14 percent of Māori speakers (Figure 5).

Why this difference exists

- **Māori-medium education:** Māori learners are more likely to have attended immersion pathways, bilingual units, or culturally grounded early childhood services
- **Cultural environments:** Māori are more often embedded in whānau, marae, and community contexts where te reo Māori is spoken and nurtured
- **Age of acquisition:** Many non-Māori begin learning later in life, which international evidence links to slower progress and lower maximum competency.³

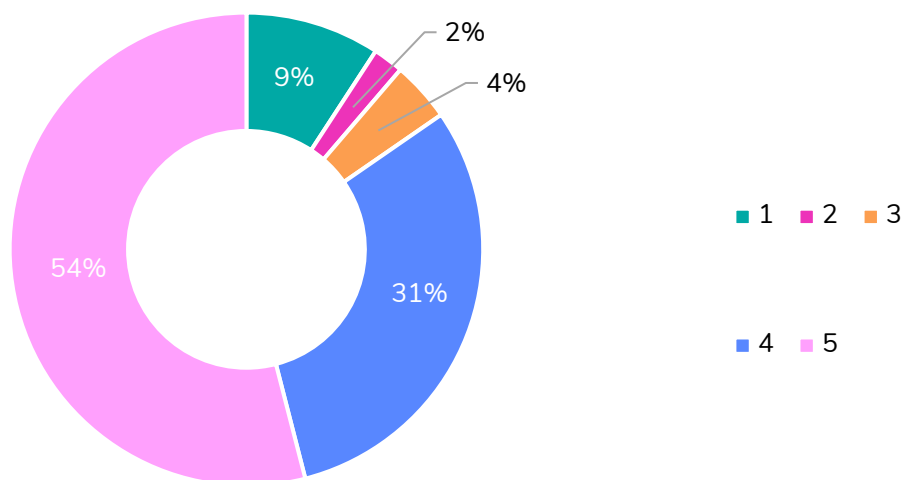
Figure 4 Proficiency of Māori speakers of te reo Māori, by proficiency level one to five, 2023



Source: BERL analysis

³ Hartshorne, J. K., Tenenbaum, J. B., & Pinker, S. (2018). A critical period for second language acquisition: Evidence from 2/3 million English speakers. *Cognition*, 177, 263–277. <https://doi.org/10.1016/j.cognition.2018.04.007>

Figure 5 Proficiency of non-Māori speakers of te reo Māori, by proficiency level one to five, 2023



Source: BERL analysis

4.4 Proficiency by gender

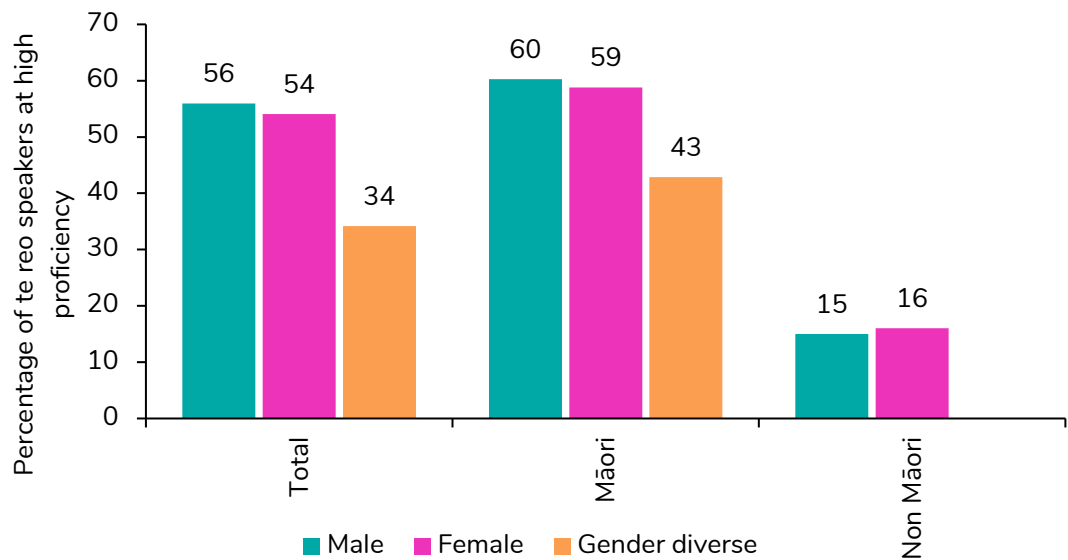
Gender patterns in proficiency reflect both demographic and workforce realities. Overall proficiency rates for males and females are similar (Figure 6). However, among those who are highly proficient (levels one to two), females represent the majority, accounting for 55 percent of this group (Figure 7).⁴

Contributing factors

- Higher proportions of females work in sectors where te reo Māori capability is valued or visible, including education, health, and community services
- Gender-diverse learners are less represented among high-proficiency speakers, reflecting small sample sizes, limited data, and potential barriers to accessing language pathways.

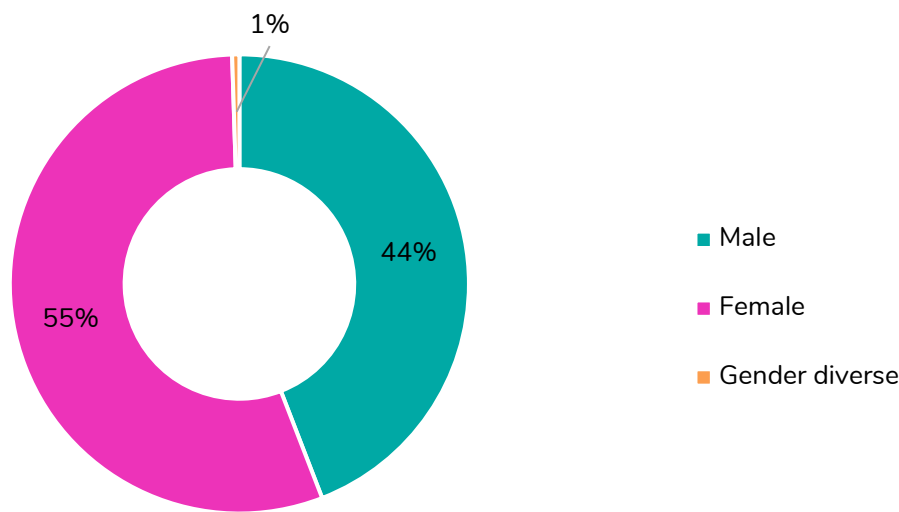
⁴ Note that the graph excludes data on non-Māori gender diverse speakers due to data limitations.

Figure 6 Percentage of speakers who speak te reo Māori at a moderate or high proficiency level (one to three), 2023



Source: BERL analysis

Figure 7 Percentage of high proficiency speakers by gender, 2023



Source: BERL analysis

4.5 Proficiency of Māori by region

While comparable regional data is not available for non-Māori, 2025 research by BERL estimated the number of Māori who speak te reo Māori across different regions (Figure 8).⁵ Regional patterns reflect the interaction between demography, education infrastructure, cultural connectedness, and economic structure.

North Island regions, particularly those with strong Māori populations and well-established immersion schooling networks, show significantly higher proficiency among Māori speakers.

Regional strengths

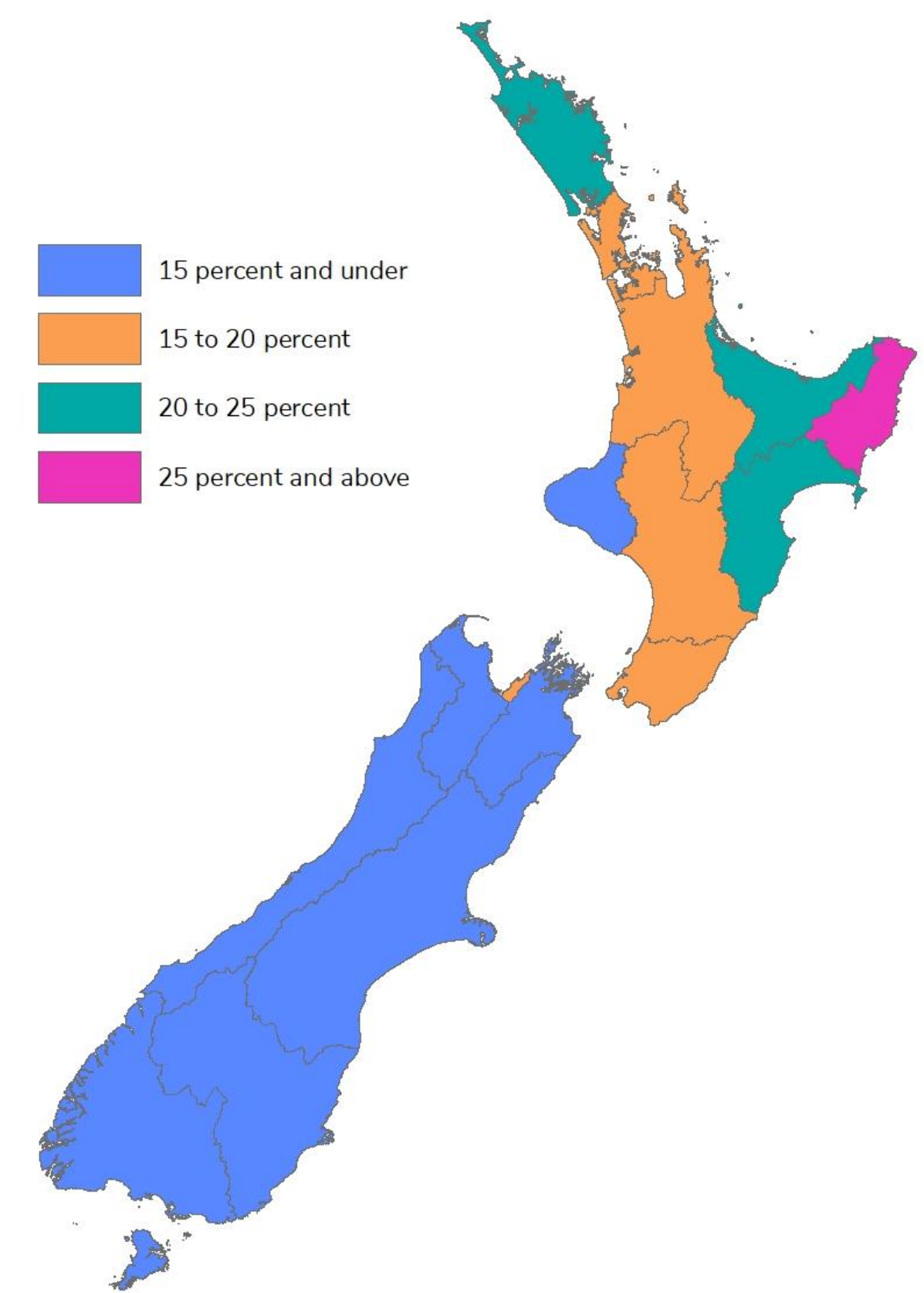
- Te Tairāwhiti (Gisborne) leads the country with around 29 percent of Māori able to hold a conversation in te reo Māori
- Te Moana-a-Toi (Bay of Plenty) (25 percent), Te Tai Tokerau (Northland) (23 percent), and Te Matau a Māui (Hawke's Bay) (21 percent) also exceed the national average
- These regions share characteristics such as strong cultural institutions, high Māori population density, and well-established Māori-medium education.

Regional challenges

- Te Waipounamu (South Island) regions typically show proficiency rates between 10 and 12 percent
- Contributing factors include lower Māori population density, fewer Māori-medium schools, and fewer informal speaking environments
- Despite lower proficiency, these regions often support higher wages due to their economic structures, illustrating that cultural strength and economic strength do not always align geographically.

⁵ Business and Economic Research Limited (2025). Mapping te reo Māori. Tokona te Raki. <https://berl.co.nz/our-mahi/mapping-te-reo-maori-use>

Figure 8 Percentage of Māori who are able to hold a conversation in te reo Māori, 2023



Source: BERL analysis

Implications

Regional differences in reo Māori proficiency reflect wider social, cultural, and economic dynamics across Aotearoa New Zealand.

Areas with high proficiency tend to have strong and cohesive Māori communities, where intergenerational transmission of te reo Māori is more visible and embedded in everyday life.

At the same time, these regions often have fewer large employers and narrower economic bases, contributing to lower median wages and fewer high-income opportunities compared with major urban centres. In contrast, regions with larger cities, like Tāmaki Makaurau (Auckland) and Te Whanganui-a-Tara (Wellington), offer a wider range of high-value employment opportunities but can present fewer natural opportunities for frequent reo Māori use due to more dispersed communities.

These patterns intersect with mobility. Many young Māori move from their home regions to urban centres for study, training, and employment. As they relocate, they carry their reo Māori proficiency with them, contributing to the gradual spread of te reo Māori in urban environments while maintaining strong language communities in regions with high cultural cohesion.

Looking ahead, the economic value of te reo Māori will depend on how effectively bilingual capability is supported across both urban centres and more rural or regionally based communities.

Strengthening education pathways, supporting Māori-led enterprises in regional areas, and enabling culturally capable workplaces in urban regions can help to ensure that highly proficient speakers, particularly young adults, are able to thrive wherever they choose to live.

5 How the workforce is using te reo Māori

This section focuses on how workers are using te reo Māori across sectors, including patterns of high and low engagement and areas of sector growth, and should be considered alongside wider revitalisation impacts not captured in the data.

Key findings

- **Te reo Māori is most visible in public-facing and service-orientated sectors.** Education, public administration, health care, and arts and recreation all show above-average proportions of speakers of te reo Māori. This reflects strong cultural competency expectations and longstanding engagement with Māori communities.
- **Growth is occurring across nearly all sectors, even those not traditionally associated with te reo Māori.** Construction and retail, both starting from a low base, have experienced substantial proportional increases, signalling a broadening recognition of the value of bilingual capability.
- **Workplaces with a cultural and interpersonal focus show the highest proficiency integration.** Education and broadcasting, where communication and cultural literacy are central, continue to lead sector uptake and provide key pathways for proficient speakers.

Drivers and influences

- **Labour demand for cultural competency.** Public sector reforms and sector-specific expectations, particularly in health and education, have increasingly embedded te reo Māori and tikanga within service frameworks.
- **Labour supply shifts.** Younger, highly proficient cohorts entering employment are expanding the available bilingual workforce, enabling sectors to fill cultural capability gaps more readily.
- **Policy settings.** The Māori Language Act 2016 and commitments under Maihi Karauna have reinforced expectations for te reo Māori in frontline and publicly funded environments, shaping recruitment and organisational culture.
- These drivers highlight that workforce patterns reflect both the distribution of reo Māori capability and structural demand across sectors, making it difficult to isolate independent effects of language proficiency.

5.1 High-engagement sectors

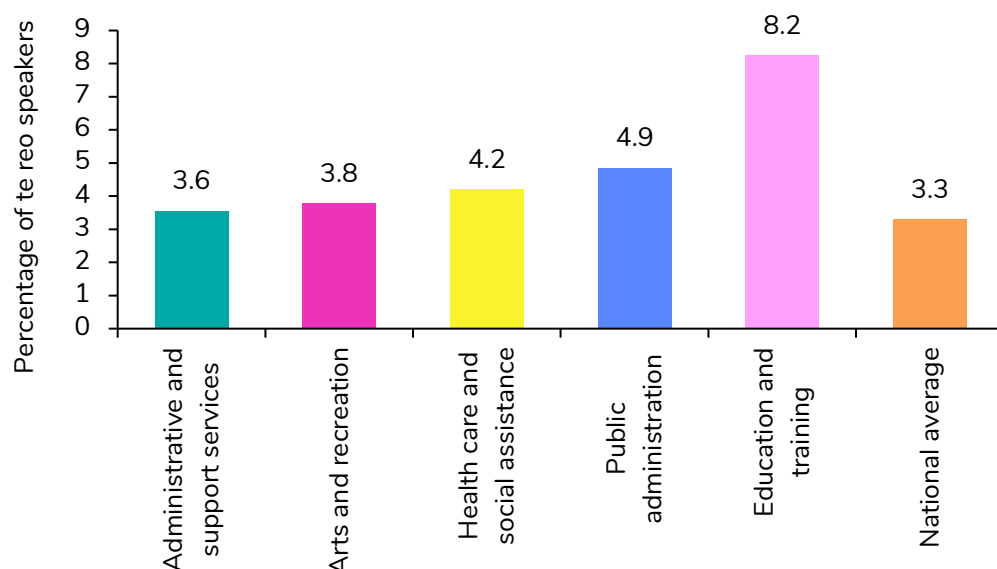
The national average share of the workforce able to speak te reo Māori is 3.3 percent (Figure 9).

Several sectors exceed this threshold by a significant margin, reflecting a combination of structural demand and cultural drivers.

Education and training

At 8.2 percent, the education sector has the highest proportion of speakers of te reo Māori. This includes early childhood, primary, secondary, and tertiary educators, with preschool and support roles showing the strongest presence. These patterns reflect both workforce expectations and the sector's direct role in language transmission.

Figure 9 Percentage of sector workers who speak te reo Māori (top five industries), 2023



Source: BERL analysis

Public administration and safety

Public administration records 4.9 percent of workers able to speak te reo Māori. This aligns with public sector imperatives to strengthen Crown–Māori relationships and uphold cultural competency standards in service design and delivery.

Health care and social assistance

Health care sits at 4.2 percent, with demand driven by the need to serve Māori communities more effectively. Communication, trust-building, and culturally grounded care underpin this workforce capability.

Arts and recreation, and administrative and support services

Both sectors sit above or close to the national average, reflecting roles that rely heavily on interpersonal interaction and cultural expression.

Why te reo Māori is concentrated here

These sectors share four common characteristics:

- High levels of interpersonal communication
- Direct engagement with whānau, communities, or the public
- Institutional commitments to cultural responsiveness
- Workforce composition that aligns with reo Māori capability, including higher proportions of female workers, who are more represented among highly proficient speakers.

These factors create sustained demand for, and enable the concentration of, bilingual capability and proficiency.

5.2 Low engagement sectors

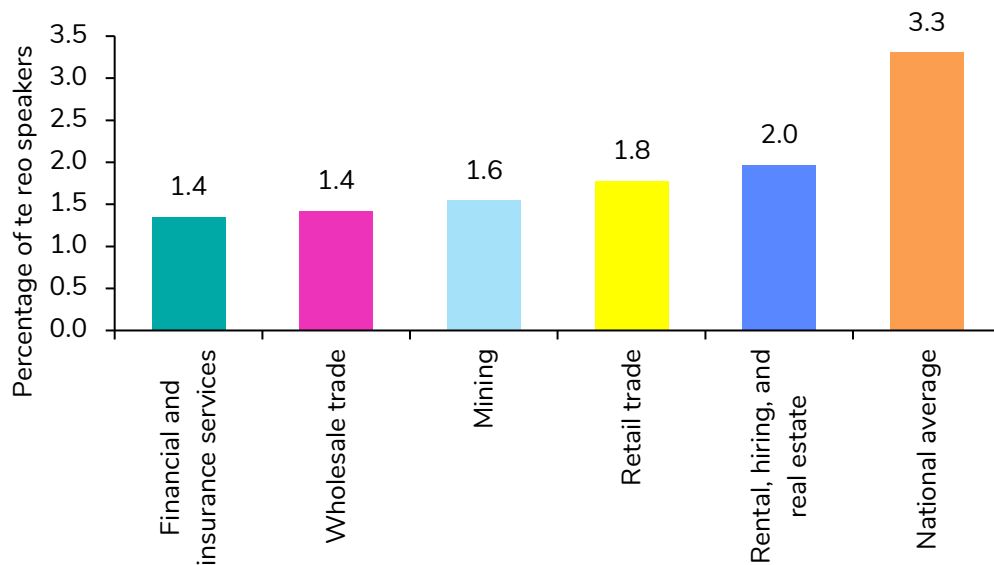
Several large sectors fall below the national average, including financial and insurance services, wholesale trade, mining, retail, and real estate (Figure 10).

Structural reasons for lower uptake

- **Nature of work:** Mining prioritises operational efficiency and safety, and standardised communication practices dominate.⁶ Manufacturing, the sixth lowest sector, has similar drivers to mining.
- **Customer profiles:** Sales-driven roles historically have fewer customers who speak te reo Māori, reducing incentives for bilingual engagement.
- **Limited organisational expectations:** In many lower-engagement sectors, cultural competency has not yet been embedded as a strategic priority.

⁶ Haar, J., Ka'ai, T., Ravenswood, K., & Smith, T. (2019). *Ki te tahatū o te rangi: Normalising te reo Māori across non-traditional Māori language domains*. Te Taura Whiri i te Reo Māori. <https://openrepository.aut.ac.nz/items/23617f73-21cc-4d24-9b7f-297a4ecef0a>

Figure 10 Percentage of sector workers who speak te reo Māori (bottom five sectors), 2023



Source: BERL analysis

Why future growth is likely

Despite low current uptake, demographic and market conditions are changing:

- Businesses increasingly recognise that integrating te reo Māori can improve customer experience, brand alignment, and social licence
- Bilingual capability is emerging as a point of differentiation in competitive service environments
- National revitalisation strategies, including Maihi Karauna, alongside corporate social responsibility efforts, are accelerating workplace adoption.

5.3 Sector highlights for speakers te reo Māori

Two sectors, education and broadcasting, stand out as leaders in employing speakers of te reo Māori. These sectors are notable not only for their current uptake, but also for their role in normalising and amplifying te reo Māori across society.

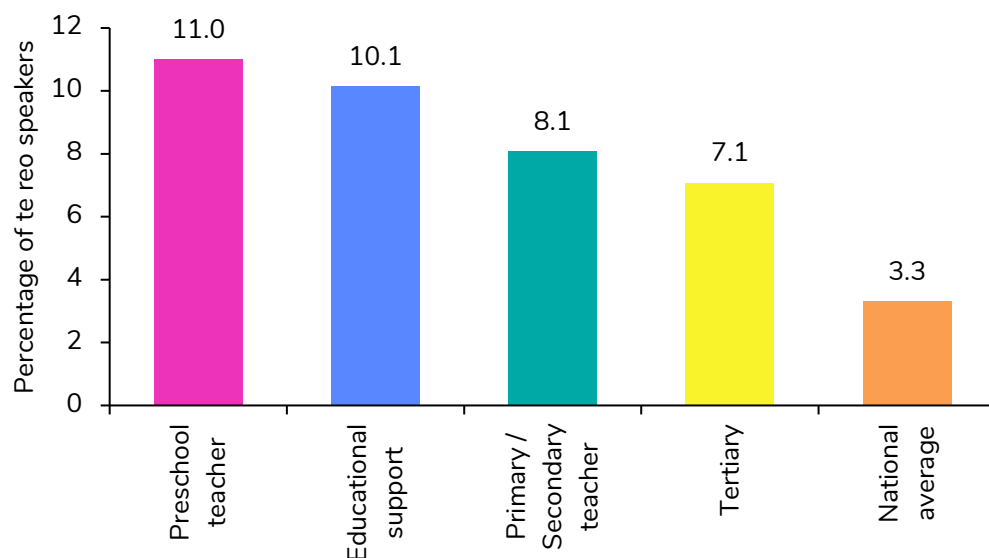
Education workforce

Preschool teachers (11 percent), educational support staff (10.1 percent), and primary and secondary teachers (8.1 percent) show high levels of proficiency in te reo Māori (Figure 11). Tertiary educators, at 7.1 percent, also sit at more than twice the national average.

These patterns highlight:

- The sector's role as a cornerstone of revitalisation
- Strong labour demand driven by immersion pathways and bilingual units
- Clear career opportunities for highly proficient speakers across all education levels.

Figure 11 Percentage of education workforce who can speak te reo Māori, 2023



Source: BERL analysis

Broadcasting workforce

The broadcasting sector workforce (radio at 7.2 percent and television at 7.0 percent) shows some of the strongest uptake outside education (Figure 12).

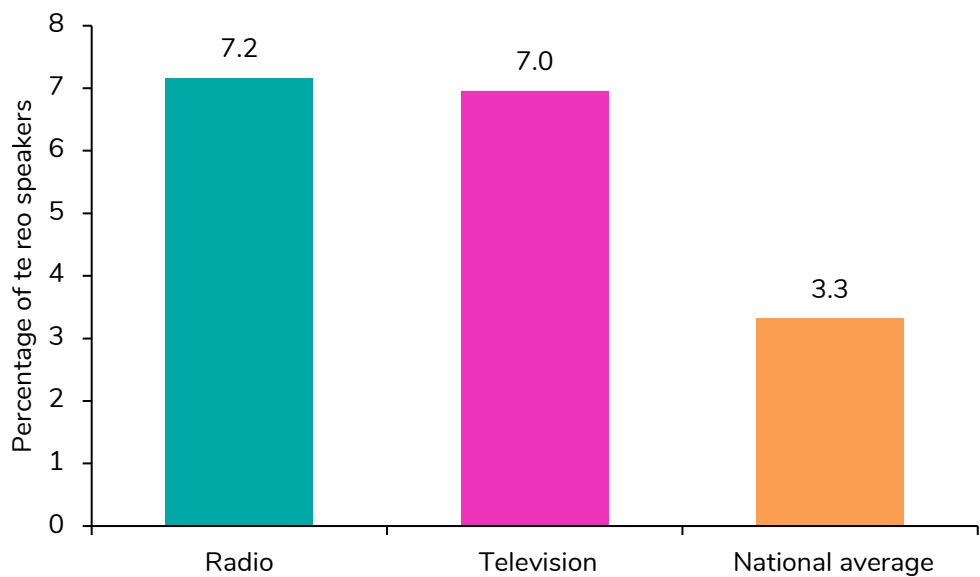
Key drivers include the following:

- Growth in Māori media content
- Rising audience expectations for reo Māori presence
- Policy and funding settings that support Māori broadcasting.

These factors position broadcasting as an important contributor to the visibility and status of te reo Māori.

The role of broadcasting extends beyond employment. Māori media increases exposure to te reo Māori, supports language learning and confidence, and creates regular opportunities for language use across diverse audiences. These effects contribute to the wider revitalisation system but are not fully captured through workforce measures alone.

Figure 12 Percentage of broadcasting workforce who can speak te reo Māori, 2023



Source: BERL analysis

While broadcasting appears here as a distinct employment sector, its role within the reo Māori ecosystem extends well beyond workforce participation. Māori media functions as critical language infrastructure, supporting the normalisation, accessibility, and everyday use of te reo Māori across Aotearoa New Zealand. Through television, radio, and digital platforms, Māori media increases exposure to te reo Māori for both speakers and non-speakers, reinforcing learning and supporting confidence in language use. It provides regular opportunities to hear and engage with te reo Māori in a range of contexts, including news, entertainment, education, and cultural content.

These functions are particularly important in contexts where opportunities for immersion or community-based language use may be limited. In this way, Māori media helps extend the reach of te reo Māori beyond formal education settings and supports ongoing language use across the life course. The impact of Māori media is therefore not fully reflected in workforce or employment measures alone. Its contribution includes supporting intergenerational transmission, strengthening

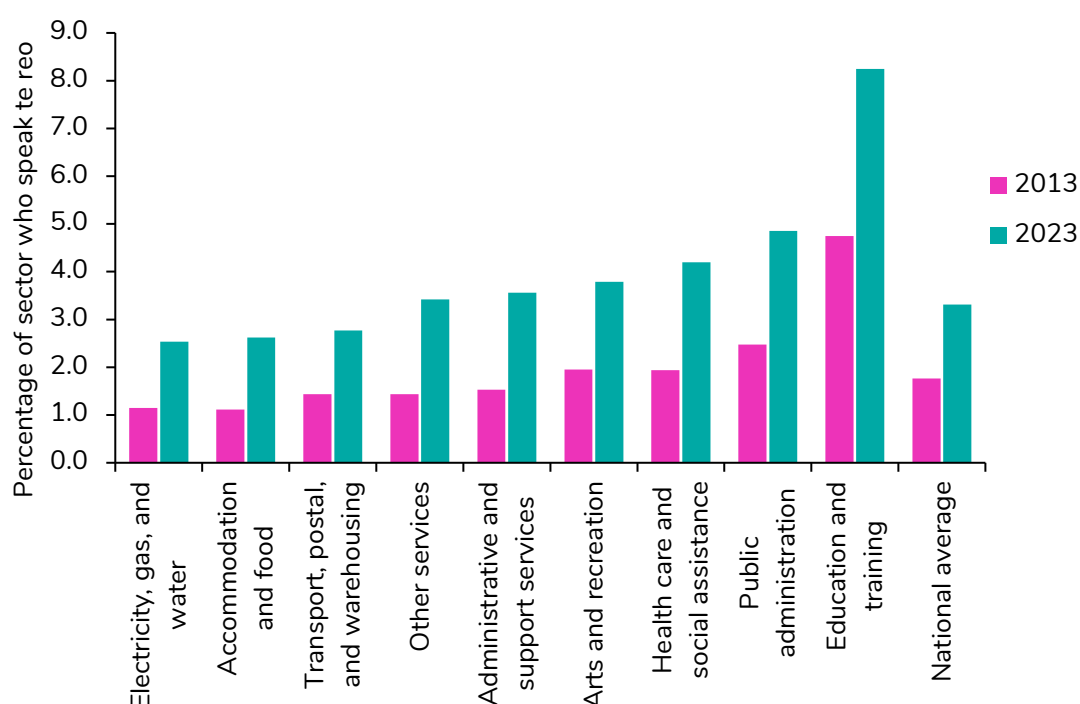
cultural connection, and enabling the broader uptake of te reo Māori across society. These system-level effects sit alongside the economic and employment patterns observed in this report.

This expanding role of Māori media contributes to broader distributional change over time by supporting increased exposure, capability, and confidence, which in turn shape how te reo Māori is represented across the workforce.

5.4 Sector growth for speakers of te reo Māori

Across the 2023 Census population, nearly all sectors experienced growth in the proportion of workers who speak te reo Māori. Overall uptake increased from 1.8 percent in 2013 to 3.3 percent in 2023 (Figure 13).

Figure 13 Change in percentage of speakers of te reo Māori within top sectors, 2013–2023



Source: BERL analysis

Strongest growth: Education, public administration, and health

- Education increased from 4.8 to 8.3 percent, reflecting sustained sector-level commitments and workforce demand

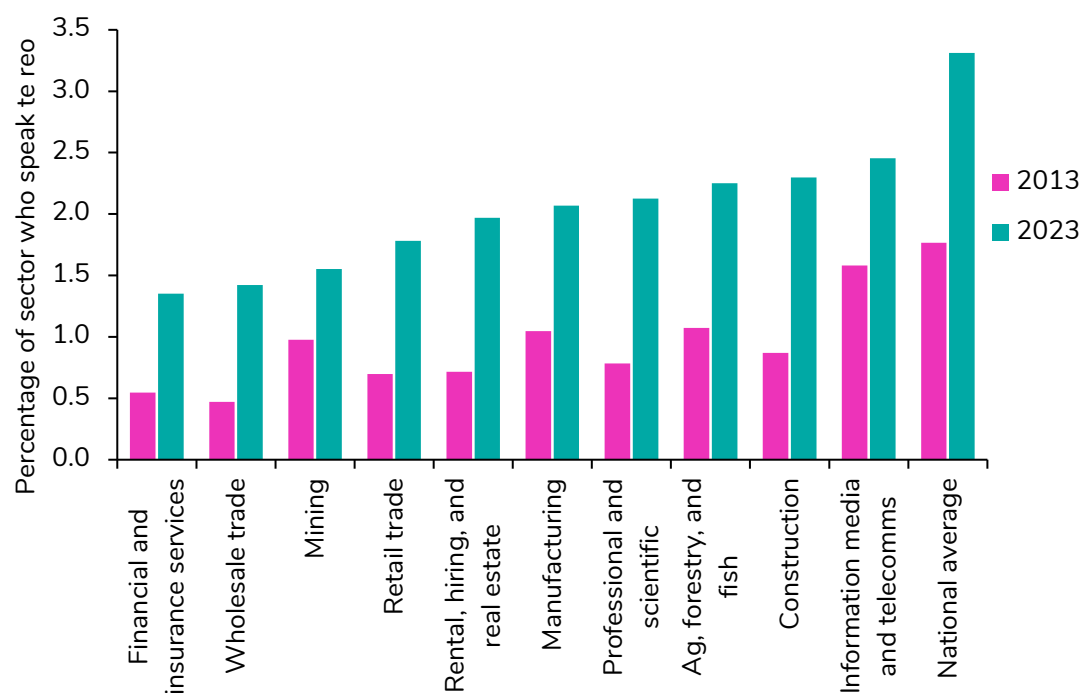
- Public administration and health nearly doubled their shares of speakers of te reo Māori, driven by cultural competency expectations and the Māori Language Act 2016.^{7,8}

Emerging growth in traditionally low engagement sectors

Construction and retail recorded relative growth of 164 percent and 155 percent respectively (Figure 14). Possible drivers include the following:

- Entry of younger, more proficient speakers into the workforce
- An increase in Māori-led projects requiring bilingual communication
- Growing customer-facing expectations for the use of te reo Māori.

Figure 14 Change in percentage of speakers of te reo Māori within different bottom sectors, 2013–2023



Source: BERL analysis

⁷ <https://www.publicservice.govt.nz/data/public-service-census/capability-mobility/maori-crown>

⁸ <https://www.publicservice.govt.nz/assets/DirectoryFile/Government-Workforce-Policy-Statement-2024.pdf>

6 How much are they earning? Income effects of te reo Māori

Key findings

Income outcomes reflect both individual capability and the sectors in which speakers are employed. As a result, differences between speakers and non-speakers should be interpreted as system-level patterns rather than the direct economic return to reo Māori proficiency.

- **Earnings gaps have closed and, for Māori speakers of te reo Māori, reversed.** Māori speakers of te reo Māori now earn slightly more (0.7 percent) than Māori non-speakers of te reo Māori, after earning less in both 2013 and 2018. Non-Māori speakers of te reo Māori have also seen the earnings gap narrow substantially.
- **Nominal incomes have risen sharply for speakers.** Between 2018 and 2023, the average income of Māori speakers of te reo Māori grew by 73 percent, compared with 67 percent for Māori non-speakers. Non-Māori speakers of te reo Māori experienced a similar increase.
- **Income distribution is shifting upward.** Speakers of te reo Māori are increasingly represented in higher income deciles, particularly deciles six, seven, nine, and 10, indicating increasing representation in higher income deciles as conversational and mid-level proficiency become more economically valued.⁹

Drivers and influences

- **Policy changes:** The Māori Language Act 2016 and Maihi Karauna have increased organisational expectations for bilingual capability, particularly in public services.
- **Labour supply shifts:** Younger, highly proficient speakers of te reo Māori entering the workforce are lifting overall earning potential and changing the occupational mix of the speaker population.
- **Demand for cultural capability:** Organisations increasingly recognise te reo Māori as an asset for customer engagement, brand identity, and culturally aligned service delivery.

⁹ <https://www.stats.govt.nz/information-releases/new-zealand-index-of-socioeconomic-deprivation-2023-census/>

This section focuses on the income effects associated with te reo Māori from a human capital perspective, and should be considered alongside wider revitalisation impacts not captured in the data. From a distributional perspective, the results indicate a gradual upward shift, with speakers of te reo Māori increasingly represented across higher income deciles over time. Rather than a uniform increase in earnings, this reflects changes in the composition of the workforce, as more highly proficient cohorts enter employment and progress through different sectors.

6.1 Income difference for speakers of te reo Māori

There are multiple ways in which the economic benefits of te reo Māori can be observed. The *Revitalising te reo Māori social value report* from Whakaata Māori highlights the broader societal value. This includes \$9 million generated through active learners improving their proficiency, and \$16 million in value associated with increased use of te reo Māori within whānau.¹⁰

While these figures provide useful context at a societal level, this report focuses on individual-level income outcomes, as a measure of how reo Māori capability interacts with labour market returns, and should be interpreted cautiously. Two important caveats apply.

Firstly, many highly proficient speakers of te reo Māori are under 35 and therefore at earlier stages of their careers. Secondly, Māori earn less on average than non-Māori, reflecting long-standing structural and socio-economic inequities. While language revitalisation and the growth of the Māori economy, may contribute to narrowing these gaps over time, these disparities remain evident in current data.

Income patterns for speakers of te reo Māori have shifted markedly over the past decade. In 2013, Māori who spoke te reo Māori earned slightly less than Māori non-speakers, with a gap of around 0.6 percent (Figure 15).¹¹ By 2018, this gap had widened to nearly three percent, indicating that early revitalisation gains had not yet translated into income advantages.

¹⁰ Whakaata Māori. (2025, April 30). *Whakaata Māori releases 2025 social value report: \$114 million in measured impact*. Whakaata Māori. <https://www.whakaatamaori.co.nz/media-releases/whakaata-maori-releases-2025-social-value-report-114-million-in-measured-impact>

¹¹ As outlined in Appendix A Methodology, this section uses counts data for all individuals who reported speaking te reo Māori, without distinguishing proficiency levels. In contrast, the subsequent sections draw on proficiency data from the IDI, enabling a more detailed analysis of how incremental improvements in language capability influence labour market outcomes.

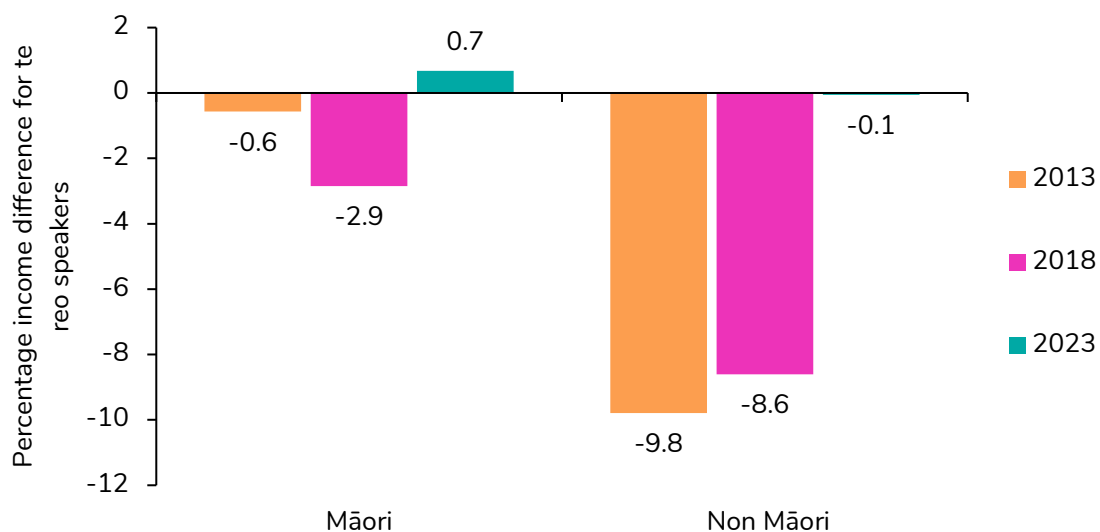
By 2023, however, this pattern had reversed. Māori speakers of te reo Māori earned 0.7 percent more than Māori non-speakers, representing a total shift of 3.6 percentage points over five years.

This change is consistent with a growing recognition of te reo Māori as a form of valued human capital, particularly in sectors with strong Māori community engagement or cultural competency expectations.

A similar convergence occurred for non-Māori speakers of te reo Māori, though from a much steeper starting point. In 2013, non-Māori speakers of te reo Māori earned almost 10 percent less than non-speakers. By 2023, this gap had narrowed to close to zero.

While the underlying pathways differ, with many non-Māori acquiring te reo Māori later in life, or for specific roles, the overall trend indicates that bilingual capability is no longer associated with an earnings penalty. Instead, it increasingly aligns with income parity and, in some cases, advantage.

Figure 15 Percentage difference in income for speakers of te reo Māori, 2023



Source: BERL analysis

6.1.1 Nominal income trends

When examining nominal income levels, the shift is even more apparent. Between 2013 and 2023, income growth for both Māori and non-Māori speakers of te reo Māori matched or exceeded, that of non-speakers (Figure 16).

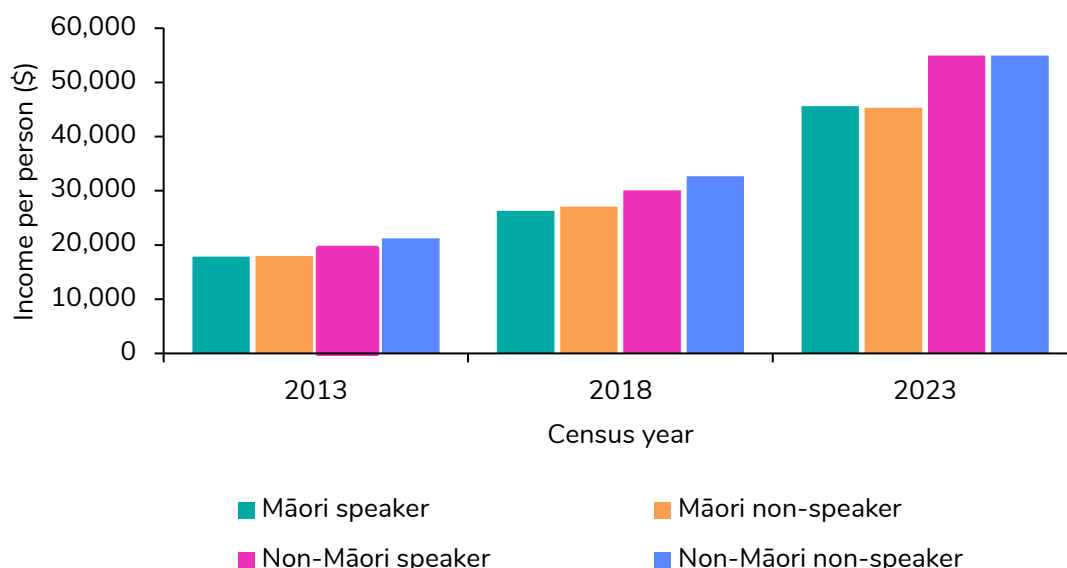
Māori nominal incomes

- **2013:** Speakers earned \$17,860 compared with \$17,960 for non-speakers
- **2018:** Speakers earned \$26,313 compared with \$27,063
- **2023:** Speakers earned \$45,610 compared with \$45,300, a reversal of earlier gaps. This represents a 73 percent nominal increase for Māori speakers between 2018 and 2023, compared to 67 percent for non-speakers.

Non-Māori nominal incomes

- **2013:** Speakers earned \$19,317 compared with \$21,208 for non-speakers
- **2018:** Speakers earned \$30,074 compared with \$32,662
- **2023:** Speakers earned \$54,936 compared with \$54,968, effectively eliminating the gap.

Figure 16 Income difference between speakers and non-speakers in Census years 2013–2023



Source: BERL analysis

Interpretation

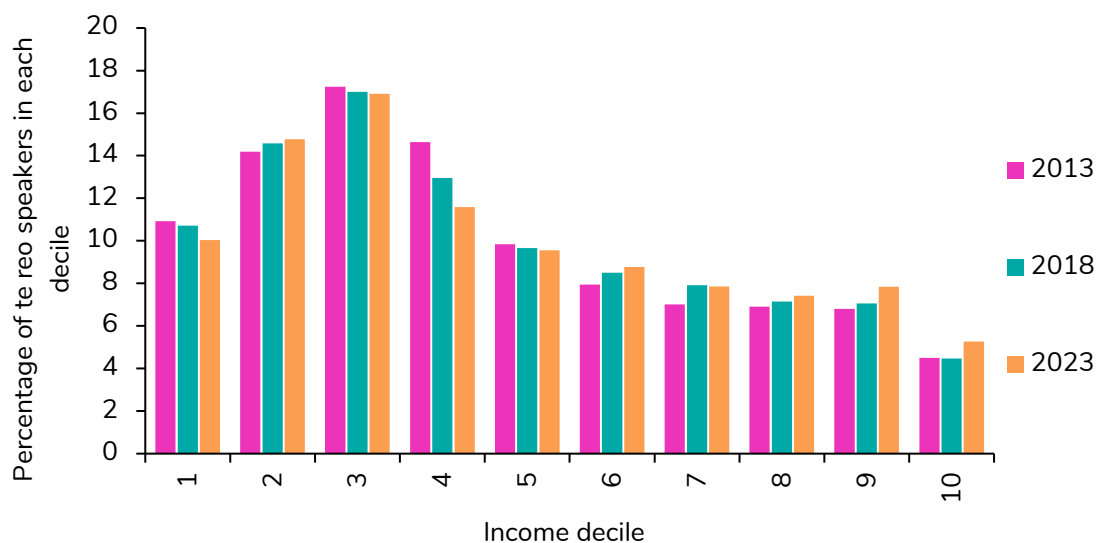
These nominal gains reflect:

- Increased demand for cultural capability
- A growing supply of proficient younger speakers of te reo Māori entering mid-career roles
- Sectoral patterns that are increasingly associated with higher demand for bilingual competency.

6.2 Income distribution changes

Looking across the income distribution deciles provides additional insight into how speakers of te reo Māori are positioned within the workforce. In 2013, 57 percent of speakers of te reo Māori were concentrated in the lower and middle-income deciles (one to four), while only 11 percent were in the top three deciles (Figure 17).¹²

Figure 17 Income decile of all speakers of te reo Māori, 2013–2023



Source: BERL analysis

¹² For a definition of deciles, visit: <https://www.ehinz.ac.nz/indicators/population-vulnerability/socioeconomic-deprivation-profile/>

By 2018, movement away from the lower deciles had begun. By 2023, the shift was pronounced. The share of speakers in decile four fell by more than 20 percentage points, while representation in deciles six to 10 increased substantially. Decile 10 alone grew by 17 percent.

By 2023, more than one-fifth of speakers of te reo Māori were in the top three income deciles. This pattern indicates upward mobility and increasing representation in roles with higher responsibility, pay, and stability. Note: Differences reflect both proficiency and sector/occupational composition.

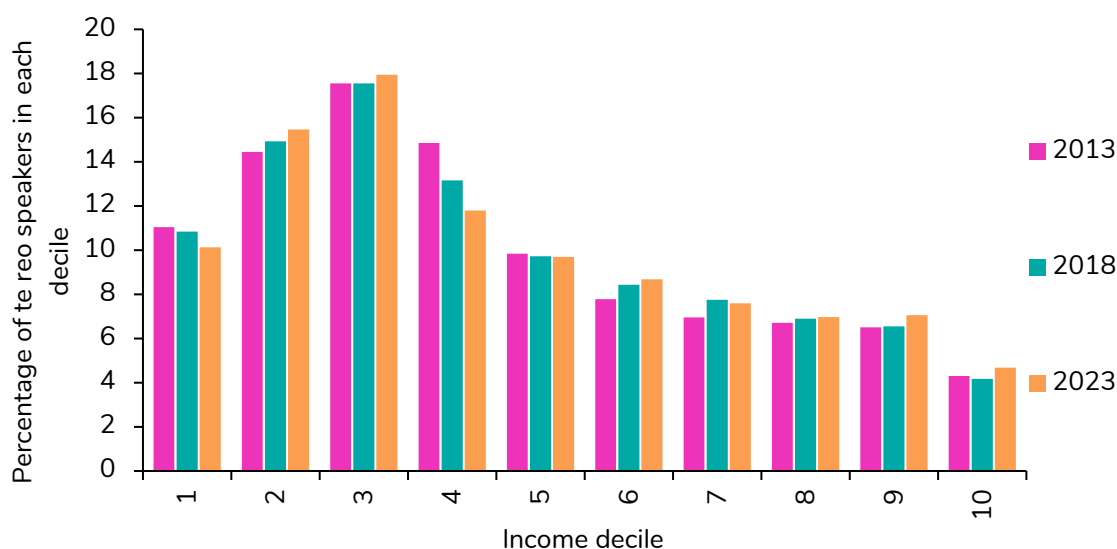
6.2.1 Differences between Māori and non-Māori speakers

Both Māori and non-Māori speakers of te reo Māori show upward income movement over time, but the distribution differs.

For Māori speakers of te reo Māori, gains are spread across several higher deciles. Between 2013 and 2023, decile six increased by 11.6 percent, decile seven by 9.3 percent, and deciles nine and 10 by 8.5 percent and 8.8 percent, respectively (Figure 18). At the same time, representation in lower deciles declined sharply, particularly in decile one and decile four.

These shifts reflect the younger age profile of many Māori speakers of te reo Māori, who are progressing from early-career roles into more skilled and higher-paid positions.

Figure 18 Income decile of all Māori speakers of te reo Māori, 2013–2023

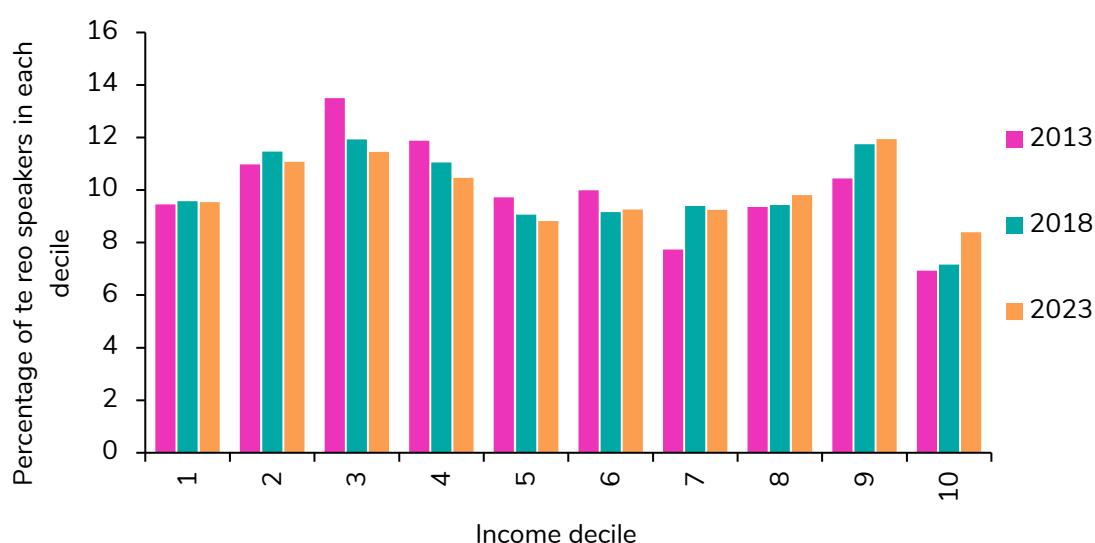


Source: BERL analysis

Non-Māori speakers of te reo Māori show a stronger concentration of growth at the top end of the distribution. Decile 10 increased by 21.2 percent, decile seven by 19.5 percent, and decile nine by 14.3 percent (Figure 19), alongside declines in middle-lower deciles.

It is likely that this pattern reflects later-career acquisition of te reo Māori among non-Māori, often linked to senior roles, cultural advisory functions, or public-facing positions.

Figure 19 Income decile of all non-Māori speakers of te reo Māori, 2013–2023



Source: BERL analysis

6.3 Proficiency effects on 2024 income

Econometric analysis provides further insight into how different levels of proficiency relate to earnings, after controlling for demographic and occupational factors.¹³

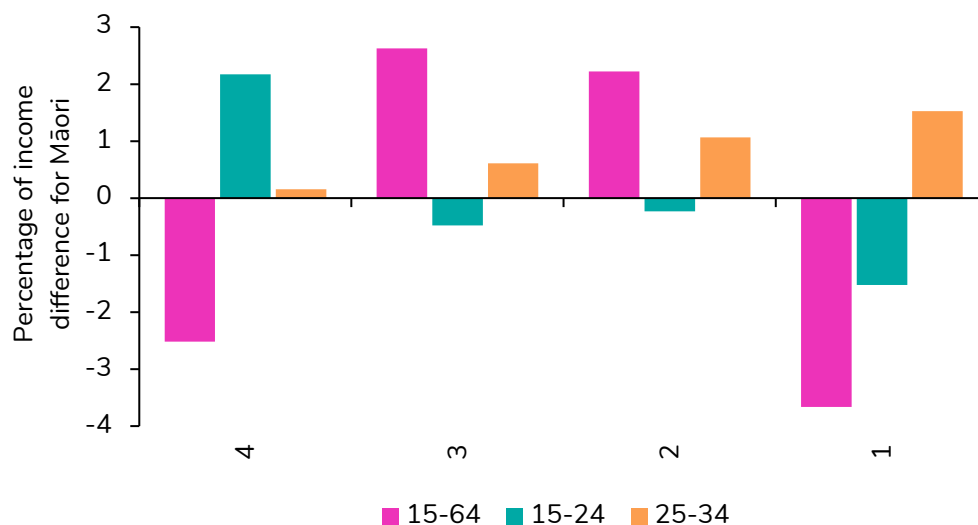
For Māori aged 15 to 64, the strongest income effects occur in the mid-proficiency range. Moving from level four to level three proficiency is associated with a 2.6 percent income increase, and moving from level three to level two with a further 2.2 percent increase (Figure 20).

Negative effects at the lowest and highest proficiency levels suggest uneven returns to language skills. Income gains appear strongest at conversational and mid-level proficiency. Lower measured

¹³ The econometric analysis (OLS, controlling for age, gender, ethnicity, occupation, industry, qualification, and labour force status) shows that income effects follow a non-linear relationship with proficiency.

effects at higher proficiency levels reflect sector and occupational pathways, including the concentration of highly fluent speakers in kaupapa Māori, community, and cultural roles where remuneration structures differ. This should not be interpreted as a lower economic value of fluency itself.

Figure 20 Percentage income difference for Māori, based on change in level of reo Māori proficiency, 2023

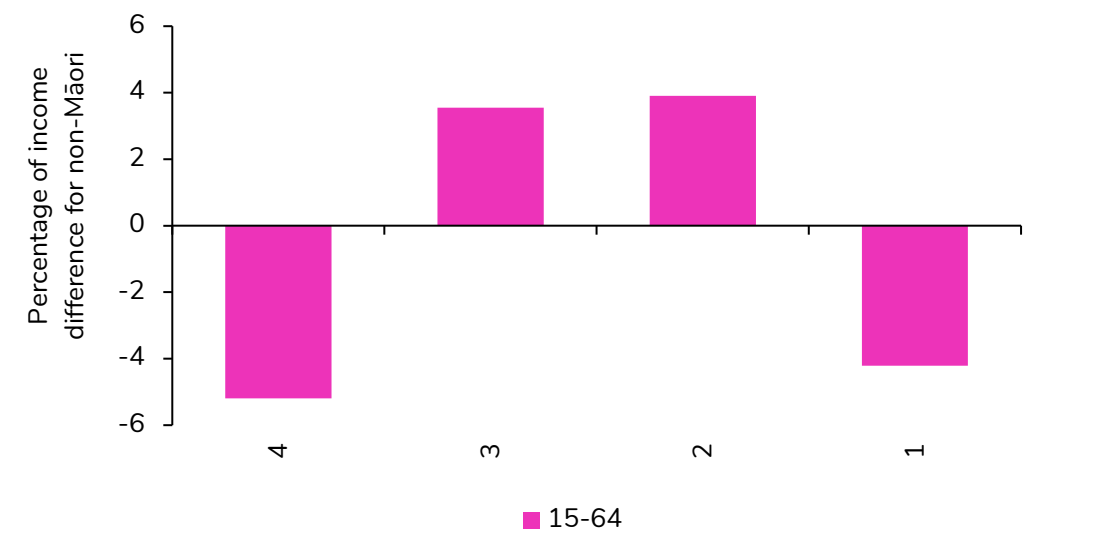


Source: BERL analysis

For Māori aged 15 to 24, short-run effects differ. Gains from moving between mid-proficiency levels are small or negative, which likely reflects the overlap between study and employment at this life stage rather than long-term income trajectories.

Non-Māori show a similar mid-level pattern. Income increases of 3.5 percent and 3.9 percent occur when moving from levels four to three and three to two, respectively (Figure 21). Moving from level two to level one, however, is associated with a decline in income, reinforcing that demand is strongest for communicative rather than fully fluent capability.

Figure 21 Percentage income difference for non-Māori, based on change in level of reo Māori proficiency, 2023



Source: BERL analysis

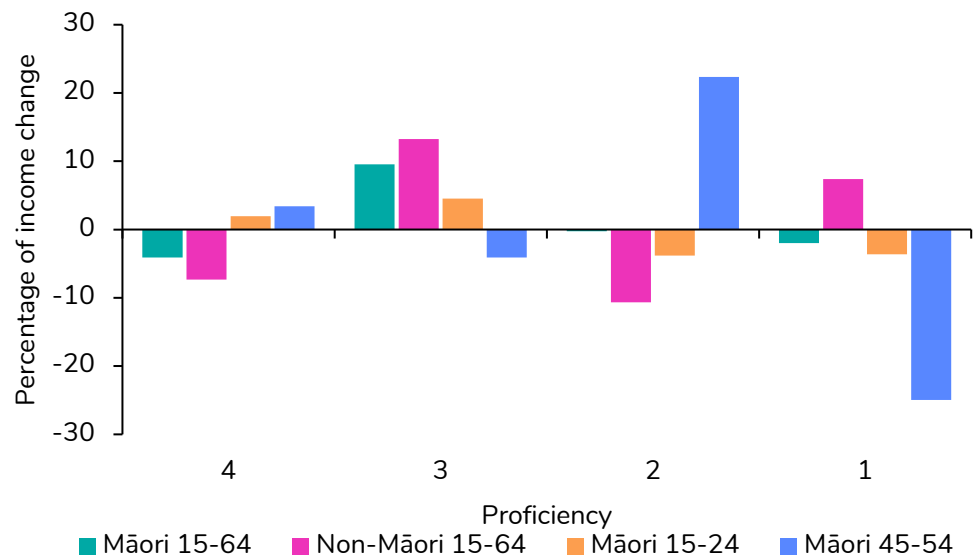
6.4 Proficiency effects on annual income (2013–2024)

When analysing average annual income across the full 2013–2024 period, proficiency again shows a non-linear relationship with earnings.

For Māori speakers of te reo Māori, moving from level four to level three proficiency is associated with an income increase of nearly 10 percent (Figure 22). Further increases in proficiency deliver smaller or negative marginal returns, indicating that conversational ability is most strongly rewarded in the labour market.

Non-Māori speakers of te reo Māori experience greater volatility in income effects, reflecting smaller sample sizes and concentration in specialised roles where changes in proficiency often coincide with job transitions.

Figure 22 Average percentage change in annual total income, based on proficiency, 2023



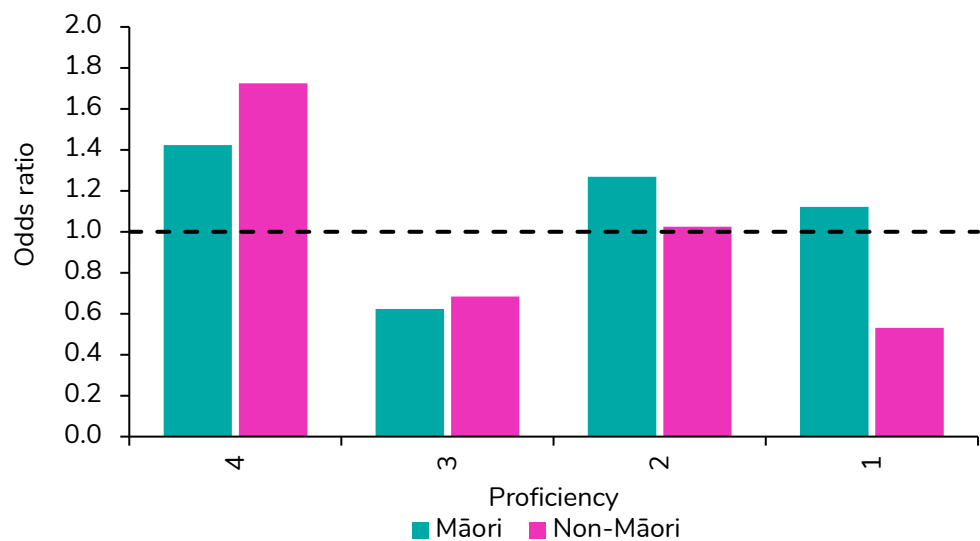
Source: BERL analysis

6.5 Labour force engagement

Labour force transitions provide another lens on the economic value of proficiency.

For Māori, increases in proficiency are generally associated with a higher likelihood of moving into study, particularly when moving from level five to four and from level three to two (Figure 23). For non-Māori, effects are more variable, with the strongest study transitions occurring at level four.

Figure 23 Odds ratio of moving towards study by increasing proficiency by one level, by ethnicity, 2023

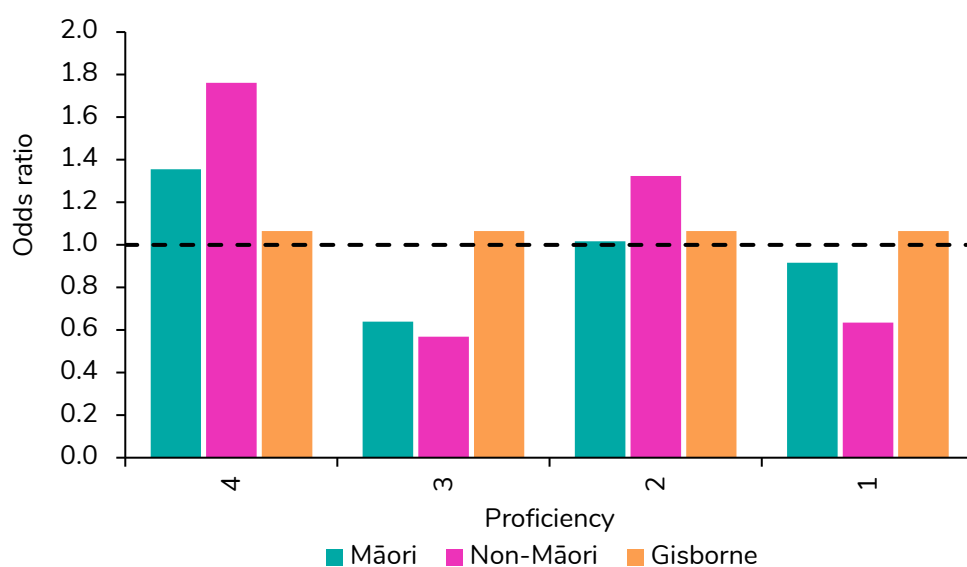


Source: BERL analysis

Transitions into work are more nuanced. For Māori, increases from the lowest proficiency levels are associated with higher odds of entering work, while gains at the highest proficiency levels show weaker or negative effects (Figure 23). It is likely that this reflects occupational sorting and early-career dynamics.

For non-Māori, labour force transitions fluctuate more widely, reflecting age, sector, and industry concentration, as well as greater stability among fluent speakers in specialised roles.

Figure 24 Odds ratio of moving towards work by increasing proficiency by one level, by ethnicity, 2023



Source: BERL analysis

Regional variation adds further complexity. In Te Tairāwhiti Gisborne, Māori at all proficiency levels are around 10 percent more likely to transition into work, reflecting strong cultural infrastructure and local demand for capability in te reo Māori. This suggests that regional labour markets with high cultural alignment can amplify the economic value of proficiency.

7 How education shapes proficiency in te reo Māori

Key findings

- **Māori-medium education remains the most significant driver of high proficiency in te reo Māori.** More than 70 percent of highly proficient speakers began learning before 2013, with a sharp recent increase in new learners since 2023.
- **Speakers of te reo Māori show distinct employment patterns.** These include higher rates of self-employment and a greater likelihood of combining work with study or receiving a benefit while working.
- **Younger speakers dominate te reo Māori-speaking workforce.** Many are progressing through education at the same time as participating in the labour market, contributing to a dynamic and evolving skill profile.

Drivers and influences

- **Long-term revitalisation investment:** Decades of investment in Māori-medium education have created a strong foundation for high proficiency.
- **Educational achievement:** Students in Māori-medium education achieve higher academic outcomes, supporting stronger long-term pathways.
- **Workforce incentives:** Growing demand for culturally competent workers in education, health, media, public services, and kaupapa Māori roles reinforces the value of both educational and linguistic capability.

7.1 Education impact on proficiency

Education remains the strongest determinant of proficiency in te reo Māori. Māori-medium education pathways, from early childhood through to secondary schooling, have produced a generation of speakers whose proficiency far exceeds that of earlier cohorts. In addition to supporting proficiency, these pathways contribute to increased use of te reo Māori across different domains over time.

This reflects the generational nature of human capital development, where investments in education translate into changing capability and participation patterns over time, contributing to longer-term shifts across the workforce.

More than 70 percent of highly proficient speakers began learning before 2013, demonstrating the long-term impact of early immersion. Recent years have also seen accelerated uptake. Nearly 19 percent of high proficiency speakers began learning between 2018 and 2023, almost double the rate observed between 2013 and 2018. This reflects both expanded learning opportunities and growing societal momentum around normalising te reo Māori.

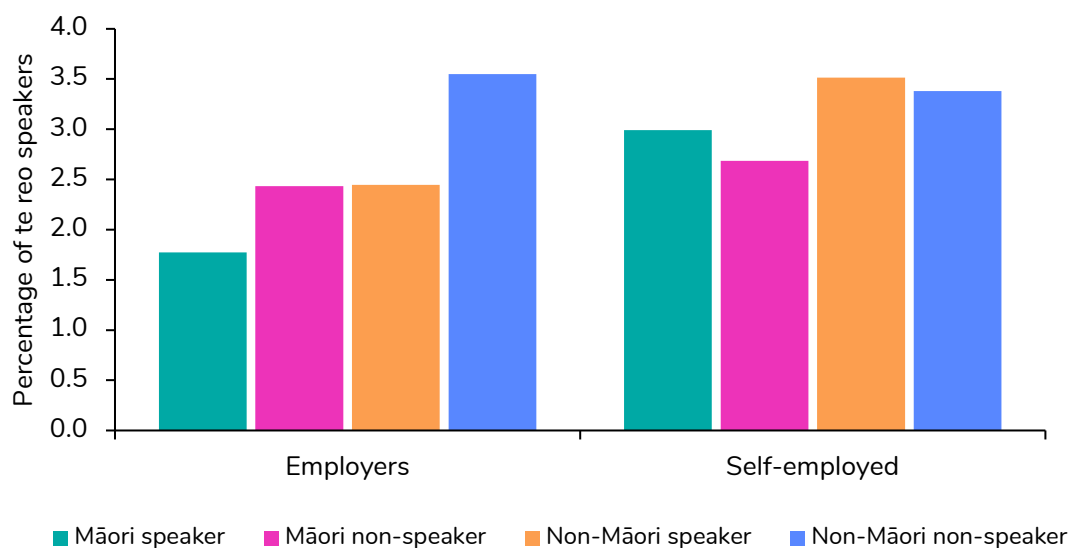
Māori-medium education also supports broader educational success. Māori students in immersion settings achieve higher academic outcomes, with around 17 percent attaining excellence in the National Certificate of Educational Achievement (NCEA), compared to three percent in English-medium education.¹⁴ These results indicate that language learning strengthens not only cultural capability but also the academic foundations that shape long-term career pathways.

7.2 Education and employment

Speakers of te reo Māori participate widely in paid employment, but their employment patterns differ in ways that reflect both opportunity and structure within the revitalisation environment. While speakers of te reo Māori are slightly less likely to be employers than non-speakers, they are more likely to be self-employed (Figure 25).

¹⁴ <https://tokona-te-raki-e31deb.webflow.io/all-news/he-au-nui-he-au-ora>

Figure 25 Percentage of speakers of te reo Māori who are employers or self-employed, 2023



Source: BERL analysis

Around three percent of Māori speakers of te reo Māori and 3.5 percent of non-Māori speakers of te reo Māori report being self-employed, slightly higher than among non-speakers. This suggests that many speakers engage in contracting, kaupapa Māori work, or roles supported through flexible arrangements linked to cultural, educational, and community services.

Some speakers of te reo Māori also work in roles with variable security or income. This may reflect the project-based nature of parts of the cultural and community sectors, as well as the early-career stage of many younger speakers. As a result, the presence of reo Māori capability in the workforce does not always align neatly with traditional employment structures.

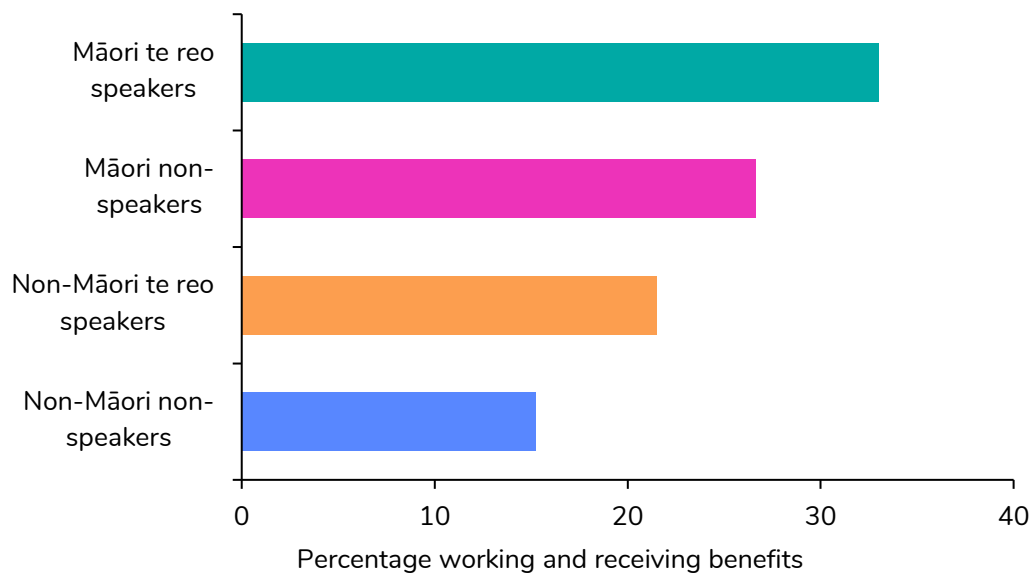
Te reo Māori and benefits

Speakers of te reo Māori are more likely than non-speakers to receive a benefit while working.

Around one-third of Māori speakers of te reo Māori and 21.5 percent of non-Māori speakers of te reo Māori receive a benefit while employed, compared with 26.7 percent of Māori non-speakers and 15.2 percent of non-Māori non-speakers (Figure 26).

These patterns largely reflect the age profile of speakers of te reo Māori and the overlap between work and study. Younger workers are more likely to combine part-time employment with student allowances or other forms of income support.

Figure 26 Percentage of speakers and non-speakers receiving a benefit and working, 2023



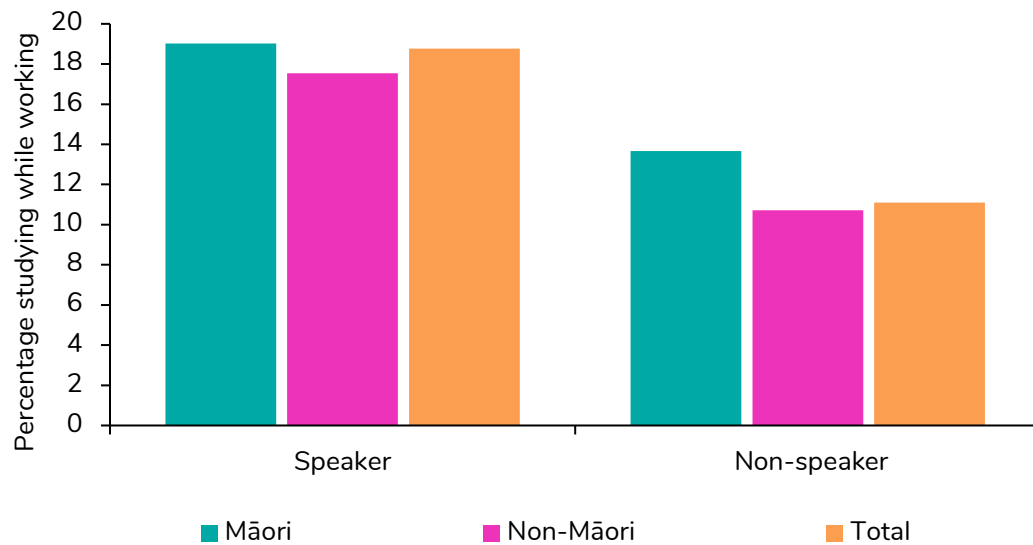
Source: BERL analysis

Work–study dynamics

Education continues to shape labour market behaviour beyond initial schooling. Nearly 19 percent of speakers of te reo Māori who are working are also studying, compared to 11 percent of non-speakers (Figure 27).

This reflects the concentration of reo Māori speakers in the 15–34 age group, many of whom are progressing through tertiary education while participating in the workforce. It also points to ongoing upskilling, with language capability accompanied by continued qualification-building.

Figure 27 Percentage of speakers and non-speakers who are studying while working, 2023



Source: BERL analysis

Implications for workforce development

The intersection of education, proficiency, employment, and study highlights that speakers of te reo Māori form an increasingly skilled and adaptable segment of the workforce. Their pathways combine language expertise, academic achievement, and professional development.

Growing numbers of highly proficient young speakers, alongside rising tertiary participation, create opportunities to:

- Strengthen culturally capable leadership across sectors
- Enhance service delivery and cultural safety in public- and community-facing industries
- Embed capability in te reo Māori within organisational workforce strategies
- Support Māori-led enterprises and innovative bilingual services.

As these cohorts move into mid-career roles, the combined value of educational achievement and linguistic capability is likely to become increasingly influential in shaping Aotearoa New Zealand's labour market.

8 How investment is shaping the economic impact of te reo Māori

Key findings

- **Investment in the revitalisation of te reo Māori has strengthened the language ecosystem.** Funding across education, broadcasting, and cultural initiatives has supported capability building and generated measurable social and economic value across Aotearoa New Zealand.
- **Major government commitments reinforce long-term capability development.** Sustained investment in Māori-medium education and Māori media has expanded opportunities for speakers of te reo Māori and supported workforce and sector growth.
- **Cultural initiatives deliver both cultural and economic returns.** Events such as Te Matatini generate substantial economic activity alongside their cultural contributions, illustrating the dual socio-economic impacts of revitalisation.

Drivers and influences

- **Māori Language Act 2016 and Maihi Karauna:** These frameworks established a clear Crown commitment to protecting and promoting te reo Māori, setting the national direction for increasing speaker numbers and normalising te reo Māori in public life.
 - **Long-term education investment:** Decades of funding for Māori-medium education have created a sustained pipeline of highly proficient speakers.
 - **Rising public demand and cultural expectations:** Increasing expectations for te reo Māori in public services, media, workplaces, and cultural events continue to support investment and participation.
-

8.1 Investment in education and revitalisation

Investment in te reo Māori spans multiple sectors, with education representing the largest and most sustained area of commitment. The Crown reaffirmed its responsibility to support revitalisation through the Māori Language Act 2016, which formalised a partnership approach between the Crown and Māori. The Maihi Karauna strategy further articulated national aspirations for a strong and healthy Māori language and set expectations for public sector leadership in this area.¹⁵

In 2025, the Ministry of Education announced a \$100 million investment in Māori-medium education, including \$60 million for new classrooms and \$4.5 million for the development of te reo Māori resources.¹⁶ This funding was additional to baseline education funding and directly supported the future pipeline of speakers of te reo Māori.

Budget 2026 builds on this investment through broader Vote Education funding, including additional operating funding and targeted support for Māori-medium and early learning settings, such as Te Kōhanga Reo National Trust.¹⁷

Broadcasting also received significant investment in 2025, with \$139 million allocated to Māori media organisations.¹⁸ Of this, Te Māngai Pāho received approximately \$66 million to support television, radio, and digital content in te reo Māori, while Whakaata Māori received around \$48 million to expand Māori-language broadcasting and content visibility. Additional funding supported iwi radio stations and community media, which play an important role in normalising te reo Māori at a regional level.

¹⁵ At the time of writing, Maihi Karauna was being refreshed, and expected to be updated in 2026 to build on earlier progress, address emerging challenges, and reflect the latest evidence on effective language revitalisation. Retrieved from <https://en.tetaurawhiri.govt.nz/maihi-karauna-refresh-underway>

¹⁶ Ministry of Education. (2025, April 29). Budget 2025: Māori education – strengthening ongoing work to support Māori learner success through te reo Māori across the education system. Retrieved from <https://www.education.govt.nz/our-work/publications/corporate-documents/budget-2025/maori-education>

¹⁷ Ministry of Education. (2026, May 28). Core investments. An overview of the Budget 2026 investment into the wider education system. Retrieved from <https://www.education.govt.nz/our-work/publications/corporate-documents/budget-2026/core-investments>

¹⁸ The Treasury. (2025). Estimates of Appropriations 2025/26: Vote Māori Development. Retrieved from <https://www.treasury.govt.nz/sites/default/files/2025-05/est25-v7-maodev.pdf>

More recent Budget 2026 settings build on this baseline, including a \$48 million package over four years to support the long-term sustainability of Māori broadcasting, with funding directed toward content commissioning, capability development, and adaptation to digital platforms. At a system level, Vote Māori Development appropriations for 2026/27 include nearly \$119 million for the promotion of Māori language and culture, covering funding to entities such as Te Māngai Pāho, Whakaata Māori, Te Taura Whiri i te Reo Māori, and Te Mātāwai.¹⁹

These figures reflect different funding lenses, including annual allocations, multi-year Budget packages, and aggregated Vote-level appropriations. Māori media investment supports not only employment and content creation, but the wider infrastructure required for language normalisation and sustained use.

Cultural initiatives are another area of sustained investment. In 2024, Te Matatini, the national kapa haka festival, secured close to \$49 million over three years.²⁰ This funding supports both the biennial festival and regional kapa haka networks. Given the scale of the event, which attracts thousands of performers, whānau, and spectators, Te Matatini generates significant economic activity through tourism, hospitality, event management, and media engagement. More recent Budget 2026 settings continue to support Māori cultural and creative capability, although with a broader focus across cultural initiatives rather than a continuation of funding at the same level for a single programme such as Te Matatini.²¹

These investments support both economic activity and the wider language ecosystem, including normalisation, intergenerational transmission, and growing demand for te reo Māori capability across sectors. They extend beyond cultural preservation, contributing to education, employment pathways, creative industries, and regional economies, and reinforcing a system in which te reo Māori capability is both culturally meaningful and economically relevant (see section 5). While debate continues about whether funding levels meet Maihi Karauna aspirations, available evidence suggests many investments are generating tangible returns.

¹⁹ The Treasury. (2026). *Estimates of Appropriations 2026/27: Vote Māori Development*. Retrieved from <https://budget.govt.nz/budget/pdfs/estimates/v7/est26-v7-maodev.pdf>

²⁰ Beehive.govt.nz. (2024, May 30). *Budget assures funding for Te Matatini*. Retrieved from <https://www.beehive.govt.nz/release/budget-assures-funding-te-matatini>

²¹ Beehive.govt.nz. (2026, May 28). *Budget invests in Māori language and cultural capability*. Retrieved from <https://www.beehive.govt.nz/release/budget-invests-m%C4%81ori-language-and-cultural-capability>

These dynamics are consistent with a gradual distributional shift, where sustained investment over time contributes to changes in capability, participation, and outcomes across the population, rather than immediate or uniform effects.

8.2 Economic benefits snapshots

While the cultural value of te reo Māori cannot be fully quantified, recent social value analyses provide insight into the economic activity associated with revitalisation. Whakaata Māori analysis from 2025 estimated \$114 million in social value was generated from an operating budget of approximately \$50 million, indicating a substantial return on investment.²² This reflects the dual role of broadcasting as both cultural infrastructure and a driver of economic and social value, extending the reach of te reo Māori.

Other examples illustrate the diversity of economic contributions linked to te reo Māori, including a feature film generating an estimated \$33 million in economic impact, a reo Māori sing-along app valued at \$3 million, and Matariki-related public engagement producing \$16 million in social value.²³ Te Matatini ticket sales alone generated an estimated \$24 million in direct economic contribution to Taranaki in 2024, reflecting strong public participation and regional spill-over effects. This participation is significantly amplified through broadcast and digital media coverage.²⁴ These examples highlight the breadth of economic activity associated with te reo Māori revitalisation, spanning media, events, entertainment, and digital engagement.

Beyond cultural events and media, revitalisation is also reshaping professional markets. Te reo Māori translation and interpretation sector is estimated to be worth around \$14 million annually, with high demand relative to supply.²⁵ Current ratios of approximately one translator per 830 speakers and one interpreter per 330 highly fluent speakers highlight ongoing workforce pressures and potential growth areas.²⁶

²² SVA & Whakaata Māori. (2025). *Revitalising Te Reo Māori: The social value of Whakaata Māori*. Retrieved from <https://www.whakaatamaori.co.nz/official-publications>

²³ Ibid.

²⁴ Angus & Associates. (2025). *Te Matatini 2025 Impact Evaluation*. Retrieved from <https://www.tematatini.co.nz/assets/Uploads/Te-Matatini-2025-Impact-Evaluation.pdf>

²⁵ Business and Economic Research Limited. (2025). *Market Analysis for translators and interpreters of te reo Māori*. Te Taura Whiri i te Reo Māori. Retrieved from <https://en.tetaurawhiri.govt.nz/market-analysis-translators-interpreters>

²⁶ Ibid.

Private-sector organisations also report benefits from incorporating te reo Māori into their operations. Case studies from organisations, such as Auckland City Council, One NZ (previously Vodafone), and Colenso describe improved customer relationships, staff engagement, and brand alignment when te reo Māori is embedded authentically. These examples suggest that, beyond public sector expectations, te reo Māori is increasingly recognised as a strategic asset.²⁷

Education amplifies these benefits over the long term. Students in Māori-medium education develop strong language proficiency alongside higher academic achievement, which is associated with improved employment outcomes, higher lifetime earnings, and lower social costs.²⁸ Broadcasting plays a complementary role by reinforcing language learning outside the classroom, supporting intergenerational transmission, and providing visible pathways for language use in professional and creative careers. International and local research indicates that learning an indigenous language supports broader educational success, contributing economic value at both individual and societal levels.

Overall, these examples demonstrate that investment in the revitalisation of te reo Māori delivers a combination of cultural, social, and economic benefits, and the evidence shows that revitalisation investment supports job creation, cultural industries, human capital development, and a more inclusive and resilient economy.

8.3 Measuring and supporting long-term revitalisation outcomes

While the investments outlined above support capability, workforce development, and cultural activity, they also highlight the importance of how revitalisation outcomes are measured over time.

Administrative datasets such as the IDI provide a robust foundation for analysing labour market participation, income, and education pathways. However, they are not designed to capture key dimensions of language revitalisation, including:

²⁷ Haar, J., Ka'ai, T., Ravenswood, K., & Smith, T. (2019). *Ki te tahatū o te rangi: Normalising te reo Māori across non-traditional Māori language domains*. Auckland: Te Taura Whiri i te Reo Māori. Retrieved from https://ndhadeliver.natlib.govt.nz/delivery/DeliveryManagerServlet?dps_pid=IE43833827

²⁸ Sin, I., Minehan, S., & Watson, N. (2022). *Effective pathways through education to good labour market outcomes for Māori: Literature summary*. Motu Economic and Public Policy Research. Retrieved from <https://www.motu.nz/our-research/population-and-labour/individual-and-group-outcomes/effective-pathways-through-education-maori>

- Frequency and context of reo Māori use
- Intergenerational transmission within whānau
- Confidence and willingness to use te reo Māori
- Exposure to language through media and everyday environments.

These dimensions are central to understanding the long-term health and sustainability of te reo Māori, but are currently only partially captured through existing data sources.

Targeted investment in data collection is, therefore, an important complement to investment in language revitalisation itself. This includes:

- Maintaining and renewing dedicated surveys of language use, particularly Te Kupenga, to provide up-to-date, nationally representative insights into how te reo Māori is used in everyday contexts
- Improving measures of language use across different domains, e.g., home, workplace, and community
- Strengthening the integration of qualitative and kaupapa Māori approaches to measurement.

Strengthening the evidence base in this way would enable a more complete understanding of how revitalisation efforts translate into real-world language use, well-being outcomes, and intergenerational change. It would also support more informed decision-making across the reo Māori ecosystem.

In this context, the findings presented in this report should be understood as describing one dimension of impact – economic participation – within a wider system that cannot yet be fully captured using administrative data alone.

Appendix A Methodology

Data Lab disclaimer

Access to the data used in this study was provided by Statistics New Zealand (Stats NZ) under conditions designed to give effect to the security and confidentiality provisions of the Data and Statistics Act 2022. The results presented in this study are the work of the author, not Stats NZ, or individual data suppliers.

These results are not official statistics. They have been created for research purposes from the Integrated Data Infrastructure (IDI), which is carefully managed by Stats NZ. For more information about the IDI, please visit: <https://www.stats.govt.nz/integrated-data/>.

The results are based in part on tax data supplied by the Inland Revenue Department to Stats NZ under the Tax Administration Act 1994 for statistical purposes. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes and is not related to the data's ability to support Inland Revenue's core operational requirements.

Integrated Data Infrastructure

To answer the research questions put forth by this project, we first needed to build a dataset of individuals old enough to be employed in New Zealand, including those who speak te reo Māori and those who do not speak te reo Māori. Such a dataset would enable us to measure the labour market outcomes for individuals in New Zealand who speak te reo Māori against those who do not speak te reo Māori.

Census data

Our first step in building a dataset for our analysis was the 2023 Census dataset. This provided us with the most recent comprehensive dataset of key variables such as the ability to speak te reo Māori, ethnicity, age, region, employment status, work and labour force status, occupation, highest qualification, and sector/industry. For this dataset we removed all individuals under the age of 15 at the time of the Census, as these individuals lacked usable labour market data in the Census and therefore were outside the scope of the research.

While the 2023 Census is a comprehensive dataset, it is also a snapshot in time. Therefore, to review changes over time, we needed to add other datasets to our 2023 Census one. This allowed us to fill in a final core timeseries dataset for our econometric analysis.

To aid us in filling our timeseries we added, from both the 2018 and 2013 Censuses, data on employment status, work and labour force status, ability to speak te reo Māori, occupation, sector/industry, and highest qualification for those individuals aged over 15 in the 2023 Census. This provided us with three data points for variables gathered via the Census.

As part of this timeseries individuals not included in the 2013 or 2018 Census, or those who were too young in either of those Censuses to have employment variables, will be missing these variables for these two time periods. Missing variable responses were handled by the econometric modelling and could still be used in our analysis.

To assist with the econometric analysis to be undertaken at the next stage, we combined the speaking te reo Māori variable from each Census into a single variable. This single variable noted if the individual could speak te reo Māori since 2013, since 2018, or since 2023, or could not speak te reo Māori.

Administrative datasets

To further expand our timeseries, and fill in the years in between the three Censuses, we needed to lean on four administrative datasets available in the IDI. These were the following:

- Inland Revenue Department employee monthly schedule (EMS) dataset
- Ministry of Social Development benefit dataset
- Ministry of Education tertiary study dataset
- Household Labour Force Survey dataset.

Inland Revenue Department (IRD)

The EMS dataset from the IRD dataset has monthly data on the income of individuals, including the source of that income (working, benefit, pension, student allowance, or Accident Compensation Corporation (ACC)). This enabled us to estimate the labour market outcomes for that individual, across March years between 2013 and 2023 based on these income sources.

For this data source we changed the monthly income into annual (calendar) income, per income source, for each individual. Each year was filtered to match the population in the over-15, 2023 Census dataset. This data was then joined onto the growing dataset.

Ministry of Social Development (MSD)

The MSD benefit dataset has the start date and end date of individuals on main benefits across this period. This enabled us to determine the number of days an individual may have spent on the jobseeker, supported living, sole parent, or other main benefit (excluding superannuation and the veteran's benefit). This dataset allowed us to determine if an individual was on a main benefit, during any of the years between 2013 and 2023, and how many days they spent on that benefit.

This allowed us to double-check an individual's benefit status as derived from the IRD EMS dataset. For this dataset we first determined the number of days, per calendar year the individual received a benefit for each year from 2013 to 2023. We filtered this dataset to include only those individuals from our 2023 Census dataset and then, finally, we joined it to the core dataset.

Ministry of Education (MoE)

The MoE tertiary dataset contains the start date and end date of individuals' time enrolled at a tertiary education provider. This enabled us to determine the number of days spent each year at a tertiary education provider, for each year between 2013 and 2023. This allowed us to estimate how many of the individuals in our population dataset were studying at a tertiary provider, either while working or not in the labour force.

For this dataset we first calculated the number of days spent studying each calendar year. We assumed that if an individual spent more than 50 days within a calendar year studying, we could categorise this as studying for our labour market outcomes. Those who studied for less than 50 days within a year we categorised as not studying. As for the previous dataset, the data was filtered to only include those individuals in the 2023 Census dataset. This dataset was then joined onto the core dataset.

Household Labour Force Survey (HLFS)

The HLFS dataset contains labour force data for a sample of individuals. Each year around 30,000 individuals are surveyed each quarter, with their household part of the HLFS survey for around two years. While this dataset does have good data on employment, unemployment, and other labour market outcomes, it only covers a small sample of the entire population.

For those individuals who were part of our 2023 Census dataset, we were able to obtain several quarters of robust, accurate data to better capture their overall labour market outcomes to go along with the data from the other three sources. Our first step, once filtered to match the 2023 Census

dataset, was to convert the quarterly data into annual data to match the other datasets. Once completed, this data was joined to the core dataset.

Assigning labour market outcomes

With the IRD, MSD, MoE, and HLFS data all added to the core dataset, we could, for everyone, then estimate their labour market outcome for each calendar year from 2013 to 2023. To undertake this exercise, we used a series of if statements in R that would evaluate the data variables from each data source and, based on the criteria of each if statement, determine which labour market outcomes the individual would be assigned to each year across the period.

For this process, 16 final labour market outcome categories were used, which recognised that, in some cases, an individual may have multiple labour market outcomes, such as working and studying within the same year, or working and being on a benefit for individuals who gained or lost a job during the year.

The final categories are as follows:

1. Working
2. Working and studying
3. Working and paid parental leave
4. Working, paid parental leave, and studying
5. Paid parental leave
6. Paid parental leave and study
7. Working, studying, and benefit
8. Working, paid parental leave, benefit, and studying
9. Paid parental leave, studying, and benefit
10. Working and benefit
11. Working, paid parental leave, and benefit
12. Paid parental leave and benefit
13. Studying
14. Benefit and studying

15. Benefit

16. Not in the labour force.

Estimating levels of proficiency in te reo Māori

With the labour market outcomes between 2013 and 2023 estimated for each individual aged 15 and over in the 2023 Census, our next area to work on was estimating the proficiency level of individuals who spoke te reo Māori.

To help us estimate individuals' speaking proficiency levels in te reo Māori, we used data from three different datasets, which were:

- Te Kupenga (TK) 2018
- The New Zealand General Social Survey (NZGSS) 2018 and 2023
- The annual roll data from the MoE covering all individual primary and secondary learners.

For both the TK and NZGSS surveys, an individual's proficiency in speaking te reo Māori was expressed using the following categories:

1. Very well (I can talk about almost anything in te reo Māori)
2. Well (I can talk about many things in te reo Māori)
3. Fairly well (I can talk about some things in te reo Māori)
4. Not very well (I can only talk about simple/basic things in te reo Māori)
5. No more than a few words or phrases.

For the MoE annual roll data, the data was expressed across seven categories, based on the percentage of time spent learning in te reo Māori. These initial seven categories were then aligned with the five categories used by the other two data sources so that the data would be more consistent. How these seven categories match the five categories from the other surveys is shown here:

1. Level one (81 percent to 100 percent of time spent learning in te reo Māori) – Very well
2. Level two (51 percent to 80 percent of time) – Very well
3. Level three (31 percent to 50 percent of time) – Very well
4. Level four–A (12 percent to 30 percent of time) – Well

5. Level four–b (At least three hours per week spent learning in te reo Māori) – Fairly well
6. Level five (less than three hours per week) – Not very well
7. Level six (no learning in te reo Māori) – No more than a few words or phrases.

Once all three data sources for proficiency in te reo Māori were being expressed in a consistent manner, we were able to add all three data variables onto our core dataset and merge the three together into a single proficiency in te reo Māori variable. As part of this, we assigned individuals a 'six' if we had no proficiency data for them, rather than assigning them an n/a, as this made econometric modelling of this variable simpler.

Overall, the final core dataset pulled together for the econometric analysis contained:

- Labour market outcomes for each individual between 2013 and 2023
- Total annual income between 2013 and 2023
- 2013, 2018, and 2023 Census variables on:
 - Employment, including occupation, industry, employment status, work, and labour force status
- Te reo Māori proficiency variables
 - Region
- Demography, including ethnicity, age, and gender.

Econometric analysis

Two types of regression were estimated:

- Ordinary least squares (OLS) models
- Ordered logistic models.

For the OLS models, the dependent variable was one of the following:

- Total income for 2024 (in logs)
- Average annual income between 2013 and 2024 (in logs)
- Coefficient of variation (CV) of annual income between 2013 and 2024. CV is calculated as the standard deviation of annual income divided by average annual income.

In the ordered logistic models, the dependent was an ordered factor (labour market outcome categories), where the lowest level was “benefit only” and the highest level was either “working only” or “studying only”. Levels in between were ranked combinations of activities such as “working and paid parental leave”, “benefit and study”, etc. The ranking was determined to locate the individual on a continuum between “benefit only” and the highest level of labour market outcome (either working or studying).

Two measures of ability in te reo Māori were used as explanatory variables in the regressions:

- **Te reo Māori status**, which captures the earliest year that a Census respondent indicated they could speak te reo Māori. As we used data from the 2013, 2018, and 2023 Censuses, te reo Māori status is a categorical variable with four levels: from 2013, from 2018, from 2023, and none. The “none” level was set as the reference level
- **Te reo Māori proficiency**, which captures the speaking proficiency of individuals where data is available from the MoE, NZGSS, etc. This is an ordered factor with levels one to five, where level five indicates no ability while level one is complete fluency. Level five was set as the reference level for the regressions.

All the regression models have the form:

$$\mathbf{y} = \mathbf{D}\boldsymbol{\beta}_D + \mathbf{X}\boldsymbol{\beta}_X + \boldsymbol{\varepsilon}$$

where, for a sample of size n :

$\mathbf{y}$ is an $n \times 1$ vector of dependent variable observations

$\mathbf{D}$ is the $n \times k$ design matrix for the explanatory variable with k levels

- Te reo Māori status = categorical variable $\Rightarrow$ dummy contrast coding
- Te reo Māori proficiency = ordered factor $\Rightarrow$ orthogonal polynomial contrast coding

$\mathbf{X}$ is the $n \times p$ matrix of p control variables (age, gender, ethnicity (Māori or non-Māori), industry, occupation, highest qualification, and labour market status)

$\boldsymbol{\beta}_D$ is the $k \times 1$ coefficient vector for the explanatory variable

$\boldsymbol{\beta}_X$ is the $p \times 1$ coefficient vector for the control variables

$\boldsymbol{\varepsilon}$ is the $n \times 1$ error term.

We are primarily interested in the estimate of $\boldsymbol{\beta}_D$, although some transformations of $\boldsymbol{\beta}_D$ are needed for ease of interpretation when the dependent variable is in logs or is an ordered factor. When the

explanatory variable is proficiency in te reo Māori, the polynomial contrasts also must be applied to β_D to give estimates of how the dependent changes when there is a one level increase in proficiency.

These transformations were applied to the coefficient estimates so they can be interpreted directly from the econometric results. Only coefficients that are statistically significant at the 0.10 level are incorporated in the results.

While the models control for observable characteristics, unobserved factors may still influence results.

Limitations

- TK 2018 had a sample size of 8,500 individuals.
- NZGSS 2018 and 2023, both of which had a sample size of around 8,000 individuals.
- Annual roll data from the MoE, which covers the percentage of learning undertaken in te reo Māori for all individuals' primary and secondary education, only covers individuals back to 2007.
- HLFS is limited to 30,000 people at any one time, with individuals in the survey for no more than two years.

Assumptions

- One of the sources of data on proficiency level used in the research comes from the annual roll data from the MoE. This data notes the percentage of learning taking place in te reo Māori, from none to 100 percent, for each individual for each year of their schooling. To use this data, we needed to make some assumptions regarding the most likely proficiency level of students who undertook education conducted in te reo Māori, based on the percentage of their learning undertaken in te reo Māori. The exact assumptions used are noted in detail earlier in appendix A, under the 'Estimating proficiency levels in te reo Māori' heading.
- Imputing proficiency levels for individuals not in the NZGSS and TK surveys, based on the ethnicity, age, gender, and ability to speak te reo Māori data in the Census, was considered. However, given the key nature of this variable to the research, and the aim of the research, we did not use this data due to worries about its potential influence on the results.

Appendix B Plain language summary of methodology

This project aims to understand how speaking te reo Māori affects people's work and income in New Zealand. We want to know if there are differences in labour market outcomes, including jobs, earnings, and career paths, between those who speak te reo Māori and those who do not.

How we built the dataset

To answer these questions, we first created a large dataset of people in Aotearoa New Zealand, who were old enough to work (aged 15 and over). We included both those who speak te reo Māori and those who do not. The main source for this was the 2023 Census, which tells us about people's language skills, ethnicity, age, region, job status, occupation, qualifications, and industry. We focused only on people aged 15 and over, since younger people do not have enough work data. To see how things have changed over time, we added information from the 2018 and 2013 Censuses for the same group. This gave us three points in time to track changes in language ability and work outcomes.

Adding more detail with administrative data

To fill in the gaps between Census years, we used four other government datasets:

- IRD (tax records): Shows people's income and where it comes from (work, benefits, pensions, etc.)
- MSD (benefits): Tells us when people received benefits and for how long
- MoE (education): Shows how much time people spent studying at tertiary institutions
- HLFS (labour force survey): Gives extra details about employment for a sample of households

We matched all these records to the people in our Census dataset, so that we could see their work, study, and benefit history for each year from 2013 to 2023.

Assigning labour market outcomes

Using all this data, we worked out each person's main activity for every year, whether they were working, studying, on parental leave, receiving a benefit, or not in the labour force. Sometimes people did more than one thing in a year, so we created 16 categories to cover all the possible combinations.

Measuring proficiency in te reo Māori

To understand how well people speak te reo Māori, we combined information from three sources: Te Kupenga survey (2018), the New Zealand General Social Survey (2018 and 2023), and Ministry of Education school records. We grouped people's language ability into five levels, from fluent (1) to not able to speak te reo Māori at all (5). If we did not have data for someone, we marked them as "no data" for modelling purposes.

Bringing it all together

Our final dataset includes:

- Labour market outcomes for each person, each year (2013–2023)
- Annual income for each person (2013–2023)
- Census details on job, industry, qualifications, region, ethnicity, age, and gender
- Proficiency in te reo Māori, and when each person reported being able to speak te reo.

How we analysed the data

We used two types of statistical models:

- Ordinary least squares (OLS): To see how ability in te reo Māori affects income
- Ordered logistic models: To see how ability in te reo Māori relates to different work outcomes.

We looked at two main measures of ability in te reo Māori:

- Status: The earliest year an individual could speak te reo Māori (2013, 2018, 2023, or never)
- Proficiency: How well the individual could speak te reo Māori, from not at all to fluent.

We also controlled for other factors, such as age, gender, ethnicity, job type, and qualifications to make sure we were comparing similar groups.

Why this matters

By carefully linking language ability to work and income data, this approach helps us understand the real-world impact of te reo Māori on people's lives and on the wider economy. It shows not just the cultural value of the language, but also its role in shaping opportunities and outcomes for individuals and communities.