

# TE RANGAHAU O TE TUAKIRI MĀORI ME NGĀ WAIARO Ā-PŪTEA | THE MĀORI IDENTITY AND FINANCIAL ATTITUDES STUDY (MIFAS)

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## Background, theoretical orientation and first-wave response rates

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### Abstract

How does cultural identity matter for Māori economic decision-making? Te Rangahau o Te Tuakiri Māori me Ngā Waiaro ā-Pūtea | The Māori Identity and Financial Attitudes Study (MIFAS) aims to address this question. The MIFAS is the first large-scale ( $n = 7,019$ ) nationwide study of Māori aged 18 and over

that aims to correlate personal cultural beliefs and practices to economic choices. This article describes the theoretical underpinnings of the MIFAS in identity economics and explains the process by which we have used Western methods and methodology to explicate the relationship between Māori identity and economic

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activity. It also provides preliminary response rate data and discusses the representativeness of the MIFAS data set in comparison with data

gathered by the 2006 and 2013 New Zealand Censuses and Te Kupenga 2013.

## Keywords

Māori identity, identity economics, social identity theory, financial attitudes, economic outcomes

## Introduction

Financial commentators have recently “valued” the Māori economy at over NZ\$50 billion (Chapman Tripp, 2017), and the property pages of New Zealand’s biggest newspaper have described Māori as standing on the brink of a “Golden Age” (Gibson, 2015). Indeed, growth in the Māori economy in recent decades has been billed as “little short of spectacular” (New Zealand Institute of Economic Research, 2003), and Māori have been ranked among the most entrepreneurial thinkers in the world (Frederick & Chittock, 2006). We may therefore feel such optimism is well founded. However, switching the frame to a closer look at Māori households reveals a different picture: a rival narrative of headlines. Māori feature prominently in litanies of negative social statistics, and when it comes to economic outcomes of whānau and individuals, as opposed to tribal corporations, the media do not hesitate to portray Māori with equal and opposite oversimplification as nothing short of a financially incompetent “brown underclass” (Every Child Counts, 2011).

Beyond those headlines, in more considered writings, the intergenerational impact of colonisation has been recognised as the root cause of Māori social and economic problems (Māori Perspective Advisory Committee, 1988). An in-depth review of the multifarious social, cultural and structural implications of colonisation cannot be provided here. Rather, we acknowledge that any assessment of the contemporary Māori economic situation must recognise the ongoing

economic and psychosocial implications of New Zealand’s colonial history—in particular, how Māori have responded to the imposition of an alternative economic ideology: capitalism.

The precolonial Māori economy, which sustained Māori for centuries prior to contact with non-Māori, was non-monetary, subsistence and collectivist. Māori depended entirely on the land and the natural environment. The fundamental disruption to the Māori ecology occurred when Pākehā arrived in numbers in the early 1800s. By force of numbers, war, disease and a series of dubious “agreements”, settlers and officials asserted political control in New Zealand. The Treaty of Waitangi was signed by the British Crown and Māori chiefs in February 1840. Although the Treaty guaranteed Māori would retain their land and their political autonomy, that did not occur, and within 100 years after first contact, Māori had lost nearly all their lands. This changed the Māori world irrevocably, fractured tribal networks, eroded the culture and language, exposed Māori to racial discrimination and plunged Māori into intergenerational material poverty.

The colonisation of New Zealand was part of the British capitalist expansion, heavily influenced by the Industrial Revolution. The latter accelerated trade and economic growth in the United Kingdom and spurred traders, explorers and government officials to explore new countries to settle and resources to access. In *New Zealand: A Short History*, John Beaglehole (1936) observed that New Zealand’s colonisation was founded on the expansion of Britain’s

“capitalist democracy” and described the colonisation of the 1840s and 1850s as “corporate colonization” (p. 150).

In short, colonisation separated Māori from their greatest material asset (land) while simultaneously wrenching Māori into an imposed economic system. One might understand why Broughton, in “The Well-being of the Maori”, observed:

There is no doubt that, over the years, the Maori has had to struggle in order to survive within “a foreign cultural environment” at the expense of his own culture. From this context, there has resulted much psychological distress and anger directed at the “institutions” of material wealth. (Broughton, 1989, p. 20)

Here Broughton stresses the deep feelings of resentment and resistance Māori may hold towards Pākehā conceptualisations of material wealth and success. In other words, capitalist values, which are inherently individualist and materialistic, cannot be simply generalised to Māori. Indeed, Māori have grown tired of the deficit framing on Māori economic achievement that compares Māori socioeconomic status with that of non-Māori and emphasises that “Māori must achieve success as Māori”.

### Intra-group diversity

It is a complex endeavour to genuinely understand what “Māori must achieve success as Māori” really means, at least in an economic or financial sense. In contemporary New Zealand society, there are many layers of Māori intra-group diversity. Each iwi and hapū has its own distinctive history, and a further, regional layer of diversity results in variations in access to resources and opportunities. On the individual level, cultural knowledge, such as the ability to speak te reo Māori and understand tikanga Māori, is unevenly valued; more Māori are identifying with multiple ethnic groups

(Statistics New Zealand, 2013); and Māori live in diverse familial and economic contexts.

However, despite intra-group variation, it is important to note unifying themes throughout research that examines Māori attitudes and values towards work, career and economic activity. Customary Māori cultural values—particularly collectivism and interdependence—continue to influence Māori economic perceptions and priorities (Grimes, MacCulloch, & McKay, 2015). Specific values typically mentioned include wairuatanga, kotahitanga, tino rangatiratanga, whanaungatanga, kinship ties, and pride in and respect for tikanga Māori (Liu & Tamara, 1998; Oliver & Love, 2007). Several recent reviews indicate that these cultural imperatives are valid success indicators for Māori economic activity (Henare, 2000). While this confluence of sources also flows smoothly into the view that “Māori must achieve success as Māori”, to even understand that phrase we still require a clear picture of the specific economic choices individual Māori make, and how those are shaped by cultural imperatives. To generate this information, a sufficiently large nationally representative data set is required—one that enables empirical measures of Māori identity and economic values, as well as the ability to model linkages in a way that accounts for a range of control variables.

### Theoretical foundation: Identity economics

The overall theoretical approach to group-related attitudes measured in the MIFAS—that is, Māori identity and culture—derives from social identity theory (Tajfel & Turner, 1986), which proposes that each person’s self-concept is at least partly determined by the social groups (e.g., ethnicity, gender and religion) they affiliate with. Therefore, we take the position that aspects of Māori identity (beliefs, attitudes, behaviours and feelings individuals associate with identifying as Māori) can be measured,

albeit imperfectly, using a self-report. Several of our research projects to date leverage the Multidimensional Model of Māori Identity and Cultural Engagement (MMM-ICE) to achieve this goal. The MMM-ICE is a self-report (Likert-type) instrument designed to assess distinct dimensions of identity and cultural engagement in Māori populations. The inception, development and validation of the MMM-ICE scale has previously been described in a number of papers (e.g., Greaves, Houkamau, & Sibley, 2015; Greaves et al., 2017; Houkamau & Sibley, 2010, 2015, 2018).

The most recent version, the MMM-ICE3, assesses concepts, values, perspectives and characteristics commonly associated with Māori identity on eight dimensions. Higher scores on each dimension are indicative of higher commitment to Māori culture, beliefs, values, spirituality, political autonomy and traditional notions of whanaungatanga and kinship obligations (Houkamau & Sibley, 2018). The operational definitions, means, standard deviations and Cronbach alpha scores for each MMM-ICE scale are shown in Table 1. We use the MMM-ICE within the MIFAS to closely examine the relationship between different dimensions of Māori identity and economic beliefs and behaviours (e.g., savings, spending, career priorities and materialism/non-materialism), thus enabling us to document the link between dimensions of Māori identity and economic choices.

Sociologists, psychologists and other social scientists have long held the view that identity explains demographic differences in economic behaviours and outcomes (Hofstede & Bond, 1988). Previously, the field of economics, based on scientific formulas and precise metrics and sometimes known as “the dismal science”, had tended to ignore culture as a driving factor in economic choices. Neoclassical economics was almost exclusively quantitative (far more so than psychology), and it may be no coincidence that discarding culture, norms and identity for a universalising assumption of rational

self-interested behaviour (albeit supposedly only as a starting point) was highly mathematically convenient—and itself became a norm for how people not only did, but also should, behave. However, Nobel Prize-winning economist George Akerlof and collaborator Rachel Kranton changed this trajectory by integrating the core components of the aforementioned social identity theory into formal economic analysis, creating the field of identity economics (Akerlof & Kranton, 2000). Their novel integration challenges the notion of “rational choice” (i.e., that individuals always make prudent and logical decisions that provide them with the greatest benefit or satisfaction) by proposing that when making economic choices, people take into account, not only the financial implications, but also the implications for their identity.

Akerlof and Kranton’s (2000) work shows how cultural and other identity can account for many phenomena where the bare principle of rational self-interested choice proves unequal to the task (Humlum, Kleinjans, & Nielsen, 2012). Identity economics also goes some way towards explaining why individuals will make choices to bolster the groups they strongly affiliate with, even if those choices result in personal economic loss. Although still a nascent area of research, Akerlof and Kranton’s theory supports what Māori thought-leaders have proposed for some time, namely that the psychological effects of social exclusion and trauma experienced via colonisation mean that the colonised can never accept conformity to the colonisers’ standards and subscribe to the “dominant culture” (Akerlof & Kranton, 2000). In other words, Māori must achieve success as Māori (Houkamau, Stevens, Oakes, & Blank, 2019).

In seeking international examples of research examining the role of culture for economic choices, we have located only a small number of quantitative studies (e.g., Constant & Zimmermann, 2008; Levison & Peng, 2007). Perhaps this is not surprising. Guiso, Sapienza

**TABLE 1** Definitions for the eight dimensions indexed by the MMM-ICE3

<p><i>Group membership evaluation (GME)</i> (<math>M = 5.28, SD = 1.35, \alpha = .81</math>)</p> <p>The extent to which a person positively evaluates their membership in the social category Māori and views their membership as Māori as a personally important or central aspect of their self-concept <i>versus</i> the extent to which the person negatively evaluates their membership in the social category Māori and views their membership as Māori as peripheral or irrelevant to their self-concept.</p>
<p><i>Cultural efficacy and active identity engagement (CEAIE)</i> (<math>M = 4.84, SD = 1.40, \alpha = .78</math>)</p> <p>The extent to which a person perceives that they have the personal resources required (i.e., the personal efficacy) to engage appropriately with other Māori in Māori social and cultural contexts <i>versus</i> the extent to which the person perceives that they lack the personal resources and ability to engage appropriately with other Māori in Māori social and cultural contexts.</p>
<p><i>Interdependent self-concept (ISC)</i> (<math>M = 4.01, SD = 1.39, \alpha = .76</math>)</p> <p>The extent to which the concept of the self-as-Māori is defined by virtue of relationships with other Māori <i>versus</i> the extent to which the concept of the self-as-Māori is viewed as being solely unique and independent to the individual rather than as part of the social group.</p>
<p><i>Spirituality (S)</i> (<math>M = 5.08, SD = 1.62, \alpha = .86</math>)</p> <p>The extent to which a person is engaged with, and has a belief in, certain Māori concepts of spirituality, including a strong connection with ancestors, Māori traditions, and the sensation and experience of wāhi tapu (sacred places) <i>versus</i> the extent to which the person is disengaged from or does not believe in Māori concepts of spirituality.</p>
<p><i>Socio-political consciousness (SPC)</i> (<math>M = 5.21, SD = 1.43, \alpha = .82</math>)</p> <p>The extent to which a person perceives historical factors as being of continued importance for understanding contemporary intergroup relations between Māori and other ethnic groups in New Zealand, and how actively engaged the individual is in promoting and defending Māori rights given the context of the Treaty of Waitangi <i>versus</i> the extent to which the person perceives historical factors and injustices experienced by Māori as being irrelevant in contemporary society.</p>
<p><i>Authenticity beliefs (AB)</i> (<math>M = 3.66, SD = 1.16, \alpha = .67</math>)</p> <p>The extent to which a person believes that to be a “real” or “authentic” member of the social category Māori one must display specific (stereotypical) features, knowledge and behaviour <i>versus</i> the extent to which the person believes that Māori identity is fluid rather than fixed and produced through lived experience.</p>
<p><i>Perceived appearance (PA)</i> (<math>M = 4.12, SD = 1.98, \alpha = .93</math>)</p> <p>The extent to which a person subjectively evaluates their appearance as having clear and visible features that signal their ethnicity and ancestry as Māori (or high Māori prototypicality) <i>versus</i> the extent to which a person evaluates their appearance as less indicative of having Māori ancestry (low Māori prototypicality).</p>
<p><i>Whānau efficacy (WE)</i> (<math>M = 4.72, SD = 1.15, \alpha = .711</math>)</p> <p>The extent to which a person subjectively considers their family as capable of resolving challenges and completing work together (high whānau efficacy) <i>versus</i> the extent to which the person has little confidence that their family can deal with conflict or accomplish work together (low whānau efficacy).</p>

Note.  $M$  = mean,  $SD$  = standard deviation,  $\alpha$  = Cronbach's alpha.

and Zingales (2006) have explained that culture is omnipresent, and the ways it may influence economic activity are so pervasive that it is hard to devise testable measures and hypotheses to usefully analyse the relationships between indistinct and indefinite factors (also see Di Tella & MacCulloch, 2014); thus, large-scale quantitative research in this area is rare.

## The Māori Identity and Financial Attitudes Study: Content and process

### *Methodology*

The MIFAS research proceeded in two phases. In the first, interviews gathered insights from 25 Māori business leaders. These interviews enabled us to discern several core values that motivate and inspire Māori psychologically in relation to economic choices and financial aspirations. Further, a large-scale literature review gathered published writings about Māori economic development to weave into the final survey. In the second phase, we designed the MIFAS survey and piloted it with 35 Māori respondents and three Māori research assistants before we administered it nationwide.

The initial wave of the MIFAS drew a random sample of 100,000 people listed on the electoral roll who claimed Māori whakapapa. They were posted the MIFAS pen-and-paper questionnaire in September 2017.

The MIFAS survey includes over 340 individual items and takes approximately 30–45 minutes to complete. Notably, the survey includes a short (40-item) form of the MMM-ICE (Greaves et al., 2015; Houkamau & Sibley, 2018; Matika, Houkamau, & Sibley, 2019) (see Appendix 1 for a copy of the MMM-ICE3). Apart from the MMM-ICE3 manifold, additional MIFAS items include Māori perceptions of business success, individualism versus collectivism, and materialism; attitudes towards sustainability and money; access to social capital; feelings of inclusion within Aotearoa

New Zealand society; utilisation of financial products and services provided by iwi organisations versus mainstream financial institutions; financial literacy; career aspirations; political orientations; and levels of stress and other measures of health and well-being. Additional questions focus on demographic factors, including gender, age, household income, regional deprivation, religious status, parental status, relationship status, employment status, residential status (urban vs rural) and level of education.

The MIFAS is funded by the Royal Society of New Zealand Te Apārangi under a Marsden Grant. As part of our contract with the Society, we committed to receiving 5,000 completed MIFAS surveys. This posed no small challenge for several reasons. Māori commonly feel that they are over-researched and too frequently targeted for studies (L. T. Smith, 1999). Further, there is a feeling that much research has been, at best, of no benefit to Māori and, at worst, actively disempowering (Edwards, McManus, & McCreanor, 2005). To promote the MIFAS and encourage engagement, the lead author worked with Māori and mainstream media outlets to promote the survey nationwide and made appearances on television. The MIFAS was the subject of articles in newspapers and radio interviews. Examples of these include “100,000 Māori to Be Surveyed on Attitudes to Money” (Stock, 2017), “Māori Views on Money Sought” (2017), “Survey Under Way to Gauge Māori Financial Attitudes” (Boynton, 2017) and “Research Looks at Māori Attitudes and Behaviour with Money” (Dewes, 2017). The MIFAS survey and participant information sheets were translated into te reo Māori, and respondents could choose to complete their survey online or use the paper version.

### *Response rates and initial findings*

Data processing for the MIFAS survey required anonymising all surveys (by removing personal information and sorting it separately from



survey content), inputting all survey data into the Statistical Package for the Social Sciences (SPSS), coding qualitative responses, and checking and rechecking accuracy of the data (comparing the completed surveys). A total of 7,019 participants in the sample frame responded to the MIFAS, giving a “raw” response rate of 7% in round numbers (7,010/100,000). Our response rate of 7% is lower than the 9.6% in the latest “booster” wave for the New Zealand Attitudes and Values Study (NZAVS). Address accuracy in the electoral roll is 98.5%. Adjusting for address inaccuracy yields an estimated response rate fractionally higher but still rounding to 7% (7,019/98,500).

Notably, the database for this study was completed in September 2018, so the data set itself is relatively new. Given the size and uniqueness of the data set, we plan to analyse it in interrelated stages. The first stage involves validation, which is an initial stage of data analysis to clarify whether the data set is consistent and represents the Māori population. This article reports the early stages of data validation, whereby we describe aspects of our data set and evaluate it in relation to other large-scale data sets comprising significant numbers of Māori.

Although the MIFAS surpassed the goal of 5,000 respondents, it would be accurate to say the MIFAS response rate was low. This is by no means unique for a random mail survey of this nature. Survey response rates have been plunging internationally for decades (Kohut, Keeter, Doherty, Dimock, & Christian, 2012), and random mail surveys are particularly prone to very low response rates. The reasons for this decline are multiple: the rise of online surveys, mobile phones, and information requests; societal changes; and greater awareness of privacy issues (Beullens, Loosveldt, Vandenplas, & Stoop, 2018).

Māori have been found to participate in surveys at lower rates than Pākehā and other New Zealanders (Fink, Paine, Gander, Harris, & Purdie, 2011; Ministry of Health, 2017; Sibley, 2014) and are more likely to remove

themselves from survey-based studies over time (Satherley et al., 2015). The reasons for this are not entirely clear; however, it could be that the survey method itself is just unappealing to Māori. Perhaps reticence on the part of Māori may stem from a distrust of researchers due to previous negative experiences (Masters-Awatere & Nikora, 2017). Indeed, our research team did receive some negative feedback (phone calls) from a small number of respondents (> 50) dissatisfied they had received an unsolicited survey in the mail. This response is understandable given the public may be wary of strangers requesting information.

The MIFAS is a very lengthy survey with a large number of items that require respondents to provide, in some cases, quite personal information. That in itself can be a major deterrent for anyone, regardless of ethnicity. Research shows that the willingness of respondents to participate in a survey is related, at least in part, to the perceived content of the survey (Groves, Presser, & Dipko, 2004), and given the history described earlier, we suspect the topic of the MIFAS itself may have been off-putting for some recipients.

A low response rate in the MIFAS is only problematic if people in our sample differ in important ways from those who did not participate (non-response bias). Unfortunately, measuring the relationship between non-response and the accuracy of survey data is both complex and expensive to achieve (W. G. Smith, 2008). Some research does indicate that higher survey response rates do not necessarily equate to more accurate data. For example, Groves (2006) notes that the collective body of empirical work suggests there is actually no consistent relationship between response rates and non-response bias. Moreover, adjustments can be made during data analyses to account for any bias in the sample, meaning that we can use various techniques to ensure that our results are as accurate a representation of the Māori population as possible (Robertson & Sibley, 2019). One way to examine the quality of MIFAS data

is to compare the consistency of the data set with other large data sets of Māori respondents to test for similar general demographic patterns. At the time of writing, the 2018 New Zealand Census was still not available. Therefore, in this article we explore the MIFAS data quality by examining basic MIFAS demographic data with the 2006 and 2013 New Zealand Censuses and Te Kupenga 2013.

We first discuss what we see in the data, then we address the implications of biases in our discussion. Due to limited space, we can only discuss the MIFAS data set in relation to several key variables (see Houkamau & Sibley, 2019, for additional descriptive data).

### **Preliminary response rate data**

#### ***Gender***

The most obvious bias we see in the MIFAS data set relates to gender. Of the sample, 4,335 respondents were female and 2,675 were male (61.8% vs 38.2%, respectively). The Māori population does have a higher proportion of women compared to men (51% vs 49%, respectively; Statistics New Zealand, 2018); however, that alone does not account for the MIFAS gender skew. Gender has been found to have a considerable influence on survey participation internationally (Slauson-Blevins & Johnson, 2016; W. G. Smith, 2008); therefore, the gender difference in the MIFAS is not surprising and is consistent with patterns of survey responses found elsewhere. The NZAVS, which samples all ethnic groups in New Zealand using the same methodology, routinely shows gender bias of a similar magnitude. For example, the 2016 wave of the NZAVS had a similar gender bias, with 62.7% of respondents being women and 37.3% men (Robertson & Sibley, 2019). This suggests that Māori men are not particularly averse to surveys compared to other ethnic groups. The number of Māori males who completed the MIFAS survey is still sufficiently large and

representative compared to, say, Te Kupenga 2013, which was answered by 5,549 individuals, of which 47.8% were male, and 52.2% were female (Statistics New Zealand, 2014).

#### ***Age***

The average (mean) age of the MIFAS sample is 48.85 years (standard deviation 14.813) and the median is 50 years. The 2013 Census found around one-third (33.1%) of Māori were aged under 15 years and the median age of Māori was 23.9 years. Therefore, comparatively, the age structure of the MIFAS reflects a more mature sample. The key factor driving the MIFAS age structure is our sample frame, which was Māori aged 18–79 years. Those under 18 were omitted because the MIFAS relied on electoral roll data, which includes only those 18+. Our decision not to survey Māori over 79 was driven by practicality. Not only are Māori over 79 years of age an extremely small percentage of the population (Statistics New Zealand, 2013), our experience with the NZAVS indicates those aged 79+ are very unlikely to complete very lengthy pen-and-paper surveys, regardless of ethnicity. Table 2 shows the age structure of our sample. Readers will note that representation of individuals aged 20–44 in the MIFAS data set is consistent with or similar to Māori in the general population. What elevates the MIFAS mean age is an over-representation of Māori aged 45–79. The reasons for this are not clear at this stage. Research conducted with adult New Zealanders shows that overall, young people (aged 16–24 years) tend to be less attentive to financial matters (Satherley, 2017), so the topic of the survey may have been a major deterrent for younger Māori. It could be that older Māori may be more interested in reflecting on their own financial behaviour. They may also tend to have higher levels of accumulated wealth and security, and are therefore more willing to report it.



**TABLE 2** Percentage of respondents by age group for the 2006 and 2013 New Zealand Censuses and the MIFAS

Age in years	NZ Census 2006 (%)	NZ Census 2013 (%)	MIFAS 2017 (%)
20–24	9	9	5.9
25–29	8	7	6.6
30–34	8	6	6.5
35–39	8	7	7.5
40–44	7	7	9.6
45–49	6	7	11.6
50–54	5	6	11.9
55–59	4	5	12.6
60–64	3	4	10.5
65–69	2	2	8.6
70–74	1	2	5.6
75–79	1	1	2.2

*Note.* Table excludes those aged 19 and below and those aged 85 years and over.

### *Ethnicity*

Māori are more likely to identify with more than one ethnic group than any other group in New Zealand. The 2013 Census found more than half of Māori (53.5% or 320,406 people) identified with two or more ethnic groups, compared with 46.5% who identified with Māori only. Table 3 shows Māori ethnic affiliations reported in the MIFAS compared to the 2006 and 2013 Censuses. A total of 53% of MIFAS respondents reported having Māori/European/Pākehā affiliations, 43% reported being sole Māori (i.e., Māori only), 4.5% reported identifying as Māori and Pacific, 1.7% identified as Māori and Asian, and 1.2% identified with another ethnic group. These data are similar to those found in the 2006 and 2013 Censuses, although we do report a slightly lower percentage of people who identify as Pasifika and Māori. Notably, the number of Māori reporting Māori-only ethnicity has been declining slowly for years (i.e., a 6.3% decrease between the 2006 and 2013 Censuses), and this may account for the slightly lower percentage of sole-Māori in the MIFAS data set.

### *Te reo Māori*

The MIFAS asked participants to rate their own ability to speak te reo Māori on a scale from 1 to 7, with 7 being “extremely well” and 1 being “not very well”. The self-ratings of te reo Māori speaking ability can be found in Table 4A. We have not compared our data directly with Te Kupenga in the same table because of the different rating systems used (as shown in Table 4B). Although they are not directly comparable, a close examination of the MIFAS shows a basic similar trend to Te Kupenga, which found 55% of Māori adults had some ability to speak more than a few words or phrases in te reo. The MIFAS found 57% of respondents rated themselves between 2 and 5 (indicating the ability to speak at least some te reo). The MIFAS percentage of fluent/near fluent te reo speakers is about 7.1% (i.e., ranking 6–7 on our scale) versus Te Kupenga, which indicates 11% fluent speakers. Our relatively lower percentage of fluent speakers may reflect our sample range. There is a much larger percentage of fluent Māori speakers aged 75+, and we omitted Māori over 79 years of age from our study (Ministry of Social Development, 2016).

**TABLE 3** Māori ethnic affiliations reported in the MIFAS compared to the 2006 and 2013 New Zealand Censuses

Ethnicity	NZ Census 2006 (%)	NZ Census 2013 (%)	MIFAS 2017 (%)
Sole Māori	52.8	46.5	43
European	42.2	48.9	53.6
Pacific	7	8.2	4.5
Asian	1.5	1.7	1.7
Other*	2	0.4	1.2

\*Consists of responses for a number of small ethnic groups that are not included in the main categories.

**TABLE 4A** Self-rated ability to speak te reo Māori in the MIFAS

Self-rated ability to speak te reo (1–7)	Respondents (%)
1	36.9
2	23.9
3	14.7
4	11.1
5	7.3
6	3.5
7	2.6

*Note.* Participants were asked to rate their own ability to speak te reo Māori on a scale from 1 to 7, with 7 being “extremely well” and 1 being “not very well”.

**TABLE 4B** Self-rated ability to speak te reo Māori in Te Kupenga 2013

Self-rated ability to speak te reo Māori	Respondents (%)
Very well/well	11
Fairly well	12
Not very well	32
No more than a few words/phrases	44
Don't know/did not answer	8

### ***Highest qualification***

Given that it influences earning potential, income, and therefore financial attitudes and behaviours, education is obviously a key variable of interest in the MIFAS. Table 5 compares the higher educational qualifications in our sample with those reported by Māori in the 2006 and 2013 Census data. We note a markedly higher level of tertiary education qualifications in the MIFAS sample, who are at least three times more likely to hold a tertiary or postgraduate qualification. Highly educated people are more

likely to participate in studies, regardless of type of study or mode of data collection (Galea & Tracy, 2007), so we feel that this feature of the MIFAS data set, although salient, is not particularly unique.

### ***Personal income***

Personal income is an obvious indicator of current economic status, shaping choices and attitudes towards financial matters. A representative MIFAS sample should report incomes at a similar level to the adult Māori population;

**TABLE 5** Educational qualifications reported in the MIFAS compared to the 2006 and 2013 New Zealand Censuses

Qualification	NZ Census 2006 (%)	NZ Census 2013 (%)	MIFAS 2017 (%)
Bachelor's degree	5.5	6.8	19.2
Postgraduate and honours	.8	1.1	4.9
Master's degree	.7	.9	4
Doctorate degree	.1	.1	.6

**TABLE 6** Total personal income of MIFAS respondents compared to Māori aged 15 and over in the 2006 and 2013 New Zealand Censuses

Personal income range	NZ Census 2006 (%)	NZ Census 2013 (%)	MIFAS 2017 (%)
\$1–\$5,000	7.9	7.0	8.6
\$5,001–\$10,000	8.7	6.7	4.4
\$10,001–\$15,000	11.3	9.6	6.3
\$15,001–\$20,000	8.8	8.7	7.2
\$20,001–\$25,000	7.9	6.7	5.5
\$25,001–\$30,000	8	6.2	6
\$30,001–\$35,000	6.9	5.5	3.9
\$35,001–\$40,000	6.5	5.9	6.4
\$40,001–\$50,000	6.5	8.1	10.9
\$50,001–\$60,000	NA*	5.7	10
\$60,001–\$70,000	6.0	NA*	8.1
\$70,001–\$100,000	1.9	4.6	15.4
\$100,001–\$150,000	NA*	2.3	4.9

Note. Census data from Statistics New Zealand (n.d.).

\* Not available.

therefore, we compare here reported personal incomes in our sample with those reported by Māori in the 2006 and 2013 Censuses (Table 6). We note that the spread of personal incomes in our sample is not markedly different from trends shown in the Māori population overall.

## Discussion

The MIFAS is the first large-scale nationwide study of Māori aged 18 and over that aims to correlate personal characteristics and cultural

beliefs to a broad range of economic attitudes and practices. Here, we have described the MIFAS theoretical underpinnings, the methodology of this study and selected preliminary response rate data. We have also assessed the representativeness of our sample compared to the 2006 and 2013 New Zealand Censuses and Te Kupenga 2013.

Overall, our data show a clear gender and age skew and an overall higher level of tertiary education compared to the general Māori population. Yet there are similarities between some characteristics of the MIFAS data set and data drawn from previous Census samples and

Te Kupenga. For example, the range of personal incomes in our sample is not dissimilar to that found in the Censuses, te reo Māori capability in MIFAS participants seems similar to those found in Te Kupenga, and variations in ethnic affiliation in our sample mirror what has been found in previous Census data. In short, although there is a risk of non-response bias, this risk does not apply to all variables. Some of the factors underpinning under-representation in our sample can be explained in reference to the sample frame and the topic of the study itself. More importantly, at least in a statistical sense, the biases we observe in the data are manageable and can be corrected during data analyses. Using poststratification weight adjustments we can account for under-represented groups as accurately as possible (see Robertson & Sibley, 2019, for a discussion of how this is achieved).

As noted earlier, with a data set this size, phases of interrelated data analyses are required. We have barely started to “scratch the surface”, and the data validation process is still ongoing. We will move next to a deeper stage of data interpretation, returning to the question of “How does cultural identity matter for Māori economic decision-making?” This will involve not just counting responses but understanding them. A key goal of our work is to ensure that the data we have collected are used to promote a positive perspective of Māori culture and potential on Māori terms. Māori oversight and control of this data set is an explicit aspect of the MIFAS and has been since its inception, as the project lead is Māori (first author) of Ngāti Kahungunu: Ngāti Kere, Ngāti Porou: Te Whānau o Tūwhakairiora descent and the third author is a well-known Māori historian and expert in the history of Māori economic development (Te Aupōuri, Te Rarawa). The second author, an expert in statistical analysis, is Pākehā, and he provides a supportive role, as opposed to a directive one in the project. Notably, the MIFAS data set is not publicly accessible (only the project leads have access

to it), and extremely rigorous data encryption processes ensure participant anonymity. In sum, the leads are in a unique position to ensure what is increasingly referred to as data sovereignty (e.g., Te Mana Raraunga, 2015). The challenge for the future is also about ensuring the data are used to strategically benefit Māori. The process by which we go about that (i.e., what questions to ask, and what things to examine deeply) as well as the social aspects of the process (i.e., how to work with others to communicate the content and insights of the data set) requires well-informed decision-making processes. To ensure we invoke a broad and balanced perspective on the management of the MIFAS data, we have recently appointed a team of three additional Māori academics (working in business and economics) to form an expert advisory board to the MIFAS. The task of this group will be to support the leads to utilise and protect the MIFAS data set to ensure it is of strategic benefit to Māori. We see this as essential for the MIFAS to achieve its objectives and respond to Māori needs, and to maintain ethical standing in the eyes of the wider Māori community.

## Glossary

hapū	kinship entity
iwi	tribes
karakia	prayer
kōrero	speak
kotahitanga	collective work for collective benefit
marae	meeting grounds
Pākehā	New Zealanders of European descent
taha wairua	spiritual side
tapu	sacred
te reo Māori	the Māori language
tikanga Māori	Māori values/practices
tino	Māori determining what is best for Māori
rangatiratanga	
tūpuna	ancient ancestors
wāhi tapu	sacred places

wairuatanga	a belief in spirituality and commitment to the observation of spiritual protocols
whakapapa	lineage
whānau	family
whanaungatanga	family strength and unity

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## Appendix 1: The Multidimensional Model of Māori Identity and Cultural Engagement Version 3 (MMM-ICE3)

Instructions: The scale has been designed so that you will probably find that you agree with some statements but disagree with others to varying degrees. There are no right or wrong answers. Please answer on a seven-point scale with 1 being strongly disagree and 7 being strongly agree.

	Strongly disagree						Strongly agree
<i>Group membership evaluation</i>							
1. I reckon being Māori is awesome.	1	2	3	4	5	6	7
2. I love that I am Māori.	1	2	3	4	5	6	7
3. Being Māori is NOT important to my sense of what kind of person I am. [reversed]	1	2	3	4	5	6	7
4. Being Māori is cool.	1	2	3	4	5	6	7
5. Being Māori is NOT important to who I am as a person. [reversed]	1	2	3	4	5	6	7
<i>Cultural efficacy and active identity engagement</i>							
6. I don't know how to behave on a marae. [reversed]	1	2	3	4	5	6	7
7. I try to kōrero (speak) Māori whenever I can.	1	2	3	4	5	6	7
8. I can't do Māori culture or speak Māori. [reversed]	1	2	3	4	5	6	7
9. I know how to behave the right way when I am on a marae.	1	2	3	4	5	6	7
10. I have a clear sense of my Māori heritage and what it means for me.	1	2	3	4	5	6	7
<i>Interdependent self-concept</i>							
11. My relationships with other Māori (friends and family) are what make me Māori.	1	2	3	4	5	6	7
12. How I see myself is totally tied up with my relationships with my Māori friends and family.	1	2	3	4	5	6	7
13. For me, a big part of being Māori is based on my connections with whānau.	1	2	3	4	5	6	7
14. My Māori identity is fundamentally about my relationships with other Māori.	1	2	3	4	5	6	7
15. My Māori identity has nothing to do with my relationships with other Māori. [reversed]	1	2	3	4	5	6	7
<i>Spirituality</i>							
16. I believe that tūpuna (ancient ancestors) can communicate with you if they want to.	1	2	3	4	5	6	7
17. I believe that my taha wairua (my spiritual side) is an important part of my Māori identity.	1	2	3	4	5	6	7
18. I can sometimes feel my Māori ancestors watching over me.	1	2	3	4	5	6	7
19. I have never felt a spiritual connection with my ancestors. [reversed]	1	2	3	4	5	6	7

	Strongly disagree				Strongly agree		
20. I think tapu is just a made up thing. It can't actually affect you. [reversed]	1	2	3	4	5	6	7
<i>Socio-political consciousness</i>	1	2	3	4	5	6	7
21. I stand up for Māori rights.	1	2	3	4	5	6	7
22. Māori would be heaps better off if we just forgot about the past and moved on. [reversed]	1	2	3	4	5	6	7
23. I'm sick of hearing about the Treaty of Waitangi and how Māori had their land stolen. [reversed]	1	2	3	4	5	6	7
24. What the European settlers did to Māori in the past has nothing to do with me personally. I wasn't there and I don't think it affects me at all. [reversed]	1	2	3	4	5	6	7
25. I think that Māori have been wronged in the past, and that we should stand up for what is ours.	1	2	3	4	5	6	7
<i>Perceived appearance</i>	1	2	3	4	5	6	7
26. I think it is easy to tell that I am Māori just by looking at me.	1	2	3	4	5	6	7
27. I think it is clear to other people when they look at me that I am of Māori descent.	1	2	3	4	5	6	7
28. People would never know that I am of Māori descent just by looking at me. [reversed]	1	2	3	4	5	6	7
29. I think it is hard to tell that I am Māori just by looking at me. [reversed]	1	2	3	4	5	6	7
30. When people meet me, they often do not realise that I am Māori. [reversed]	1	2	3	4	5	6	7
<i>Authenticity beliefs</i>	1	2	3	4	5	6	7
32. I reckon that true Māori hang out at their marae all the time.	1	2	3	4	5	6	7
33. To be truly Māori you need to understand your whakapapa and the history of your people.	1	2	3	4	5	6	7
34. True Māori always do karakia (prayer) before important events.	1	2	3	4	5	6	7
35. Real Māori put their whānau first.	1	2	3	4	5	6	7
<i>Whānau efficacy</i>	1	2	3	4	5	6	7
36. If a problem arises that people cannot solve by themselves, the whānau as a whole will be able to solve it.	1	2	3	4	5	6	7
37. People in my whānau usually have trouble dealing with conflict. [reversed]	1	2	3	4	5	6	7
38. People in my whānau have always been able to discuss problems that affect everyone.	1	2	3	4	5	6	7
39. Whenever my whānau undertake a project together, we know that we will all work hard until it is accomplished.	1	2	3	4	5	6	7
40. When a problem arises in my whānau, I often have very little confidence that we will be able to solve it. [reversed]	1	2	3	4	5	6	7