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The role of culture and identity for economic values: a quantitative study of Māori attitudes

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ABSTRACT

This paper draws on Te Rangahau o Te Tuakiri Māori me Ngā Waiaro ā-Pūtea | The Māori Identity and Financial Attitudes Study (MIFAS). The MIFAS is a nationwide study that examines the relationship between Māori identity and economic attitudes and values. The MIFAS embeds the Multidimensional Model of Māori Identity and Cultural Engagement (MMM-ICE), which assesses Māori identity in relation to eight domains. We report data regarding three aspects of economic activity: risking iwi (tribal) assets for profit; individualism at work; and preferences for workplaces that promote Māori culture and identity. We find Māori who are more strongly oriented towards a traditional Māori belief system are less likely to be individualistic at work, more likely to prefer workplaces that respect Māori development and less likely to support commercialising iwi assets. We also find marked heterogeneity and suggest 'Māori success as Māori' may not solely reflect 'traditional' Māori values.

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Introduction

Capitalist Western ideologies accompanied British colonisation of New Zealand (Beaglehole 1938, cited in Hilliard 1997). Nearly 180 years after the signing of the Treaty of Waitangi, Māori are an ethnic minority within a Westernised economic system that is essentially capitalist, albeit mixed-market and with a large welfare state. Māori fare disproportionately poorly in most socio-economic statistics (Easton 2018), and when it comes to economic outcomes, national statistics and the media have portrayed Māori as a financially incompetent (Moewaka Barnes et al. 2012; Whitney et al. 2014) 'brown underclass' (New report … 2011; Hitchcock 2017). However, Māori have grown tired of distinctively Western deficit approaches to Māori development (Smith et al. 2015), and a discourse that champions 'Māori success as Māori' is growing stronger (ACE Aotearoa Professional Development Steering Group 2014).

The notion that Māori must achieve success as Māori aligns with what sociologists, psychologists and other social scientists have long understood about identity. Culture and

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identity play a key role in shaping economic development (Weber 1930; Polanyi 1944). Here, culture refers to the 'customary beliefs and values that ethnic, religious and social groups transmit fairly unchanged from generation to generation' (Guiso et al. 2006, p. 23). Values are abstract concepts or beliefs guiding people's lives (Schwartz 1992, 1994; Daniel et al. 2014). Our term 'economic values' refers to principles and standards for one's economic life. Economic values may affect, for instance, notions of economic success or failure, and orientations towards materialism, career and the utilisation of environmental assets. We argue they are reflected in attitudes to specific economic questions.

Culture itself is a challenging factor to measure in relation to economic values and attitudes because it is broad, and the sheer ubiquity of ways it may influence economic activity makes it difficult to devise testable measures and hypotheses to usefully analyse the relationships between these somewhat nebulous variables (Guiso et al. 2006, p. 23). Yet, in recent decades, the burgeoning empirical literature has analysed how culture affects various economic measures and outcomes (Franke et al. 1991; Brook and Luong 1999; House et al. 2004; Akerlof and Kranton 2010; Kapás 2017). In an analysis of World Values Survey data from 1995 to 2011, Grimes et al. (2015) found that Māori were more likely than non-Māori to believe that capitalists threaten society, and to prioritise the environment over economic growth. In this paper, we expand on that work and consider the extent to which Māori identity and cultural beliefs influence expressed attitudes about economic decisions. We argue that core (but non-exhaustive) 'traditional' Māori values continue to influence Māori economic decisions. Here 'traditional Māori values' refer to what published writings generally recognise as such; however, our calling these values traditional does not assume they have been held ubiquitously or by all Māori historically; rather, that they are widely cited as being normative for Māori.

The next section expounds our theoretical foundations and describes how we measure Māori identity in Te Rangahau o Te Tuakiri Māori me Ngā Waiaro ā-Pūtea | The Māori Identity and Financial Attitudes Study (MIFAS). We then offer a literature review of research that connects Māori values to economic activity and describe the guiding hypothesis for this paper before setting out the MIFAS methodology. A description of the results of our analyses including sample characteristics and data analyses is then provided before we discuss the significance of associations found overall and with three specific attitudes, while acknowledging limitations and suggesting future research avenues. Finally, the seventh section draws conclusions and describes potential implications.

Theoretical foundations and the Multidimensional Model of Māori Identity and Cultural Engagement

Our overall approach to understanding group attitudes and values derives from social identity theory (SIT) (Tajfel and Turner 1986), which proposes that group membership is crucial to the self-concept (Turner et al. 1994). In their seminal introduction to SIT, Tajfel and Turner (1979, 1986) proposed that an aspect of each person's self-concept is socially derived through their relationships with others. Social identity may be defined as a person's sense of who they are based on their group membership(s) and is an important source of belonging, meaning and social value. Social identities prescribe behavioural

as well as attitudinal norms, and in order to win and maintain acceptance, members are compelled to act in accordance with what is normative for the group. In this paradigm, self-identified Māori who consciously feel they 'belong' to the social category Māori and who highly value group membership will be strongly influenced by (what they consider) Māori social and cultural norms and expectations.

The MIFAS also draws on the work of Akerlof and Kranton (2000), who integrated SIT into formal economic analysis, creating the field of identity economics. Their work challenges the economic notion of 'rational choice' (i.e. that individuals always make prudent and logical decisions that provide them with the greatest benefit or satisfaction) by systematically incorporating the proposal that economic decisions factor in not only the financial implications, but also the implications for the decision maker's identity. We therefore take the view that those who identify strongly as Māori will be more likely to support and express (what they believe to be) Māori norms and values when making economic decisions.

To measure Māori identity, we employ the Multidimensional Model of Māori Identity and Cultural Engagement (MMM-ICE). The MMM-ICE is a survey-based measure that asks individuals to agree or disagree with a series of statements about being Māori. The inception, development and validation of the MMM-ICE scale is described in numerous publications (e.g. Houkamau and Sibley 2010, 2015b, 2018; Greaves et al. 2015). Ongoing iterations have modified the MMM-ICE to improve its validity. The latest measure, the MMM-ICE3, comprises eight dimensions. Each dimension assesses a specific domain relevant to Māori identity and cultural engagement, as follows:

(1) Group Membership Evaluation
(2) Interdependent Self-Concept
(3) Cultural Efficacy and Active Identity Engagement
(4) Spirituality
(5) Socio-Political Consciousness
(6) Authenticity Beliefs
(7) Perceived Appearance
(8) Whānau Efficacy.

The operational definitions, means, standard deviations and Cronbach's alpha scores for each MMM-ICE3 scale appear in the Methodology section below (also see Houkamau, Sibley, and Henare 2019 for the full version of the MMM-ICE3).

In relation to dimensions 1–6 listed above, higher scores may be taken as indicative of a stronger affiliation (e.g. a higher positive evaluation of the social group Māori, greater importance of being Māori to one's overall self-concept, stronger pro-Māori political beliefs and a closer alignment to normative Māori beliefs and values around spirituality). Dimension 6 (Authenticity Beliefs) is particularly important for understanding the prevalence and influence of essentialist beliefs within the Māori population because it evaluates the extent to which individuals believe Māori must display specific characteristics to be considered 'real' Māori. Dimension 7 (Perceived Appearance) was included in the MMM-ICE to evaluate the impact of racism on Māori. Unfortunately, being on the receiving end of racism is not unusual for many Māori (Houkamau et al. 2017), and economic outcomes experienced by Māori may be influenced by discrimination (see Houkamau and

Sibley 2015a for an example). Dimension 8, the Whānau Efficacy scale, was developed specifically for the MIFAS to evaluate the role of whānau connectedness and well-being for Māori identity (Matika et al. under review).

Thus far, research using the MMM-ICE has identified distinct sub-groups within the Māori population who are relatively detached from Māori culture and values. For example, drawing on data from Māori participants in the New Zealand Attitudes and Values Study ($n = 686$), Greaves et al. (2015) identified six unique Māori population sub-groups that reflected differential patterns in how Māori express their identity as Māori on each dimension of the MMM-ICE. These varied from the most enculturated group, who expressed strongly traditional ideas and preferences (22.6%), to those who identified as Māori but were largely disassociated from Māori culture and values (6.9%). These data indicate that understanding the connection between Māori identity and economic values and beliefs is a complex endeavour. Personal cultural knowledge (like the ability to speak Māori and understand tikanga Māori, namely Māori culture, custom and ethics) varies markedly across the Māori population. As Durie (1998, p. 215) observed of ever-increasing diversity: 'Māori live in diverse cultural worlds.'

Māori values and economic activity

Despite diversity in Māori society, academic commentary on Māori values regarding economic activity (what we term economic values) tends to treat Māori as having fixed, settled and stable identities, rooted in tradition and fundamentally different from New Zealand European/Pākehā (which here we also refer to European). In this respect, Māori are frequently portrayed as embodying communal values, esoteric wisdom and environmental spiritualism – diametrically opposed to supposed exclusively Western cultural values such as individualism, technology, commerce and trade (Reid and Rout 2016). Reid and Rout (2016) call the defining of Māori in opposition to Pākehā a form of 'reactionary traditionalism' – an ideological response to colonisation. They propose that reactionary traditionalism encourages indigenous people to dissociate economically from modernity, presenting indigenous culture as the antithesis of Western capitalism and exaggerating true historical differences. Examining pre-contact and pre-colonial Māori economies, Reid and Rout (2016) demonstrate that Māori already possessed many characteristics thought to uniquely underpin Western capitalism (including the traditions of property rights, governance and leadership that generated strong economic growth) prior to Pākehā arrival.

Yet, Haar and Brougham (2013, p. 878) observe: 'Māori are fundamentally different from their European counterparts and are considered to be more collectivistic'. Similarly Hook et al. (2007) note that Māori culture largely deals with the world through 'traditional principles' (p. 6). They add:

> The Pākehā/Western concepts of individuality and values of autonomy, freedom, self-interest, entitlement, competition and so on are inconsistent with the concepts of indigenous individuality where individuality is more likely to be constituted on values of relationality, collectivism, reciprocity and connectivity to prior generations. (p. 5)

Gallagher (2016) describes the core values that underpin the totality of tikanga Māori. These include whanaungatanga (relationships, mainly based on whakapapa, i.e. genealogy); mana (prestige, authority, control, power, influence, status); tapu and noa (rules

about what is sacred, prohibited or restricted), manaakitanga (generosity, caring for others and compassion) and utu (reciprocity). Many accounts describe these core values as being widely held among Māori generally (see Henare 1988, 2001, 2014; Marsden et al. 1989; Walker 1989; Barlow 1993; Royal 2002; Durie 2003; Mead 2016). A range of data sources indicate that the core Māori values described above remain important to Māori with respect to business, employment and economic activity (McIntosh et al. 2004; Te Puni Kōkiri 2006; Henry 2007; Oliver and Love 2007; Tapsell and Woods 2008; Carter et al. 2011; Spiller et al. 2011; Bargh 2012; Māori Economic Development Panel 2012; Harris et al. 2016).

For example, quantitative research also shows Māori orientations towards whanaungatanga and collectivism exert a continuing influence on Māori career satisfaction. Haar and Brougham (2013) found that Māori employees ($n = 174$) who felt their cultural values were understood in the workplace reported better job outcomes and satisfaction with their work. Kuntz et al. (2014) found that organisational espousal of 'central values' of te ao Māori (the Māori world), including manaakitanga, whakawhanaungatanga (family strength and unity) and kaitiakitanga, boosted Māori employees' affective commitment to the workplace ($n = 91$). Qualitative research shows Māori tribal organisations operate a multiple bottom line taking into account the impacts of economic development for the social and cultural outcomes of stakeholders (Smith et al. 2015), while Māori educational, work and career aspirations have been found to encompass relational values including manaakitanga and whanaungatanga (Liu and Tamara 1998; Oliver and Love 2007).

Kaitiakitanga (environmental guardianship, acknowledging the close affinity of Māori to nature; Harmsworth and Awatere 2013) and rangatiratanga (Māori acting with authority and independence over their own affairs) are modern coinages invoked regarding, among other things, Māori economic development (Carter et al. 2011). These terms represent a desire for economic self-determination (Smith et al. 2015) and express adaptation to modern political and legal realities. However, Kawharu (2000) observes that the values underpinning new constructs such as kaitiakitanga have been key facets of Maori life for generations in the management of resources and the promotion of identity. Kaitiakitanga affirms a unique status for Māori as tangata whenua (people of the land; Williams 2007), so it goes beyond a value to an affirmation of collective identity (Dell 2017).

O'Sullivan and Dana (2008) interviewed 14 Māori involved in supporting economic development in Te Rūnanga o Ngāi Tahu (the largest iwi, or tribe, in New Zealand's South Island). Māori economic development for most respondents meant achieving tino rangatiratanga (tino meaning full or absolute) by supporting their community to be economically independent. In research documented by Warriner (2007), six out of seven of the Māori entrepreneurs interviewed reported that traditional Māori values guided their decisions in relation to their business. Warriner focused on the role of whanaungatanga, manaakitanga, kaitiakitanga, rangatiratanga and aroha (love, compassion, respect) and found that these values were either highly significant to the entrepreneurs' work or considered 'essential in terms of manaakitanga and kaitiakitanga towards iwi/hapū resources and beneficiaries' (Warriner 2007, p. 563) (hapū meaning a sub-tribe or kinship grouping). Yet for one of the participants, traditional Māori values played only a minor role.

Thus, empirical research indicates that traditional Māori values are still relevant to the ways in which many Māori engage in economic activity. However, the influence of these

values does not appear to be universal. Here we add to the literature by examining intra-group diversity in economic attitudes and underlying values in a large representative sample of Māori. Our guiding hypothesis is that Māori who expressed a stronger commitment to Māori identity (as measured by the MMM-ICE) would be more likely to support normative/traditional Māori values regarding economic matters, and therefore attitudinally would report greater concern for protecting land and other iwi assets (reflecting the value of kaitiakitanga), a greater need for their workplace/employer to respect Māori values and development (reflecting utu and manaakitanga) and higher prioritisation of relationships over personal performance at work (reflecting the values of manaakitanga and whanaungatanga). The traditional Māori economic values we consider to be reflected by attitudes expressed to our three economic activities are kaitiakitanga, utu, manaakitanga and whanaungatanga.

Methodology

The MIFAS proceeded in two phases. First, interviews with 25 Māori business leaders were conducted to develop content. Interviewees identified a range of factors that motivate and inspire Māori in relation to economic development. Although these interviews did not aim to generate a list of core Māori values, all interviewees mentioned at least one of the core values cited in the previous section as important to Māori generally (and/or to themselves personally). The draft survey was developed by the authors of this paper, reviewed by two Māori academics (working in either business- or economics-related disciplines) and piloted with 35 Māori respondents and three Māori PhD students before being administered nationwide. The second phase began in September 2017, when a pen-and-paper questionnaire was posted to a random sample of 100,000 people on the New Zealand electoral roll claiming Māori whakapapa. The electoral database we sampled from included all registered voters, whether on the general or Māori roll.

Measures

The entire MIFAS comprises over 340 individual items, takes approximately 30–45 min to complete and embeds a short, 40-item version of the MMM-ICE3 (Houkamau et al. 2019). MIFAS items include Māori perceptions of business success, individualism versus collectivism, and materialism; attitudes towards sustainability and money; access to social capital; utilisation of financial products and services; career aspirations; political orientations; and measures of health and well-being. Other questions address demographic factors, among them gender, age, household income, regional deprivation, religious status, parental status, relationship status, employment status, residential status (urban vs rural) and level of education.

This paper focuses on the relationship between MMM-ICE dimensions and three measures we added to the MIFAS. Two of these measures we devised ourselves especially for the MIFAS: 'Protection of iwi assets versus taking risks for profit' and 'Requiring respect for Māori values and development in the workplace'. The third measure, 'Attitudes towards sociality versus individual performance at work', used an item from Helmreich et al.'s (1978) Work and Family Orientation Questionnaire (Adams et al. 1985). As noted above, these measures were piloted with 38 Māori before administering nationwide.

For each of these values, the opposite and alternative attitude and value would be the more traditionally (stereotypical) Western capitalist and individualist one (i.e. commercialising assets, individual work performance and no deference to Māori values at work).

Māori identity measures: dimensions of Māori Identity and Cultural Engagement measured in the MIFAS

The operational definitions, means (M), standard deviations (SD) and Cronbach's alpha scores (α) for all MMM-ICE3 scales are below. Each scale comprises four or five items. Respondents were asked to rate each item from 1 (strongly disagree) to 7 (strongly agree).

(1) *Group Membership Evaluation* ($M = 5.28$, SD = 1.35, $\alpha = 0.81$)
This scale measures the extent to which respondents positively evaluate their membership in the social category Māori and consider this personally important or central to their self-concept. Items include: 'Being Māori is NOT important to my sense of what kind of person I am [Reversed]' and 'I love that I am Māori'.

(2) *Interdependent Self-Concept* ($M = 4.01$, SD = 1.39, $\alpha = 0.76$)
This scale measures the extent to which the concept of the self-as-Māori is defined by relationships with other Māori versus being unique and independent to the individual. Items include: 'For me, a big part of being Māori is based on my connections with whānau' and 'How I see myself is totally tied up with my relationships with my Māori friends and family'.

(3) *Cultural Efficacy and Active Identity Engagement* ($M = 4.84$, SD = 1.40, $\alpha = 0.78$)
This scale measures the extent to which respondents perceive they have the personal resources (personal efficacy) to engage appropriately with other Māori in Māori social and cultural contexts. Items include: 'I have a clear sense of my Māori heritage and what it means for me' and 'I try to kōrero (speak) Māori whenever I can'.

(4) *Spirituality* ($M = 5.08$, SD = 1.62, $\alpha = 0.86$)
This measures the extent to which the person is engaged with, and has a belief in, certain Māori concepts of spirituality, including connecting strongly with the land, ancestors, Māori traditions and the sensation and experience of wāhi tapu (sacred places), versus being disengaged from or not believing in Māori concepts of spirituality. Items include: 'I believe that my taha wairua (my spiritual side) is an important part of my Māori identity' and 'I believe that tūpuna (ancient ancestors) can communicate with you if they want to'.

(5) *Socio-Political Consciousness* ($M = 5.21$, SD = 1.43, $\alpha = 0.82$)
This scale measures the extent to which respondents perceive that historical factors matter for contemporary relations between Māori and other ethnic groups in New Zealand, and how actively they promote and defend Māori rights given the Treaty of Waitangi. Items include: 'I think that Māori have been wronged in the past, and that we should stand up for what is ours' and 'I stand up for Māori rights'.

(6) *Authenticity Beliefs* ($M = 3.66$, SD = 1.16, $\alpha = 0.67$)
This scale measures the extent to which respondents believe that a 'real' or 'authentic' member of the social category Māori must display specific (stereotypical) features, knowledge and behaviour versus believing Māori identity is fluid rather than fixed and produced through lived experience. Items include: 'To be truly Māori you need

to understand your whakapapa and the history of your people' and 'True Māori always do karakia (prayer) before important events'.

(7) *Perceived Appearance* ($M = 4.12$, SD = 1.98, $\alpha = 0.93$)
This measures the extent to which respondents evaluate their appearance as having clear and visible features signalling Māori ethnicity and ancestry. Items include: 'When people meet me, they often do not realise that I am Māori [Reversed]' and 'I think it is clear to other people when they look at me that I am of Māori descent'.

(8) *Whānau Efficacy* ($M = 4.72$, SD = 1.15, $\alpha = 0.71$)
This measures the extent to which respondents consider their whānau (extended family) can resolve challenges together. Items include: 'People in my whānau have always been able to discuss problems that affect everyone', 'Whenever my whānau undertake a project together, we know that we will all work hard until it is accomplished' and 'If a problem arises that people cannot solve by themselves, the whānau as a whole will be able to solve it'. This scale was developed using existing published measures of collective family efficacy, which have been trialled cross-culturally (although not with Māori; Caprara et al. 2004; Carlo and Profugo 2009). We modified items for use with Māori before pilot-trialling the MIFAS.

Attitudes towards economic activity and economic values they reflect

(1) *Protection of iwi assets versus taking risks for profit* ($M = 4.57$, SD = 1.27, $\alpha = 0.52$)
We measured attitudes towards protecting iwi assets for the future versus commercialising and risking them for increased profit. The three items were: 'Protecting iwi assets (including land) means preserving things exactly as they are even if it means missing out on potential profits', 'I think that many iwi should take bigger risks with their resources in order to make more money' and 'Iwi should protect their resources at all costs, even if that means not using them to make money'. This measure reflects the traditional Māori economic value of kaitiakitanga, prizing environmental care and protection. Ratings were 1 (strongly disagree) to 7 (strongly agree), and items were averaged to provide a scale mean score.

(2) *Requiring respect for Māori values and development in the workplace* ($M = 4.71$, SD = 1.33, $\alpha = 0.65$)
This scale assessed how far individuals required respect for Māori values and development in the workplace. It consisted of three items: 'I would take a job which supports Māori development even if it paid less money', 'It is really important to me that my employer respects my Māori cultural values' and 'If I had to choose between a job which promoted my Māori cultural identity and one which paid great money, I'd take the money every time'. Attitudes expressed measure by proxy the traditional Māori economic values of utu, manaakitanga and whanaungatanga, prizing reciprocity and mutual respect. Ratings were 1 (strongly disagree) to 7 (strongly agree), and items were averaged to provide a scale mean score.

(3) *Sociality versus individual performance at work* ($M = 5.89$, SD = 1.32)
One item was used to assess individuals' prioritisation of personal performance versus relationships at work: 'It is important for me to do my job well even if I am not popular with my co-workers'. This item was taken from Helmreich et al.'s (1978)

Work and Family Orientation Questionnaire (Adams et al. 1985) and provides a (very) rough proxy for the traditional Māori economic values manaakitanga and whanaungatanga, which prioritise cooperation over competition. This item was rated on a scale from 1 (strongly disagree) to 7 (strongly agree).

Results

Data processing for the MIFAS required anonymising all surveys (by removing personal information and sorting it separately from survey content), inputting all survey data into Statistical Package for the Social Sciences (SPSS), coding qualitative responses and checking and rechecking the accuracy of the data (comparing the completed surveys). A total of 7019 participants in the sample frame responded to the MIFAS, giving a 'raw' response rate of 7% in round numbers (7010/100,000).

Here we offer a brief summary of our sample characteristics. Houkamau et al. (2019) recently reported the response rate data of the MIFAS data set and discussed its representativeness in comparison with the 2006 and 2013 New Zealand census data for Māori, and with Te Kupenga, Statistics New Zealand's first large-scale survey of Māori well-being (Statistics New Zealand 2014). A more comprehensive discussion of the MIFAS characteristics can be found there.

Gender

Of the sample, 4335 respondents were female and 2675 were male (61.8% versus 38.2% respectively). Four respondents indicated they were gender diverse and five did not report their gender. The Māori population does have a higher proportion of women than 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, and women are typically much more likely to complete surveys than men (Smith 2008; Slauson-Blevins and Johnson 2016). Therefore, the gender difference in the MIFAS is not surprising and is consistent with patterns of survey responses found elsewhere.

Age

The average (mean) age of the MIFAS sample is 48.85 years (SD = 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 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.

Ethnicity

Māori are more likely than any other group in New Zealand to identify with more than one ethnic group. In the 2013 census, 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. In the MIFAS, 43% reported sole Māori ethnicity, while 53.6% reported mixed Māori/

European. Notably, the number of Māori reporting Māori-only ethnicity has been declining slowly for years (i.e. a 6.3% decrease between 2006 and 2013 in the New Zealand censuses), and this may account for the slightly lower percentage of sole-Māori in the MIFAS data set.

Education

Compared to Māori sampled in the 2006 and 2013 New Zealand censuses we found the MIFAS sample were around three times more likely to hold a tertiary or post-graduate qualification (see Houkamau et al. 2019 for comparisons). Highly educated people are more likely to participate in studies generally, regardless of the type of study or mode of data collection (Galea and Tracy 2007), so we feel that this feature of the MIFAS data set, while salient, is not particularly remarkable.

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. Houkamau et al. (2019) have compared reported personal incomes in our sample with those reported by Māori in the 2006 and 2013 censuses. We note that the spread of personal incomes in our sample is not markedly different from trends shown in the Māori population overall.

Summary of sample characteristics and comment on response rate

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 New Zealand census samples and Te Kupenga. For example, the range of personal incomes in our sample is not dissimilar to that found in the censuses, and variations in ethnic affiliation are not markedly different from what is indicated in census data.

We note that the response rate in the MIFAS is low at only 7%. A low response rate was not unexpected; this was one of the reasons such a large sample was taken in the first place. We sent out 100,000 surveys with an awareness that random mail surveys often yield very low engagement. Survey response rates have been plunging internationally for decades, and random mail surveys are particularly prone to very low rates (Kohut et al. 2012). Reasons include the rise of online surveys, mobile phones and information requests; societal changes; and growing privacy awareness (Beullens et al. 2018). Also, Māori participate in surveys less than Pākehā and other New Zealanders (Fink et al. 2011; Sibley 2014; Ministry of Health 2017) and remove themselves from survey-based studies more over time (Satherley et al. 2015). The reasons for this are not entirely clear, but the survey method itself may just not appeal. It is important to reiterate also that the MIFAS is very long, and some of its many items ask quite personal information. That can be a major deterrent regardless of ethnicity, and it may have contributed to the low response rate. A low MIFAS response rate is only problematic if people we sampled differ in important ways from those not sampled (non-response bias). We have addressed

this matter elsewhere (see Houkamau et al. 2019). In short, we propose that although there is a risk of non-response bias, some of the factors underpinning underrepresentation in our sample can be explained in reference to the sample frame and nature of the study. 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 post-stratification weight adjustments, we can account for underrepresented groups as accurately as possible. For a discussion of how this is achieved, see Robertson and Sibley (2019).

Data analyses

A multiple regression model was performed with five demographics (gender, age, education, regional deprivation and also identifying as European/Pākehā) and the MMM-ICE scales predicting scale mean scores for the three outcome measures. Missing data for exogenous variables were estimated using Rubin's (1987) procedure for multiple imputation, with parameter estimates averaged over 10,000 data sets (thinned using every 200th iteration). All three outcomes were modelled as continuous variables in a single model, and their residuals were allowed to correlate. The model was estimated using maximum likelihood with robust estimation of standard errors to adjust for possible non-normality in residuals. Parameter estimates for the model are reported in Tables 1–3.

Table 1. Regression model predicting attitudes toward protection of iwi assets (as opposed to taking risks with iwi assets for increased profits).

	b	SE	*β*	*z*	*p*
Education (0–10)	−.068	.006	−.146	−11.326	.000
Gender (0 women, 1 men)	.165	.031	.063	5.380	.000
Age	−.005	.001	−.061	−5.192	.000
Regional deprivation (1–10)	.037	.006	.083	6.508	.000
Also identified as European (0, 1)	−.051	.034	−.020	−1.489	.137
Group membership evaluation	−.017	.018	−.018	−.982	.326
Cultural efficacy	−.007	.015	−.008	−.501	.616
Interdependent self-concept	.010	.016	.011	.637	.524
Spirituality	.081	.013	.102	6.311	.000
Socio-political consciousness	.143	.014	.161	9.926	.000
Perceived appearance	.016	.009	.025	1.728	.084
Authenticity beliefs	.109	.013	.117	8.401	.000
Whānau efficacy	.098	.015	.088	6.732	.000

Table 2. Regression model predicting respect for Māori values and development in the workplace.

	b	SE	*β*	*z*	*p*
Education (0–10)	.007	.005	.014	1.304	.192
Gender (0 women, 1 men)	−.202	.025	−.073	−7.932	.000
Age	.004	.001	.045	4.654	.000
Regional deprivation (1–10)	.008	.005	.017	1.699	.089
Also identified as European (0, 1)	−.025	.028	−.009	−.875	.381
Group membership evaluation	.160	.015	.161	10.686	.000
Cultural Efficacy	.094	.013	.098	7.407	.000
Interdependent self-concept	.084	.013	.087	6.350	.000
Spirituality	.120	.011	.145	10.829	.000
Socio-political consciousness	.258	.012	.276	20.967	.000
Perceived appearance	−.014	.007	−.020	−1.861	.063
Authenticity beliefs	.042	.011	.043	3.900	.000
Whānau efficacy	.108	.012	.093	9.308	.000

Table 3. Regression model predicting attitudes toward individual performance versus sociality in the workplace.

	b	SE	*β*	*z*	*p*
Education (0–10)	−.034	.007	−.070	−4.911	.000
Gender (0 women, 1 men)	−.020	.033	−.007	−.588	.556
Age	−.004	.001	−.047	−3.711	.000
Regional deprivation (1–10)	.017	.006	.036	2.691	.007
Also identified as European (0, 1)	−.032	.037	−.012	−.866	.386
Group membership evaluation	−.024	.018	−.025	−1.339	.181
Cultural efficacy	.037	.016	.039	2.309	.021
Interdependent self-concept	−.034	.016	−.035	−2.078	.038
Spirituality	.056	.014	.068	4.098	.000
Socio-political consciousness	−.002	.016	−.002	−.107	.915
Perceived appearance	.036	.010	.054	3.709	.000
Authenticity beliefs	.036	.014	.037	2.540	.011
Whānau efficacy	.070	.015	.061	4.679	.000

(1) Model predicting support for protecting iwi assets versus risking them for profit

As Table 1 shows, after adjusting for demographics and multiple aspects of identity, higher levels of Socio-Political Consciousness, stronger Authenticity Beliefs, greater commitment to Māori Spirituality and higher levels of Whānau Efficacy were (in descending order) the key factors associated with favouring asset protection. The other dimensions from the MMM-ICE yielded no significant associations. Demographically, the more educated respondents inclined more towards risking iwi assets for greater potential profit. Men, younger people and people in more deprived regions (i.e. a number nearer 10 on the Regional Deprivation index) were less inclined to do so. Whether one also identified as European was not associated with attitudes towards the protection of iwi assets.

(2) Model predicting requiring respect for Māori values and development in the workplace

As shown in Table 2, those who scored higher on Socio-Political Consciousness, Group Membership Evaluation, Spirituality, Cultural Efficacy and Active Identity Engagement, Whānau Efficacy, Interdependent Self-Concept and Authenticity Beliefs reported more highly valuing work that promoted Māori identity and culture. Only Perceived Appearance was not associated with this work-related variable. Demographically, women and older people tended more towards requiring respect for Māori values and development at work. Whether one also identified as European, level of education and regional deprivation were not associated with attitudes towards respect for Māori values and development in the workplace.

(3) Model predicting emphasis placed on individual performance versus sociality in the workplace

As reported in Table 3, respondents scoring higher on Spirituality, Whānau Efficacy, Perceived Appearance, Cultural Efficacy and Active Identity Engagement and Authenticity Beliefs tended to report their work performance trumped relationships with

co-workers. Those scoring highly in Interdependent Self-Concept, younger people and those with more education were more likely to value relationships with co-workers over individual performance. People living in more deprived regions, in contrast, emphasised performance over relationships. Whether one also identified as European and level of education were not associated with an emphasis one way or the other.

Discussion

This section discusses the significance of the associations between the MMM-ICE and the three attitudes analysed in this paper (the values we believe to underlie each have already been identified). Overall, our results show marked heterogeneity. We found that Māori who strongly value Māori identity according to specific dimensions (particularly Spirituality, Socio-Political Consciousness, Whānau Efficacy and Authenticity Beliefs) were more likely to endorse attitudes that aligned with the normative or traditional values often cited in academic literature describing Māori as reviewed above.

First, we found that Māori who are more socially and politically conscious and believe more firmly in Māori concepts of spirituality (as measured in the MMM-ICE) have a much greater preference for preserving and protecting iwi natural resources, including land, rather than utilising and risking it for profit. Land recovery, and the recovery of iwi assets generally, has been a core focus of the Treaty of Waitangi claims process. Therefore, the reason that those who are more socially and politically conscious and hold on to more traditional Māori values as measured by Authenticity Beliefs may oppose commercialising iwi assets if they are more attuned to the history of Māori land loss and the intrinsic value of land to Māori.

The MMM-ICE Spirituality scale specifically asks respondents to consider the extent to which they feel connected with their ancestors spiritually. Therefore, higher scores on this scale explain a deeper connection to land as a tāonga tuku iho (a gift passed down from previous generations) which must be protected and is hard to compensate by money. More data are needed to understand the relationship between higher scores on Whānau Efficacy and a reluctance for iwi members to 'take risks' with iwi assets to 'make money', as the survey items stated. Our previous research has found that higher levels of Cultural Efficacy and Active Identity Engagement (as measured by the MMM-ICE) are linked to an increased positive expectation of future financial security for Māori (Houkamau and Sibley 2017). We propose that this earlier finding may reflect the tendency for Māori, who overall have collectivist orientations, to view their relationships as a form of future economic security. The MIFAS data on Whānau Efficacy supports this, and suggests that those with very high trust in whānau (or a positive whānau network they can rely on) consider this their primary source of sustenance, and therefore see no need to risk iwi assets or resources for profit (or indeed see a need not to).

Second, our findings of strong correlations with fully seven dimensions of the MMM-ICE indicate that Māori who are deeply culturally engaged and treasure their Māori identity and culture prefer employment that promotes Māori values and development This preference, for those who have the choice, may mean selecting employers who respect Māori cultural values and work that promotes Māori development, even if it pays less. This result bears out identity economics and the notion that identity is a crucial factor

in economic decisions, notably complementing or even overriding pecuniary motivations (Akerlof and Kranton 2010).

Third, with regard to individual performance versus sociality in the workplace, it makes sense that belief in interdependence (Interdependent Self-Concept) is associated with preferring the maintenance of relationships at work over individual performance. We propose that this may indicate attitudes towards whanaungatanga. Interdependent Self-Concept measures how far individuals define themselves by relationships with other Māori. We find it particularly interesting that gender and Group Membership Evaluation were not significantly associated with expressed preferences for individual performance at work over sociality. This suggests expressions of individualism and collectivism may be socially and situationally contingent for Māori. It may be that in some cases people have little say in the matter. If relying on their own performance simply to hold on to their jobs they may effectively have to focus foremost on keeping that individual performance at a consistently high standard. Thus, specific dimensions of Māori identity may be more important in some contexts and not others, contingent on individual circumstances.

For all three outcome variables, having European ethnic affiliation bore no significant association with financial attitudes. This finding suggests Māori with multiple ethnic identities may not necessarily have a weaker sense of cultural identity compared with those identifying as solely Māori. This is a particularly intriguing and worthwhile area for future research given the increased incidence of Māori reporting mixed ethnicity in New Zealand census data.

Limitations and future research

This paper has several limitations. Quantitative methodologies have their own strengths and weaknesses, and these have been comprehensively addressed elsewhere (Taras et al. 2009). Our variables are necessarily restricted. We have focused on three variables and propose that individuals' attitudes towards them will vary contingent on their commitment to traditional Māori values. We remain acutely aware that the measures proposed for the three dependent variables need further validation. Our single-item measure for sociality at work is particularly vulnerable to criticism. While it is difficult to capture the complexity of attitudes in any measure, this can be especially hard with just one question or item. Consequently we acknowledge that tests of validity using the MIFAS data are required to assess how accurately our new measures ('Protection of iwi assets versus taking risks for profit', 'Requiring respect for Māori values and development in the workplace' and 'Attitudes towards sociality versus individual performance at work') reflect the Māori cultural values we suggest. For the purposes of this paper, we have assumed that the measures used indeed provide a valid reflection of those constructs.

Also, the obvious point that factors other than cultural identity can influence economic decisions bears stating. Individuals possess multiple identities, ethnic *and* otherwise, and it is problematic and reductive to suggest that cultural identity is the superordinate motivating influence. Interrelated factors including locality, gender and age should not be glossed over, since they, too play an important role in decision making. In this paper we have taken into account some such factors but others, like personality, are unaccounted for so far.

Notably, the database for this study was completed in September 2018, so the data set itself is still comparatively new. Given the size and uniqueness of the data set, it requires analyses in interrelated stages. This paper is the first to report correlations between the MMM-ICE dimensions and (selected) dependent variables. Much deeper analyses are necessary to better understand the differing attitudes of Māori and what this might mean for systems of economic development that suit some, if not all, Māori groups (defined by heterogeneous attitudes). To that end, future research using the MIFAS data set will explore, for example, preferences for individual investments in education; attitudes towards materialism, consumption and money; and personality traits and other sources of identity, such as religion. This paper is an initial examination of the database; we hope it will serve as a starting point for questioning the role of Māori identity for economic activity.

Conclusions and implications

A core objective of the MIFAS is to paint a clearer picture of Māori perspectives on financial and economic matters. Although differences among iwi and hapū are well recognised, much writing around Māori in relation to economic development effectively treats Māori as culturally and socially homogenous. The consideration of Māori aspirations tends to be viewed through the lens of somewhat monolithic and essentialist Māori values, nevertheless taken as widely or even universally 'normative', in a simplification that sacrifices important insights about impactful diversity.

In this paper we first affirm and elucidate the economic importance of treasured Māori cultural identity, aligning with the traditional values cited here, for the many who choose it. However, for some of Māori descent, what are considered traditional Māori values may be incompatible with their personal aspirations. Thus, our data support and extend smaller-scale, qualitative and quantitative studies that explore the ways traditional cultural imperatives or economic values still affect contemporary Māori attitudes towards economic activity. Secondly, but equally importantly, confirming previous research and commentary on the nature of contemporary Māori society (Durie 1998; Greaves et al. 2015), we show heterogeneity: contemporary Māori are not monolithic, and important nuances shape how different Māori engage with economic decisions.

We delineate the potential influence of Māori cultural values in relation to employment choices, satisfaction with employers, and the use of natural resources. Māori ethnic identity is evolving and diverse, but often homogeneity in Māori identity is taken for granted. Yet our data shows a heterogeneity in attitudes towards the three aspects of economic activity examined.

Without underestimating the profound impact of Māori economic hardship, our results qualify purely deficit-based readings of the socio-economic position of Māori. Deficit readings omit Māori heterogeneity and incidentally risk simplistically defining Māori by Western values and metrics, including metrics of rationality. Our examples of respect for Māori values at work, workplace sociality and iwi land/asset preservation are rational within a traditional Māori value system, even if they incur personal financial cost. Moreover, the extent of the difference between what are supposed to be traditionally Māori and traditionally Western capitalist values, and thus how far they need to be traded off against each other for Māori economic development, remain live questions.

Our data set showed that strong traditional Māori allegiances and traditional Māori values may override the desire for personal pecuniary benefit. This supports the key tenets of identity economics and suggests that some Māori may reject the culture of the 'dominant' ethnic group and identify much more closely with their own ethnic group and its values as traditionally represented, even if this rejection acts as a barrier to employment and upward social mobility. In this sense, strong allegiance to being Māori might be a 'poor economic decision' but serves to endorse the value of being Māori. This in turn affirms Akerlof and Kranton's (2000, p. 717) observation: 'because identity is fundamental to behaviour, choice of identity may be the most important "economic" decision people make'.

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References

ACE Aotearoa Professional Development Steering Group. 2014. Māori success as Māori. A summary report of findings from the Māori success as Māori research project. Wellington: ACE Aotearoa Professional Development Steering Group.

Adams J, Priest RF, Prince HT. 1985. Achievement motive: analyzing the validity of the WOFO. Psychol Women Quart. 9(3):357–369.

Akerlof G, Kranton R. 2010. Identity economics. Princeton (NJ): Princeton University Press.

Akerlof GA, Kranton RE. 2000. Economics and identity. Q J Econ. 115(3):715–753.

Bargh M. 2012. Rethinking and re-shaping indigenous economies: Māori geothermal energy enterprises. J Enterp Communities. 6(3):271–283.

Barlow C. 1993. Tikanga whakaaro: key concepts in Māori culture. Auckland: Oxford University Press.

Beullens K, Loosveldt G, Vandenplas C, Stoop I. 2018. Response rates in the European social survey: increasing, decreasing, or a matter of fieldwork efforts? Surv Methods. [accessed 2019 Jul 3]. https://surveyinsights.org/?*p*=9673.

Brook T, Luong HV. 1999. Culture and economy: the shaping of capitalism in Eastern Asia. Ann Arbor (MI): University of Michigan Press.

Caprara GV, Regalia C, Scabini E, Barbaranelli C, Bandura A. 2004. Data from: Perceived collective family efficacy scale – English version. PsycTESTS Dataset. [accessed 2019 Jul 3]. https://www.proquest.com/products-services/psyctests.html.

Carlo M, Profugo D. 2009. Developing Asian values, self-construal, and resiliency, through family efficacy and parental closeness. Int J Res Rev. 1:1–20.

Carter L, Kamau R, Barrett M. 2011. Te Pae Tawhiti Māori economic development programme: literature review and programme report. Auckland: Ngā Pae o te Māramatanga.

Daniel E, Bilgin AS, Brezina I, Strohmeier CE, Vainre M. 2014. Values and helping behavior: a study in four cultures. Int J Psychol. 50(3):186–192.

Dell K. 2017. Te hokinga ki te ūkaipō: disrupted Māori management theory – harmonising whānau conflict in the Māori Land Trust [doctoral thesis]. Auckland: University of Auckland.
Durie M. 1998. Whaiora: Māori health development. 2nd ed. Auckland: Oxford University Press.
Durie M. 2003. Ngā kāhui pou: launching Māori futures. Wellington: Huia.
Easton B. 2018. Heke tangata: Māori in markets and cities. Auckland: Te Whānau o Waipareira Trust.
Fink J, Paine SJ, Gander P, Harris R, Purdie G. 2011. Changing response rates from Māori and non-Māori in national sleep health surveys. New Zeal Med J. 124(1328):52–63.
Franke RH, Hofstede G, Bond MH. 1991. Cultural roots of economic performance: a research note. Strateg Manage J. 12:165–173.
Galea S, Tracy M. 2007. Participation rates in epidemiologic studies. Ann Epidemiol. 17(9):643–653.
Gallagher T. 2016. Tikanga Māori pre-1840. Te Kāhui Kura Māori. 0(1). [accessed 2019 Jul 3]. http://nzetc.victoria.ac.nz/tm/scholarly/tei-Bid001Kahu-t1-g1-t1.html.
Greaves LM, Houkamau CA, Sibley CG. 2015. Māori identity signatures: A latent profile analysis of the types of Māori identity. Cult Divers Ethn Minor Psychol. 21(4):541–549.
Grimes A, MacCulloch R, McKay F. 2015. Indigenous belief in a just world: New Zealand Māori and other ethnicities compared. Motu Working Paper 15–14. Wellington: Motu Economic and Public Policy Research.
Guiso L, Sapienza P, Zingales L. 2006. Does culture affect economic outcomes? J Econ Perspect. 20 (2):23–48.
Haar JM, Brougham DM. 2013. An indigenous model of career satisfaction: exploring the role of workplace cultural wellbeing. Soc Indic Res. 110(3):873–890.
Harmsworth GR, Awatere S. 2013. Indigenous Māori knowledge and perspectives of ecosystems. In: Dymond J, editor. Ecosystem services in New Zealand – conditions and trends. Lincoln (NZ): Manaaki Whenua Press; p. 274–286.
Harris F, Macfarlane S, Macfarlane A, Jolly M. 2016. Māori values in the workplace: investing in diversity. MAI J. 5(1):48–62.
Helmreich RL, Beane WE, Lucker GW, Spence JT. 1978. Achievement motivation and scientific attainment. Pers Soc Psychol B. 4:222–226.
Henare M. 1988. Ngā tikanga me ngā ritenga o te ao Māori: standards and foundations of Māori society. Wellington: Royal Commission on Social Policy.
Henare M. 2001. Tapu, mana, mauri, hau, wairua. A Māori philosophy of vitalism and cosmos. In: Grimm J, editor. Indigenous traditions and ecology: the interbeing of cosmology and community. Cambridge (MA): Harvard University Press for the Centre for the Study of World Religions; p. 197–221.
Henare M. 2014. The economy of mana. In: Cooke D, Hill C, Baskett P, Irwin R, editors. Beyond the free market: rebuilding a just society in New Zealand. Auckland: Dunmore; p. 65–69.
Henry E. 2007. Kaupapa Māori entrepreneurship. In: Dana L-P, Anderson RB, editors. International handbook of research on indigenous entrepreneurship. Cheltenham (UK): Edward Elgar; p. 536–548.
Hilliard C. 1997. Island stories: the writing of New Zealand history 1920–1940 [dissertation]. Auckland: University of Auckland.
Hitchcock J. 2017, Nov 7. Māori unemployment is a national crisis. The Spinoff. [accessed 2019 Jul 3]. https://thespinoff.co.nz/atea/07-11-2017/Māori-unemployment-is-a-national-crisis/.
Hook G, Waaka T, Raumati L. 2007. Mentoring Māori within a Pākehā framework. MAI Rev. 3(1):1–5.
Houkamau CA, Sibley CG. 2010. The multi-dimensional model of Māori identity and cultural engagement. New Zeal J Psychol. 39(1):8–28.
Houkamau CA, Sibley CG. 2015a. Looking Māori predicts decreased rates of home ownership: institutional racism in housing based on perceived appearance. PLoS One. 10(3):e0118540.
Houkamau CA, Sibley CG. 2015b. The revised Multidimensional Model of Māori Identity and Cultural Engagement (MMM-ICE2). Soc Indic Res. 122(1):279–296.
Houkamau CA, Sibley CG. 2017. Cultural connection predicts perceptions of financial security for Māori. Soc Indic Res. 133(1):395–412.

Houkamau CA, Sibley CG. 2018. Mixed methods and the scientific study of Māori identity: the story of the Multidimensional Model of Māori Identity and Cultural Engagement. In: Booysen LAE, Bendl R, Pringle JK, editors. Handbook of research methods in diversity management, equality and inclusion at work. Cheltenham: Edward Elgar; p. 470–496.
Houkamau C, Sibley C, Henare M. 2019. Te Rangahau o te Tuakiri Māori me Ngā Waiaro ā-Pūtea - Background, theoretical orientation and first-wave response rates. MAI Journal. 8(2):142–159.
Houkamau CA, Stronge S, Sibley CG. 2017. The prevalence and impact of racism toward indigenous Māori in New Zealand. Int Perspect Psychol. 6(2):61–80.
House RJ, Hanges PJ, Javidan M, Dorfman PW, Gupta V. 2004. Culture, leadership, and organizations: The GLOBE study of 62 societies. Thousand Oaks (CA): Sage.
Kapás J. 2017. How cultural values affect economic growth: a critical assessment of the literature 1. Ekon Misao Praksa. 26(1):265–285.
Kawharu M. 2000. Kaitiakitanga: a Māori anthropological perspective of the Māori socio-environmental ethic of resource management. J Polynesian Soc. 109(4):349–370.
Kohut A, Keeter S, Doherty C, Dimock M, Christian L. 2012. Assessing the representativeness of public opinion surveys. [accessed 2019 Jul 3]. http://www.people-press.org/2012/05/15/assessing-the-representativeness-of-public-opinion-surveys/.
Kuntz JR, Nswall K, Beckingsale A, Macfarlane AH. 2014. Capitalising on diversity: espousal of Māori values in the workplace. J Corp Citiz. 55:102–122.
Liu JH, Tamara P. 1998. Leadership, colonisation, and tradition. Identity and Economic Change in Ruatoki and Ruatahuna. J Nativ Educ. 22(1):138–145.
Marsden M, Goodall A, Palmer D, Ministry for the Environment & Core Group on Resource Management Law Reform. 1989. Resource management law reform: part A, The natural world and natural resources, Māori value systems & perspectives: part B, Water resources and the Kai Tahu claim. Wellington: Ministry for the Environment.
Matika C, Houkamau C, Sibley C. under review. The Revised Multidimensional Model of Maori Identity and Cultural Engagement (MMM-ICE3). New Zeal J Psychol.
McIntosh A, Zygadlo F, Matunga H. 2004. Rethinking Māori tourism. Asia Pac J Tour Res. 9 (4):331–352.
Mead HM. 2016. Tikanga Māori: living by Māori values, Revised ed. Wellington: Huia.
Ministry of Health. 2017. Methodology report 2016/17: New Zealand health survey. Wellington: Ministry of Health.
Moewaka Barnes A, Borell B, Taiapa K, Rankine J, Nairn R, McCreanor T. 2012. Anti-Māori themes in New Zealand journalism; toward alternative practice. Pac Journal Rev. 18(1):195–216.
Māori Economic Development Panel. 2012. Strategy to 2040. He kai kei aku ringa: The Crown-Māori economic growth partnership. Wellington: Māori Economic Development Panel.
New report reveals brown social underclass in New Zealand. 2011, Sep 2. Scoop. Press release: every child counts. [accessed 2019 Jul 3]. http://www.scoop.co.nz/stories/PO1109/S00032/new-report-reveals-brown-socialunderclass-in-new-zealand.htm.
Oliver P, Love C. 2007. Mahi aroha: Māori perspectives on volunteering and cultural obligations. Wellington: Office for the Community and Voluntary Sector.
O'Sullivan J, Dana T. 2008. Redefining Māori economic development. Int J Soc Econ. 35(5):364–379.
Polanyi K. 1944. The great transformation (foreword by Robert M. MacIver). New York (NY): Farrar Rinehart.
Reid J, Rout M. 2016. Māori tribal economy: rethinking the original economic institutions. In: Anderson TL, editor. Unlocking the wealth of Indian nations. Lanham (MD): Lexington Books; p. 84–103.
Robertson A, Sibley CG. 2019. Research sampling: a pragmatic approach. In: Brough P, editor. Advanced research methods for applied psychologists: design, analysis and reporting. New York (NY): Routledge; p. 15–36.
Royal T. 2002. Indigenous worldviews: a comparative study. [accessed 2019 Jul 3]. https://static1.squarespace.com/static/5369700de4b045a4e0c24bbc/t/53fe8f49e4b06d5988936162/1409191765620/Indigenous+Worldviews.
Rubin DB. 1987. Multiple imputation for nonresponse in surveys. New York (NY): Wiley.

Satherley N, Milojev P, Greaves LM, Huang Y, Osborne D, Bulbulia J, Sibley CG. 2015. Demographic and psychological predictors of panel attrition: evidence from the New Zealand attitudes and values study. PLoS One. 10:e0121950.
Schwartz SH. 1992. Universals in the content and structure of values: theoretical advances and empirical tests in 20 countries. Adv Exp Soc Psychol. 25:1–65.
Schwartz SH. 1994. Are there universal aspects in the content and structure of values? J Soc Issues. 50(4):19–45.
Sibley CG. 2014. Comparison of demographics in the NZAVS and New Zealand Census. NZAVS Technical Documents, e22. [accessed 2019 Jul 3]. https://cdn.auckland.ac.nz/assets/psych/about/our-research/nzavs/NZAVSTechnicalDocuments/NZAVS-Technical-Documents-e22-Comparison-Demographic-Proportions.pdf.
Slauson-Blevins K, Johnson KM. 2016. Doing gender, doing surveys? Women's gatekeeping and men's non-participation in multi-actor reproductive surveys. Sociol Inq. 86(3):427–449.
Smith WG. 2008. Does gender influence online survey participation?: A record-linkage analysis of university faculty online survey response behavior. [accessed 2019 Jul 3]. https://files.eric.ed.gov/fulltext/ED501717.pdf.
Smith GH, Tinirau R, Gillies A, Warriner V. 2015. He mangōpare amohia: strategies for Māori economic development. Wellington: Te Whare Wānanga o Awanuiārangi.
Spiller C, Erakovic L, Henare M, Pio E. 2011. Relational well-being and wealth: Māori businesses and an ethic of care. Journal of Business Ethics. 98(1):153–169. DOI:10.1007/s10551-010-0540-z.
Statistics New Zealand. 2014. Te Kupenga 2013 (English)—corrected. [accessed 2019 Jul 3]. http://archive.stats.govt.nz/browse_for_stats/people_and_communities/Māori/TeKupenga_HOTP13/Data%20Quality.aspx.
Statistics New Zealand. 2018. Māori population estimates: At 30 June 2018. [accessed 2019 Jul 3]. https://www.stats.govt.nz/information-releases/Māori-population-estimates-at-30-june-2018.
Tajfel H, Turner J. 1986. The social identity theory of intergroup behavior. In: Worchel S, Austin WG, editors. Psychology of intergroup relations. Chicago (IL): Nelson Hall; p. 7–24.
Tajfel H, Turner JC. 1979. An integrative theory of intergroup conflict. In: Austin WG, Worchel S, editors. The social psychology of intergroup relations. Monterey (CA): Brooks-Cole; p. 33–47.
Tapsell P, Woods C. 2008. Potikitanga: indigenous entrepreneurship in a Māori context. J Enterp Communities. 2(3):192–203.
Taras V, Rowney J, Steel P. 2009. Half a century of measuring culture: approaches, challenges, limitations, and suggestions based on the analysis of 121 instruments for quantifying culture. Journal of International Management. 15(4):357–373.
Te Puni Kōkiri. 2006. Hei whakamārama i ngā āhuatanga o te tūrua pō – investigating key Māori business characteristics for future measures: thinking paper. [accessed 2019 Jul 3]. https://www.tpk.govt.nz/documents/download/102/tpk-keybusnessmeasures.pdf.
Turner JC, Oakes PJ, Haslam SA, McGarty C. 1994. Self and collective: cognition and social context. Pers Soc Psychol B. 20(5):454–463.
Walker R. 1989. Māori identity. In: Novitz D, Willmott B, editors. Culture and identity in New Zealand. Wellington: Government Print; p. 35–50.
Warriner V. 2007. The importance of traditional Māori values for necessity and opportunity: Māori entrepreneurs – iwi-based and individually owned. In: Dana L-P, Anderson RB, editors. International handbook of research on indigenous entrepreneurship; [accessed 2019 Jul 3]. DOI:10.4337/9781781952641.
Weber M. 1930. The Protestant ethic and the spirit of capitalism. London: Routledge.
Whitney L, May S, Lamy M. 2014. PISA 2012: New Zealand financial literacy report. [accessed 2019 Jul 3]. https://www.educationcounts.govt.nz/__data/assets/pdf_file/0006/148506/PISA-2012-New-Zealand-Financial-Literacy-Report.pdf.
Williams DV. 2007. Māori social identification and colonial extinguishments of customary rights in New Zealand. Social Identities. 13(6):735–749.