

Measuring the value of the contribution of Māori language and culture to the New Zealand economy

Prepared for Te Taura Whiri i Te Reo Māori

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Te Pua Wānanga ki te Ao

FINAL

March 2017

This research was kindly supported by funding from Te Taura Whiri i Te Reo Māori



THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

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Ngā Mihi

Ko Te Reo te hā, te poutokomanawa o taku Māoritanga (Sir James Hēnare).

Tau atu te tau nei, he tau nō tūrangi. Whakatau ki runga, whakatau ki raro. Tēnei te whakatau te turuki atu nei, tēnei te whakatau te whano atu nei. Tāmaua tēnei whakatau, tāmaua kita, tāmaua whita.

Te Taura Whiri i Te Reo Māori tēnā koe. Tēnā koe i toro mai i te ringa ki Te Whare Wānanga o Waikato ki te rangahau i te uaratanga o Te Reo Māori me te ahurea Māori ki te ōhanga o Aotearoa. Kua rangahau a runga, kua rangahau a raro, kua kau i te moana, kua kake i ngā taupae ki te whai i te māramatanga mō te kaupapa nei. Hei tāhūhū tēnei mō ngā kaupapa rangahau nui ka hua mai i ngā heketipi o te tāhūhū nei hei hāpai ake i te mana o Te Reo Māori ā tōna wā.

Tēnei Te Whare Wānanga o Waikato e tuku nei i te pūrongo ki a koe; Te Inenga i te uaratanga o Te Reo Māori me te ahurea Māori me tōna koha ki te ohanga o Aotearoa.

Arohatia Te Reo.

Our thanks to Te Taura Whiri i te Reo Māori for their support towards such a worthwhile project which challenged our minds, extended our capacity and entrenched our love and support for Te Reo Māori. We are grateful for the people and organisations that gave us their time and energies that allowed us to arrive at clearer understandings for the task we had set ourselves. Thanks to our whānau who contributed to this report: Moana Rarere who made substantial contribution to the report through a comprehensive literature review, and Tuti Nikora and Dr Brennan Allen who gave ongoing support and whose advice, inputs and expertise enhanced our discussions and findings. A very special thanks to our Advisory Board for your unwavering guidance and belief: Vice Chancellor Professor Neil Quigley, Professor Linda Smith, Professor Pou Temara, Associate Professor Leonie Pihama and Dr Tom Roa. We also thank our expert peer-reviewers, Professor Frank Scrimgeour (University of Waikato), Atawhai Tibble (Treasury) and Conal Smith who helped shape the final report and provided valuable critiques.

Ehara au i te toa takitahi, he toa takitini. Tēnā koutou katoa.

Executive Summary

Te Reo Māori is unique and belongs to the lands and waters of Aotearoa. This valuable taonga forms a central part of Māori identity, and how Māori are identified. Despite this, Te Reo Māori is often discussed as a problem, or an artefact of a dying race. What detractors of Te Reo Māori fail to realise is that, unlike colonial languages which research suggests are interchangeable without negative implications for economic development, Te Reo Māori adds new value to the economy. It can be shared it with tourists, shape the way Māori think or do business, implemented to give products an edge and create increased wellbeing. The goods, services and contributions of Te Reo Māori are tangible benefits to the New Zealand economy which cannot be replicated if Te Reo Māori is lost.

This commissioned report aims to build on our understanding of Te Reo Māori as positioned above, through characterisation and measurement of the value of the contribution that Māori language and culture make to the New Zealand economy. The purpose of this report is to identify characteristics of the Māori language and Māori culture economy, to quantify the goods and services provided by these economies and to define tools or models that can be used as a form of measurement. It offers seminal perspectives into the economic contribution of Te Reo Māori and Tikanga Māori to the New Zealand economy, providing another dimension to our understanding of the value Te Reo Māori creates and the importance of maintaining investment to ensure the success in the ongoing revitalisation Te Reo Māori.

The research draws attention to the conceptual and theoretical development of a framework to underpin the economic modelling in order to arrive at a quantification of the value. This theoretical development was informed by a literature review and stakeholder interviews which allowed the research to develop a definition of the Māori language economy and describe the characteristics of the economy, ending in a description of our frameworks for understanding the value of Te Reo Māori. A model to assess the non-market value is explored in a case study on the economics of tangihanga.

Our findings are:

- The language cannot be evaluated in isolation. The impact of a language is far-reaching with flow-on effects in the broader, social, cultural, and economic contexts.
- There is an inconsistent approach of policy responses and investment in the language.
- Any development in the Māori language economy would not occur without the commitment and dedication of many people and organisations for whom engagement with Te Reo Māori is a normal and everyday practise.

- In order to facilitate the growth and development of Te Reo Māori, we need to find ways of encouraging the Government to promote, the people to demand, and the private sector to supply the goods and services which are part of the Māori language economy.
- Language can be viewed as a critical ingredient in economic relationships as without language there would be minimal economic activity.
- Literature supports the conceptualisation of language as a form of “human capital” or skills, knowledge and experiences possessed by an individual which can be used to support production or productivity.
- The Māori language and culture economy comprises of any good or service which makes use of Te Reo Māori as a direct input or where the cultural capital of Te Reo Māori is required to facilitate production.
- Without Te Reo Māori, goods and services derived from the language would not exist and economic development would be reduced while interchanging English for another language is unlikely to have a significant impact.
- The value of Te Reo Māori is at least the total value of expenditure on Te Reo Māori.
- A range of techniques exist in the field of economics which could be used to estimate some aspect of the market and non-market value of Te Reo Māori. They will not on their own reveal the economic contribution of Te Reo Māori.

This research has been largely constrained in three areas of research. The original goal of estimating the dollar value of the contribution of Te Reo Māori remains elusive, though we offer some insights through our analysis in Te Kupenga. We also became aware of the need to better understand the costs and trade-offs of public and private investment in Te Reo Māori, employment creation and the multiplier effects. Finally, we believe that this research would benefit from primary data collection. Surveying a sample of firms who we identified as being involved in the Māori Language economy to better understand their employment, production and sales behaviour would allow for more detailed input/output and value add investigation. Similarly, surveying of individuals would allow us to explore the characteristics of demand for Māori language goods and services, while also exploring the non-market value created by the Māori language.

This report has traversed our process to identify characteristics of the Māori language and Māori culture economy; attempted to quantify a cultural ritual; explored tools and models that may be used to measure the value of the contribution that Māori language and Māori culture make to the New Zealand economy.

A few preliminary steps need to be worked through before choosing an approach for further developments in understanding the contribution of Te Reo Māori to the New Zealand economy. The approach adopted will depend on the budget, resources and time constraints of the project. In addition, the choice of valuation tool will depend on the 'question' posed and on what cultural goods, services and/or activities is under evaluation. If the research question specifically asks for the contribution of Te Reo Māori and culture to the New Zealand economy, then an itemised list or stocktake of the contribution of Te Reo Māori by some sort of grouping (e.g. industry/sector) that make up the language economy would be helpful in terms of having a broad overview of the language economy, and identifying the information or data needs based on the itemised list.

Section 1: Introduction

Te Reo Māori belongs to the lands and waters of Aotearoa. It is embedded within the hundreds of years of deep and complex history on which Māori identity has been layered. Its narratives traverse time spans from the arrival of Māori to these lands to the contemporary challenges of oral communication into a widening cyber and technological space. Te Reo Māori is inextricably linked to physical and spiritual wellbeing enriching those who are touched by its reach.

However, sustaining Te Reo Māori is not without challenge or opposition. Decades of underinvestment, institutional discrimination and the process of colonisation has led to a reduced number of speakers and reduced use in everyday activities. This has impact! To ensure support for Te Reo Māori in a growing competitive and global environment, there is a need to be able to articulate the role of Te Reo Māori in different aspects of Aotearoa which also must include the economic dimension.

This study, commissioned by He Puna Whakarauora (the research branch of Te Taura Whiri i Te Reo Māori/ Māori Language Commission), offers seminal perspectives into the economic contribution of Te Reo Māori and Tikanga Māori to the New Zealand economy, providing another dimension to our understanding of the value Te Reo Māori creates and the importance of maintaining investment and ensuring the success of Te Reo Māori.

In June 2015, a project team based in Te Pua Wānanga ki te Ao Māori was successful in being awarded the contract for this study. The research team was led by Associate Professor Sandra Morrison, and members of the research team were Associate Professor Te Kahautu Maxwell from Te Pua Wānanga ki te Ao and Dr Matthew Roskrug from Massey University. It is supported by a range of stakeholders and an expert advisory board comprising of Professor Linda Smith, Professor Pou Temara, Professor Neil Quigley, Associate Professor Leonie Pihama and Dr Tom Roa.

The project aimed to characterise and measure the value of the contribution that Māori language and culture make to the New Zealand economy. The specific tasks identified in the project plan included:

- Identify characteristics of the Māori language and Māori culture economy;
- Identify and quantify the goods and services provided by these economies;
- Assess the characteristics of the supply of, and demand for, those goods and services;
- Assess whether those demands are being met; and
- Ascertain whether there are further opportunities to create demand.

To provide boundaries around this task, the report was also provided with scoping details, including defining the breadth of economy and range of economies for this study. We were also provided with the following other scoping guidelines:

- Define tools or models to be used to measure the value of the contribution that Māori language and Māori culture make to the New Zealand economy;
- Identify Māori language goods and services that make up Māori language and Māori culture economies;
- Identify and quantify the characteristics of the supply of, and demand for, those goods and services; and
- Ascertain whether the demand is being met or whether there are further opportunities to create demand.

There is very little doubt that the Māori language is highly valued in Aotearoa New Zealand. This leads into a discussion about the meaning of ‘value’ and, in a political and economic context, how this concept determines public policy priorities, and hence, resource allocation. Despite the efforts that have been implemented over the last four decades, that predominantly recognise the ‘intrinsic’ value of Te Reo Māori, it appears that other dimensions of ‘value’ are less emphasised. The purpose of this review is to ascertain current thinking and practices in measuring the economic value of Māori language and culture, and to define tools or models that can be used as a form of measurement.

Only very recently has a serious study of the value of the language been undertaken (Te Kura Roa research programme), of which *The value of the Māori language: Te hua o Te Reo Māori* is a significant tangible outcome. The book is a culmination of voices about the ongoing survival and success of the language and its value to Aotearoa New Zealand. Although the collection provides a strong evidence base of the value of Te Reo Māori, it only addresses certain aspects of ‘value’, mainly intrinsic. No attempt has been made by anybody to examine the ‘economic’ dimension of value. It is unfathomable if not contentious to think that a monetary value could be placed on a language, let alone, a taonga (treasure) such as Te Reo Māori. How can one put a price on something that is inherently *priceless*? However, it is plausible to create estimates of the contribution and marginal impacts of usage, though this is not uncontentious. Attempts to consider the economic value of a language, particularly those that are endangered, minority and/or indigenous, have been explored but research has for the most part been on the fringes, limited and sparse. The literature on the economics of language offers various approaches on ‘how’ to undertake such a feat but an initial search of the literature has retrieved few studies which have attempted to estimate a value.

In this regard, although determining the economic value of Te Reo Māori is the primary component of this project, the language cannot be evaluated in isolation. The impact of a language is far-reaching with flow-on effects in the broader, social, cultural, and economic contexts. Thus, the task at hand is to determine the value of the wider contribution of Te Reo Māori to the economy, whether this be as a communication of exchange in building various relationships or as a contributing factor in the value chain where Te Reo Māori is the essential element that ascribes a good, service or activity as part of its unique Māori identity.

The report is structured as follows. Section Two provides a detailed literature review of the intersection between language and economics, and the economic contribution made by language. Section Three further enables our concept development through detailing our learnings from engagement with stakeholders, drawing out key themes for later analysis. Section Four then draws on a synthesis of economic theory and Te Reo Māori to allow us to develop a definition of the Māori language economy and describe the characteristics of the economy, ending in a description of our frameworks for understanding the value of Te Reo Māori. Discussion of the quantification of the value is provided in Section Five, and non-market value of Te Reo Māori is then explored in a case study provided in Section Six. Subsequently, Section Seven concludes our report.

Section 2: Literature review

Introduction

There is little doubt that Te Reo Māori and Tikanga Māori are highly valued in Aotearoa New Zealand, despite factions who think otherwise (see Waitangi Tribunal, 1986; 2011). The countless efforts of advocates for Te Reo Māori have resulted in the implementation of language revitalisation initiatives as well as recognition of Te Reo Māori as an official language through the passing of the Māori Language Act 1987. To support Te Reo Māori, the New Zealand government had invested in the establishment of Te Taura Whiri i Te Reo Māori – Māori Language Commission, and allocated significant (though some may argue, insufficient) central funding into the support and promotion of Māori language. However, despite continued efforts to revitalise and retain the language, in recent years there has been a decline in the proportion of ‘everyday’ speakers. This decline can be tracked using the New Zealand Census (Statistics New Zealand, 2013a), from 91,609 (28.2%) of those who identified as Māori in the 2001 census to 92,391 (23.7%) in the 2013 census. Though the absolute number has increased slightly, the decline in the absolute number has heightened concerns about the health of Te Reo Māori, particularly in a political context of austerity measures. If there is a poor relationship between spending and outcomes for Government in relation to Māori language promotion, funding may be diverted to other Māori development areas or to other areas entirely. More recently, the establishment of Te Mātāwai under the 2016 Te Pire mō Reo Māori, Māori Language Act is tasked with leading Te Reo Māori revitalisation on behalf of iwi and Māori indicating a significant departure from previously being Government led. It is too early in its establishment to predict whether Te Reo Māori will flourish or otherwise under its mandate. The hope is obviously for increased growth in accordance with Te Mātāwai’s mission.

The Crown remains obligated under the Treaty of Waitangi to take responsibility for protecting and preserving Te Reo Māori (Waitangi Tribunal, 2011). However, for the language to thrive, the burden of promoting the language must extend beyond just the Government hence the establishment of Te Mātāwai as a contributing agent. It is likely that to grow the use of Te Reo Māori language, individuals as well as other agencies will need to play a role in either creating demand for Te Reo Māori goods or services, or for private enterprise to provide the goods and services to meet this demand (Te Puni Kōkiri, 2014b). Growth in the number of speakers and the health of the language is in the best interests for all New Zealanders, “...it is a matter of national pride and identity for all New Zealanders. Everybody wins when the Māori language thrives” (Waitangi Tribunal, 2011, p. 161). However, the Wai 262 report also noted the limited funding available to protect and enhance Te Reo Māori and its dialects; somewhat constraining the Crown’s ambitions as outlined in

the Māori Language Strategy 2003. It also argues that a lack of ambition has limited the funding made available (Waitangi Tribunal, 2011), which could possibly explain the Crown's arguably ad hoc and inconsistent approach of policy responses and investment in the language (Te Paepae Motuhake, 2011; Waitangi Tribunal, 2011).

In order to facilitate the growth and development of Te Reo Māori, we need to find ways of encouraging the Government to promote, the people to demand, and the private sector to supply the goods and services which are part of the Māori language economy. This means creating an understanding of Te Reo Māori beyond just a language to learn, or a vehicle for identity expression (while it certainly is these things and more). While these elements are important, language and culture go beyond the intrinsic realm. Kapa haka is one example that has made a significant and valuable contribution on a global scale. It also has wider social, cultural, intellectual and economic implications (Pihama, Tipene, & Skipper, 2014). Although we are aware of the impact of various Māori symbolism in building and marketing New Zealand's economic identity, no comprehensive stocktake of those goods, services and activities that involve Te Reo Māori and culture has ever been done in economic terms.

Motivated by the concerns outlined above, this literature review aims to provide us with a solid foundation for this project, which seeks to *to measure the value of the contribution that Māori language and culture makes to the New Zealand economy*. The purpose of this review is to ascertain current thinking and practices that measure the economic value of language and culture and to inform the appropriate evaluation approach to undertake this broader task. It is not impossible, though it is contentious. It is unfathomable to think that a monetary value could be placed over a taonga such as Te Reo Māori; for how can one put a price on something that is inherently *priceless*? In this study, we don't seek to identify a price, or value of Te Reo Māori, but rather the monetary contribution of Te Reo Māori as one facet of the languages value. **Economic tools are available to assist in determining a dollar value of the language, but it comes with compromises.**

We begin by discussing the meaning of 'value'. Much of the literature on Te Reo Māori emphasises its intrinsic value. However, for the purposes of this research project we explore the meaning of value from an economic perspective. We then undertake a review of publication and study of the Māori economy, and reflect on how it may or may not capture the role of Te Reo Māori and Tikanga Māori in contributing to the New Zealand economy. It is also important to know how the Māori economy is defined.

The value of Māori language and culture

Identifying a value in reference to language and culture often raises concerns as the concept of value is used to inform resource allocation. Indeed, how this concept is defined determines public policy priorities, and therefore resource allocation. The connection between value and resource allocation is made clear by Higgins and Rewi (2014) who argue that “In terms of resourcing Māori language initiatives, decisions and fiscal distribution are again conditional upon the values recognised by the service provider” (p. 10). The rightful place of Te Reo Māori and culture as national treasures is firmly grounded in Aotearoa New Zealand, and it would be difficult, let alone objectionable, for any Government to withdraw support completely. However, while the provision of public funding to support Te Reo Māori is almost a certainty, the level and breadth of funding is not given, and is subject to competition with other portfolios and demands for state funding. Historically, the incentive to commit public funds has been largely driven by moral and political obligations:

“...the Government has made efforts to give effect to those expectations around Te Reo Māori, largely as a response to political pressures that gained momentum in the late 1960s and early 1980s to recognise the rightful place of Te Reo Māori in New Zealand society” (Te Paepae Motuhake, 2011, p. 33)

A good indicator of the State’s prioritisation of Te Reo Māori is how it has responded through its policies and funding programme. As mentioned earlier, the commitment to promoting Te Reo Māori could be characterised as inconsistent with variable levels of coordination. A significant proportion of the total funding is allocated via Education, Māori Affairs and Arts, Culture and Heritage. The remainder of the total fund is spread across the rest of the central Government sector in relatively miniscule proportions. However, of greater concern is the varied attitudes towards the language across the whole public sector, with enthusiasm and well-planned programmes ranging from detailed language strategies to only minor engagement with Te Reo Māori promotion (Te Paepae Motuhake, 2011). The variation in attitudes are also a reflection of the value of Te Reo Māori. The recent establishment of Te Mātāwai will see them administer \$7.5 million per annum in community language and research funding (Te Punk Kōkiri, 2016).

Since being recognised by the State as an official language in 1987, minimal research has been done on the value of Te Reo Māori (Higgins, Rewi, & Olsen-Reeder, 2014). If anything, much of the literature has predominantly been Government sponsored reports that assess the health of the language based on survey or census data (e.g. Kalafatellis, Fink-Jensen, & Johnson, 2007; Statistics New Zealand, 2002, 2014; Te Puni Kōkiri, 2006, 2008a, 2008b, 2009a, 2009b, 2009c, 2009d, 2009e,

2009f, 2009g, 2009h, 2009i, 2009j, 2010). Indeed, the focus on health (or un-health) of the language could be interpreted as problematising and de-emphasising Te Reo Māori, rather than celebrating the benefits it creates and the underlying institutional and colonial drivers of declining health in the language.

Early discourses highlighted the struggle for Te Reo Māori to be promoted and officially recognised. It is only since the 1990s that serious study of the value of the language been undertaken¹, of which *The value of the Māori language: Te hua o Te Reo Māori* (Higgins, Rewi, & Olsen-Reeder, 2014) is a significant and tangible contribution to the programme. This book is a culmination of voices about the ongoing survival and success of the language and its value to Aotearoa New Zealand. Although the collection provides a strong evidence base for the value of Te Reo Māori, it only addresses certain aspects of 'value', mainly intrinsic. 'Intrinsic value' refers to the value of an object, being the value which is beyond the market value of a good or service. Attempts to consider the economic value of a language, particularly those with few or declining speakers, or those spoken by minority and/or indigenous peoples, have been explored but research has for the most part been on the fringes, limited and sparse. The literature on the economics of language offers various approaches on how to undertake such a feat but an initial search of the literature has retrieved relatively little results of such a comprehensive undertaking.

While there are many economic impact reports which estimate a contribution of cultural events to the New Zealand economy, only recently has Aotearoa started to formalize this knowledge with the publication of *Value and Culture* (Allan et al., 2013) commissioned by the Ministry of Culture and Heritage. Although the authors have focused on valuing culture in general², as opposed to language specifically, it still holds insights for understanding the value of Te Reo Māori. One key message which we observed in this report is that although identifying, characterising and determining the economic value of Te Reo Māori is the primary component of this project, it is essential that we do not evaluate just the language in isolation from the culture and people in which it is embedded. The impact of a language is far-reaching with flow-on effects in the broader, social, cultural, and economic contexts. Thus, the task at hand is to determine the value of the wider contribution of Te Reo Māori to the economy, whether this be as a communication of exchange in building various relationships or as a contributing factor in the value chain where Te Reo Māori is the essential element that ascribes a good, service or activity its unique Māori identity.

¹ Te Kura Roa – research programme

² Allan et al. (2013) use the concept *culture* in terms of the broad arts, sports and heritage sectors.

Much of the discourse on Māori language emphasises its intrinsic value. Philosophically, intrinsic value refers to the value an object has “in itself” or “for the sake” or “in its own right” (Stanford University, 2014; Attfeld, 1998). However, it is emerging that Te Reo Māori and Māori culture is being recognised for its value in the wider sphere, such as tourism, cultural events and sport (Pihama et al., 2014; Te Paepae Motuhake, 2011). These products and services are the commodities which are produced with input from Te Reo Māori and which form the basis of the language economy.

The empirical literature in the New Zealand context conducted thus far affirm that Te Reo Māori makes a significant contribution to the economy. However, Pihama, Tipene and Skipper (2014) found that while there was a firm conviction about the economic value of kapa haka, most research participants were less able to ‘articulate specific economic outcomes’; indicating a definite need to explore further the economic value of kapa haka. However, the challenge is determining ‘how’ to go about “measuring the [economic] value of culture, knowledge and art, and how ‘value’ itself should be defined and measured” (p. 69). While there are resources and models available to assist in this endeavour (Higgins et al., 2014; Pihama et al., 2014), one of the biggest challenges is defining the scope such as kapa haka on the wider economy. In the case of kapa haka, its impact is much more, going beyond the realms of large national events such as Te Matatini, where the economic impact can be ascertained to some extent. Yet a significant part of the kapa haka economy, the ‘silent’ economy is ignored (Pihama et al., 2014), thus seriously underestimating the economic value. Furthermore, ‘haka’ has become a major identity icon for New Zealand; and a branding element for a commercial enterprise such as the All Blacks which is recognised on a global scale. ‘Ka mate, ka mate’ is associated with the All Blacks brand. However, while describing the nature of the value which ‘ka mate’ provides as an identity and branding activity is relatively straightforward, the challenge (in the absence of a competitive market for rights to perform ka mate) is finding a methodology which enables the valuation of this haka in this context.

Within the private research sector, economic valuation of the cultural sector has been conducted by Business and Economic Research Limited (BERL). BERL (2014) conducted a detailed assessment of the economic impact of the ‘wānanga sector’ in two parts: Immediate impacts, in terms of its operational and capital expenditure; and long-term impacts in terms of the sector’s core output through training and education using kaupapa Māori principles, thereby increasing the capability and capacity of people and their participation in the labour market and local communities (BERL, 2014).

The conceptual challenges in determining the value of kapa haka and the wānanga sector to the economy are just as applicable for Te Reo Māori. Not only do these conceptual issues exist, but

from an applied research perspective, the accessibility, relevance and timeliness of economic data for evaluating Te Reo Māori also poses a challenge. Some research has identified the economic value of Te Reo Māori and Tikanga Māori, with Pihama et al. (2014) firmly recommending a comprehensive study, but no attempt has been made to place an actual dollar value on its contribution. While an understanding of the intrinsic value of Te Reo Māori, undertaking this project requires building on the current literature in the sense that it provides an economic perspective on the broader contribution of Te Reo Māori and Tikanga Māori. The first place to examine is the Māori economy, as a subset of the broader New Zealand economy.

The contribution of Māori to the New Zealand economy

Economic activity has long been a part of Māori society, but not always in the individualistic and commercial form that is understood today. Before Pākehā arrived, the Māori economy was predominantly centred on hapū and whānau and the kainga (place) which was near valuable resources such as fish stocks, shellfish, fresh water and forests. The pre-European Māori economy was self-sufficient in producing and consuming resources for their own needs (Easton, 2012; Keane, 2015). The concept of trading was mainly in the form of gift exchange, and included inter-tribal trading of resources (Keane, 2015). When Pākehā arrived, Māori generally embraced the possibilities of trade with enthusiasm, resulting in innovation and entrepreneurship, new alliances and new enterprises (Te Puni Kōkiri, 2007a). Māori adapted relatively smoothly to building commercial relationships, such as bartering food and other land-based resources in exchange for European technology. **Given that Te Reo Māori would have been the dominant language, early Pākehā settlers were dependent on Māori trade, and therefore learning to converse in Te Reo Māori was a prerequisite for wellbeing, if not survival (Ministry for Culture and Heritage, 2015).**

Māori were also adept entrepreneurs (Firth, 1972; Frederick, 2002; Petrie, 2002; Smith, 1999), with the unique ability “to draw on cultural norms and customs in their entrepreneurial ventures” (Dawson, 2012). While the degree to which these were embedded in Te Reo Māori is unknown, it seems likely that Te Reo Māori and the Tikanga communicated by Te Reo Māori were the foundations of the cultural norms and customs which supported this entrepreneurship. By 1850s, Māori operated successful enterprises, trading and transporting both within Aotearoa and abroad. However, this booming period was very short-lived with the alienation of Māori land from the 1860s and onwards (Keane, 2015) through “sustained and largely effective efforts at breaking the power of Māori collective commercial enterprises” (New Zealand Institute of Economic Research, 2003, p. 5).

Māori entered the modern market economy in three waves (New Zealand Institute of Economic Research, 2003). The first wave stems from economic activities during the early days of colonisation, trading their produce and labour. The second, which again has its genesis in the early days, refers to tribal trading and collectively-owned assets, which is gaining greater significance in today's economic environment. The revival of the Māori economy occurred some decades later (around 1930s), as Māori-owned land-based enterprises became incorporated under Acts of Parliament (New Zealand Institute of Economic Research, 2003). Some forty years later, the establishment of the Waitangi Tribunal provided a conduit for Māori to submit claims relating to "actions or omissions of the Crown that potentially breach the promises made in the Treaty of Waitangi" (Waitangi Tribunal, n.d.). Through Treaty Settlements, the Māori asset base has been strengthened. The third wave relates to Māori entering the 'knowledge-based economy'³ through rapid growth in service industries, cultural knowledge, and skills development (New Zealand Institute of Economic Research, 2003).

The modern Māori economy has many dimensions, and is continually growing as a major contributor to the broader New Zealand economy (Nana, Khan, & Schulze, 2015). However, it is challenging to define the 'Māori economy' as distinct from the New Zealand economy as a whole because Māori interests are inseparable from the national economy (New Zealand Institute of Economic Research, 2003). The authors define the Māori economy as encompassing:

"all those businesses and transactions where 'Māoriness' matters. It includes the activities based on collectively-owned Māori assets, the businesses of the self-employed who identify as Māori, commercial transactions involving Māori culture, services oriented to specific Māori needs, as well as the housing owned by Māori" (New Zealand Institute of Economic Research, 2003, p. 2).

Based on this definition, 'Māoriness' is one of the key criterion. Harmsworth (2006) points out that Māori values and culture have a significant role to play in Māori business and are instrumental in defining a 'Māori' organisation. However, according to the above definition, the Māori economy includes those entities who 'identify as Māori', which means that they do not necessarily incorporate Māori values into their business practices. That is, a Māori business is distinguished mainly by ownership (Te Puni Kōkiri, 2013). In their study of Māori entrepreneurship, Te Puni Kōkiri (2013) identified that there were no agreed definitions of a Māori business. However, in their report they

³ Described as "economies which are directly based on the production, distribution and use of knowledge and information" (Organisation for Economic Co-Operation and Development, 1996, p. 7)

differentiate between a 'Māori business' versus a 'kaupapa Māori business' or a 'Māori entrepreneur' and 'kaupapa Māori entrepreneur'. The defining factor was based on the "commitment expressed to Māori culture through their entrepreneurial activities" (Te Puni Kōkiri, 2013, p. 4). Despite these tensions, it is impractical to classify Māori businesses based on kaupapa. Hence, according to the findings of the New Zealand Institute of Economic Research (2003), the Māori economy includes:

- Collectively-owned trusts and incorporations;
- Māori-owned businesses (e.g. tourism, broadcasting, and self-employed)
- Service providers (e.g. health and education);
- Housing owned by Māori; and
- Income (i.e. wages/salaries earned by Māori).

There has been a considerable amount of interest and research into the Māori economy. Most of the research has focused on the asset base and monetary impact of the Māori economy. This research has been conducted at multiple levels, including at the national and regional level, and within specific sectors (BERL, 2010, 2014; Te Puni Kōkiri, 2008c, 2009k, 2012, 2014a). While the impact of the Māori economy is extensive, in terms of 'value added', it is "significantly smaller than the overall role of Māori in the New Zealand economy" (New Zealand Institute of Economic Research, 2003, p. 9). This implies that the overall role of Māori to the New Zealand economy is much larger than the information provided via accounting frameworks such as macroeconomic accounts, balance sheets and tables, as compiled by the System of National Accounts (see New Zealand Institute of Economic Research, 2003 for more information). The impact of the Māori economy for the future is expressed in the Māori Economic Development panel's strategy, outlining the vision to 2040 and six specific goals that focus on building capabilities, relationships and owning resources (Māori Economic Development Panel, 2012a, 2012b).

One of the greatest differences between Māori and non-Māori enterprises is the value added through cultural distinctiveness. This cultural distinctiveness includes additional value from scarcity and the uniqueness that Māori cultural goods and services possess, and also the distinct world view and interpretive lens which enables different approaches to problem solving and innovation (Davies, 2008; Harmsworth, 2005; Te Puni Kōkiri, 2007b). Other research highlights some of the diverse characteristics of Māori businesses (Federation of Māori Authorities, 2006; Te Puni Kōkiri, 2009I). Some research outputs identify areas of Māori export strengths, which are mainly in 'other services' (includes health, community, cultural, recreational personal), property services, the primary sector, and manufacturing (Allen, 2011).

Studies of language and economics

Language diversity is conflictual in the sense that different language groups “compete for access to material and symbolic resources” whether this be through armed violence or political rivalry in the “framework of democratic institutions” (Grin, 2003, p. 3). Conflict can arise in three types of contexts between the spheres of economics and language (Grin, 2003).

Firstly, economic factors can affect the fortunes of different languages. For example, it may be too expensive to deliver services to cater for variety of languages, such as signage, or international trade may favour one universal language for convenience. Secondly, language variables can have an impact on economic variables. Proficiency in a minority language may attract remuneration rewards or incentives to learn. Demographic size of a language community may also stimulate aggregate demand for language-specific goods and services consumed by that particular community (Grin, 2003). In the New Zealand context, the Māori population has experienced a remarkable recovery since the beginning of the 20th century (Pool, 1991) and currently comprises 15 per cent of the total New Zealand population (Statistics New Zealand, 2013b), thus being the most visible indigenous population in a settler nation. This has meant that Māori have been in a favourable demographic position to develop the Māori language economy, with strong demand for Te Reo Māori and cultural goods and services. However, the growth in overseas migration and the focus on Asia, and in particular China as an important trading partner, has seen a growing demand in recent years for Mandarin language and Chinese cultural goods and services (Ministry of Education, n.d.; New Zealand Chinese Language Week Charitable Trust, 2015). Thirdly, economic reasoning tends to support arguments of different interest groups, particularly in the context of language policy (Grin, 2003). Perhaps the most common debate in this regard relates to the cost and benefits of supporting or promoting minority language(s). Furthermore, policy planners are confronted with their own resource constraints (Grin, 2003), which can also have an impact on whether a minority language flourishes or perishes.

Despite being an area of conflict, language diversity and multilingualism can also be viewed as a cultural asset or a source of resilience and economic potential for a society. Krauss (1992) argues that language diversity has important human development and social implications. The authors relate language diversity to the analogy of an ecosystem; citing that damage to any elements in an ecosystem can result in unforeseen consequences for the system. In terms of language –

“The death of a language is a significant loss because they imply a loss of inherited knowledge. Cultures are transmitted through languages and languages also reflect the history of the people who have used them. Linguistic diversity is not less important than ecological diversity” (Krauss, 1992).

Language policies and planning are also ideologically driven (Cobarrubias, 1983; Pool, 1973). Cobarrubias (1983) identifies at least four typical overarching ideologies that motivate language policies:

- Linguistic assimilation;
- Linguistic pluralism;
- Vernacularization; and
- Internationalism.

Each ideology can vary in form but generally speaking, linguistic assimilation assumes that all speakers should be able to speak and function in the dominant language, regardless of their origin. It assumes that the dominant language is more superior and denies equal rights to linguistic minorities. At the other end of the ideological spectrum, pluralism involves coexistence of different language groups and their rights to maintain and cultivate their languages on an equitable basis (Cobarrubias, 1983). Vernacularization involves the restoration and/or elaboration of an indigenous language and its adoption as an official language (Cobarrubias, 1983). On the other hand, internationalism promotes the adoption of a non-indigenous language, either as an official language or as a language of instruction, for the purpose of wider communication. Examples include ethical issues and language rights which are explored in detail in the works of Cobarrubias (1983) and Pool (1973). The findings of these papers and a theme in general is that tensions arise when status rights are advocated.

The application of economic analysis can be very beneficial for threatened languages (Grin, 2003). Language economics studies a range of topics, including the effect of language on income and trade, the costs and benefits of language planning, the revitalisation and preservation of minority and/or indigenous languages and so forth (Gazzola, 2014; Grin, 2003). From expert analyses, we learn that the nature of the relationship between economics and language is strongly connected and reciprocal (Grin, 1996). Language is influenced by economic objectives. Eastman (1983) notes the influence of economic ideas as guidelines for predicting the likelihood of language maintenance and shift, given the economic condition of the society and its existing circumstances. As an example, Crystal (1987) refers to migrants in search of work and a better standard of living contribute to the linguistic diversity of their new geographic area. Equally, economists acknowledge that language

processes affect economic processes (Grin, 1996). In explaining this phenomenon, (Chiswick, 2008) refers to the reduction in productivity as a result of language incompetency during the building of the Tower of Babel. While it is important to know the relationship between language and economic variables, it is just as important to realise that 'the economics of language' is much broader. Economics provides the concepts, models and tools that help to understand 'economic behaviour', and on this notion, economics can be applied to language. Thus, economics of language "in addition, it includes the study of language-related issues where economic variables have little or no part, but which can nevertheless be examined with the concepts and methods of neo-classical economics" (Grin & Vallancourt, 1997, p. 43).

As a notable expert in the field, Grin (2003) describes the discipline as "the paradigm of mainstream theoretical economics and uses the concepts and tools of economics in the study of relationships featuring linguistic variables. It focuses principally, but not exclusively, on those relationships in which economic variables also play a part" (Grin, p. 16). Based on this definition, the language can be viewed as a critical ingredient in economic relationships because without language there would be minimal economic activity.

Summary

This literature review provides a conceptual foundation for the rest of this report. We found in conducting this review a surprising gap in existing literature regarding the contribution of language to economics. While the intrinsic value of culture has been discussed in detail, there is little research which has then gone on to position language within this value framework.

Section 3: Stakeholder engagement

Engagement with Stakeholders

To socialise and orient the research, the team met with stakeholders between September 2015 and June 2016, to discuss the research with identified and selected stakeholders. Our meetings were primarily to advise and inform on our research given that many organisations have vested interests in the research outcomes. We did not use pre-set questions, but rather we considered it important to present ourselves and to respond to any discussion points that interested parties may have of us given that this research could be contentious. We informed those that we met that part of what we were exploring is to identify the Māori language goods and services that make up the Māori language and Māori culture economies and to quantify the characteristics of the supply of, and demand for those goods and services.

Meetings with the following organisations took place:

- Kōhanga Reo Trust: CEO and staff
- Te Matatini: CEO and Chairperson
- Te Māngai Pāho: CEO and staff
- Tourism New Zealand
- NZ Treasury
- Ministry of Education
- Huia Publications
- Productivity Commission
- Statistics New Zealand

In addition, other meetings were held with:

- Māori Television: CEO
- NZ Trade and Enterprise
- Te Rōpū Manukura
- Tribal Economies, Te Rūnanga o Ngāi Tahu

There are notable omissions from this list where our schedules did not allow a meeting to occur despite several efforts to find suitable meeting opportunities.

Our meetings were extremely useful with some constructive guidelines, cautions and information emerging. Key themes also emerged that we thought worthy of noting. Overall, the general consensus was positive towards the research and supportive of our attempts to unravel

what are the key elements that constitute the language economy in order to arrive at a monetary value. The complexity of such a task was not lost on many stakeholders. Complex questions were asked of us; what level of contribution is required for Te Reo Māori to be considered part of a Māori language economy? Where does branding fit? We know that Te Reo Māori is of high value but how can it be measured? Are you discussing Te Reo Māori as an enabler or Te Reo Māori as capital? These questions were also questions which we asked ourselves.

We were cautioned by many to pay due diligence to those people and organisations who participate in the Te Reo Māori sector but not in the Te Reo Māori economy. Indeed, any work in the Māori language economy would not occur without the commitment and dedication of many people and organisations for whom engagement with Te Reo Māori is a normal and everyday practise. Examples are those who engage in marae ritual and activities, whānau for whom the speaking of Te Reo Māori occurs daily in their homes and workplaces; iwi who are executing language revitalisation plans; the Kōhanga reo and puna reo movements, kura kaupapa and wananga. It is this body corpus that forms the base from which a Māori language economy can emerge and this body corpus is part of the silent or hidden economy.

Below is some general commentary arising from our discussions with stakeholders which we listed under several themes:

- Theme One: Ensuring a holistic approach to the study including health and wellbeing of Māori
- Theme Two: Te Reo Māori economy is not separate from the tribal economy and not separate from the New Zealand economy
- Theme Three: Language planning is essential to the development of the Te Reo Māori economy
- Theme Four: Improving the quality of Te Reo Māori and appropriate resources is essential to the Te Reo Māori economy
- Theme Five: The importance of Innovation to the Te Reo Māori economy

Theme 1: A holistic approach

We were reminded of the intrinsic value of Te Reo Māori and its gift to us as a taonga. It is that worldview that must be the driver of the research. As one contributor remarked “we are into something more intrinsic and cultural and the meaning of life value i.e. the wairua or the mauri or the spirit of the reo.”

The definition of success for Māori is not necessarily economic but embraces wellbeing of the collectives to which Māori belong. Another contributor stated “and if we think about your productivity with your well-being focus rather than just economic growth does Te Reo Māori and the Tikanga Māori around it, does that help people to become more efficient at converting money into happiness so you need less money, less material things to be as happy if you have those cultural connections because to me that's a form of product.?”

While all stakeholders reinforced the intrinsic value that speaking Te Reo Māori brings, they were also aware of what the quantification of Te Reo Māori could add on top of its intrinsic value to both Māori development and to the development of the New Zealand economy. The research in itself would be a welcome addition to emerging discourses on the wealth of the Māori economy which has predominantly been based on tangible assets through the Treaty settlement processes.

A holistic approach should embrace the creative arts and performing arts, music, books, video clips and CD's. For people who engage in these activities, Te Reo Māori is essential to their life. Of importance is the foundational basis that the Kōhanga Reo continues to provide in terms of its contribution to the Te Reo Māori economy and broader development of Te Reo Māori

While the value of Te Reo Māori to the New Zealand economy will be welcome research, less obvious is the economic value that Te Reo Māori brings to improved health outcomes and improved educational outcomes, and in adding to whānau and social cohesion generally. While this is not part of our research, it is an important point to remember. One contributor asked “what would be the economic impact if Māori stopped speaking their reo and stopped practising their culture...what would that do to the New Zealand economy?”. This counterfactual was echoed by members of our advisory team, and forms a central part of the research in this report, and provides a foundational research question for future projects.

Theme 2: Interrelationship between Māori language, tribal & New Zealand economies

For some hapū and iwi, their Te Reo Māori strategy is not separate from an overall tribal development plan. This raised an interesting question and we wondered how many Māori governance groups conducted all their business in Te Reo Māori. From anecdotal evidence and discussions with stakeholders, we thought that most Māori governance bodies would conduct their business in English and again anecdotally, this was through their desire to be inclusive of non- Māori speakers.

We were told that strengthening Te Reo Māori as a matter of course benefits Māori and what is good for Māori will then surely have benefits for the rest of New Zealand. Te Reo Māori and Tikanga Māori can provide the 'edge' to business and in tourism, the power of the tribal narrative significantly enhances the tourism experience.

New Zealand Trade and Enterprise have a professional training module, the Kia Kaha programme which provides teachings on understanding the Māori economy through Te Reo Māori and Tikanga Māori; Māori culture is their business edge and business differentiator; it opens doors to the international market. Therefore, it is an arbitrary line between the New Zealand economy and the Māori economy. However, ensuring that Māori are positioned to benefit from the Māori economy as well as growth in the New Zealand economy facilitated through growth in the Māori economy remains a challenge.

The use and misuse of Māori visual media and words for profit making has always raised the ire of many Māori especially when it contravenes the spiritual and cultural meaning of being Māori and Māori still need to be on guard regarding such exploitation and co-option.

Many Māori themselves have been capitalising on their uniqueness as a means to 'commercialise the culture' however generally there are accountabilities built into their use which ensures the mana of the product is intact.

For the tourist, the Māori dimension builds on the uniqueness of Aotearoa New Zealand in the global context – especially in terms of marketing strategy for our Tourism industry. Our landscape attracts tourists first and foremost then following that is Māori culture. There are significant identifiers for the tourist e.g. the Ka Mate Ka Mate haka; having a hangi and concert; enjoying the hospitality from Māori if the tourist is fortunate enough to engage with Māori. But many Māori are creating new tourism experiences as well; bed and breakfast; customised tours; horse ride treks for example. There are a growing number of Māori operators. Those operators who are not Māori realise that the Māori experience is part of the total tourist package and are making attempts to increase their understanding

"I'm not sure whether visitors can separate language from other cultural practices whether it be performance or carving or other attractions. There are quite specific culturally important attractions that visitors would want to go and experience and see but then there's also the overlaying of cultural importance on perhaps more everyday experiences whether it be a ride down the Wanganui River. What we are seeing increasingly is that operators are telling the stories of places."

Theme 3: Language planning is essential to development of Te Reo Māori economy

All stakeholders reinforced the necessity to develop and grow the Te Reo Māori sector and not to rely on latent growth. It was noted by one commentator that societal attitudes were the biggest barrier to Te Reo Māori growth. Māori Television and media were important ingredients in portraying a positive message of Te Reo Māori to wider audience. Our stakeholders were active in their commitment to language planning with some funding opportunities being dependent on a language plan which had a clear development strategy.

Theme 4: Improving the quality and resourcing is essential to Te Reo Māori economy

The Ministry of Education administers a range of strategic plans and budgets committed to Māori Language education. State funded educational facilities are allocated funding through their operational budgets. However, reporting on the Māori language spend is not always transparent. Teachers who teach in Te Reo Māori can be given a MITA (Māori Immersion Teacher Allowance) or a Management Unit in recognition of these skills that they bring to the job. Teach New Zealand offer several scholarships to support students who want to teach in Māori medium. Of course, we also need to be mindful that many schools do not have Māori language teaching in their schools.

A Ministry of Education spokesperson stated “I suppose we are kind of moving into this similar kind of space where people want to know what the value for money will return to the Government from this type of education, we started to do it within this work, we setup an investment framework, the types of questions we thought people should be thinking about, for example “how can we spend the money to get really good language outcomes from the investment so it's a softer approach...”. We tried to think about what are the dimensions of quality, what would that look like and feel like in a classroom as a learning experience.”

The question was asked as to whether children who have Te Reo Māori and who have graduated from Kōhanga Reo and Kura Kaupapa Māori have better educational outcomes than those who are not graduates and we were told by both MOE and Kōhanga Reo that their research indicates that this is indeed so. We then questioned whether Māori with a qualification who speak Te Reo Māori earned more than their counterparts of Māori with a qualification but who did not speak Te Reo Māori? There was no clear answer to that question although the Māori Social Survey may help us with data. Of course, when we talk about Māori/people who speak Te Reo Māori then we should be benchmarking a level of competency so that we are clear of Te Reo Māori speaking abilities.

Other players who are not Crown entities see the value in having resources made available to improve the quality of Te Reo Māori. Te Matatini has made that step; Te Panekiretanga, the Māori

Language Institute of Excellence has been created; Huia Publishers has a commitment to Te Reo Māori development and publishing in Te Reo Māori even on occasions knowing that their readership would be limited. They hold strongly to the integrity of understanding a Māori perspective and appreciation of Māori identity in their work e.g. illustrations.

Huia Publishers commented that “in working in partnership then you have to be really careful that you are a partner and not just a translator or that you don't just come in at the end just to 'Māori it up' a little bit you know like put a little logo somewhere.”

There were questions raised regarding whether funding for Te Reo Māori language development was equitable to funding for other languages especially given that the Government has to show ‘active protection’ for Te Reo Māori. Changes with the new Māori Language Act 2016 is creating uncertainty amidst some circles.

Theme 5: The importance of Innovation to the Te Reo Māori Economy

Stakeholders were impressed with some of the new innovations emerging in terms of access and availability to Te Reo Māori and therefore benefitting the Māori Language economy. Given new technology and social media and the dynamic changes that are occurring, it was thought that there could be growth in new media. Te Māngai Pāho has a facility for making funding available for new media. We were also referred to Callaghan innovation who we understand are starting to break ground in creating new technology for speaking and learning Te Reo Māori outside of educational institutions. Huia Publishers spoke about the growing popularity and purchasing of interactive and experiential e books in Te Reo Māori. New Zealand Trade and Enterprise encouraged the creative application of Māori Language and Tikanga Māori to create investment opportunities.

We were told that a recent poll by Nielsen research showed a positive attitude to Te Reo Māori and culture which is flourishing and innovation was a strong contributing factor, although we have been unable to identify which poll the stakeholder was referring to, it appears related reporting in the Te Mangai Paho 2015/2016 Annual Report (2016).

Summary

We found our stakeholder engagement to be invaluable in helping us to better conceptualise the Māori language economy. We achieved our goal of both socialising our project with these stakeholders and developing our own understanding of both the academic and socio-political issues which may arise when undertaking this work. The five themes which were identified because of these stakeholder engagement discussion feed through to our framework development, and helped to inform both our value estimations and our case study research.

Section 4: Economic characteristics Te Reo Māori language and culture

Overview

This section aims to provide an understanding of what the Māori language and culture economy looks like and the functional relationships between Te Reo Māori and the New Zealand economy. This requires detailed assessment of how Te Reo Māori contributes value, including the role it has the production of goods and services and the characteristics of the market for Te Reo Māori goods and services. Before identifying the current tools and practices, we discuss the role of economics in evaluating language.

By formalizing this knowledge, we will be able to develop an understanding and theoretical mechanism through which we hypothesize that Te Reo Māori contributes to the economy, and provides a foundation for future work developing this area of knowledge. To achieve this, we build on the literature review section to develop functional definitions and relationships between Te Reo Māori and value creation, enabling an understanding of the mechanisms through which Te Reo Māori influences value creation to the Aotearoa New Zealand economy.

We respect Te Reo Māori as a taonga which has an intrinsic value within Te Ao Māori. This, as signalled in Section Three, makes it challenging to reduce Te Reo Māori to a dollar contribution, both conceptually and in a culturally respectful manner. The consideration of Te Reo Māori as a 'commodity' or reduction to an economic input is overly simplistic, and does not reflect the spiritual, cultural and social role of Te Reo Māori. In addition, positioning it within the New Zealand economy may be seen as colonisation of the language, reducing it to another commodity within a western paradigm. Given these concerns, there is the potential for this report to be perceived poorly by stakeholders for its simplification or economic-centric perspective.

While respecting this position, and agreeing with the critique, we also argue that an aspect of Te Reo Māori is the way that it functions as an economic input into production and productivity, influencing commodities which are supplied and consumed at market. Even if distasteful, if Te Reo Māori is not examined through this lens, an important addition to a holistic understanding of the value created by the Māori language may be overlooked. Therefore, in this report we seek to draw attention to the aspect of Te Reo Māori which is reflected in the economic value and the role of the language in stimulating economic activity. While our focus is on this aspect, we acknowledge that this is only one role of Te Reo Māori, and the Māori language fulfils many other functions for Māori, New Zealanders, and international visitors. Our narrow focus on economic value is important to add

to the mix of understanding the contribution of Te Reo Māori, but not sufficient alone to understand the actual value of Te Reo Māori to the New Zealand economy, cultural identity and society.

As discussed in earlier sections, there are many challenges and unknowns as we progress towards our goal of understanding the role and characteristics of the Māori language and culture's contribution to the New Zealand economy. Defining what exactly is the Māori language and cultural contribution, the role it plays in value creation and in subsequent quantification of the value of the contribution of Māori language and culture to the Aotearoa economy is problematic. Both concept and perception issues may arise. If these are not considered carefully they could become major barriers to the success or acceptance of the findings of this report. To overcome these challenges, this section progresses from reaching an accepted functional definition of Te Reo Māori, to exploring the interrelationships and developing a functional model of the mechanism through which value is created. The lack of existing literature on the topic generally and for Te Reo Māori specifically means that much of the thinking in this report is exploratory and opportunities exist to critique and further develop our understanding, with the aim of finding ways of identifying where Te Reo Māori creates value, and identifying potential approaches for using Te Reo Māori to create additional value to Aotearoa.

Section Four draws on the findings of the literature review and stakeholder engagement found in earlier sections, and introduces these findings to language economics and valuation methodologies. From this we develop a framework for understanding the value contribution of Te Reo Māori to the New Zealand economy (and wellbeing more generally), and to lay the foundation for both the valuations and case study research found in later sections.

Economic perspectives of language, culture and value

This section aims to position language, culture and value within an economic framework and within economic discourse. It will provide the conceptual relationships needed to explain the frameworks that we develop later in the section.

Language economics

To define a framework which models the economic value of the contribution of Te Reo Māori to the Aotearoa economy, we begin with a brief exploration of the field of language economics. Language economics is a specialisation within economics which relates to the economic understanding of acquisition and application of language. The economics of language is an emerging discourse but has its genesis in the 1960s, beginning with Marschak (1965). Although the discipline is

epistemologically grounded in economics, it has strong inter-disciplinary links to policy analysis, sociology of language, linguistics and other social sciences.

Language economics has largely been on the periphery of mainstream economics (Grin, 2003; Zhang and Grenier, 2013). However, global trends in languages, ethnicity and cultures, migration, diversity, globalisation, as well as indigeneity has seen the growing relevance of language economics in solving specific problems (Grin, 2003). More specifically, language economics is growing in recognition because “language diversity is both conflictual and threatened” (Grin, 2003, p. 3), and the use of economic analysis is seen as a tool in the fight to preserve, revitalize and strengthen threatened languages. An alternative definition proposed by Chiswick (2009) focuses specifically on the proficiency aspect of language, with language economics being “the study of the determinants and consequences of language proficiency using the methodology and tools of economics” (2008, p. 2).

As a field of study, language economics is relatively underdeveloped. Economics was slow to begin to work with the concept of language, particularly in comparison to other social sciences (Gazzola et al. 2015). Examples of research within the field include the incentivisation of language acquisition, the economic benefits of (including salary premiums) from language proficiency, and the role language plays in economic activity. Predominantly, these studies are concerned with language and migration, or language education.

Language has been studied extensively from the perspective of other social sciences, such as sociology, psychology, anthropology and of course linguistics. Many thousands of articles have been authored which examine the social aspects of language, including the diffusion and role in coordinating activity. While social science analysis of language has often touched on economics, there is surprisingly little published work which looks at language from an economic perspective. From the economics perspective, communication through language is central to all interaction and allocation through which economic activity occurs. Common culture and language facilitate trade, communication and interaction between individuals.

The slow development of language economics may be due to difficulties in ‘drawing a line’ around the role of language. It might also be due to the interchangeability of language, where having a common means of communication is essential but the language of the communication is only important in its efficiency, which would prioritise widely spoken and efficient (low cost to learn and use) languages over those which are complex or not widely spoken. It is plausible under this theory that the diversity of language may introduce additional costs with little if any additional benefit. Indeed, there are many potential pitfalls and complications when valuing any cultural resource, and

language in particular. While this report attempts to both acknowledge and overcome these challenges, no doubt many challenges still exist and this reinforces the rich vein of research which could be developed in the interplay of Te Reo Māori and the economy.

As introduced in the literature review, Gazzola et al. (2015) offer an extensive contemporary bibliographical overview of the intersection between economics and language. In their publication, they break language economics up into several broad categories, which they describe as their ‘mental map’ for charting the relationships. These categories are a useful tool for understanding the ways in which economics and literature relate to each other. They include:

- A) Surveys of language and economics (general and descriptive)
- B) Economic investigation into language morphology and distribution (Evolution and structure)
- C) Economics of language status, including:
 - Influence of language on economic variables
 - Economic influences on language variables

The findings of these language economics papers appear to centre around language playing a role in economic systems, and the role these systems then play in language distribution and diversity. However, from the point of view of Te Reo Māori, the key areas of language economic theory which we want to focus on is the systems perspective of language, and the influence of language on economics variables.

Where language has been researched from an economic perspective, it has almost exclusively been in investigating the economic implications of language skills for migrants, in comparison to “native” or “local” language, which often refers to the dominant language spoken by those who were born within the country (e.g. English in the New Zealand context, Spanish within Mexico) rather than the indigenous language of a country or region. Language for migrants is seen as both a barrier to economic and social assimilation, but also a potential resource for migrants to draw on if their language skills can be used to create additional economic or social value.

From a systems perspective, dominant languages, being languages which are most commonly spoken, represented in media and spoken in business, science and trading within a given region, provide the lowest transaction costs (the costs involved in completing an action such as a conversation or purchase) and therefore have the greatest incentives for continued use by speakers and adoption by non-speakers (Arcand, 1996; Lazear, 1999). However, despite the incentives for language to converge towards a single dominant language, there remains a global diversity in languages, with many thousands of languages and dialects spoken outside of the dominant languages. **These minority languages survive primarily due to their highly localized density and/or**

their role in cultural identity. Another way to think about their survival is that, for speakers, the benefits that accrue from being able to communicate in a non-dominant language are greater than the costs of attaining or maintaining proficiency, or in increased transaction costs from specialising in the dominant language.

This cost and benefit approach may help to explain why individuals and societies retain a non-dominant language. However, there is surprisingly little research which deals with language as an input into production of goods and services, another potential reason for the maintenance and promotion of non-dominant languages. For language to have a role in the economy, we require it to assist in the creation of economic value, the focus of our next section. What language economics does highlight though is that even within the field of economics this assessment of Te Reo Māori takes a narrow view, looking specifically at value creation, and there are many other avenues of the economics of Te Reo Māori to explore.

Understanding economic value

Economic value is one of many possible ways of understanding value, but one which has gained increasing favour in policy, business and governance circles seeking to maximise the benefits of expenditure, providing a means of understanding choices and trade-offs in allocating scarce resources. Economic value is defined as the measure of the benefit provided from a good or service. While economic value is often understood to be the price of a good or service at market, it is not restricted to just the market value of a good or service, but also the non-market value. Both market and non-market value together measure the benefit which could be accrued to an individual, corporation, Iwi group or society as a whole through consumption, use, or simply the existence of a good or service.

The purpose of much of economic analysis is to monetarize (that is, described as a dollar amount) the economic value of goods and services, thereby allowing a common measure for evaluating options. This means understanding and quantifying both the market price and the value which is not captured by the price of a good, but which is accrued through its existence. In many cases, with pounamu as an appropriate example, the good takes on a value to the individual who possesses it which is far greater than the price that could be received if the product was sold on a market. Other examples, such as the koru branding for Air New Zealand, provide a non-market value through promotion of the New Zealand brand to international tourists. A simple way to think about economic value of a good or service is how much the individual would have to be compensated to forego (give up) the good or service. One drawback of this method is the limited availability of data for measuring the economic value of a good. There are several methods for estimating the non-

market value of a good. However, for the purposes of measuring value, often the market price is the best information we have on the economic value of a good or service and is therefore used as an estimate of economic value.

Economic value is most commonly applied when choices need to be made with scarce resources. For example, the New Zealand government allocates funding to institutions through an annual budget. In order to decide how to allocate the (scarce) funding available across competing portfolios (e.g. Health, Education, Justice, Development, Social services etc.) choices needed to be made. Information which can be provided through an understanding of economic value can help to inform this decision making, allowing for prioritisation of expenditure in such a way that it maximises economic value, among other concerns.

There are many textbooks, papers and online-resources which provide detailed descriptions of the concept of economic value. What we aim to do in this section is provide only sufficient information for a reader to be able to understand how we have positioned Te Reo Māori within the understanding of economic value. For further reading on understanding economic value, we direct readers to a recent New Zealand paper by Allen, Grimes and Kerr (2013) introduced in our literature review. The authors provide an excellent description of value, with a focus on cultural value, which lends itself to our analysis. This well thought out paper provides significant detail into the economics approach to conceptualizing value both in general and in specific relation to cultural goods. Their writing underpins much of our own regarding the conceptualization of economic value.

Contribution of language to economic value

Authors such as Barry Chiswick and Paul Miller (see for instance Chiswick, 1978; Chiswick and Miller, 1995; 1996; 2002; 2014) have developed an extensive literature which supports the conceptualization of language as a form of “human capital”, or skills, knowledge and experiences possessed by an individual which can be used to support production or productivity. Chiswick (2009) elaborates on this by setting out the three main requirements for human capital:

- It is embodied in the person;
- It is costly to attain;
- The skill is productive.

While Chiswick goes on to show how this is true for language in general, we can extend the example to Te Reo Māori. We understand that while Te Reo Māori has a spiritual and cultural value, being essential for the communication and practice of Tikanga Māori and transmission of knowledge across generations, it also satisfies the requirement of being embodied in the person, in that the

language skill is inseparable from the person who has acquired it (unlike a car or other physical commodities).

Te Reo Māori is costly to attain, particularly for those who do not grow up in Te Reo Māori speaking households. Individuals need to make an investment to learn Te Reo Māori, both in terms of time required to become and maintain proficiency, as well as in monetary terms, as individuals invest in training and learning resources.

The final requirement is that the skill is productive. While authors such as Chiswick (2008 etc.) have no hesitation in describing the product role that “native” or “local” (actually- majority) language has, and the productivity role migrants who possess non-local languages have, there is surprisingly little research which has considered the role of indigenous language in productivity.

There are certainly examples of where indigenous language may have an economic role, within the Te Reo Māori context, it is easy to conceptualize Te Reo Māori as aiding to production in the Tourism industry, where tourists seek to experience or understand Māori culture (e.g. Kapa haka, Pōwhiri, Pūrākau). The service sector may also improve productivity through Te Reo Māori proficiency, for example in healthcare, carers with Te Reo Māori proficiency are likely to be better placed to provide care for Māori patients and improve health outcomes. This productivity question is engaged with in more detail in later sections of the report but is essential to our understanding of the value of Te Reo Māori.

Accepting that Te Reo Māori is a human capital resource at the individual level provides us with a basis for understanding a role that Te Reo Māori plays in creating value to the Aotearoa economy, but it is not sufficient to capture the diversity of the role Te Reo Māori may play in creating value to the New Zealand economy. It is likely that Te Reo Māori also provides a role in facilitating social capital creation, being the connections between individuals along which information flows (Roskrug, 2012). It also contributes to the wellbeing of speakers, facilitates innovation and entrepreneurship through differences in problem solving and conceptualization over English and other languages, and provides many other economic benefits.

At a macro-level, there is little evidence that (dominant) colonial language has an impact on economic development, meaning they are interchangeable (though there may be some premium for English being the dominant language, due to its hegemonic role particularly in trade and science, there is little evidence to support this). While the colonial languages are interchangeable and commonly held, indigenous languages are not. Goods and services produced through indigenous language (such as tourist activities) cannot be created without the language, meaning the loss of the language would reduce economic development. In the Aotearoa context, if we exchanged English for

French, then there is little theoretical reason why economic development might vary. However, if we removed Te Reo Māori from Aotearoa, then the New Zealand economy loses a set of goods and services which are unique to speakers of Te Reo Māori and Aotearoa as the home of Te Reo Māori. This means that without Te Reo Māori, then goods and services derived from the language would not exist, and economic development would be reduced while interchanging English for another language is unlikely to have a significant impact.

Te Reo Māori and Māori cultural relationship to economic value

Drawing on our extensive engagement and discussion with stakeholders and community members, as well as our understanding of the economic role of language, this section aims to provide a firm positioning of Te Reo Māori and the culture in which Te Reo Māori is embedded within the concept of economic value, particularly the New Zealand economy. To achieve this, this section aims to provide answers to the following questions:

- What is the Māori language and culture economy?
- What are the characteristics of its goods and services?
- What are the characteristics of the supply and demand for those goods and services?

Once these questions are addressed, we will conclude this section with discussion of different frameworks for understanding the value of Te Reo Māori within the Aotearoa economy context.

What is the Māori language and culture economy?

As discussed earlier, economic value is held within goods and services. Building on this, we could define the Māori language and culture economy as the goods and services which are facilitated through the use of Te Reo Māori. A stricter functional definition which we adopt is that Te Reo Māori was an input into some part of the production process for a good or service. The role of Te Reo Māori as an input might be explicit, such as in educational services like Te Kōhanga Reo or in tourism services which include kapa haka or Pōwhiri. The role might also be subtler, such as in the creation of moko, toi Māori or pounamu carving which all require some aspect of Te Reo Māori to inform the practice and design elements and to communicate the value (economic or otherwise) of the creation or service.

Indeed, as we quickly discovered, while defining the Māori language and culture economy appears a simple concept, our discussion with stakeholders and our own concept development in our journey with Te Reo Māori has a vast influence on the goods and services provided in New Zealand. At the broadest level, some people describe the Māori language and culture as having a role in all production within Aotearoa, as the health and wealth of the land and water is inseparable

from Māori tradition and the tiakitanga of Aotearoa embedded in Te Reo Māori. Using this broad conceptualization, all New Zealand economic activity which includes the land or environment is enabled through te ao Māori as understood through Te Reo Māori. In order to negotiate the complexities that arise, and to make this project achievable, we adopt a highly pragmatic and functional definition of what is a *direct* part of the Māori language culture and economy.

Our definition is that the Māori language and culture economy comprises of any good or service which makes use of Te Reo Māori as a direct input (e.g. education, Huia publications), or where the cultural capital of Te Reo Māori is required to facilitate production (e.g. toi Māori). The Māori language and cultural economy is not synonymous with the Māori economy, which tends to measure the economy of individuals, households and organisations which identify as Māori, but for whom the activity may not have a strong connection to Te Reo Māori. For example, an Iwi-owned enterprise contributes to the Māori economy. However, if neither the governance nor production of the good or service drew on Te Reo Māori (for example, a real-estate agency), then it would not be included within our definition of the Te Reo Māori economy.

Characteristics of the Māori language economy

As discussed above, and drawing on the findings of the literature review and stakeholder engagements, we conceptualize the Māori language economy as being all (informal or formal) economic activity which either:

- Uses Te Reo Māori as a direct input into production; or
- Draws on Te Reo Māori to conduct production or business activities as an indirect input.

One important distinction we draw is the difference between formally traded goods and services, and informal markets for primarily services, such as the services provided to marae maintenance and in coordinating and undertaking tangihanga, kapa haka or waka ama.

To describe the scope of the Māori language economy, we began by looking at the formal goods and services where Te Reo Māori is a direct or indirect input into production (or the product itself). To assist with this, we use the Australia and New Zealand Standard Industrial Classification 2006 (ANZSIC06) that is disaggregated at level 1⁴. The advantage of conceptualizing formal activity

⁴ For more information on ANZSIC06 coding see <http://www.stats.govt.nz/methods/classifications-and-standards/classification-related-stats-standards/industrial-classification.aspx>

through this classification as industry activity is often used as a productivity measure of economic value, and so we can map these activities into an estimate of value.

We have attempted to characterise the role that Te Reo Māori provides within each of these industries using broad role classifications. These role classifications aim to capture, in the broadest sense, the way in which Te Reo Māori is used within an industry (if at all) to contribute to production within that industry. These roles are **Direct Input**, where Te Reo Māori is directly used as an input into production and **indirect inputs**, including:

- **Knowledge contribution:** Where knowledge embedded in Te Reo Māori is used as an indirect input into production
- **Workplace Culture:** where Te Reo Māori contributes as a cultural good to the health, productivity, recruitment or retention of the workforce.
- **Governance:** Strategic, administrative and executive decision making
- **Innovation and Entrepreneurship:** Old and new ideas facilitated by Te Reo Māori

The **Direct Inputs** role is the narrowest definition of how Te Reo Māori contributes to the economy. It reflects goods and services for which Te Reo Māori is a direct input into production. This means that the good or service would not be able to be produced without Te Reo Māori as an input. Examples of direct inputs include Te Reo Māori language education and kapa haka presentations to tourists. Without Te Reo Māori, these goods or services would not exist.

The remaining categories are examples of **indirect inputs**. The first of these is **Knowledge contributions**. This includes industries which make use of knowledge which is embedded and inseparable from Te Reo Māori, but where it is the distinct knowledge rather than language itself which is the input. This means that the shape or structure of the good or service is influenced by Te Reo Māori, but the good or service itself may not be a direct output resulting from the language use. Good examples of this include toi Māori products or tourism ventures which are enriched through the use of pūrākau and pakiwaitara. Indirect inputs are any activity where Te Reo Māori has an indirect impact on production, employment or wellbeing.

Workplace culture is the broadest of the role categories we have identified. Workplace culture refers to the role that Te Reo Māori plays within an industry in supporting the recruitment, retention, wellbeing or productive practice of employees within an industry. In this way, Te Reo Māori influences the productivity of workers and the profitability of firms within an industry, while not having a direct role as an input within production. Another way of thinking of workplace culture is to liken Te Reo Māori to Bourdieuan capitals such as social, cultural and human capital (Bourdieu, 1986).

The concept behind Workplace culture is that, in some firms, the use or principles founded in Te Reo Māori:

- Influences the connections and networking between staff (**social capital**). This in turn enables a firm to draw on the information held and distributed by that network, facilitating innovation, entrepreneurship, decision making and other aspects of productive activity. An example of this would include a network of Te Reo Māori speakers who communicated on social media within central government, sharing ideas and knowledge within the group.
- Provide a common understanding of behaviour, norms and rules within the worksite, between individuals and between institutions (**Cultural capital**). Cultural capital also includes the skills and knowledge which a person possesses which have been communicated through cultural interaction. An example of this would include the Māori fisheries sector, where knowledge of fisheries and interaction within the fishery industry is in part guided by the cultural knowledge expressed in Te Reo Māori.
- Influences the health and wellbeing of the workers who are employed within a firm or industry (**Human capital**), in such a way that workers are easier to recruit, retain, are more productive in work or have less absences from work. Examples of this include the forestry sector, which is the largest proportional employer of speakers of Te Reo Māori. The use of Te Reo Māori within some enterprises in this industry is important to the spiritual and mental wellbeing of the workers and therefore on the human capital of the workforce.

We also identify aspects such as **governance**, rangatiratanga and kaitiakitanga as roles in which Te Reo Māori influences economic activity. In this role, Te Reo Māori facilitates the way in which an activity is governed, and influences the decision making process to improve productivity or sustainability of a firm, or to help guide decision making. It is related to cultural capital, but is distinct from workplace culture in that it is about the strategic elements within an industry, rather than interpersonal interaction and workplace factors. Examples of Te Reo Māori providing a role at the governance level includes the decision making by Iwi around investment within the rohe.

The final role identified is which we have identified is **innovation and entrepreneurship**. From our meetings with stakeholders, there is a clear, but difficult to articulate role, for Te Reo Māori in the development of new ideas and approaches to problem solving, as well as the reintroduction and adaptation of old ideas. This contributes to new business start-up, investment and better productivity within industries, but its effect is difficult to measure. The definition we adopt includes the Te Reo Māori facilitated cultural capital and the different approach to conceptualizing problems, which is applied to improving or innovating products or production. Examples include the creation of

new toi Māori designs and products, kaupapa Māori research strategies and policy interventions designed from a Māori interpretive lens.

Supply of Māori language goods and services

Following the work of Siadeco Research Society (2015) which explored the value of the Basque language, we identify seven distinct groupings of industries within the Māori language economy. Two of them are primarily public sector in their funding and activity (Public administration, Education), while the rest have either mixed or purely private roles (Language industry, customer experience, exports, Cultural industry and the media).

Earlier sections describe the roles that Te Reo Māori hold within the Aotearoa economy, effectively describing the activities which comprise the Māori language economy. This section builds on this understanding to introduce the concept of industrial groupings or sectors of which industries comprise. While the role categories are used as a guide, Te Reo Māori is likely to play multiple roles within each category. These groupings are better thought of as industrial clusterings while our earlier roles form activity clusterings. Between both industrial and activity clusterings we can describe the characteristics of the Māori language economy from a top-down and bottom-up perspective.

Public Administration

This category of the Māori language economy includes industries which are involved in the public administration and promotion of the Māori language. It includes the publicly funded administrative services which cater to practice, development, resourcing or monitoring of the Māori language at both a national (central government) and sub-national (local government) level. As mentioned earlier, the New Zealand government annually spends up to \$400 million on supporting Te Reo Māori (including health and education portfolios), while the direct spend in supporting Māori language is likely to be closer to the \$80 million annual spend identified in Vote Māori Development.

Education

While some of the expenditure by central government is dedicated to the administration of language services, policy and revitalization, this is far from the largest sector involved in expenditure on Te Reo Māori. One of the largest industry groupings includes the public and private provision of education services. This industry grouping includes education services provided at preschool level, including kōhanga reo, education at the primary and secondary level, and higher education including wānanga and university studies. Importantly, the education sector is not restricted to Māori language medium education (kura kaupapa Māori) but also teachers and modules teaching Te Reo

Māori within generic mainstream schools. It also includes the private education providers and tutoring services. The creation and sale of educational goods such as the Te Whanake Māori language series books and applications⁵.

Language industry

The language industry comprises enterprises which provide professional services designed to elaborate or distribute the Māori language. The language industry includes the goods and services which are produced to satisfy the demand for Māori language goods and services outside of those directly related to education. In this category, we include professional services such as translation services, paid formal speakers, and professional language consulting services.

Cultural industry and the media

The language industry includes goods and services which are produced to satisfy the demand for Māori language goods and services outside of those directly related to education. Includes commodities which are produced and sold as part of the cultural industry, including Te Reo Māori publications (e.g. Huia publications series). Creative industries which draw on Te Reo Māori are also included in this grouping, such as pounamu carving and other Māori cultural goods which draw on Te Reo Māori for inspiration or design.

Also included in this grouping are Māori broadcasting and entertainment services. This includes Māori television, radio and periodical media. We also include entertainment services such as waiata (performances, CDs and MP3s etc), and kapa kaka and pōwhiri. Events such as Te Matatini are also included in this cluster.

Tourism and branding

The tourism sector in New Zealand is comprised of several different industries. For example, the accommodation services, transportation services and recreational services are all involved in supplying services which are demanded by domestic and international tourists. Te Reo Māori is involved in tourism both directly through informing recreational activities which are demanded by tourists. The availability of these activities also attracts tourists into regions, stimulating additional spending and new tourism arrivals.

⁵ For details see <http://www.tewhanake.maori.nz/>

However, Te Reo Māori also plays a more nuanced role in the New Zealand economy through the creation of branding. Māori language and culture are commonly used as branding for New Zealand goods and services exported overseas. While this includes international tourism (which is a form of export services), it also includes branding on products such as Tohu wines. Examples of this branding includes the use of the koru design by Air New Zealand and the use of Kia Ora in advertisements for New Zealand.

Customer experience

Some industries such as *Accommodation and food services* and *Administrative and Support Services* not only have a role in the workplace culture of the industry, but also draw on Te Reo Māori as an input into the customer experience, drawing on Te Reo Māori to improve the quality of the service which workers in this industry provide. This may include services to tourists, enhancing their experience in New Zealand, but may equally apply to providing service to New Zealanders who value Te Reo Māori or speakers of Te Reo Māori.

Non-grouped industries

There are also many industries which do not fall within our industry groupings but where Te Reo Māori may play a role at the firm level (governance, innovation and entrepreneurship, workplace culture). We characterise these as non-specific, and acknowledge that our understanding of the role of Te Reo Māori in these industries varies from non-existent to having a major role, and that the strength of the connections will require detailed industrial analysis which is not within the scope of this report.

Table 4.1 over page summarizes our understanding of the role of Te Reo Māori by industry within the New Zealand economy.

An important exception to this industrial classification is tourism. Tourism services occur across different industries, for example an attraction might be classified as *Arts and Recreation Services* while hotel and restaurant services fall under *Accommodation and food services*, while tour and travel bookings are made through *Administrative and Support Services*. From our engagement with stakeholders, we recognise that one of the major contributions made by Te Reo Māori to the New Zealand economy is contribution to the branding, identity and experience of international tourists to, and domestic tourism within New Zealand.

Table 4.1: Groupings and primary role of Te Reo Māori by industry

Grouping	Industry	Role of Te Reo Māori
Public Administration	Public Administration and Safety	<ul style="list-style-type: none"> • Direct input • Knowledge contribution • Workplace culture • Governance
Education	Education and Training	<ul style="list-style-type: none"> • Direct input • Innovation & entrepreneurship
Language industry	Professional, Scientific and Technical Services	<ul style="list-style-type: none"> • Direct input
Culture and Media	Arts and Recreation Services	<ul style="list-style-type: none"> • Direct input • Knowledge contribution • Innovation & entrepreneurship
	Retail Trade	<ul style="list-style-type: none"> • Direct input
	Information Media and Telecommunications	<ul style="list-style-type: none"> • Direct input • Knowledge contribution • Innovation & entrepreneurship
Tourism	Accommodation and Food Services	<ul style="list-style-type: none"> • Workplace culture • Customer experience
Customer Experience	Rental, Hiring and Real Estate Services	<ul style="list-style-type: none"> • Workplace culture • Customer experience
	Health Care and Social Assistance	<ul style="list-style-type: none"> • Workplace culture • Customer experience
Non-grouped industries	Agriculture, Forestry and Fishing	<ul style="list-style-type: none"> • Workplace culture
	Mining	<ul style="list-style-type: none"> • Workplace culture
	Construction	<ul style="list-style-type: none"> • Workplace culture
	Wholesale Trade	<ul style="list-style-type: none"> • Workplace culture
	Manufacturing	<ul style="list-style-type: none"> • Direct input • Workplace culture
	Transport, Postal and Warehousing	<ul style="list-style-type: none"> • Workplace culture
	Financial and Insurance Services	<ul style="list-style-type: none"> • Workplace culture
	Administrative and Support Services	<ul style="list-style-type: none"> • Workplace culture
	Electricity, Gas, Water and Waste Services	<ul style="list-style-type: none"> • Workplace culture
	Other Services	<ul style="list-style-type: none"> • Workplace culture

Costs of supporting Te Reo Māori

While this report is primarily focused on the benefits and value contribution of Te Reo Māori, we acknowledge that there are also costs and potential negative externalities (consequences) of Te Reo Māori to the New Zealand economy. These costs include private and public expenses, as well organisational or societal costs such as compliance and coordination costs. However, given individuals and the state choose to meet these costs, it could be argued that the value of Te Reo Māori is *at least* the total value of expenditure on Te Reo Māori.

Table 4.2 below details some of the costs which Te Reo Māori may create for the New Zealand economy.

Table 4.2: Examples of costs arising from Te Reo Māori

Source	Description of costs	Nature of costs
Individuals	Private expenditure on language acquisition and maintaining proficiency (e.g. tuition)	Private expenditure, money
	Opportunity cost of not learning a different language	Options, earnings
	Discrimination based on language	Options, earnings
Businesses	Compliance and representation costs	Corporate expenditure, time
	Professional development of staff	Corporate expenditure, time
Institutions (Iwi, organisations)	Compliance and representation costs	Time, money
State (New Zealand local and central government)	Budget expenditure on supporting Te Reo Māori education and visibility	Government expenditure
	Compliance and representation costs	Time, Government expenditure
Social costs	Coordination costs (communication barriers)	Transaction costs

We see in Table 4.2 that for individuals who can speak Te Reo Māori, there are a range of potential private costs identified. These include both the monetary and time costs involved in learning Te Reo Māori. While some individuals will face relatively low or zero costs of developing Te Reo Māori language skills due to exposure while young, many speakers chose to learn or develop their skills with Te Reo Māori at an older age. For these learners, there are private costs in accessing

teaching material and tutoring, as well as the opportunity costs of spending time learning Te Reo Māori, rather than learning a different language, or devoting that time to some other activity (such as working or relaxation). We also identify the likelihood that for some individuals, their ability to speak Te Reo Māori may result in discrimination, and in social, educational or employment discrimination which limits opportunities or future earnings, as well as having an impact on health, wellbeing and happiness.

Moving beyond the individual, we identify that businesses and institutions are likely to face some costs because of Te Reo Māori. This may include compliance costs of providing signage, branding or support for Te Reo Māori speaking staff members. These actors may also be required to meet costs associated with ensuring adequate representation or support for staff, and meet the time and monetary cost of providing professional development for staff who wish to develop or maintain their reo Māori proficiency.

At a more macro-level, the state faces costs of supporting Te Reo Māori through budget allocations into services, particularly education and media related services. While actual government expenditure in supporting Te Reo Māori is unclear due to internal ministerial, vote health and vote education spending on supporting Te Reo Māori, from vote Māori development 2015/16 suggests that expenditure on supporting language through this alone was between \$80 and \$85 million. Estimates of the actual spend range from \$200 to \$400 million, with difficulty in separating dedicated expenditure on supporting Te Reo Māori, rather than expenditure which happens to go to organisations which provide essential functions using a Te Reo Māori medium (e.g. Kura Kaupapa educational spend).

At the broadest level, we also identify that there may be some societal costs associated with Te Reo Māori in Aotearoa. These primarily arise from the cost of any language diversity, being the transactional costs of communication or exchange which arise from interacting in more than one language. Examples include where interpretation services are required to facilitate interaction, and are considered very minor in the New Zealand context, particularly given the multilingual status of most Te Reo Māori speakers and the current dominance of English as the language of commerce.

It is important to recognise that these costs, while not minor in their next expenditure, are also likely to reflect the value of Te Reo Māori for New Zealand. For example, neo-classical economic theory suggests that a rational individual is only willing to face the costs of an activity if the perceived benefit is equal to or greater than these costs. However, whether the *economic* benefit is greater than the *utility* benefit is unclear, and the contribution to the economy may be lower than

expenditure, with the difference comprising of benefits which accrue outside of the formal economy (e.g. Identity, wellbeing, cultural capital, social capital).

Demand for Māori language goods and services

This section provides brief discussion of the characteristics of demand and supply of Māori language goods and services. Much of this has been covered in earlier sections, and so this section aims to synthesis this information and provide more structure around the market for Māori language commodities and services.

Within neo-classic economic theory, demand for a good or service is comprised of consumers who are willing to purchase the good or service because of the benefit that they would accrue from its consumption. Regarding Te Reo Māori economy, this demand comes from different sources depending on the type of product which is being consumed. Consumers fall broadly within three groups:

- Speakers of Te Reo Māori, both domestic and international (Speaking insiders)
- Non-speakers of Te Reo Māori who identify Te Reo Māori as culturally significant to them (Non-speaking insiders)
- Non-speakers of Te Reo Māori who do not identify Te Reo Māori as culturally significant to them (Non-speaking outsiders)

Speakers of Te Reo Māori are the most likely to demand goods and services supplied by the Māori language economy. This is because speakers are not relying on the value add from the cultural value, identity or scarcity of the product. This contrasts with non-speakers, who are likely to consume Te Reo Māori goods and services primarily due to the value added because the good possesses cultural or identity value. An example of this is a Māori language translation of Alice in Wonderland translated by Tom Roa. While this product may be purchased by speakers and non-speakers alike, it is more likely to be purchased by speakers of Te Reo Māori because they are not only reliant on the cultural value of the Te Reo Māori translation, but also able to gain the entertainment value from reading the book.

We also differentiate between non-speakers who do and do not identify with Te Reo Māori. In this way, we seek to separate those who consume Te Reo Māori goods and services as a non-speaking insider from non-speaking outsiders. Non-speaking insiders identify with Te Reo Māori's intrinsic cultural value in a way in which makes them more likely to consume Te Reo Māori goods and services than non-speaking outsiders, who are likely to consume Te Reo Māori goods and services only in relation to value to their experiences or the scarcity or beauty of the item. The most obvious division of non-speaking insiders and outsiders include non-speaking Pākehā and

International tourists. Non-speaking pākeha are likely to ascribe an identity value to Te Reo Māori goods and services because they identify themselves as being from Aotearoa, and so the good may have a different meaning to them than it would to a tourist.

Frameworks for understanding the value of Te Reo Māori

Due to the complex role of Te Reo Māori in value creation, and the seminal nature of this work, we have placed considerable importance on framework development. The goal of this section is to map the pathway we have taken in moving from a more western-styled framework to the *Te Pua* model which is a new adaptation of the value creation framework, envisaged through a kaupapa Māori interpretive lens.

Early value of Te Reo Māori framework

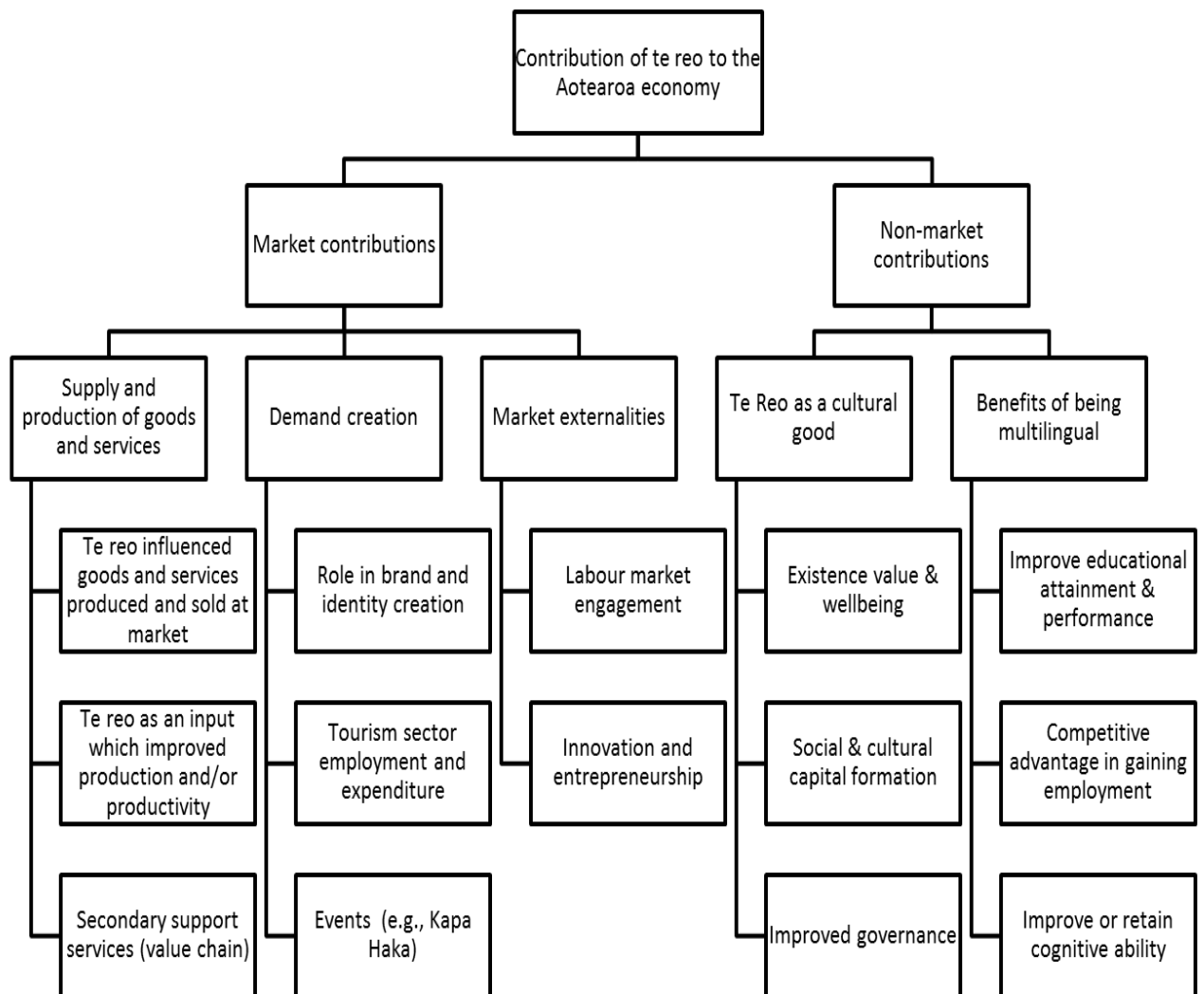
The early part of our study involved the development of a western-styled framework to understand how the Māori language economy coordinates to create value for the New Zealand economy. We came to name this model the *Language value framework*. The model was developed by drawing on the sources of Total Value framework created by Allan Corey, Arthur Grimes and Suzi Kerr titled *Value and Culture: An economic framework* (Allan, Grimes & Kerr, 2013) conducted for Manatū Taonga (Ministry for Culture and Heritage) provides summary insights into the valuation of culture as an economic good and within an economic framework.

The Language value framework provided us with a high-level understanding of the role of Te Reo Māori in contributing value to the New Zealand economy, while enabling sufficient detail to clearly express what we will and will not be examining with any given valuation approach. The framework was also helpful in enabling us to formalize language and provide operational definitions and relationships which enable valuation to be undertaken using a defensible set of concepts.

Adapting the report by Allan, Grimes and Kerr (2013) into a framework applicable to Te Reo Māori is not straight forward, and involved consultation, literature reviewing and workshopping among team members to arrive at a model which draws heavily from a neo-classical economic understanding of value and the role of language, but provides a starting point for further analysis. This model (Figure 4.1 below), sometimes referred to as the 'silo' model because of the vertical relationship between value nodes, provides a very useful visual framework for understanding, at a glance, how Te Reo Māori might be contributing value.

One of the issues identified is that the Language Value Framework was not very meaningful to people we discussed our model with, and lacked a Kaupapa Māori lens.

Figure 4-1: Language value framework



Te Pua model

The result of this critique was returning to the white-board, and re-developing the model into the Te Pua model, which in both design and content reflects the value of Te Reo Māori to Māori and within the New Zealand economy. We believe that the biggest achievement of this research project has been creating and engaging in a discourse regarding the value of Te Reo Māori to New Zealand, and reflecting this in the Te Pua model. We have introduced this question to a broad range of stakeholders, and received a huge variety of feedback, causing us to continually ‘return to the whiteboard’ and redevelop our thinking.

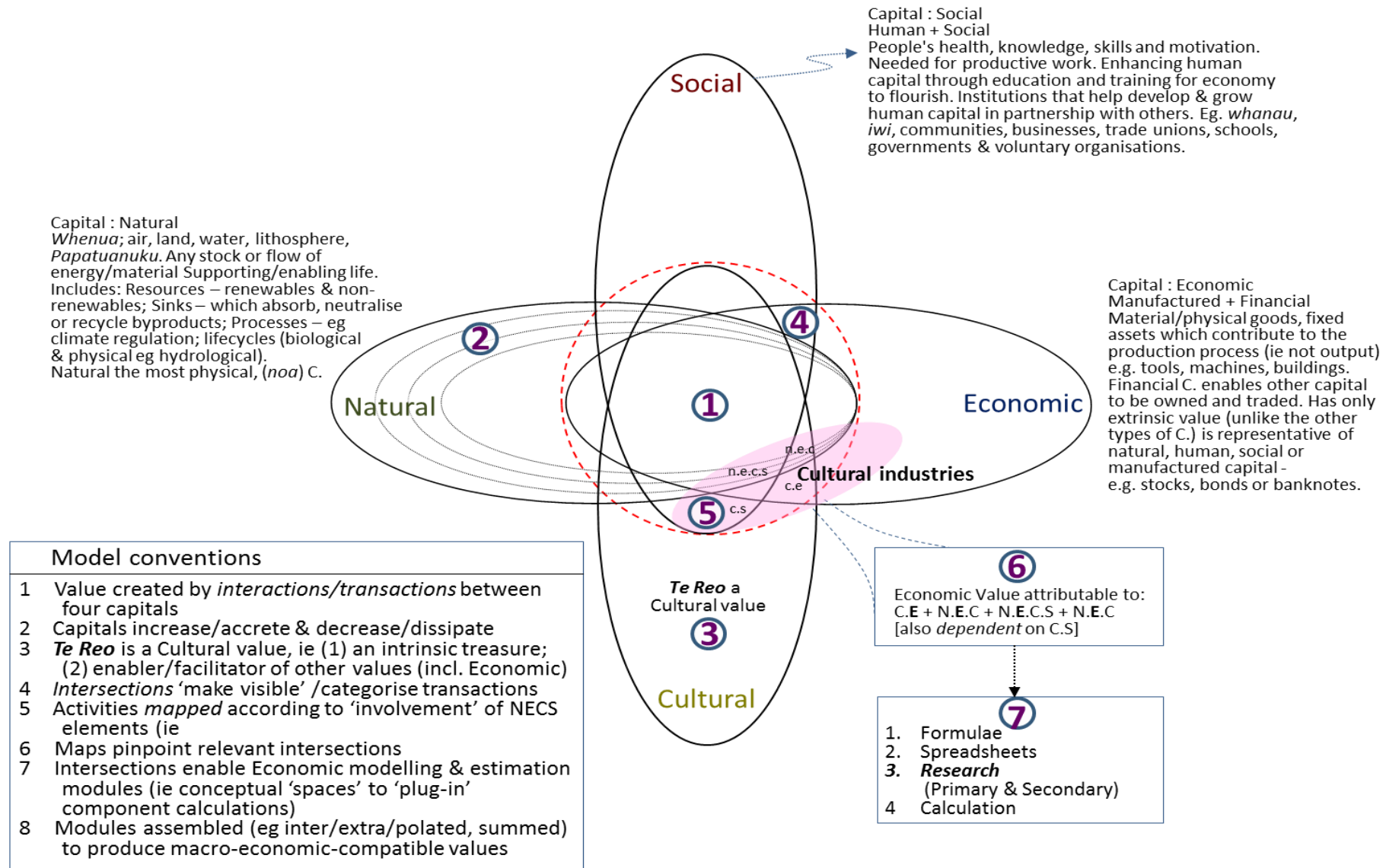
Having addressed and problematized uncritical applications of conventional economic modelling approaches to the research question, the group turned to face the issue of the need for other avenues in understanding the economic value of language, and in particular Te Reo Māori.

A potential way forward was found by thinking about the contributions made to the creation of economic value by mobilising other forms of capital. After Allen (2014; 2016) and Samkin, Allen, Horrox & Schneider (2014), it is posited that increases in economic value are facilitated as existing economic capital is combined with other forms of capital. For example, economic growth is enabled by corporate actors (mobilising manufactured and financial capitals) producing goods and services for markets, using a combination of ingredients, or inputs. These inputs can take physical form (e.g. raw materials) and arise from the environment (natural capital), or less tangible forms, such as human skills, creativity and ingenuity (social capital); and institutional and wider cultural contexts (cultural capital). An understanding of economic value as resultant from the interplay of other factors is well-established in the literature, and traces its heritage back to Smith's (1776) model of surplus value being created from certain relationships between factors of production. More modern interpretations have it that these factors should be considered 'capitals' (see for example, Elkington, 1998; Iremonger & Scrimgeour, 2004). Through this work, an innovative conceptual model was developed. A pictorial representation of this model is shown in Figure 4.2.

The structure of the model depicts the four capital clusters as partly separated - representing the different origins and characters toward Natural, Economic, Social and Cultural capitals - and partly interconnected - reflecting an understanding that value is created by interactions/transactions between capitals. Overall system value (such as a nation, or a world) is the sum of all capitals (see for example, Solow, 1986). In this model, Te Reo Māori is a Cultural value, i.e. (1) an intrinsic treasure; and (2) enabler/facilitator of other values (including Economic). The 'intersections' formed by the superposition of capitals on to each other 'make visible' and enable categorisation of transactions and activities within a system. For example, activities designed to create economic value (e.g. 'corporate business') using intellectual property created by humans (e.g. a patent or trademark) involving some physical input (e.g. efficiencies in raw materials processing) can be categorised 'within' a subset N.E.S. In this way, activities can be mapped per relative 'involvement' or input of resources from relevant capitals (see circled "5" in Fig. 4.2)

Other activities can be mapped in this way. Activities which can be defined as 'cultural industries' were examined using the model; namely, tangihanga, kapa haka and Māori Broadcasting. Using theory conventions, these were mapped and represented in the model as the pink shaded area. This showed how resources arising 'out of' each of the capitals are mobilised to create value in each capital area. One advantage of this approach is that it does not focus exclusively on economic aspects (or rationales) for activities, yet identifies the economic contributions/outputs arising from specific activities.

Figure 4-2: Te Pua version 2: Theoretical Foundations



Also, represented in Figure 4.2 is a research process. After identifying, clustering and mapping activities, we can more easily hone in on the economic contribution of an activity (while avoiding potentials for unconscious or unintended prioritising of economic over other values). Boxes “6” and “7” point to processes of calculation enabled by this model. For example, focussing on that cluster of activities which go toward and supporting a tangihanga (or some other cultural function) via the intersections covered by the map, economic values can be more easily identified and quantified. Our longer-term research goal is to apply this model to a wide range of cultural activities linked and enabled by Te Reo Māori to establish a more accurate and representative picture of the economic value created by the indigenous language of Aotearoa.

Summary

This section seeks to provide some economic conceptualization and framework around our understanding of the role Te Reo Māori plays in value creation in the New Zealand economy. This is achieved through firstly working towards a functional definition of Te Reo Māori which we adopted to identify what, within the broader world of Te Reo Māori, we are examining in this report. We then go on to explore language as an economic concept generally and Te Reo Māori specifically before exploring several frameworks and arriving at our preferred framework for understanding the value of Te Reo Māori, the Te Pua model.

We acknowledge that this report offers only a brief exploration into the development of our understanding of Te Reo Māori as a contribution to economic wellbeing. However, it also provides a starting point on a journey towards reaching a deep understanding. The dearth of economic analysis of the role of non-dominant indigenous language generally, and Te Reo Māori specifically, means that there is little foundational literature from a quantitative or economic perspective, and so we aim to contribute to the development of this discourse by facilitating debate and bringing the understanding of Te Reo Māori and its economic role into the mainstream.

Section 5: Measuring the value of Te Reo Māori to the New Zealand economy

This section explores estimation techniques for the economic contribution of language generally, and the contribution of Te Reo Māori to the New Zealand economy specifically. To achieve this, we firstly conduct an overview of the methods of valuing cultural goods generally and language specifically, distinguishing between market and non-market methods. We then narrow our focus to international examples of attempts to quantify the value of indigenous language to local or regional economies. Subsequently we provide some exploratory estimates of the value of the contribution of Te Reo Māori. They provide both a contribution range which we believe Te Reo Māori falls within, as well as provides a starting point for future research and investigation into the complex relationship between indigenous language and value, both economic and holistic.

Finally, we conclude this section with some implications and conclusions drawn from the findings, suggesting options for directions for future research aiming to further characterise, estimate and develop the contribution of Te Reo Māori to the Aotearoa economy.

Estimating market and non-market contributions

While there are several economic approaches to determining the contribution, based on the literature available, the following approaches have been used in determining the market and non-market value of language and culture. This subsection provides an overview of prominent methods identified for estimating the contributions of culture or language to a society. The distinction between market and non-market value is that market contribution is the value created from market interactions, while non-market value is that value created from Te Reo Māori's existence which is not captured in market interactions.

The methods we describe have been drawn from several sources, but we owe a particular debt to the previously discussed paper by Allen, Grimes and Kerr (2013) which explored different valuation methods for understanding value in a cultural context using economic concepts. We also draw from a 2013 BOP consulting paper, titled "*The economic, social and cultural impact of the city arts and culture cluster*" which also offers several valuation methods.

The purpose of this section is not to provide a comprehensive review of methodology, but to highlight major approaches and provide suggestions for subsequent study. However, we suggest that these approaches are considered as a starting position for establishing an approach within a broader research program seeking to understand the economic contribution of Te Reo Māori.

Estimating 'market' contributions

Economic Impact Analysis

Perhaps the common approach to estimating economic contribution is the broad set of methods included in Economic Impact Analysis (EIA). EIA seeks to estimate the effect (impact) of a good, service, programme, decision or other option on an economy. While there are many examples of EIA, they primarily are associated with events or policies. There are several different approaches which can be taken within EIA, and many textbooks deal with this subject, though most draw on health or environmental examples.

The most prominent approach to EIA is termed cost benefit analysis (though variations exist, especially within health economics). More complex EIA estimation methods include input/output and economic simulation. In relation to economics, the cost-benefit analysis is a technique for enumerating and evaluating the costs and benefits associated with an economic project (Black, Hashimzade, & Myles, 2013; Shim & Siegel, 1995). It includes not only the direct benefits and costs but also external effects or externalities. For the purpose of evaluating cultural goods an EIA is a common and relatively straight-forward approach. The analysis involves estimating the gross expenditure on an option (for example, the hosting of Te Matatini), and balances this against the benefits (commonly either monetary or monetarized benefits) to estimate the net contribution of an activity (the sum of costs minus the sum of the benefits).

EIA can be used to assess the broader economic impact to an economy by providing a cultural good or service in terms of additional spending, visitor numbers and/or jobs provided (Allan et al., 2013; BOP Consulting, 2013). In other words, not only can this method consider the cost of hosting Te Matatini (in our example), but also captures the flow-on benefits from holding the event, for example expenditure on accommodation, restaurants, local shops, suppliers etc. This approach can also consider 'multiplier effects', being the effects of spending that go beyond the initial round of spending. For example, a Te Matatini team buys its supplies from a local dairy. A portion of the money paid to the dairy is then used to pay staff, and in turn, the staff of the dairy spend a portion of their wages/salaries in the local economy. In this way, a single dollar spent within an economy can create more than a dollar of additional economic activity.

EIA attempts to capture three types of economic impact from the activity:

- Direct e.g. spending on supplies from local providers
- Indirect e.g. spending by spectators on dining out
- Induced e.g. employees of local suppliers (to the cultural event organisation) spending their wage/salary in the local economy

However, depending on the purpose of the analysis, there are several effects which should be considered to ensure that the holding of an event adds value to the local economy:

- Displacement and substitution effects – does spending on one event mean less spent on another event within the local economy?
- Leakage – is there spending that will ‘leak’ out of the local economy? (for example, employees may live outside of the local economy)
- Deadweight – could spending have occurred in the local economy anyway, regardless of whether the event happened?

The answers to the above questions will also depend on the geographical focus of the research project, for example the local, regional or national economy. The strengths and weaknesses of the EIA are clearly identified by Allan et al. (2013) and BOP Consulting (2013), of which a summary is provided in the table 5.1 below.

BOP Consulting (2013) provide two United Kingdom based case studies of EIA’s that were conducted in 2010 on an art’s organisation, Anvil Arts, and an AV arts festival. Both case studies required both primary and secondary data sources e.g. financial accounts, management accounts, interviews with key personnel, online surveys to customers etc. In Aotearoa, BERL (2014) conducted an EIA on the Wānanga sector in two stages. The first stage focused on assessing the impact of the operations of all three Wānanga on the New Zealand economy in terms of output, GDP, and employment. The second stage focused on assessing the wider impact on the economic and social well-being of the communities they operate. This included assessing the economic impact of skills development and productivity of students. BERL also captured the induced impact by using multipliers sourced from input-output tables (Statistics New Zealand, 2003).

Table 5-1: Strengths and weaknesses of Economic Impact Analysis method

Strengths	Weaknesses
Most common technique for estimating the value of cultural goods (Allan et al., 2013; BOP Consulting, 2013). It is also relatively straight-forward and affordable approach (BOP Consulting, 2013).	Unable to capture the full range of values i.e. non-market values, non-use value, option value, producer and externality benefits (see Section 3.2 of Allan et al. (2013) for full explanation), which arise from the consumption and provision of cultural goods and services. That is, an EIA generally considers only ‘market activity’. Thus, EIA is not a very useful technique to apply when no market prices exist.
Measures direct expenditures and costs as well as induced activity (multiplier benefits) (Allan et al., 2013).	Very difficult to estimate the multiplier benefits and magnitude because it involves assumptions about multipliers which may be inaccurate or variable over an economic cycle (Allan et al., 2013).
Standardised benchmarks of multipliers are available (see Batini, Eyraud, Forni, & Weber, 2014; Statistics New Zealand, 2003 for more information).	The provision of cultural goods or services may not cause any change in ‘business as usual’ spending (see Schilling, 2012 on the impact of the Rugby World Cup 2011 on international visitor numbers) Fails to capture the benefits which can accrue to non-users of goods (Allan et al., 2013).

Economic Footprint Analysis (EFA)

Also known as *size analysis* or *economic contribution analysis*, the Economic Footprint Analysis measures the size of an organisation’s, sector’s or industry’s activities and is then compared with the national economy (BOP Consulting, 2013). More accurately thought of as a variant of the EIA approach, EFA is commonly used for assessing the contribution of an industry of sector in general, rather than a specific area or event. There are two measures that the EFA encompasses: employment and Gross Value Added (GVA). The employment measure is straight-forward, requiring the number of employees. GVA is closely related to the concept of Gross Domestic Product (GDP), on the premise that it is an estimate of an organisation’s value generated for the whole economy. Essentially, the GVA “measures the value an organisation ‘adds’ to its inputs in the course of making its outputs” (BOP Consulting, 2013, p. 14). The EFA is a worthwhile method to consider in valuing culture because it considers not only direct impacts, but also indirect and induced impacts. However, like other EIA techniques, it does require the use of multipliers. Although it is a method that is rarely used, there are some case studies which have adopted it, such as the EFA analysis of the British Broadcasting Corporation (BBC) undertaken by BOP consulting (see BOP Consulting, 2013).

Estimating 'non-market' contributions

The market techniques above are limited in their ability to capture value which isn't directly included in market transactions or not incorporated within a pricing system. To address this limitation, there are valuation techniques that aim to put a monetary value on the broader benefits of cultural activities, particularly when there is no market price assigned, such as free entry. The methods profiled here include stated preference and revealed preference techniques.

These techniques are more commonly used to value environmental goods, but there appears to be growing support in using stated preference techniques for measuring the value of 'cultural goods and services' (see Allan et al., (2013) and H.M. Treasury (2011)).

Stated Preference Techniques

Stated preference techniques use survey techniques designed to elicit respondents' (users and non-users) preferences for the non-market good (Allan et al., 2013). A typical survey describes a hypothetical market in order to elicit estimates of a respondent's willingness to pay (WTP) or willingness to accept (WTA) (H.M. Treasury, 2011). There are two models of stated preference techniques commonly used in the valuation of cultural goods: Contingent Valuation and Choice Modelling, as useful measures (Navrud & Ready, 2002; O'Brien, 2010). They are also popular models to use in measuring the value of environmental resources (Do & Bennett, 2007; Hanemann, 1994; Mogas, Riera, & Bennett, 2005; Othman, Bennett, & Blamey, 2004; Tuan & Navrud, 2006). The strengths and weaknesses of both models are presented in Table 5.2. More modern applications of stated preference techniques, such as those introduced by Benjamin, Kimball, Heffetz & Szembrot (2014) in the analysis of subjective wellbeing have further developed the applications of stated preference techniques. Both Contingent Valuation and Choice modelling are described in detail in Hensher, Rose, and Greene *"Applied choice analysis: a primer"* (2015), and interested readers are encouraged to consult this book as a detailed methodology primer.

Contingent Valuation (CV)

Under the contingent valuation method, questionnaires elicit WTP or WTA through open-ended or option based questions which attempt to elicit non-market value through getting people to reveal the price they would be willing to pay, if a price was charged for a non-market good. For example, an open-ended response is appropriate for a question such as: *"How much are you willing to pay to attend event X?"* Whereas, a question such as *"Which of the amounts listed below best describes your willingness to pay to attend event X?"* compels respondents to choose one of the options listed. There are models and templates that can assist in the development of a suitable

questionnaire (Bateman et al., 2002; Last, 2007; Mitchell & Carson, 1989). As a case study, the British Library commissioned a CV be conducted to estimate the value of its services. One of the results from the study showed that the library contributed four times the amount of public money that it received (BOP Consulting, 2013). CV is commonly used in environmental economic research, for example Kaval and Roskrige (2009) use CV to estimate the non-market value of native bird conservation, and the non-market value of Maungatautari bird sanctuary (conservatively estimated at \$13 million New Zealand Dollars in 2008). The main challenge of CV is undertaking primary data analysis to collect the willingness to pay estimates, and avoiding priming or influencing the value people indicate through the survey design.

Choice Modelling (CM)

Choice modelling (also known as choice experiments) is a valuation method which has been applied in a wide range of areas, including tourism, cultural resources, and environmental management (Choi, Ritchie, Papandrea, & Bennett, 2010). It differs slightly from the CV model in that it presents respondents with a series of 'choice sets' where a bundle of attributes which the good possess is varied. The respondents are then asked which bundle is the most preferred (Allan et al., 2013; HM Treasury, 2011). The combinations of bundle attributes and pricing allow an estimation of the value associated with each attribute. For example, Mazzanti (2003) identify a set of attributes of a museum: information on conservation level/activity, access policy (visitor hours), additional services, and entrance fee. For a more information on choice modelling, see Castellani, Pattitoni and Vici (2015) and Mazzanti (2003) who provide a more detailed overview of the methodology.

Table 5-2: Some strengths and weaknesses of stated preference techniques (Adapted from WERF, 2008)

	Contingent Valuation	Choice Modelling
Strengths	Monetises people's 'willingness to pay' for cultural goods/services/activities	
	Widespread use and extensive literature base to draw on	
	Assists in evaluating choices (comparing between options)	
	Straightforward to design and analyse	Provides better information for choice evaluation
	Can be adapted to a wide variety of valuation contexts	Encourages more active stakeholder/customer participation
	Suited to estimating different types of values	Less prone to biases observed in other methods
		Better able to explore WTP v WTA
Weaknesses	Can be a complex technique to apply (see Castellani et al., 2015; Mazzanti, 2003)	
	Relative values can be established but less useful for establishing absolute values	
	May miss external benefits	
	Prone to variation in the framing of items	
	Not suited to analysing trade-offs between competing priorities	Requires more information than CV
	More time-consuming	Requires more sophisticated econometric techniques than CV
	Prone to respondent bias	Requires extensive pre-testing

Revealed Preference Techniques

Revealed preference techniques are different to stated preference techniques in that revealed preference techniques use observed behaviour in a related market to estimate individuals' WTP for a given non-market good. Effectively, these techniques seek to reveal the value that individuals place on non-market goods or services using value information from market goods or services. There are two prominent methods that come under this category and are relevant to valuing the non-market aspect of a cultural goods/services/activities, termed Hedonic Pricing and Travel Cost.

Hedonic Pricing

The Hedonic Pricing (HP) method is a method of estimating non-market value by comparing the price of the good to the price of a similar good which varies on the characteristic of interest. This method is commonly used in environmental economics to estimate the non-market value of environmental amenities. While almost any market commodity could be used, this approach most commonly often uses property prices, with properties closer to the environmental amenity having a higher price (controlling for other factors) which reflects the value of (access to) the environmental amenity. The theory being that the non-market benefit a house possesses (e.g. a house within a good school district) will have that value reflected in the price. The difference in the value of the houses provides an estimate of the non-market value of having a 'pleasant view'. The same principle can be applied in terms of living within a 'culturally-based' area. It is less commonly used to value cultural goods. Sheppard (2010) provides an overview of the method in the cultural context, but is less clear how this might be applied in the context of Te Reo Māori. One approach might be to examine house prices near kura kaupapa (Māori medium educational facilities above pre-school level) to explore any differences in property prices near these schools. We might also explore the difference in the prices charged for toi Māori and generic European art sold, or tourism operators which offer a generic environmental tourism experience and those which enhance the tour by including Te Reo Māori elements.

Travel Cost

This method is also commonly used in environmental economics. The Travel Cost (TC) method uses the amount of effort expended in travelling to a site to estimate the value that visitors place on the given non-market good. An example from environmental economics might include the costs for visitors to travel to Tongariro National Park. We assume that for rational actors, the value of that experience is worth at least the cost to travel there. An extension on this, the transaction cost method, expands on the travel costs to include the incidental costs incurred while staying there, and the admission or attraction prices. Te Matatini is the most obvious example where the travel cost

method could be applied to measuring the non-market value of Te Reo Māori, because we know that for participants and attendees, the experiencing Te Matatini is worth at least the costs incurred to attend (the costs for participants and their families of training and practice are other costs which signal value).

Table 5-3: Strengths and weaknesses of Hedonic Pricing and Travel Costs methods

Strengths	Weaknesses
Hedonic Pricing method is based on market prices associated with a bundle of cultural and non-cultural goods.	Hedonic pricing is usually based on property prices, which may only be slightly influenced by the value of culture.
The Travel Costs method is based on actual travel times and costs the directly reveal people’s valuations of cultural goods (Allan et al., 2013)	Travel Costs method assume that people in different locations have similar preferences. People can also have multiple purposes for traveling to a location, thus confounding the value.
	Revealed Preference techniques estimate only the non-market <i>use values</i> of a given cultural good. Non-use values and externalities, are omitted.
	The techniques do not capture non-use values, option values, producer and externality benefits (see Allan et al., 2013).

Other Approaches: Social Return on Investment (SROI)

BOP Consulting (2012) outline another valuation technique that mixes elements of EIA, EFA and CV methods. In response to the limitations of the market models, the Social Return on Investment (SROI) model is a type of ‘social accounting’ model which incorporates non-economic costs and benefits. The New Economics Foundation provide a comprehensive guide on how to conduct an SROI (Goodspeed, Lawlor, Neitzer, & Nicholls, 2009). The SROI method provides a way of understanding the value of an organisation based on its effects on stakeholders and audiences. An ‘impact map’ is developed by listing all stakeholders, and how the organisation might have an impact

on them, both positive and negative. The next stage then requires identifying the most important impacts, and then ascertaining whether they can be measured quantitatively or qualitatively (BOP Consulting, 2012).

There are two types of SROI, Evaluative, and Forecast. Evaluative is backward-looking. It is conducted retrospectively and is based on outcomes that have already happened. At the opposite end, forecast is forward-looking. It predicts how much social value will be created if the activities achieve their intended outcomes (BOP Consulting, 2012).

A key aspect of the SROI is that organisations attempt to establish financial ‘proxies’ for their positive and negative impacts. Like the EIA, the effects of deadweight, displacement, substitution and attribution can be considered. An SROI ratio is then calculated, which illustrates the relationship between total costs and total benefits of an organisation’s activities (BOP Consulting, 2012).

Table 5-4: Strengths and weaknesses of Social Return on Investment method

Strengths	Weaknesses
Mixes elements of market and non-market methods.	Establishing financial ‘proxies’ can be contentious. It can also be difficult to find a suitable proxy, for say, raised self-esteem (BOP Consulting, 2012).
Monetises how much a public investment returns in terms of social outcomes	This method can be challenging for arts and cultural sector but more suitable for voluntary or community sector (see BOP Consulting, 2012).
	Stakeholder involvement in defining value and impact means that SROI is a non-comparable methodology (see BOP Consulting, 2012).

In summary, there are a range of techniques which have been developed within the field of economics which could be used to estimate some aspect of the market or non-market value of Te Reo Māori to New Zealanders. However, most of these have not yet been used to estimate value in a language context, making analysis on Te Reo Māori from this perspective world-leading and therefore of value to an international audience. While these techniques are suitable for examining a concept of value, they will not on their own reveal the economic contribution of Te Reo Māori.

Applied economic contribution of language studies

There are few papers or studies which attempt to estimate the economic contribution of culture, and fewer still with a focus on language outside of a policy framework. However, there appears to be an emerging trend as governments seek to understand the returns on their investment, and data availability makes such study more feasible. From our readings, we have identified several papers which provided excellent overviews of valuation methods for understanding the economic value of cultural goods in general or language in particular, and are representative of three different 'levels' of analysis.

At a policy level, seminal works into the methodological approach to language policy valuation include the studies by François Grin and François Vaillancourt whose work is of great interest not only due to the depth of analysis but also because it is some of the only work which focuses specifically on the value of **non-dominant Indigenous language** (see Grin & Vaillancourt, 1998; Grin, 1999). These authors, who have conducted work for the New Zealand Treasury in the late 1990s, have a particular interest in understanding the economic impact of language policy. The cost benefit analysis on language policies may in turn provide information which can be used to estimate the underlying contribution of language.

In their monograph titled *The Cost-effectiveness evaluation of minority language policies* (Grin & Vaillancourt, 1999), the authors summarise the findings of four case studies, two which involve the Welsh language (Cymraeg), being dual road signage, and the provision of Cymraeg medium broadcasting channel; and one each of Basque (Euskara) and Irish (Gaeilge) language policies, being Euskara education planning and Gaeilge promotion policies respectively. They assess the cost-effectiveness of these policies. Effectiveness is measured by examining four criteria, do the policies increase 1) number of speakers, 2) proficiency of speakers, 3) attitudes towards the language or 4) the quantity of language used.

At a broad level, Chiswick (2009) presents a synthesis of the valuation methods that he has used in his long career examining language economics from the point of view of a migration. Chiswick's work tends to focus on the labour market implications of language, with the two primary questions he has sort to answer, being "What determines dominant language acquisition or proficiency among migrants and linguistic minorities?" and "what are the consequences of dominant language acquisition and proficiency?" (Page 7). Chiswick's work has primarily used regression analysis to examine the effect of language on entrepreneurship and economic opportunity for migrants. His findings are of limited value for Te Reo Māori, as they focus more on the benefits of dominant language proficiency in successful outcome creation for migrants. However, the methods

used by Chiswick could be adapted to be used to test for positive outcomes and premiums in earnings for migrants, New Zealand born Māori and non-Māori.

Some of the most prominent non-dominant indigenous languages to be studied include the Euskara (Basque) language and the Catalan language, both languages within Spain and Southern France. The Basque language is strongly promoted within the Basque region, with 27% of the population in Basque regions able to speak Euskara. In contrast, Catalan is dominant within the Catalonian region, with 72% able to speak and 95% able to understand Catalan. These languages have both received economic analysis into their contribution to the economy (as has Spanish and Portuguese languages, though these widely spoken languages may offer less insights for Te Reo Māori).

The contribution of Euskara to the Basque region has been assessed in several studies. However, a comprehensive review of the impact of Euskara to the Basque economy remains perhaps the most detailed analysis of the contribution of a non-dominant language to an economy that we have identified. This report by Siadeco Research Society (2015) titled "*Value & Economic Impact of Basque Language*" commissioned by the Basque Government Department of Education, Language and Culture provides an excellent assessment of the contribution of the Basque language, and was drawn on as a major inspiration for this report.

In their report, Siadeco Research Society (2015) identifies the contribution of Euskara to the economy through both the volunteer (informal, non-market) sector and the formal sector (public and private). To identify the contribution of Euskara to the Basque economy, they focus on the formal sector, and identify four macroeconomic variables to focus on. These are Employment, Gross Value Added (value added to a product or service in the production process), Production value, and Gross Domestic Product. With heavy reliance on input-output tables, they calculate the contribution to the Basque economy to be 6.3% of total employment (77% of which were directly related to the language economy, and 23% from indirect and induced demand), 4.5% of Gross Added Value, and 4.2% of Gross Domestic product. The Education sector appears to be the greatest driver of these figures followed by industries which contribute to the tourism sector (Trade, transport, hospitality).

Method selection

There are a few preliminary steps that need to be worked through before choosing an approach for further developments in understanding the contribution of Te Reo Māori to the New Zealand economy. The approach adopted will depend on the budget, resources and time constraints of the project. In addition, the choice of valuation tool will depend on the ‘question’ (Allan et al., 2013) and on what cultural goods, services and/or activities the team decides to evaluate (For example, cultural sites, cultural goods, Māori arts and music, tourism services, kapa haka). If the research question specifically asks for the contribution of Te Reo Māori and culture to the New Zealand economy, then an itemised list or stocktake of the contribution of Te Reo Māori by some sort of grouping (e.g. industry/sector) that make up the language economy would be helpful in terms of having a broad overview of the language economy, and identifying the information or data needs based on the itemised list. Allan et al. (2013) provide a useful guide in terms of assessing the kind of information that is needed, which has been inserted as Table 5.5 below.

Table 5-5: Information requirements

<p>(A) A clear articulation of the types and amounts of benefits that may accrue as a result of the specific activity, including estimates of:</p> <ul style="list-style-type: none"> i. Market value derived by consumers (including the expected number of consumers and their per person expenditures on the cultural good); ii. Non-market values derived by consumers (including the number of consumers who gain value from the cultural good); iii. Value gained by producers (over and above their incomes) including the number (and type) of producers; iv. Other values derived by individuals (option value, existence value, bequest value); v. Any extra market values derived from outside the cultural sector (which may be relevant for an impact analysis); vi. Positive externality benefits, including benefits arising from: <ul style="list-style-type: none"> ◆ Branding of a locality as a creative city; ◆ Promotion of democracy and social capital; ◆ Longer term benefits that may be internalised (but not necessarily recognised) by an individual.¹¹
<p>(B) Who these benefits are projected to accrue to (for example, broken down by locality, incomes, ethnicity, gender, age, and/or measures of disadvantage).</p>
<p>(C) What other forms of support are projected for the activity from private, philanthropic and various public sources, with consideration of whether other sources of support may be crowded out if government provides funding.</p>
<p>(D) Whether the funding is being used in part to inform people of new art forms or other cultural opportunities about which current and potential consumers lack information.</p>

Source: Allan et al. (2013)

Following the logic of the 'decision tree', the first step is to decide on whether a study should capture just the market value of Te Reo Māori (including culture) or both market and non-market values of language for their evaluation. This decision is critical in terms of time, resources but most importantly, the overall aim. In the interest of time and resources, if a study decides to capture only the market value, an Economic Impact Assessment (EIA) or Economic Footprint Analysis (EFA) are the more appropriate methods. Using these methods comes with compromises: they are unable to capture the full range of values i.e. non-market values, non-use value, option value, producer and externality benefits (Allan et al., 2013).

In comparison to the non-market models, both methods are straight-forward to process. However, it does require a bit of work in terms of accessing and obtaining data (e.g. the cost of an entry fee to Te Matatini or employee numbers). Researchers should also consider how they will obtain the indirect and induced costs involved (e.g. spending by spectators on accommodation, dining, shopping). To capture the spending beyond the initial round will also require the use of multipliers. While researchers undertake this process, they also need to consider three effects to ensure that the good, service or cultural event that they are assessing 'adds' value to the economy. These effects are: displacement/substitution, leakage, and deadweight (see page 46 above).

Ideally, a more robust analysis of the contribution of language will involve a mixture of both market and non-market models. This is because we can get a better sense of the total value that language/culture has on the economy. However, utilising non-market models will be dictated by the time and resources of the project. Either way, the non-market models require a bit of preparation work and information gathering.

A few points to bear in mind. First, if the project team decide to apply Contingent Valuation (CV) or Choice Modelling (CM) methods, then they need to be aware that it will be difficult to compare the values provided by different types of cultural goods e.g. symphony orchestra versus kapa haka (see Allan et al., 2013 for further information). Second, stated preference techniques (CV and CM) approach also needs to be supplemented where positive externalities may arise because of support for certain activities. Thirdly, when aggregating individual preferences (i.e. willingness to pay), a decision needs to be made regarding how to weight each individual's willingness to pay in order to reach an estimate of the benefits of the particular good or policy scenario to the wider society. This is especially important when it comes to wealth distribution of society – a particular group in society is over-represented in a particular part of the wealth distribution (Allan et al., 2013).

Contribution estimations

This section provides some exploratory analysis into the contribution of Te Reo Māori to the New Zealand economy. Due to constraints in the scope of this project we were unable to undertake primary data collection or undertake detailed input-output analysis indeed, our early efforts went into exploring both Economic Impact Assessment and Input-Output assessments as approaches for this study, but due to the complexity of the assessment relative to the timeframes and the lack of a clear conclusion into the value of Te Reo Māori this approach has been deferred as contenders for an expanded project.

We estimate the contribution of Māori language and culture to the New Zealand economy through three aspects, employment, value add and gross domestic product. Besides the government institutions involved in the promotion and education of Te Reo Māori, we also draw attention to the value added of Te Reo Māori to the New Zealand private sector. In this section, we do not explore the non-market contribution of Te Reo Māori, although we offer a case-study into this in section 6 using the example of revealed preference techniques and tangihanga.

Employment

The ways in which we theorise that Te Reo Māori contributes to the New Zealand economy were discussed earlier in Section Four. These included the creation of employment in industries which use Māori language as an input into the production of goods and services, including:

- Public Administration
- Education
- Language Industry
- Cultural Industry and Media
- Tourism

In addition, Te Reo Māori also contributes to the economy through providing workforce augmentation, either improving the effectiveness of the workforce through the benefits of multilingualism as well as through the unique influence Te Reo Māori and Tikanga Māori play in improving workplace factors such as recruitment, retention, wellbeing and productivity of workers.

Per the 2013 census, approximately 60,000 individuals or 2.9% of the New Zealand employed workforce are Te Reo Māori speakers. Table 5.5 below shows some basic data on the distribution by industry (ANZSIC06 Division) of Te Reo Māori speakers, those who identify with Māori and the aggregate New Zealand population per the 2013 New Zealand Census. We also create two measures of representation, that of Te Reo Māori speakers relative to those who identify as Māori, and Māori compared to the total New Zealand population.

Table 5-6: Those identifying as Māori and Te Reo Māori speakers by industrial grouping

Industry grouping	Te Reo Speakers	Māori ethnicity	Total population	Te Reo Māori representation	Māori representation
Agriculture, Forestry and Fishing	6.5%	7.3%	6.7%	Neutral	Neutral
Mining	0.3%	0.4%	0.3%	Neutral	Neutral
Manufacturing	9.2%	12.2%	9.8%	Under	Over
Electricity, Gas, Water and Waste Services	0.7%	0.9%	0.7%	Neutral	Neutral
Construction	6.8%	9.1%	7.9%	Under	Over
Wholesale Trade	2.4%	3.6%	5.0%	Under	Under
Retail Trade	5.8%	8.7%	9.8%	Under	Under
Accommodation and Food Services	5.2%	6.3%	5.8%	Under	Neutral
Transport, Postal and Warehousing	4.9%	5.6%	4.3%	Neutral	Over
Information Media and Telecommunications	1.7%	1.4%	1.8%	Neutral	Neutral
Financial and Insurance Services	1.6%	2.3%	3.6%	Neutral	Under
Rental, Hiring and Real Estate Services	1.5%	1.8%	2.6%	Neutral	Neutral
Professional, Scientific and Technical Services	4.4%	4.7%	8.7%	Neutral	Under
Administrative and Support Services	3.9%	4.0%	3.4%	Neutral	Neutral
Public Administration and Safety	7.3%	6.3%	5.1%	Over	Over
Education and Training	19.0%	9.4%	8.4%	Over	Over
Health Care and Social Assistance	12.8%	10.0%	10.0%	Over	Neutral
Arts and Recreation Services	2.2%	2.1%	1.9%	Neutral	Neutral
Other Services	3.9%	3.7%	4.0%	Neutral	Neutral
Total Stated	100%	100%	100%		

Source: New Zealand Census 2013, Statistics New Zealand.

In Table 5.5 we see that compared to total distribution, those who identify as Māori are clustered in physical industries, such as Manufacturing, Construction, Transportation and Warehousing. Those who identify as Māori are also likely to be employed in Public Administration, administrative and support services. In contrast, Māori are less likely to be employed in Trade, Finance and Services, and Professional, Scientific and Technical Services.

With respect to the contribution of Te Reo Māori, we would expect that Te Reo Māori speakers would be over-represented relative to those who identify as Māori in industries where Te Reo Māori has a strong contribution to production in those industries. This is supported by our findings, and Table 5.5 shows that, per the 2013 Census there are only three broad industry groupings where the proportion of Te Reo Māori speakers is over-represented relative to the proportion of those who identify as Māori (greater than one percent higher). This includes the Public Administration and Safety, Education and Training, and Health Care and Social Assistance industrial groupings. One explanation of these findings is that Te Reo Māori provides a significant role in the value add of these industries, such that the premium offered by them is sufficient to attract a disproportionate number of Te Reo Māori speakers. Alternatively, it may be other unobserved characteristics of the industry which attracts individuals who are more likely to speak Te Reo Māori. In contrast, those who speak Te Reo Māori are under-represented (more than one percent lower) in Trade (retail and wholesale), construction and manufacturing. Construction and Manufacturing industries are particularly surprising given the comparative over-representation of those who identify as Māori in these industries.

To further deepen our understanding of the relationship between Te Reo Māori and employment, we explore the specialisation to Te Reo Māori speakers at a finer level of disaggregation, being 2-digit ANZSIC 2006 for most industries but narrowing further to 3-digit coding ANZSIC 2006 coding for Education, Public Administration, Health and Arts and Recreation industries (O, P, Q and R codes) due to both the quantity of Te Reo Māori speakers in these industries and the heterogeneity within different subsectors of these industries. There are 20 industries from this list which have a ratio of 1.5 or higher, suggesting that they have 50% or more Te Reo Māori speakers than the national average.

Table 5-7: Te Reo Māori speakers by industry sub-sector

Industry group	Industry sub-sector	Te Reo speakers	Total employed	Percentage speakers	Ratio
Education and training	Preschool Education	2450	20830	11.8%	4.04
Agriculture, Forestry and Fishing	Forestry and Logging	490	5430	8.9%	3.07
Education and training	Educational Support Services	280	3430	8.2%	2.83
Services	Civic, Professional and Other Interest Group Services	1150	16380	7.0%	2.40
Public Administration and Safety	Justice	230	3470	6.8%	2.32
Health Care and Social Assistance	Social Assistance Services	2100	33550	6.3%	2.15
Information, Media and Telecommunications	Broadcasting (except Internet)	280	4600	6.1%	2.11
Education and training	Tertiary Education	1950	33500	5.8%	2.00
Education and training	Primary and Secondary School Education	4810	83120	5.8%	1.99
Education and training	Adult, Community and Other Education	1070	19140	5.6%	1.93
Electricity, Gas, Water and Waste Services	Waste Collection, Treatment and Disposal Services	230	4400	5.2%	1.80
Health Care and Social Assistance	Other Health Care Services	340	6650	5.1%	1.75
Public Administration and Safety	Central Government Administration	1560	31430	5.0%	1.71
Agriculture, Forestry and Fishing	Aquaculture	40	820	4.8%	1.64
Agriculture, Forestry and Fishing	Agriculture, Forestry and Fishing Support Services	730	15270	4.8%	1.63
Arts and Recreation	Heritage Activities	310	6620	4.6%	1.59
Agriculture, Forestry and Fishing	Fishing, Hunting and Trapping	100	2150	4.6%	1.58
Manufacturing	Food Product Manufacturing	2450	53670	4.6%	1.57
Manufacturing	Pulp, Paper and Converted Paper Product Manufacturing	190	4110	4.5%	1.55
Health Care and Social Assistance	Allied Health Services	1893	42618	4.4%	1.53

Source: New Zealand Census 2013, Statistics New Zealand.

Table 5.6 above shows the subsectors within industry groupings in which Te Reo Māori speakers are clustered. We see the number of speakers and the total number employed in these industries (rounded to base 10), the percentage of speakers in the industry and the ratio of that percentage to the percentage of speakers in the employed workforce (2.9%). The industry with by far the greatest proportion of speakers is pre-school education, with almost 12% of the workforce able to speak Te Reo Māori, roughly four-times higher than expected. Alongside pre-school education, all other education subsectors also had a much higher than expected proportion of Te Reo Māori speakers. The subsector with the second most dominance in Te Reo Māori speakers was Forestry and Logging, with almost three times the proportion of speakers expected. Indeed, forestry and wood processing features several times in Table 5.6, and is an industry with a clear clustering of Te Reo Māori speakers. Further down the list, the Justice Sub-sector, several health subsectors, waste collection and disposal as well as Heritage activities in the Arts and Recreation industry are also areas where there is strong representation from Te Reo Māori speakers.

Drawing on our modelling in section 4, and through examination of this list, suggest that there are several industries where the direct use of Te Reo Māori creates employment. These are:

- **Te Reo Māori Language teaching:** Including either teaching Te Reo Māori, or teaching other subjects in Te Reo Māori.
- **Services in Te Reo Māori:** Including generic services which are provided in Te Reo Māori in whole or part. This includes the Policy and Government roles, the Justice sector (Lawyers, Police, and Prison staff), the Health sector, and Social assistance services.
- **Te Reo Māori services:** Including Language consulting, translation, advocacy and Iwi/Hapu governance roles.
- **Media and Arts:** This includes employment in heritage activities, Radio and Television broadcasting and creative or performing arts.

There are also three main groupings which we identify as having a cluster of Te Reo Māori, but where Te Reo Māori is unlikely to have a direct role as an input, but is still important either due to indirectly contributing to the health and wellbeing of the workforce or for non-economic reasons such as fostering clusters of Te Reo Māori speakers to assist in normalizing the use of Te Reo Māori. These include:

- Forestry and Wood processing sectors
- Food Manufacturing sector
- Waste collection and management sector

Value add

The value add of labour broadly refers to the additional value which is added to a good or service through addition of labour. For example, a barista working at a coffee shop provides value add through improving the service time and quality of providing coffees to customers, or a dairy worker provides value add through providing the human input needed for tasks such as herd management or milking.

This method of calculating the contribution of Te Reo Māori to the New Zealand economy takes the assumption that an employed Te Reo Māori speaker uses this human capital skill to influence production within their workplace. Through this mechanism, some portion of the value added within an industry which employs a Te Reo Māori speaker will be due to their ability to speak the language, although the degree to which it contributes to value add will vary depending on whether Te Reo Māori is a skill central to production (e.g. Te Reo Māori teacher, kapa haka performer) or likely plays only a marginal or incidental (e.g. Electrician, hotel concierge). Without a detailed understanding of the factors of production in each industry, it is impossible to estimate with a high degree of accuracy what contribution Te Reo Māori provides to production in an industry, and even broad estimate ranges are likely to be inaccurate. However, in the absence of detailed qualitative investigation into the role of Te Reo Māori in production in each industry, broad estimates likely provide the most robust approach.

One method of exploring value added might be to look for a wage premium for those who speak Te Reo Māori within different industries. The theory being that if Te Reo Māori improved productivity in an industry, then we might expect to see a higher salary being paid to someone who could speak Te Reo Māori relative to an observationally similar individual who could not (for example, if Te Reo Māori was a valuable input into the Manufacturing sector, then those who were employed in Manufacturing and could speak Te Reo Māori would be paid more than those who could not, all else being equal).

A further approach to understanding the value add of Te Reo Māori is through understanding the contribution it makes to Gross Domestic Product (GDP), particularly through the Expenditure approach, or the Production approach to national accounting.

To understand the contribution through the expenditure approach, we would need to model or estimate the expenditure on products and services which draw on Te Reo Māori as a direct or indirect input, or where Te Reo Māori creates induced expenditure. This could be achievable with firm-level sample surveying or transaction data for areas in which Te Reo products and services were consumed within the economy. The expenditure approach is very interesting, but the surveying and

primary data collection required to estimate value using this approach were beyond the resources of this project. We do go some way down this path with the case study approach described in section six, but fall short of arriving at a global contribution figure.

A more achievable approach would be to explore the production side of GDP. The production (or value-add) approach to GDP measures the total value of goods and services produced in New Zealand, after deducting the cost of goods and services used in the production process. Using this measure, we have an estimate of how much each industry contributes to New Zealand GDP. We theorise that for industries where Te Reo is a direct input into production (Education, Tourism, and Governance), then for employees within an industry who can speak Te Reo, a portion of their value add is due to the use of Te Reo in the workplace. Therefore, by understanding the proportion of employees per industry who speak Te Reo, and the value add of those industries, we can estimate the contribution of Te Reo to the New Zealand economy.

Summary

This section provides an overview of methods for the estimation of the contribution of Te Reo Māori to the New Zealand economy. While many of these research projects are demanding in terms of time and primary data collection, through collaboration with Statistics New Zealand and potentially other data providers, it is plausible that the methods which require secondary data analysis only could be achieved with little additional cost in comparison to those requiring extensive primary data collection.

Section 6: Case Study valuation methods

The case study valuation method attempts to develop the beginnings of a valuation model for non-market activities where Te Reo Māori contributes to the activity. Our research team engaged in deep discussion on a selection of activities to ensure Te Reo Māori does contribute to the activity. Interesting debates emerged. If Te Reo Māori was not present and evident, would it still be an activity based on Tikanga Māori? The tangible activity is inextricably linked to the intangible activity and use of Te Reo Māori. The Tikanga Māori associated with the activity would not exist as Tikanga Māori if Te Reo Māori was not present. We selected the tikanga of tangihanga as a model on which to base our valuation model. Other activities such as kapa haka may also be a useful activity in the future on which to assess a valuation model especially given the economic and cultural resources that are invested in tribal and national competitions and displays.

Bringing those discussions within our definition of the Māori language economy tangihanga was selected as the most commonly understood activity which made use of Te Reo Māori as a direct input and the cultural capital of Te Reo Māori as a facilitator

Chiswick refers to language as human capital with the requirements that it is embodied in a person, costly to attain and the skill is productive. From our definition productivity is demonstrated by Te Reo Māori being both an input and facilitator of tangihanga. On the consequence of language acquisition Chiswick goes on further to say proficiency in the destination language will lead to more success in adjusting to the destination labour market [p.24]. We conceptualise this to a person proficient in Te Reo Māori will be more successful operating at and fulfilling the obligations to a tangihanga

The principle of the model is to capture leakage to the economy that is not reflected in GDP and so the method focuses on the labour value of individuals who participate through koha, time and effort and obligation in-service to the activity. Other inputs such as travel, kai, and cleaning supplies are excluded from the model as these are offset by individuals bearing the cost or through income received from koha. Also, excluded from the model are direct costs that would normally be associated with a funeral given that a funeral does not require Te Reo Māori to be a funeral whereas a tangihanga requires Te Reo Māori to be a tangihanga.

The model articulates the processes involved and for each process the labour effort, skill level required, the frequency and duration. Labour rates correlating to skill level are determined at generic, medium, high and expert. From all the gathered information, the activity value is estimated.

The Tangihanga Case Study

Tangihanga as the selected activity aligned well with the role classifications we used for industries. Direct inputs of Te Reo Māori included karanga, whaikorero, and waiata, rituals which are essential to the tangihanga process. During this ritual of mourning which generally takes place at a marae over two to three days, a workplace culture, based on shared genealogy of whakapapa is enhanced with Te Reo Māori providing a common understanding of roles and tasks through whanaungatanga or relationships in the family. The marae has its governance in place in terms of structure, process and protocol through the hapu of that marae setting limits on what can be done or not done at that marae through pre-established rules of kawa. Innovation and entrepreneurship is also in place through the need to adapt to situations as they arise such as a group of visitors or ope arriving after sunset to pay their respects.

One case study of tangihanga was completed during the course of the research. We had in our minds a medium size marae which was:

- a) Often used e.g. at least twice a month
- b) Easy accessible with good transport infrastructure
- c) Not urban
- d) Had families/hapu easily contactable who were active in directing protocol

A schedule of tasks was developed from the discussions, as can be seen below. These tasks were essential to the process of tangihanga bearing in mind that tangihanga would normally be carried by the extended whānau or hapū rather than the immediate whanau who would be grieving, known as the whanau pani. Notable of the processes involved were the preparatory, start up, post-event and wrap-up tasks. Each task was considered for time, skill, frequency and duration. The range of skill levels showed the expert nature of tasks such as whaikōrero and preparing the burial ground. We also wanted to show that many of these tasks required a high level of proficiency and expertise and experience and demonstrated that person's expertise by awarding them a higher hourly rate.

The labour rates were set at generic (\$29k per annum salary), medium (\$39k per annum salary), high (\$58k per annum salary) and expert (\$100k per annum salary) for the sake of this example. These reflected our estimates of the commercial value of the labour required. It was found individual tasks often required people of different skill levels, for instance preparation of the burial ground comprised a senior kaumatua as an expert, instructing others of lesser skill levels. Time for individual tasks were also difficult to judge therefore we could only make estimates based on our collective subjective yet experienced judgements.

Table 6.1 Extract from the Tangihanga Case Study Data Collection

Activity		Total hrs	Hours by skill level				Total labour cost
Day: 0-Preparation & tupapaku arrives. 1-2 ope pay respects, 3 nehu, 4 clean-up	Day(s)		Gene ric (\$15/hr)	Medium (\$20/hr)	High (\$30/hr)	Expert (\$51/hr)	
Setting up tents if needed; Preparation of wharekai, setting up of tables and chairs	0	4	0	4	0	0	\$ 80
Cooking 6am-1pm, 4pm-7pm - 2 days	1 & 2	80	40	20	20	0	\$ 1,600
Preparation of the hakari	3	60	36	12	12	0	\$ 1,140
The kitchen clean-up of the hakari	3	24	8	8	8	0	\$ 520
The kitchen clean-up of every meal for the 2 days.	1 & 2	13.5	4.5	4.5	4.5	0	\$ 293
The setup for every meal for 2 days	1 & 2	10.5	7	3.5	0	0	\$ 175
The hakari entertainment of kapa haka by the tangata whenua	3	3	1	1	1	0	\$ 65
Post-burial marae clean-up	4	48	24	24	0	0	\$ 840
Rubbish disposal at the local refuge tip	4	2	1	0	1	0	\$ 45
Phone call that a hapū/ whānu member has passed away and what time to expect the body.	0	0.25	0	0.25	0	0	\$ 5
Notification to wider hapu of passing of deceased.	0	2	0	2	0	0	\$ 40
Making sure gas bottles are full	0	2	1	1	0	0	\$ 35
Preparation of ablution facilities	0	6	2	4	0	0	\$ 110
Daily marae housekeeping	1, 2 & 3	12	6	6	0	0	\$ 210
Organising of kaumātua, the paepae, whaikōrero, the tohunga	1	1.5	0	0.5	0.5	0.5	\$ 51
Organising of Kaikaranga	1	0.75	0	0.25	0.25	0.25	\$ 25
Organising of kaiwaiata	1	0.75	0	0.25	0.25	0.25	\$ 25
Organising of karakia	1	0.75	0	0.25	0.25	0.25	\$ 25
The home people pallbearers going to get the tūpāpaku from the hearse	0	1.5	0	1	0.5	0	\$ 35
The tūpāpaku and manuhiri whakaeke	0	3	1	1	0.5	0.5	\$ 76
The setting out of photos	0	1	0.25	0.25	0.25	0.25	\$ 29

The placing of the korowai and family heirlooms	0	1	0.25	0.25	0.25	0.25	\$ 29
The wharemate is in place with local kuia of the marae	0	1	0.25	0.25	0.25	0.25	\$ 29
The burying of the corpse	3	8	2	2	2	2	\$ 232
Whaikorero for 2 days, 5 ope per day	1 & 2	30	10	0	10	10	\$ 960
Waiata is sung by the tangata whenua 5 ope per day	1 & 2	1.66	0	0.83	0.83	0	\$ 42
Funeral service - nehu	3	2	0	0	0	2	\$ 102
Karanga continue for 3 days, 5 ope per day	1, 2 & 3	2.5	0	0	0	2.5	\$ 128
Karakia continue for 3 days once in the morning once at night	1, 2 & 3	6	0	0	0	6	\$ 306
The return to the marae and the ritual that takes place	3	1	0	0	0	1	\$ 51
Preparation of the burial ground	1 & 2	16	4	4	4	4	\$ 464
Preparation of wharenuī	0	4	2	1	1	0	\$ 80
Preparation of the whare mate, laying of beds and linen, hanging photos	0	3	1	1	1	0	\$ 65
TOTAL		352.7	151.3	103.1	68.3	30.0	\$ 7,910

The final valuation of labour for tangihanga at the medium size marae was \$7,910. Interesting from the findings are the sheer volume of hours invested over the tangihanga period being 353 hours of which the main contributor came 42% or 151 hours from the generic skill level and the smaller contributor from the expert level 8% or 30 hours. Closer analysis led us to catering as the highest cost category, at \$1,600 alone for general catering and \$1,100 for the kaihakari.

The value from these findings will vary for all marae and for all tangihanga, and for all models of this nature this can only be a best estimate. What is more important from this part of the study is recognising the wealth of contribution from individuals through duty and obligation to uphold Tikanga, central to that is Te Reo Māori being inseparable from their identity as Māori. Tangihanga obligates the whānau, and hapū to be present to conduct rituals that allow the marae to hold the integrity of its mana and to be accountable to the gods and to the spiritual world, it is a necessary activity.

If one was to multiply the value of a tangihanga by the number which this marae hosted over one year, and to further consider the number of marae throughout the country who host tangihanga then the appreciation grows for the level of non-market activities where Te Reo Māori is a necessary contributor. While this economic activity can loosely fall under voluntary activities future development of non-market activities in relation to Te Reo Māori should include the learning from the voluntary sector and central to tangihanga are the cultural drivers. Mahi aroha has been a term coined to describe work undertaken for the benefit of whānau, hapū and iwi is often seen as an essential part of fulfilling their cultural obligations to the wider collective (Office for the Community and Voluntary Sector, 2007). Further to this Manuka Henare has adapted Hyden's model (1980) to explain that Māori also exist within what Hyden labelled as an economy of affection. This is based on reciprocity as a mode of economic organisation and in its modern manifestation it provides a system of collective security in ways that modern economies do not. (Henare, 1995). Tangihanga operates at a social level where resources are redistributed unofficially and protects those who are participating against the negative impacts of a market economy. Its worth within this economy of affection is based on the principle that people and honouring their human dignity is far more important than regarding people as human capital (Henare, 1995) which is what tangihanga as a ritual is testament to.

Summary

In the case study valuation method for non-market activities where Te Reo Māori contributes to the activity we reference tangihanga to calculate given its regular occurrence in Māori communities. The tangible activity is inextricably linked to the intangible activity and use of Te Reo Māori. The Tikanga Māori associated with the activity would not exist as Tikanga Māori if Te Reo Māori was not present. In future research, other activities on which to assess a valuation model could help build a profile of the immense value of economic and cultural resources in which Māori invest their resources.

Section 7: Concluding thoughts

This report has explored the contribution of Te Reo Māori to the New Zealand economy, primarily from a conceptual perspective. We have particularly focused on the characteristics of the Māori economy and the contribution of Te Reo Māori to the New Zealand economy. The subject and literature have been reviewed extensively (Section Two), and the reflections of our engagement with stakeholders discussed (Section Three). The conceptualization and characterisation of the Te Reo Māori language economy and contribution to the mainstream economy has then been discussed (Section Four), before moving to a discussion of some quantitative methods for estimation (Section Five) and our non-market value estimation using case study methodology with respect to tangihanga (Section Six). This has been conducted in consultation with a wide range of stakeholders and engagement with a vast array of literature, from concept to application and policy. Through this research, we have added to the understanding of the relationship between Te Reo Māori and the New Zealand economy, and contributed to the international understanding of non-dominant indigenous language contributions to economic value.

We have experienced failures, but consider these failures to be learnings in this new discourse and for opportunities to catapult future projects. We also wish to draw attention to what have been major achievements of this research. It has provided original research into the international body of evidence on the topic, been the first to consider the value of Te Reo Māori from a primarily economic perspective, and the first to develop a value model, *Te Pua*, which is integrated with Kaupapa Māori research practices. This final section will focus on discussing on the potential policy implications of our findings, the future of this research programme, and finish with final thoughts.

Policy implications

While this study was not directly intended to inform policy development, it nonetheless provides some new and valuable policy insights with regard to the Māori language economy, which may be adopted by policy makers and those interested in economic development generally and the Māori economy specifically. Firstly, our engagement with stakeholders provided several insights which could be used to inform policy development. All five of our themes have a similar policy message. They suggest that when attempting to develop policy designed to support or develop the Māori language economy, policy makers should also be mindful of the impact spillovers into other dimensions of individuals, iwi, hapū and whānau wellbeing, and similarly when exploring mainstream economic development policies, consideration should be given to how these policies will allow for encouraging the health of the Māori language, the quantity of speakers, volume of use, quality of use and the attitudes towards Te Reo Māori (concepts introduced in section Five). In other

words, should policy makers with an interest in economic development should explicitly consider both how Te Reo Māori could contribute to economic development and how that policy will explicitly realise the contribution to development Te Reo Māori is making. If these themes are accepted, then ensuring Te Reo Māori policies are mindful of the economy, among other concerns, and ensuring economic policy is mindful of Te Reo Māori will help Aotearoa have a successful socio-economic ecosystem.

In Sections Four and Five, we characterise the Māori language economy. As expected, we identified demand for Te Reo Māori products and services as essential to the health of the Māori language economy, and from a policy perspective, there is some evidence to suggest that targeting both youth (those engaged with Education and Performance/Art, two large industries in the Māori language economy) and tourism (particularly as this is an export industry) are potential policy conclusions. We also found that while clusters of Te Reo Māori speakers were present in industries we expected, Education, Public Administration, Safety, Health (though not at the clinician/specialist level) and Arts and Recreation, we were also surprised to find clusters within manual industries. In particular, there is strong evidence of clustering of Te Reo Māori speakers in the Forestry and Wood sectors, as well as Waste Management and Processing, Transportation (Road, Rail and Water but not Air) and Food Manufacturing industry. Policy designed to develop the Māori language economy and the health of the language generally could target these industries, developing the number of speakers and ‘critical mass’ of workers who speak Te Reo Māori. Innovation opportunities using Te Reo Māori may also be easier to identify in these industries due to the comparatively high number of speakers, and policies aiming to capture Māori innovative potential may target these areas.

From a knowledge perspective, our study suggests that there is a surprising lack of data collected which is suitable for the identification of the Māori language economy. Working with organisations such as Statistics New Zealand to collect or present existing data in a way which clearly explores this, similar to the Tourism Satellite Account⁶, would greatly simplify the task of estimating the contribution of Te Reo Māori.

Lastly, our stakeholders and investigations all suggest that the Māori language economy is broader than the spoken language, and includes Toi Māori and corporate or resource governance using Te Reo Māori and Tikanga Māori principles. Policy aiming to grow the Māori language economy would therefore benefit from targeting not only spoken Te Reo Māori, but also craft and

⁶ See: http://www.stats.govt.nz/browse_for_stats/industry_sectors/Tourism/tourism-satellite-account-info-releases.aspx

creativity which is grounded in Te Reo Māori and Tikanga Māori. From a policy perspective, there is the clear potential to assist with the health ageing of Māori elders through integrating them with this process, and having them assist in teaching and supporting the innovation and creativity of young artists, designers and the creative sector.

Where to from here?

Throughout this report, we have discussed the future of this research programme. Indeed, this research has been largely constrained in three areas of research. The original goal of estimating the dollar value of the contribution of Te Reo Māori remains elusive, though we offer some insights through our analysis in Te Kupenga. We also became aware of the need to better understand the costs and trade-offs of public and private investment in Te Reo Māori, employment creation and the multiplier effects. Finally, we believe that this research would benefit from primary data collection. Surveying a sample of firms who we identified as being involved in the Māori Language economy to better understand their employment, production and sales behaviour would allow for more detailed input/output and value add investigation. Similarly, surveying of individuals would allow us to explore the characteristics of demand for Māori language goods and services, while also exploring the non-market value created by the Māori language.

Final thoughts

Lastly, while we have not concluded with the provision of a definite range of numbers in which to place a defensible dollar value that Te Reo Māori makes to the New Zealand economy, the process of thinking, creating and discarding models, agreeing then disagreeing on figures and dissecting each other's solutions has left us with a gnawing feeling of incomplete work let alone what an enormous task we had taken on. We do however have satisfaction that this report has traversed our process to identify characteristics of the Māori language and Māori culture economy; attempted to quantify a cultural ritual; explored tools and models that may be used to measure the value of the contribution that Māori language and Māori culture make to the New Zealand economy. We have included our failings, engendered supportive stakeholder engagement, interrogated a diverse range of possibilities for where future research could be effected. It is our hope that these steps will enable future research to explore the contribution of Te Reo Māori to the New Zealand economy, strengthening the argument for investment in Te Reo Māori both privately and by the Government of Aotearoa.

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