

Maori socio-economic disparity
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Background

The recently elected coalition government of the Labour and the Alliance parties has publicly committed itself to addressing Maori socio-economic disparity. Maori socio-economic disparity is captured by various measures of the gap between Maori as an aggregate and some reference group, typically but not always non-Maori.

This paper considers some of the analytical issues arising out of policy debates on Maori socio-economic disparity. It draws on previous work I have undertaken, often with others (see Chapple et. al. 1997, Chapple and Rea 1998, Chapple 2000, Chapple 1999, Chapple and Maré 2000). The paper also owes a considerable intellectual debt to the work of John Gould (1990A, 1990B and 1996). It is hoped that this paper will help stimulate a more sophisticated and informed discussion of the reality of Maori socio-economic disparity.

While much of the focus below is on disparity in the last decade or so, some historical background of Maori socio-economic performance places the main focus in context. Much of the socio-economic history of the Maori population post-1840 has concentrated on the negative impact of the massive transfer of land assets that took place from Maori to non-Maori, particularly from the period from about 1865 to the First World War. Less remarked upon, but perhaps more remarkable was the near simultaneous turnaround in the Maori population from decline to growth, perhaps from the 1870s but certainly from the 1890s. At the same time, there was a substantial improvement in the relative well-being of Maori women resulting in a Maori gender ratios falling from 130 men for every 100 women in 1857/8 to 107 by 1926 - something much more in line with birth ratios. The improvement in Maori gender ratios and overall population is consistent with other indicators of gains in absolute socio-economic wellbeing (Chapple 2000). At the same time there were absolute improvements in Maori socio-economic wellbeing, catch-up was also occurring in a relative sense, especially in life expectancy, to the majority group. The process of urbanisation of the post-World War Two period was also undoubtedly associated with an improvement in wellbeing for Maori. Urbanisation would have been associated with better schooling, better housing, better jobs, better health services, and generally more consumption choices than were available in rural areas. The relative advantage of towns is revealed by the large and rapid movement of Maori from country to town and post-war improvements in Maori life expectancy, health, education, housing and employment outcomes. It is likely that the growing strength of the pull factors of the town consequent on post-war industrialisation and recovery from the Great Depression rather than any substantial absolute deterioration of Maori rural living conditions was primarily responsible for the changes in relative incentives. The post-1970s Maori population is in absolute terms larger, per capita materially wealthier, and has a higher life expectancy than at any other time in New Zealand's history.¹

However, despite these substantial absolute and relative socio-economic gains, it remains a well-established fact that significant socio-economic gaps still remain between Maori and non-Maori in New Zealand in education, health, income and labour market status (Te Puni Kokiri 1998, 2000).

The Maori ethnic group

Before moving on to issues of Maori socio-economic disparity it is worthwhile considering the issue of the Maori ethnic group in some historical detail.

¹ This analysis involves value judgements regarding the importance of tangible material goods and life expectancy as key elements of well being. The same set of value judgements underpin discussions of Maori socio-economic disparity and "closing the gaps" debates today.

Maori people are those who are wholly or partly descended from the first Polynesian discoverers and settlers of these isles. In this sense, Maori have existed here, according to the currently available evidence, for perhaps a thousand years. But it was only when the first Western Europeans touched these shores several hundred years ago and provided another group to define themselves against that the Maori ethnic group became a possibility. However, the Maori ethnic group is a much more recent construction. Maori ethnicity is a phenomenon of the post-war period, with the crucial period being the last thirty years.

Prior to World War II, the Maori people had a much weaker collective identity, which was over-ridden by much more powerful group loyalties, particularly loyalties to iwi or more likely hapu. Despite considerable and ongoing efforts, beginning with the Maori King movement in the 1850s and working through the Kotahitanga and other political movements, sustaining an effective pan-Maori, or Maori ethnic identity proved elusive before World War Two.

Maori ethnicity is a recent construct born out, based on descent from the Maori people, but born out of the process of post-war urbanisation and consequent population mixing, the growth of mass communications, and the often underestimated influences of world-wide trends of growing ethnic consciousness and assertiveness. In addition, the approach of the government and the larger non-Maori population of treating Maori people as a group as they urbanised provided a further powerful impetus for a Maori ethnic identity. Those descended from the Maori people came to recognise certain areas of commonality and community of interests in the new urban environment and at some point after the World War these links became sufficiently strong for one to speak with confidence of the existence of a Maori ethnic group.²

Much of this work of creating the sense of ethnic community out of the changed social conditions was undertaken by "entrepreneurs of ethnicity" - those who perceived the possibility of the ethnic group and the benefits that it might bring and promoted it, often at considerable personal cost. Maori entrepreneurs of ethnicity work to expand the boundaries of the ethnic group and to solidify the sense of ethnic commitment by creating a world where increasing amounts of material and psychic rewards are offered to those in the group. They focus on, emphasise, and sometimes even exaggerate inter-group differences as means of constructing the collectivity.

Thus in a very real sense the Maori ethnic group is a construct arising out of the mass colonisation of this country over the last 160 years by settlers from Britain.

Maori as an ethnic group claim common descent and share certain myths of origin and struggle. By definition ethnic groups remain more or less discrete from one another. But how discrete are Maori? As an ethnic group, Maori live in close interaction with other ethnic groups, have no exclusive livelihood, no exclusive language, possess relatively few if any exclusive customs and no exclusive religion. The Maori ethnic group also has a history of very high rates of exogamy (marriage outside the group). Thus if a tight knit ethnic group is defined as one with few interactions with other groups, an exclusive language, exclusive customs and religion and low exogamy, the Maori ethnic group is relatively loose rather than tight knit.

How does this discussion of the construction and nature of the Maori ethnic group relate to census measurement of the Maori ethnic group? In summary, official ethnicity statistics in the New Zealand census are collected based on individuals'

² See for example King (1992).

subjective self-definition of their ethnicity. Interestingly the shift from percentage ancestry based measures of the Maori population ("race" in the jargon of the times) to a subjective ethnicity based measure occurred in the early 1980s, indicating a significant consolidation of the construct of Maori ethnicity as a socially meaningful category.

In the most recent 1996 census there were 273,693 New Zealanders who identified ethnically as Maori and Maori only. In addition to this, there were 250,338 New Zealanders who identified as members of another ethnic group, usually Pakeha/European, and also as Maori. Currently Statistics New Zealand's official policy is to arbitrarily classify mixed ethnicity individuals who have Maori as one of their ethnic groups as Maori and not as the other group or groups to which they also belong. This sole plus mixed group is the Maori ethnic group as officially measured.

Social scientists and policy makers need to be more aware that that Statistics New Zealand's arbitrary classification may confuse analysis if it is taken literally. An important example of the analytical confusion promoted by the SNZ hierarchical procedure is detailed below in terms of calculations of ethnic youth dependency ratios. A random statistical allocation of half of mixed Maori/non-Maori to the Maori ethnic group and half to the non-Maori ethnic group is a more intellectually appealing solution to the taxonomic problem of mixed ethnicity people than calling them all Maori. This solution still does some - but surely much less - violence to people's subjective choice to indicate they belong to several ethnic groups. The solution also guards against some of the more egregious perceptual and analytical errors arising from the current taxonomy.

In addition the 1996 census reveals another 56,343 New Zealanders with Maori ancestry but who do not identify ethnically as Maori. Adding these ancestry-but-not-ethnicity people gives around 580,374 Maori in 1996.

Even as measured by the census, Maori are not an ethnically homogenous mass. By classifying themselves as both Maori and non-Maori, or acknowledging ancestry but not ethnicity, many individuals implicitly reject the common binary ethnic classifications and perceptions that underpin the standard disparity analysis and official ethnicity measures. In a sense this data is evidence that some Maori descended people, even as measured by the census, have a stronger ethnic identity and others have little or none.

The reality is not even as binary as the official statistics. At the margin Maori imperceptibly shade into non-Maori. For some people their Maori identity is likely to be very central to their lives. Other Maori are unlikely to think it greatly important: other aspects of their social and personal identities - class, occupation or profession, job, education, religion, leisure pursuits, sports clubs or other gang connections, regional location, family, gender, political leanings and so on - may take precedence.

Evidence that their ethnic identity is not all encompassing is the fact that many (roughly half of enrolled Maori) of Maori ancestry are reluctant to take part in national ethnic politics, enrolling on the general rather than Maori electoral roll for general elections. And of the Maori on the Maori roll, noteworthy are the relatively low levels of support for a number of parties based solely on the Maori ethnic group. Most Maori on the Maori electoral roll vote for mainstream non-ethnic parties, again evidence of considerable cultural similarities rather than differences.

Fluidity in terms of officially measured Maori ethnicity is revealed in Statistics New Zealand's inter-censal consistency study for the 1996 census (Coope and Piesse no date). Using a matched sub-sample from the 1991 and 1996 censuses, this study showed that there was an inflow from the non-Maori group into the officially defined Maori ethnic group between 1991 and 1996 of 23.4% of the 1991 Maori ethnic

group. The corresponding outflow was proportionately much lower but still relatively high at 5.7%. One in every four officially measured Maori in 1996 was not Maori in 1991. One in every twenty officially measured Maori in 1991 had exited the group in 1996. In terms of the Maori descent group, the in and outflows between 1991 and 1996 were 9.6 and 4.8 percent respectively. One in very ten Maori descended person in 1996 had discovered their Maori ancestry over the last five years and one in every twenty had lost it. The large relative differences between the inflows on the identity (23.4%) and descent measures (9.6%) respectively probably represent individuals flowing from the descent but not ethnicity group into the descent and ethnicity group.

Further evidence of Maori ethnic fluidity comes from data collected on a national survey of crime victims (Young et. al. 1997). This survey asked people if they were "New Zealander of European descent", "New Zealander of Maori descent", or "European". 849 respondents were re-checked using the 1996 census question of their ethnic group. Assuming about 137 of these re-checked people were wholly or partly of Maori descent (since Maori were 16% of the total survey of 5000), the proportion of these people changing their response was large. 24 people shifted from having wholly or partially Maori descent in the crime questionnaire to no Maori ethnic identification in the census question. 18 of these people changed from European and Maori descent to only Maori ethnicity in the census. 14 of these people changed from solely Maori descent to mixed Maori census ethnic identification. Two people changed from European descent to the Maori ethnic group. Again, this supports a fluid rather than a primordial picture of being Maori.

Rather than considering Maori ethnicity as a rigid binary primordial dichotomy, as often current research and policy discussions imply, it is better to regard Maori identity (and by implication that of other ethnic groups in New Zealand too) as fluid, differing in degrees of interest and commitment, and constructed. Maori ethnicity (and very possibly reported ancestry) as it is conceptualised today also needs to be seen as responding to incentives offered to group membership, both in terms of physical and psychic goods. In addition, there are considerable dangers in reifying the census Maori ethnicity statistics: they can indicate little about the strength of ethnic identity.

Finally, as a consequence of considerable ethnic fluidity, if individuals see being Maori as marking socio-economic failure and being non-Maori as marking socio-economic success, rather than ethnicity causing disadvantage as is often implied in policy discussions, ethnicity may itself be caused by disadvantage. In other words, a socio-economic success is less likely to identify as Maori than is a socio-economic failure. Stereotypical views of a common boundary between ethnicity and success are unintentionally promoted by many popular and policy discussions of Maori disparity. These stereotypes contribute to a social climate where socio-economic performance may determine ethnicity for some people. The stereotype is unsupported by the empirical record, as is demonstrated below.

The Maori ethnic group, inter-ethnic marriage and disparity

Interaction between social groups is an important factor measuring strength of group boundaries. Because marriage is an intimate relationship, intermarriage between ethnic groups not only shows interaction across boundaries, it also shows that members of different groups accept each other as equals. Intermarriage can thus be regarded as an intimate link between ethnic groups.

Ethnic inter-marriage has further social consequences. It decreases the importance of ethno-cultural distinctions in future generations because the children of mixed marriages are less likely to identify themselves with a single group and are likely to incorporate the cultural backgrounds of both groups. By intermarrying, individuals may lose the negative attitudes they have toward other groups. Because

intermarriage often connects the social networks of the partners, this applies to a range of out-group members, not just to the immediate partners. And it of course the children of mixed marriages are also unlikely to have strong negative attitudes to their parents' ethnic groups

Marriage patterns result from both preferences and opportunities. In terms of preferences, cultural similarities can lead to personal attraction, encouraging people to establish long-term relationships. Since many activities in marriage are shared, such as the raising of children, the purchase of a house, and the undertaking of leisure activities, dissimilarities in taste would complicate these activities. More generally, people prefer to marry someone who has similar cultural resources because this enables them to develop a common lifestyle in marriage. In terms of opportunities, the chances to marry within the group are higher the more often one meets people within the group and the more often one interacts with group members on a day-to-day basis.

In terms of Maori exogamy, nearly seven out of ten (66%) of the younger (24-34 year old) part of the measured Maori ethnic group who are married (legal or de facto) are married to a member of the non-Maori group (figures from Callister 1998, Table 10). Furthermore, many of the four out of ten younger Maori ethnic group who marry a fellow ethnic group member are of multi-ethnic identity, itself a form of exogamy. This implies that today, as measured by the census, the majority of Maori ethnic group children growing up today have a non-Maori parent, a picture supported by data on ethnicity of new births for 1998 in Table 1.

Sole Maori	43.4%
Mixed Maori	56.6%
Maori & European	44.2%
Maori & Pacific	7.4%
Maori, European & Pacific	5.0%
Total	100.0%
Source: Statistics New Zealand Demographic Trends 1999, figure 2.2	

High levels of out-marriage provide further evidence that the Maori ethnic group boundary is quite permeable for a majority of Maori. The figures suggest high amount of cultural similarity and high levels of social interaction between Maori and non-Maori.

Intermarriage is the reason for high numbers of people who identify both as Maori and non-Maori and also for the substantial margin of people who have Maori ancestry and do not identify as Maori. Many non-Maori New Zealanders have Maori relatives, as does the Maori population. This Maori population, sole or mixed in ethnic identity, also possesses many non-Maori ancestors. Ignoring these facts creates an oppositional picture of ethnic relations in New Zealand and misses powerful forces promoting social cohesion. However, ignored these facts typically are.

Intermarriage has historically one of the most powerful vehicles for effecting reductions in Maori socio-economic disparity. Gould (1996) argues that inter-marriage transfers Western cultural norms to Maori and thus ensures less disparity on the basis of the usual objective measures - based as they are on Western cultural norms - of income, of jobs and of life expectancy and so on. He argues that iwi who historically chose a strategy of inter-marriage such as Ngai Tahu perform much better for this reason. It could also be argued as an alternative but not mutually exclusive explanation to Gould's that inter-marriage also transfers

economic, human and information capital to Maori that then aids socio-economic success.

It is likely that given continuing high rates of intermarriage and the relative youth of mixed Maori that the mixed group (or mixed non-Maori group – there is as much justification for labelling them thus) are an important future face of the Maori (and to a lesser extent non-Maori) population. Indeed in the Household Labour Force Survey, which unlike the census has a consistent question on ethnicity, shows the mixed Maori share of the Maori ethnic population rising from 22 percent in the mid-1980s to 28 percent by 1999.³ There is considerable evidence that mixed Maori have socio-economic outcomes that are more like non-Maori than they are to those of sole Maori. Indeed, socio-economic differences between mixed Maori and non-Maori are frequently statistically insignificant.

The social realities of mass intermarriage over the last 200 years and of large numbers of people who are descended from and identify with both broad ethnic groups is fundamental to understanding Maori population changes, the implications of ongoing disparity for social cohesion, and disparity dynamics through time.

Influenced by a bi-culturalism that views Maori and non-Maori populations as if they ran on separate parallel train tracks, the current conventional wisdom ignores the implications of intermarriage. Some substantial analytical errors can result. For example Te Puni Kokiri (2000, p. 14) calculate youth dependency rates for Maori by dividing the number of Maori children by the number of Maori adults which they argue “provide[s] a crude indication of how many people in the core working age groups may be supporting those in age groups that require financial assistance”. For the year 2000, they estimate a youth dependency rate for Maori of 61.5%, compared to that of non-Maori of only 30.5%. “Maori and non-Maori families and communities”, they conclude (p. 14), “face very different situations”.

The problem with the calculation is of course that many Maori children have non-Maori parents on whom they depend. Thus the denominator of the Maori youth dependency ratio is too small: it should include non-Maori parents of Maori children. Equally the denominator of the non-Maori ratio is too large, including as it does non-Maori parents of Maori children. Allowing for the fact that 56% of Maori children are of mixed ethnicity (for evidence on this see below) and 14.7% of the population is Maori (by the census), youth dependency for Maori is more accurately 45.6% compared to 32.2% for non-Maori. The youth dependency “gap” has fallen from 31% to 14%. In addition, in considering projected age dependency ratios, the analysis equally ignores the fact that many non-Maori elderly will have Maori children to provide for them in their old age. Again, intermarriage has been ignored and this again seriously exaggerates Maori and non-Maori population differences.

The projected rising Maori population share: partly statistical artefact

Over the last decade and a half there has been a mild rise in the Maori share of the working age population of about 1 percentage point. Over the same period Pacific people have a 2 percentage point gain in population share. The big gainers have

³ The share of mixed Maori in the 1996 census is much higher at 43%. The following are reasons for the smaller mixed Maori share in the HLFS. The ethnicity questions in the census and the HLFS are different in wording, ordering of options, and number of choices allowed of ethnic groups. Second, the census numbers include those below age 15, where there are a larger number of mixed Maori. Third, in the HLFS the ethnicity of members of the household is determined by the one person responding on behalf of the household, making multiple ethnicity less likely, whereas census responses are individual and are consequently more detailed and accurate.

been the Other ethnic group, largely as a consequence of immigration their share has increased by about 2.5 percentage points.

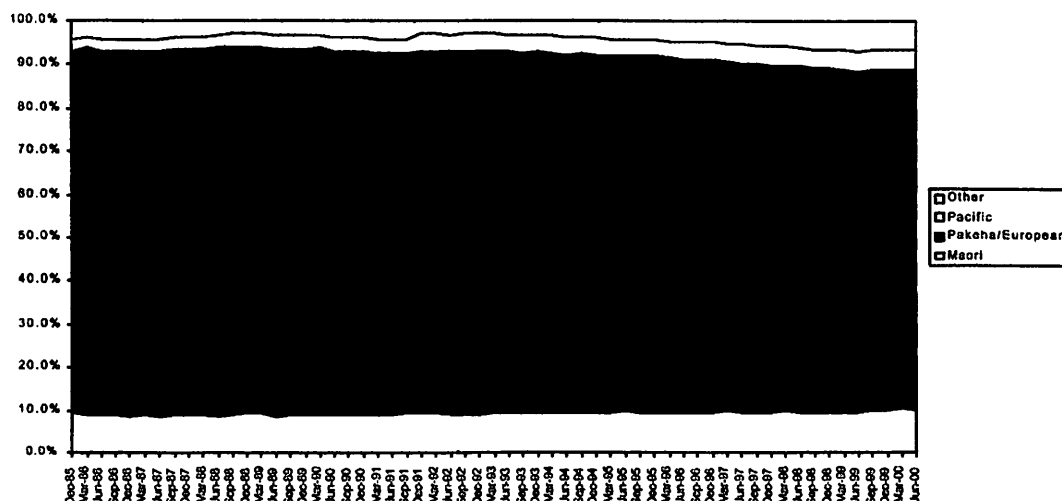
In terms of the future ethnic composition of New Zealand it is expected that these broad trends will continue. Indeed, the "browning" of New Zealand is confidently predicted by many. Using SNZ's medium population assumptions, the Maori population is projected to rise nearly six percentage points over the next 50 years from 14.7 percent of the population in 1996 to 20.5 percent in 2051.

The projected rising share of Maori is to some degree due to the older non-Maori population and to some degree due to the higher fertility rates for Maori and Pacific peoples (in 1996 estimated fertility rates were 2.7 for Maori, 3.3 for Pacific peoples and 2.0 New Zealand wide).

However, rising shares of Maori are also in substantial part a statistical artefact. In their projections SNZ assume that all the children of Maori women and non-Maori men are automatically included in the Maori population, as are a proportion of the children of Maori men (see *Demographic Trends* 1999, Table 8.2 note 2a). These SNZ assumptions mean that the projected Maori population will increase by definition regardless of differences in fertility rates.

A simple example suffices to illustrate this. Suppose Maori are currently 10 percent of a population of a hypothetical population of 100 people of the same age. Assume exact population replacement - every women, Maori and non-Maori alike, marries and has 2 children. Thus the next generation will be as large as the current population. The five Maori women thus have ten Maori children. Assuming, like SNZ, that each of the 5 Maori men additionally has 0.6 Maori children, then in the next generation the Maori population will have risen to 13 percent of the population despite there being no differences in fertility or death rates between ethnic groups. It is a cause for some analytical concern that this statistical artefact appears to have passed by many social scientists and policy analysts.

Ethnic composition of the working age population



Policy reasons for closing the gaps

At least four possible rationales can be discerned behind current policy aims to close gaps between Maori and non-Maori outcomes.

The first rationale for intervention to close the gap is to suggest that Maori disparity is a Treaty of Waitangi issue. The Treaty argument hinges on an equality of market outcomes based interpretation of Article Three of the Treaty. Translations of Article Three suggest that Maori were given all the rights and obligations of British citizens. Since the rights of British citizens at the time or later did not confer equality of socio-economic outcomes, either for individuals or groups, it seems unlikely that those who drafted or signed the Treaty had such a concept in their minds in 1840. The alternative Treaty line in favour of closing the gap is to have recourse to claim that reductions in Maori disparity are a requirement of the spirit rather than the letter of the Treaty.

The second argument in favour of closing gaps is to consider it a group equity issue: society is offended by ethnic gaps and has a preference to eliminate these disparities. Disparity is a particular social justice issue operating at the ethnic group rather than individual level.

A third argument suggests socio-economic gaps reduce the ability of Maori to sustain a vibrant culture. If positive externalities exist from Maori culture to the rest of the population in terms of tourism, other exporting, national identity and so on, intervention would improve outcomes for all.

The fourth rationale for intervention to close the gap is to argue that disparity is causing or is likely to cause inter-ethnic conflict which may function as a negative externality, imposing efficiency costs on society as a whole. This is a social cohesion argument – gaps undermine social cohesion since they serve as strong ethnic markers.

There is little to say in a policy sense regarding arguments for reducing disparity based on Treaty interpretations and issues of group equity as delivering social justice as these are fundamentally distributional value judgments. Regarding the cultural externality argument, a first best policy solution to such an externality would be to fund culture directly. Reducing existing socio-economic disparities is akin to subsidising an input rather than the final output in which one is ultimately interested. The social cohesion argument will be shown below to be weak, since disadvantage is not a strong marker of Maori ethnicity.

Is being Maori a good predictor of disadvantage?

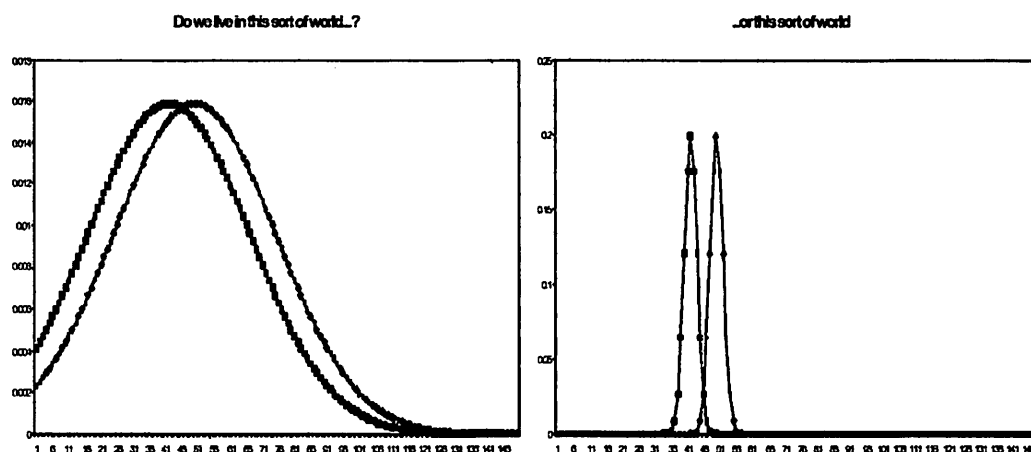
Underpinning discussions of socio-economic gaps is a comparison of average outcomes of ethnic groups. The focus on the first moment of the distribution ignores the second moment of the distribution, or intra-group variation, as well as other higher moments. By implication, these higher moments are not policy relevant

By focussing on average outcomes between Maori and non-Maori, a policy picture is created of high inter-group variation and low intra-group variation. Empirically this perception is a false one: intra-ethnic group variation in socio-economic outcomes swamps inter-group variation. Again, this has policy implications.

Below are two hypothetical frequency distributions of outcomes between two population groups. In both cases the average outcome for one group is 16 percent below that of the other group, with the higher mean being 50 and the lower mean 42. There is a considerable degree of overlap between the two populations. However, in the second distribution the in-group variance is very low: Much of the overall difference in outcome is associated with group membership and there is little overlap in outcomes between the two populations. On the other hand in the first distribution, in-group variance is very high and group membership is much less important for outcomes.

In the first distribution, consideration only of population means omits much valuable information about outcomes, in the second case, group means have a very high information content. Equally, it is more likely that group membership is a primary cause of the mean differences in the second case while in the first case it is much less likely that group membership is causal.

More formal statistical analysis using a variety of official data sets suggests that in all cases less than one percent of individual variance in incomes and employment chances is explained directly or indirectly by being Maori (i.e. by regressions using a binary Maori dummy variable as the only explanatory variable). The evidence – the very low fits consistently obtained by regressing income, subjective health, and employment outcomes on a Maori dummy variable - very much suggests that we live in the second sort of world. Being Maori explains little of variances in socio-economic outcomes and consideration only of the first moment of the distribution runs the risk of seriously distorting policy perspectives on Maori disparity. In particular, consideration only of the first moment creates a distorted picture by which all Maori are viewed as failures, all non-Maori as successes, as well as it strongly and inaccurately suggesting that that Maori ethnicity is socio-economic destiny.



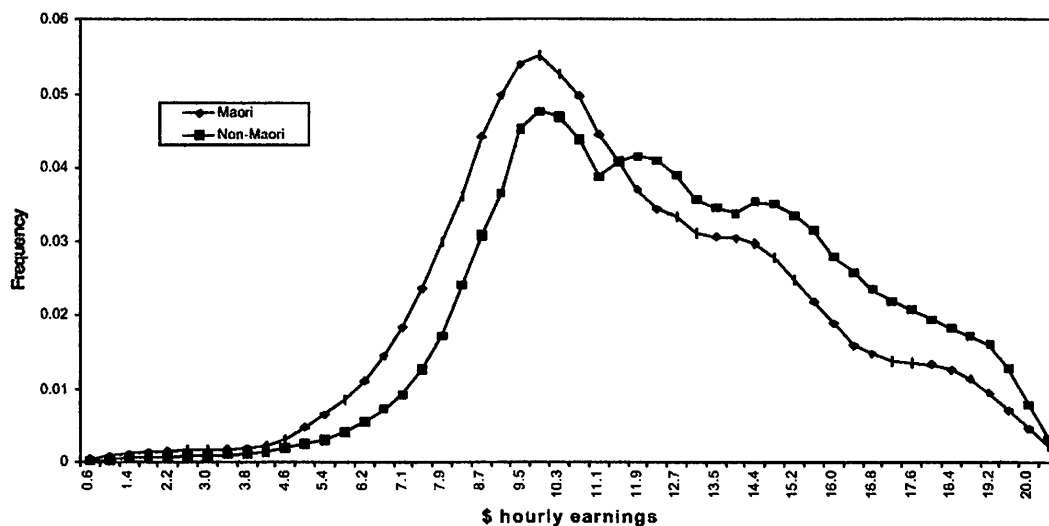
While the Maori ethnic group average hourly earnings shortfall is almost always statistically significant, the average amount of earnings variation explained directly and indirectly by Maori ethnicity for the years 1984, 1986, 1988, 1990, and each year from 1992 to 1997 is less than one half of one percent. The highest explained variation for any single year is seven tenths of one percent. Again, intra-group variation swamps inter-group variation.⁴ Maori ethnicity has similar weak predictive power (again about one half of one percent) for annual earnings using the Ministry of Education's adult literacy data set. Explanatory power of Maori ethnicity for log annual personal income from the 1996/7 *Health Survey* reveals a similar fit of 0.36%.

While the impact of being Maori has very low explanatory power, other single explanatory variables are much more powerful. 6.13% of income variation in the 1996/7 *Health Survey* is explained by gender. Being disabled has higher explanatory power than being Maori - 0.75% of earnings variation is explained by being disabled. Being married accounted for 1.87% of annual earnings variations while 6.67% is accounted for by having both a school and a tertiary qualification. Age and its square explain 10.40% of personal income variation.

⁴ I thank my colleague Sylvia Dixon for providing me with these regression results using *Household Economic Survey* data.

The graph below shows an actual distribution of real (CPI deflated) pooled hourly earnings from the Income Supplement of the Household Labour Force Survey for 1997-1998.⁵ The graph shows that we live in a world more like the first graph: in-group variances are very high, and average differences in outcomes are not sufficient to describe the world we live in. Both distributions have a similar mode. 86.4% of the two populations are distributed in the same fashion. 13.4% of Maori (or non-Maori) would need to be at a different point on the distribution for the two populations to have an identical distribution of hourly earnings (all moments of the distribution the same).⁶

Maori and non-Maori real hourly earnings distribution, 1997/98



Popular rhetoric to the contrary, Maori do not share a common experience of socio-economic disadvantage. The Maori ethnic group is not a group whose boundaries are well defined by socio-economic failure. Socio-economic differences *amongst* Maori as a group overwhelm socio-economic differences *between* Maori and other groups. Maori ethnicity is not socio-economic destiny. If being Maori were more like destiny (the second moments were small), the policy justification of dealing with gaps because they threaten social cohesion would have greater merit.

Gaps are not growing

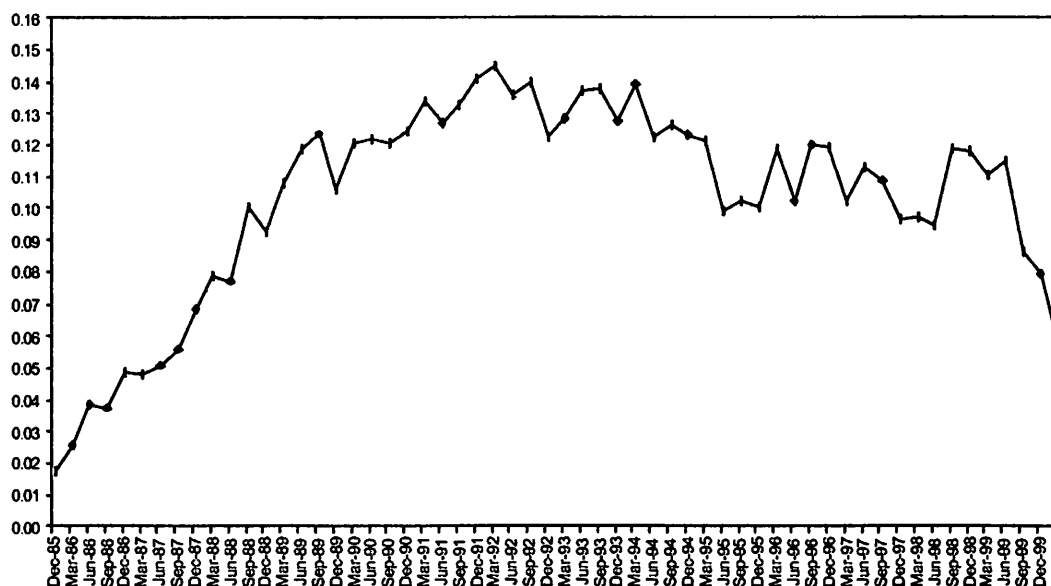
A frequently articulated belief is that over the last decade, the relative social and economic position of Maori has worsened. As shall be shown, this belief is a misconception. Take three indicators of socio-economic outcomes that most of us would consider to be key: employment rates, median income, and education levels. By all of these indicators, gaps closed over the 1990s.

⁵ The distribution is mapped using a kernel density function which smooths out statistical noise in the distributions due to random sampling errors. I again thank Sylvia Dixon for helping me with this data.

⁶ Using distributions constructed from broader annual income bands from the 1991 census, taken near the height of recent Maori labour market disparity, 19% of sole Maori and 9% of mixed Maori would need to be at another point on the income distribution to equalise outcomes. 81% of sole and 91% of mixed Maori respectively would not need to change their position on the income distribution (not specified and no income are included as distributional categories in this calculation. If these are excluded they marginally raise the numbers of distributional movers to 20% for sole Maori and marginally reduce them to 8% for mixed Maori).

Using Household Labour Force data on differences in employment rates as the best single measure of Maori labour market disparity (Chapple and Rea 1998) shows that today employment rate disparity peaked in the early 1990s at over 14% and thereafter has fallen. It rests currently at around 6% - similar to levels last attained around 1987 before the share market crash. However, disparity still exceeds levels of the mid-1980s when it was less than 4%.

Maori employment rate disparity



Patterns in disparity in median income reflect similar employment rate patterns, with a relative deterioration between 1986 and 1991 and improvement thereafter between 1991 and 1996. Note also the erratic behaviour of the series pre-1986. Maori women however have nearly caught up to where they were relative to non-Maori women in 1986 by 1996 while Maori men are some way from returning to their 1986 level of disparity. That said, relative income recovery between 1991 and 1996 was particularly pronounced for Maori males.

	Maori			Non-Maori			Ratios (Maori/Non-Maori)		
	male	female	Total	male	female	total	male	female	total
1961							89.8%	90.8%	
1971							79.5%	112.2%	
1981							83.3%	80.1%	
1986	\$12,519	\$7,421	\$9,617	\$15,513	\$7,596	\$10,817	80.6%	97.7%	88.9%
1991	\$12,958	\$10,024	\$11,001	\$20,035	\$11,456	\$14,563	64.7%	87.5%	75.5%
1996	\$16,053	\$11,247	\$12,864	\$22,000	\$12,600	\$16,229	73.0%	89.3%	79.3%

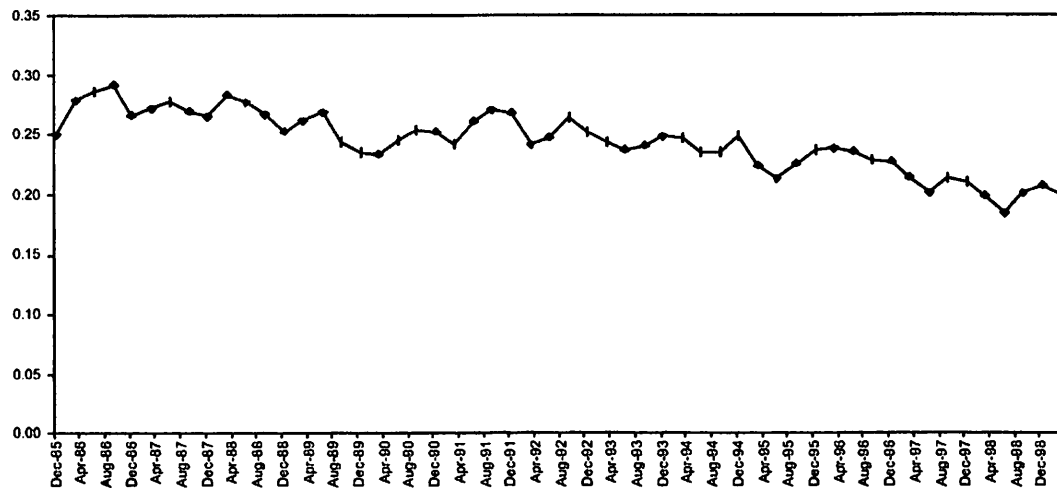
* Data from 1961 to 1981 from Nicol and ffiske (1991), 1986-1996 from SNZ. Note there have been substantial shifts in the ethnicity question in the Census over time which may impact on the accuracy of inter-censal comparisons.

Given ongoing declines in the employment rate disparity between 1996 and 1999, further reductions in median income disparity when data becomes available from the 2001 census seem likely.

Finally consider the educational qualifications of the Maori population relative to non-Maori. Data from the HLFs show that there has been a slow progressive decline in the differences between the population shares of Maori and non-Maori without qualifications between 1985 and 1998. More sophisticated measures of the

education gap between the two populations show a very similar pattern of slow convergence (Chapple 1999).

Percentage point gap between Maori and non-Maori shares of the working age population with no qualifications



Hospitalisation data has been invoked to suggest deteriorating Maori outcomes in recent years. Yet huge measurement and interpretative problems arise which render comparisons of hospitalisation rates between Maori and non-Maori virtually meaningless.

To calculate hospitalisation rates requires consistent population data. Giving the changes in the official definition of Maori in the census between 1971 and 1996 no such consistent numerator to calculate hospitalisation rates is available, making time series data on Maori hospitalisation rates unreliable. Second to calculate hospitalisation rates requires a consistent series of hospitalisation by ethnicity. Such a series is not available. Ethnicity data is collected by hospital staff. Being of low priority to staff it was frequently not collected or collected with poor accuracy. With the growing political importance of Maori in recent years greater efforts have gone into attribution of ethnicity in hospitals. Thus growing numbers of Maori hospitalised may simply reflect more accurate administrative record keeping.

More fundamentally worrying is the inherently ambiguous nature of hospitalisation numbers. Imagine that in the past Maori felt culturally alienated by hospitals and hospitals were under-provided in areas where Maori lived. As a consequence Maori did not admit themselves as frequently as necessary into hospitals. However, today hospitals have become more culturally responsive to Maori needs and Maori, as a consequence of growing urbanisation, have better geographical access to hospitals. Hospitalisation rates of Maori rise relative to non-Maori when the underlying socio-economic reality for Maori - better access to hospitals and a more responsive hospital system - may be improving.

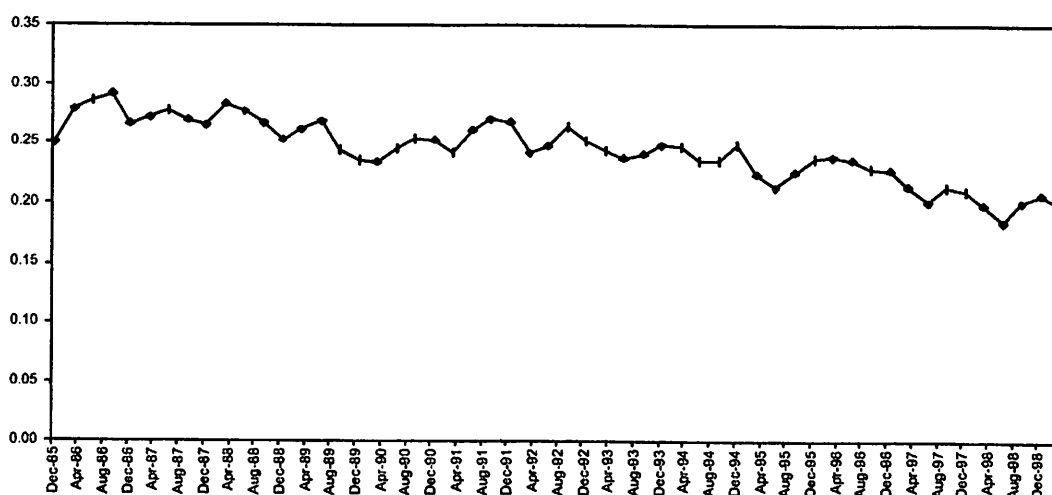
Why are there gaps between Maori and non-Maori?

This section canvasses some explanations of why average gaps in socio-economic outcomes are observed between Maori and non-Maori.

Maori tastes and preferences regarding material wellbeing may differ systematically from non-Maori. Maori may have stronger preferences for leisure or for producing non-market goods than non-Maori. As a consequence, they work less, have lower earnings, and lower degrees of labour market attachment. This disparity is compensated for in higher leisure and a greater consumption of non-marketed goods.

education gap between the two populations show a very similar pattern of slow convergence (Chapple 1999).

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Group differences in tastes and preferences are not necessarily due to ethnicity. An alternative hypothesis is that the causal factor behind these differences is not in fact ethnicity but a third factor such as social class. If for historical reasons Maori are over-represented in some social classes with different tastes and preferences from the population average there will be a correlation between ethnicity, tastes and preferences and performance which does not reflect any direct causal connection.

Maori may have insufficient information, perhaps because they do not have the same networks compared to the non-Maori population, regarding socio-economic returns. If the lack of information is such that they believe returns are systematically lower than they actually are, this may cause Maori to under-invest in acquiring socio-economic status.

Again, an alternative hypothesis is that the causal factor behind limited access to labour market is social class. If some classes have less rich information sets and networks than others, and they believe that the returns to education are systematically biased downwards they demand lower levels of education and hence have poorer socio-economic outcomes. Again, under such circumstances the correlation between ethnicity and socio-economic performance may not reflect any causal connection.

Maori may have different demographic profiles from non-Maori. Young people are less likely to have jobs and, when in them, less likely to generate high pay. Some of the observed average gap is undoubtedly due to the fact that the Maori population is more youthful than the non-Maori population.

Maori income and employment prospects may be lower because Maori have fewer educational qualifications and lower levels of literacy than non-Maori. Poorer educational outcomes and literacy may reflect pre-labour market ethnic discrimination in the schooling system or alternatively the fact that Maori are over-represented in poorer social classes who for reasons of family resources or other class based barriers find it difficult to acquire a good education and literate skills.

Maori may also be less likely to succeed in the labour market because their health status and hence labour market productivity is lower. This poorer health status may be caused by discrimination or lack of ethnic responsiveness in the health system, or by resource barriers, which disproportionately impact on Maori because they are over-represented amongst poorer social classes.

There may be an average gap between Maori and non-Maori because Maori face racial discrimination in the labour market. Discrimination may be initiated by prejudice from customers, from employers or employees.

Sociological approaches suggest that social status arising from one's parents, family and other peers is an influential benefit and social ostracism an important cost for people. If parents and peers do not value education and socio-economic success, any individual who does stands to lose social status by acquiring it. Including these factors into the cost-benefit calculation may indicate why decisions not to succeed may be rational for some Maori. As a consequence, a vicious circle develops where there is little parental encouragement, there are no role models and sub-culturally based peer pressures are a pole of attraction for others. These vicious circles are particularly likely when the ethnic group defines its boundaries by socio-economic failure.

One of the most interesting hypotheses from outside the economics literature is that colonisation has an impact in developing forms of peer and other social pressures within an indigenous population. This explanation may account for why Maori face different pressures from other minorities. Some sociologists distinguish between

colonised or enslaved minorities, described as “involuntary”, and voluntary minority immigrant groups (Ogbu 1992). Minority groups have primary cultural characteristics developed before coming into contact with the majority group. In addition, in response to a history of colonisation and racial discrimination, involuntary minorities develop secondary cultural characteristics as coping devices under involuntarily imposed oppressive conditions.

A student from an involuntary minority hoping to do well socio-economically is faced with an intense conflict between peer group loyalty, which provides a sense of identity and community, and the wish to succeed an ambition which the secondary cultural characteristics of the peer group defines as “white”.

The dimension chosen to examine performance is unemployment in 1986. The choice of data and year is because of data constraints (information is taken from Lowe 1990 and Hogan 1988). Data is by age groups, to allow for different age compositions of the populations (no comparable data is available above the 40-45 year age band). There were 24,449 Maori resident in Australia on the 1986 Census night – about 6% of Maori in New Zealand at the same period.

Age group	Maori in Aus.	All NZers in Aus.	Maori in NZ	All NZers in NZ	% gap in NZ (column 4 – column 5)	% gap in Aus. (column 2 – column 3)
15-19	30.6	10.6	29.4	19.7	9.7	20.0
20-24	24.3	11.0	18.1	9.0	9.1	13.3
25-29	18.8	7.4	13.7	6.4	7.3	11.4
30-34	16.1	5.8	10.9	5.2	5.7	10.3
35-39	13.5	4.9	8.2	4.0	4.2	8.6
40-44	13.3	4.5	7.4	3.4	4.0	8.8
45-49	11.8	4.3	6.4	3.1	3.3	7.5

Sources: Row 1, 3 and 4 from Lowe (1990); Row 2 from Hogan (1990)

In terms of both the percentage point differences in unemployment rates Maori in Australia fared relatively worse relative (quite strongly so) to New Zealanders in Australia than Maori in New Zealand compared to all New Zealanders in New Zealand in 1986 across all age groups. This is evidence against the involuntary minority arguments of Ogbu. However further detailed examination of the hypothesis considering Maori in Australia as the counter-factual would be valuable. It is worth pointing out that New Zealanders are classified by birthplace in the Australian census whereas Maori are classified by ancestry and may be Australian born. This if anything is likely to bias the results in favour of Ogbu’s hypothesis.

The unemployment rate evidence suggests that if there is a positive influence of being a voluntary minority in Australia compared to being at home, any effect is swamped by other factors in terms of unemployment rates. The initial evidence does not provide any support for Ogbu’s hypothesis.⁷

A number of the explanations considered for poorer average Maori performance rely upon their over-representation amongst poorer social classes. To sustain such a possibility, a coherent explanation is required regarding why Maori are comparatively over-represented in the social groups - the working classes - who have fewer resources today. The following factors seem of importance in this regard.

⁷ Unfortunately ancestry information was not collected in the 1990 and 1996 Australian Censuses. But an ancestry question will be included in the 2001 Australian Census. The information from 1986 and 2001 could be used to examine Ogbu’s hypothesis in more depth than has been possible here.

The pull factor of rapid industrialisation and rising relative urban wages saw a massive rural-urban migration by Maori in the post-war period. Maori entering urban areas were unskilled and poorly educated in terms of their new urban working environment because of poor rural schooling, few incentives to acquire an education in rural areas, and because of limited family resources. In addition there was little or no incentive to acquire skills through education on arriving in towns, since the world-wide compression of wage differentials during the long post-war boom meant that unskilled jobs, in addition to being plentiful, paid well relative to skilled jobs.

In some very real sense Maori migrated from one country to another: they were international migrants during the great post-war urbanisation. Many of their adjustment problems, including the drawn out nature of differences with the "native" non-Maori population of the cities, are classic problems of immigrants everywhere.

The nature of the work, contacts in the work place and substantial inter-marriage with the working class population of European origin led to the creation of "Anglo-Maori" urban working class cultures, mixing Maori traditions and British working class culture. Thus as long as there is a significant degree of between-class immobility, which domestic and overseas research supports, then economic explanations can readily be found for current Maori over-representation in the urbanised working classes that may have little causal foundation in their current Maori ethnicity.

Analysis of Maori ethnic gaps in earnings and employment

This section examines earnings and employment disparity between sole Maori, mixed Maori and non-Maori using the New Zealand International Adult Literacy data set (see Chapple and Maré 2000 for more details). The approach uses dummy variables for mixed and sole Maori and considers the evolution of the size and significance of the ethnicity dummies as additional socio-demographic variables are added to the regressions. The approach is similar to a decomposition approach in the manner by which the socio-demographic variables translate into earnings does not differ significantly between the broad ethnic groups considered.

Consider the simplest model seeking to explain earnings variation only by mixed and sole Maori ethnicity (Tables 4 and 5, first columns). This is the conventional gap model of much policy discussion. There is a considerable average gap, between a quarter and a third on annual earnings, for both female and male sole Maori. In both cases this sole Maori gap is statistically significant. On the other hand the income gap is actually positive for mixed Maori males but is not significantly different from non-Maori. The negative gap for mixed Maori females is not statistically significant. Noteworthy is the very low explanatory power of being Maori for outcomes.

Adding age and marital status controls to the model reduces the sole Maori earnings gap by roughly a third for both men and women (Tables 4 and 5, second columns). The gap remains significant for sole Maori men but loses significance for sole Maori women. The gap falls by 60 percent for mixed Maori women and remains insignificant. The male mixed Maori earnings advantage increases, but is still not significant. Further adding education and literacy variables reduces the raw male sole Maori gap to about half its original level and the female sole Maori gap becomes positive (Tables 4 and 5, third and fourth columns). In both cases the gap loses significance. In both cases the mixed Maori earnings gap is positive but not significant. Finally, in the right most column quantity controls are added allowing consideration of earnings per unit time. The earnings gap is mildly positive for both mixed and sole Maori men and mildly negative for mixed and sole Maori women. In

no case is it statistically significant. Explanatory power is much higher than for the simple explanation of outcomes by "Maoriness".

Table 4: The male Maori/non-Maori percentage earnings gap (percentages in bold indicate a gap which is significant at a five percent level)

Sole Maori % gap	-32.6	-21.9	-16.2	-15.2	+4.4
Mixed Maori % gap	+8.9	+13.4	+13.9	+14.3	+1.7
Age, married	No	Yes	Yes	Yes	Yes
Education variables	No	No	Yes	Yes	Yes
Literacy variables	No	No	No	Yes	Yes
Quantity variables	No	No	No	No	Yes
R ²	0.007	0.390	0.404	0.418	0.655

Table 5: The female Maori/non-Maori percentage earnings gap (percentages in bold indicate a gap which is significant at a five percent level)

Sole Maori % gap	-27.2	-19.5	-5.7	+5.3	-4.5
Mixed Maori % gap	-23.0	-9.4	-0.1	+4.3	-1.1
Age, married	No	Yes	Yes	Yes	Yes
Education variables	No	No	Yes	Yes	Yes
Literacy variables	No	No	No	Yes	Yes
Quantity variables	No	No	No	No	Yes
R ²	0.005	0.120	0.167	0.19	0.641

Some cross-tabulations of annual income disparity by those above and below the average level of adult literacy (data from the 1996/7 New Zealand Adult Literacy Survey) are of interest. The data include those earning no income over the reference year and are shown in Table 6. The largest and only statistically significant gap (in this case no other gap is significant at a ten percent level, let alone the 1 percent significance level found for sole Maori) is for low literacy sole Maori. Even without controlling for other background variables, gaps for high literacy Maori and low literacy mixed Maori are much smaller and not statistically significantly different from non-Maori. The earnings gap is driven by low (and zero earning) sole Maori with low levels of literacy.

Table 6: Maori/non-Maori annual income gaps by above and below average tested literacy (amounts in bold indicate a gap which is significant at a one percent level)

	Below average literacy	Above average literacy
Sole Maori	-\$4,976	-\$1,320
Mixed Maori	-\$3,129	-\$1,152

Now consider disparity in employment chances (see Chapple 1999 for an alternative time series, non-multi-variate consideration of the issues). A significant employment gap exists only for sole Maori. There is no significant gap for mixed Maori (Table 7 and 8, first columns). Age and marriage controls explain 25 percent of the male sole Maori gap but only 6 percent of the corresponding female gap (Table 7 and 8, second columns). Further controls explain about two thirds and eliminate the significance of the male sole Maori gap. Only half the sole Maori female variation is explained and the gap in employment chances remains statistically significant (Table 7 and 8, third and fourth columns).

Table 7: The Male Maori/non-Maori employment rate disparity (marginal effects from a logistic model, percentages in bold are significant at a five percent level)

Sole Maori % gap	-16.3	-12.3	-9.7	-5.4
Mixed Maori % gap	+3.9	+2.1	+2.7	+3.9
Age, married	No	Yes	Yes	Yes
Education variables	No	No	Yes	Yes
Literacy variables	No	No	No	Yes

Table 8: The Female Maori/non-Maori employment rate disparity (marginal effects from a logistic model, percentages in bold are significant at a five percent level)

Sole Maori % gap	-19.7	-18.5	-14.4	-9.0
Mixed Maori % gap	+0.0	+0.1	+2.8	+3.7
Age, married	No	Yes	Yes	Yes
Education variables	No	No	Yes	Yes
Literacy variables	No	No	No	Yes

Further information of interest is presented in Table 9, cross tabulating differences in employment chances for Maori by educational qualification. These tabulations show the employment gap is driven by poorly educated sole Maori.⁸ Sole Maori with tertiary and completed secondary school perform similarly to their non-Maori counterparts, while sole Maori with only some secondary education have very low chances of employment relative to non-Maori. Adding controls for age, gender, marital status and literacy (all of which were significant at a five percent level) to a regression considering employment chances of those with some secondary education reduced the 21.3% employment gap for sole Maori with some secondary qualifications by 43% to -12.2%. The sole Maori coefficient for those with some secondary qualifications remained statistically significant at a five percent level.

Table 9: Maori employment rate disparity by educational qualification (marginal effects from a logistic model, percentages in bold are significant at a five percent level)

	Some secondary education	Completed secondary education	Tertiary education
Sole Maori % gap	-21.3	-6.8	+0.1
Mixed Maori % gap	+0.3	-3.7	+11.3

A further cross tabulation in Table 10 shows that employment rate disparity is considerably greater for sole and mixed Maori who live in rural areas. For sole Maori in rural areas the employment rate disparity is nearly three times of that of their urban cousins. Adding controls again age, gender, marital status and literacy reduced the 30.3% employment gap for rural sole Maori with some secondary qualifications to -19.7%, still very large. The sole Maori coefficient remained statistically significant at a five percent level. The rural mixed Maori gap fell to -3.1% and was no longer significant. In urban areas, the additional controls lowered the gap in employment chances to -1.6% for sole Maori. For urban mixed Maori the gap was positive at 6.7%. Neither urban Maori employment gap was significantly different from zero.

⁸ Both Gibson (1996) and Winkelmann and Winkelmann (1998) similarly find higher rates of return on education for Maori.

Table 10: Maori employment rate disparity by urban/rural location (from a logistic regression, percentages in bold are significant at a five percent level)

	Rural areas	Urban areas
Sole Maori % gap	-30.3	-11.5
Mixed Maori % gap	-15.0	5.9

Overall, an earnings and employment gap is observed between Maori and non-Maori as a consequence of covariances with other socio-demographic outcomes. Generally speaking, being Maori does not appear to directly cause observed average earnings and employment gaps. Age, education, and literacy explain the significant gap between Maori and non-Maori. In addition, being Maori directly and indirectly explains very little of differences in income and earnings. As discussed in Chapple (1999) the pattern of employment disparity does not support the hypothesis that racial discrimination is particularly important in explaining the large variation of employment chances over time.

Also of interest is the important regional dimension in employment rate gaps. Dividing New Zealand up into Northland, Auckland, the Central North Island, Wellington and the South Island and by sole and mixed Maori shows the major gaps are for sole Maori north of Wellington and in particular in Northland and the Central North Island. The correlation between the share of the region's population which is sole or mixed Maori and the sole or mixed Maori gap is very high ($r=0.93$, $n=10$). Thus Maori perform worse in regions where there is a high Maori population share.

Table 11: Maori disadvantage is worse in regions with high Maori population shares

	Region	Average employment rate gap 1985-1999 (%)	Average share of sole/mixed Maori in total regional working age population (%)
Sole Maori	Northland	19.8	16.7
	Auckland	11.6	6.8
	Central North Island	14.6	11.3
	Wellington	6.8	4.8
	South Island	2.8	2.1
Mixed Maori	Northland	12.4	4.6
	Auckland	4.3	2.6
	Central North Island	4.4	3.3
	Wellington	5.3	2.6
	South Island	1.1	1.7

Because most analysis of disparity concentrates on simple cross tabulations in outcomes between Maori and non-Maori, in popular policy discussions Maori ethnicity is often seriously over-rated in its importance for socio-economic outcomes. Most of employment rate gap exists for particular sub-sections of the Maori population - sole Maori living in rural areas, with low levels of education, lower than average literacy, and living in Northland and the Central North Island - rather than being evenly spread across the Maori population as a whole.

Conclusion

The Maori ethnic group is a relatively recent historical construct. Maori ethnicity has been created in the last fifty years. It is still being constructed. Maori ethnicity is not primordial. Group attachment depends on rewards, both material and psychic, from belonging to the group. Maori are a loose rather than a tight ethnic group, since they have relatively few exclusive markers that define the group. However, much Maori

ethnic politics focuses on making the loose group a tighter entity by creating exclusive markers and rewards for belonging.

Often in policy and research discussions Maori ethnicity is constructed in a discrete and primordial Maori or non-Maori manner. In many ways it may be more valuable to see being Maori as part of a continuum, rather than a discrete variable, with one ethnic group shading into another. Many people do not see their ethnicity as a discrete variable, evidenced by large numbers of people who are members of both Maori and non-Maori ethnic groups.

The loose nature of the Maori ethnic group is evidenced by high rates of exogamy, or out-marriage from the group. High exogamy suggests comparatively low levels of cultural difference between Maori and non-Maori. Out-marriage is likely to be a long term force for making the boundary between the Maori ethnic group and non-Maori ethnic group even more permeable than it is currently, for reducing socio-economic disparity, and for increasing levels of social cohesion. It is likely that historically inter-marriage has been a powerful force for reducing socio-economic disparity between the Maori and non-Maori populations. The loose nature of the group is also evidenced by large flows of people in and out of the Maori ethnic group between censuses.

Four policy rationales for closing socio-economic gaps have been identified, including Treaty of Waitangi rights, broad group social equity issues, social conflict and social cohesion issues, and encouragement of a vibrant Maori culture that has positive externalities for Maori and non-Maori alike.

Considering a number of different data sources and socio-economic outcomes leads to the conclusion that being Maori has very low predictive power for socio-economic success or failure. Policy discussions of disparity typically focus on first moments of the income distribution, implicitly suggesting that they contain all the information required and implying that being Maori has high predictive power for socio-economic outcomes. A focus on the first moment of the distribution reinforces the notion of Maori as a tight ethnic group who share a common ethnic marker of poor socio-economic outcomes. It is little wonder then that first moments of the distribution of socio-economic outcomes are the focus of much current Maori ethnic politics. If the common ethnic marker is socio-economic disadvantage, then this also implies that socio-economic disparity has important negative implications for social cohesion.

I have emphasised that policy makers need to avoid a fixation of the first moments of any distribution of outcomes and remember the second moment of distributions of outcomes may significantly change perceptions of the underlying socio-economic reality. Intra Maori and intra non-Maori variation across a range of important outcomes is far greater than inter-ethnic group variation. The dangerous trap of reading into Maori ethnicity a negative socio-economic destiny needs to be avoided. To take but one example, there are very large overlaps between Maori and non-Maori earnings distributions and both distributions have the same mode and very similar high variances.

The consequence of the high intra-population variances in outcomes is to weaken the social cohesion argument for addressing disparities at an aggregate level.

Often discussions on disparity proceed on the basis that all Maori are badly off and are becoming worse off. In the early 1990s there was a move to mainstreaming of the provision of Maori services. The assertion of growing gaps for Maori over the last decade has been used to support the position that mainstreaming has failed to address Maori disparity. Again, these political positions may have a functional role as rhetorical devices in Maori ethnic politics in terms of reinforcing common perceptions of difference and shared disadvantage.

However there are certain basic facts on which all should be able to agree. Individual income and labour market disparity between Maori and non-Maori is higher today than it was during the mid-1980s but lower than it was during the early 1990s. Disparity in educational qualifications is clearly lower today than the 1980s.

Recent declines in disparity indicate nothing conclusive about the success or failure of policy mainstreaming. Even if mainstreaming was associated with rises in disparity (it is not), rises in disparity are neither necessary nor sufficient conditions to conclude that mainstreaming has been a failure. Symmetrically, falls in disparity are neither necessary nor sufficient conditions to conclude that mainstreaming has been a success. The problem is the classic one of the counter-factual. Gaps are influenced by a wide variety of factors, not exclusively or even primarily by government mechanisms employed to deliver services to the populations. Since we do not observe what would have happened, all other things being equal, in the absence of mainstreaming, we have no adequate counter-factual and can draw no strong conclusions from disparity data regarding mainstreaming as a policy.

There are a number of reasons why gaps may exist between Maori and non-Maori on average. These include different tastes and preferences, either of Maori or of groups – like the working class – where Maori are over-represented. Equally, Maori may lack information as a consequence of their social networks regarding how to succeed in socio-economic terms. Again, these networks may be ethnic or class based, with Maori over-represented in the low information class. There may be racial discrimination against Maori or cultural barriers preventing them from taking advantage of economic opportunities, either directly or through the education or the health system. Or there may be problems of social pressures arising from the fact that Maori are an involuntary minority which cause them to act as if socio-economic success was an ethnic group sell-out. However, it is worthwhile to point out that there is little evidence in favour of the involuntary minority hypothesis in data on the performance of Maori in Australia, where they are a voluntary minority and perform relatively worse compared to non-Maori New Zealanders.

The earnings and employment gap between Maori and non-Maori is examined using unit data. Noteworthy are the large socio-economic gaps in terms of earnings between mixed Maori and sole Maori and the significance only of gaps for sole Maori when compared to non-Maori. As socio-demographic controls are added, sole Maori gaps are reduced and lose statistical significance. Thus Maori perform worse on average because being Maori is correlated with other measures which better explain earnings. Similar conclusions are found when gaps in employment chances are considered. The only significant gap remaining after controlling for other socio-demographic variables is for sole Maori women.

Comparing sole Maori with non-Maori with similar levels of education reveals a very large employment gap for sole Maori without qualifications but no gap for those who are tertiary educated, while mixed Maori perform little different from non-Maori with similar levels of educational qualifications across all qualification levels. The significant Maori ethnic income gap is also driven primarily by poor outcomes for sole Maori with lower than average literacy. Above average literacy Maori perform like above average literacy non-Maori. Comparing Maori in urban and rural areas reveals the largest employment rate gap is for sole Maori in rural areas. Urban mixed Maori do better than urban non-Maori but this is not statistically significant. On a regional basis, Maori substantially perform worse in areas where Maori are a large proportion of the population – Maori heartland areas where Maori culture is presumably stronger.

Overall, much of the gap between Maori and non-Maori reflects their over-representation amongst poorer socio-economic classes. This over-representation is itself a function of relatively recent Maori urbanisation at a time when relative prices

created strong incentives to remain in low skilled occupations and not acquire education. In addition, there is strong evidence that Maori with higher levels of skills and education perform little differently from their non-Maori counter-parts, while low skilled and educated Maori perform much worse than low skilled and educated non-Maori. These findings directly suggest the problem of disparity may be sub-cultural, not ethno-cultural.

Turning finally to issues of policy, the following is a summary of the conventional policy wisdom on Maori disparity. There is disparity between Maori and non-Maori along a range of labour market outcomes and this *disparity is growing*. Maori ethnicity is seen as primordial and the Maori ethnic group is painted as one with strong and distinct boundaries. Ethnicity and disparity are implicitly seen coterminous by this analysis, so that Maori ethnicity is a good predictor of labour market failure. Maori ethnicity is often also seen as the cause of disparity. One key reason for high and growing levels of disparity is the lack of government programmes culturally appropriate to Maori. An important solution is to provide labour market programmes which are culturally appropriate - as summarised in the "by Maori for Maori" policy slogan. Replacing labour market with other socio-economic indicators pretty much summarises the same conventional policy prescription in other areas such as health and education.

How does the information provided here alter or add to this wisdom? The following is a summary of my views. There is *on average* disparity between Maori and non-Maori along a range of labour market outcomes and this *disparity is stable or falling*. At the same time Maori ethnicity is a particularly poor predictor of labour market success or failure and there is considerable overlap between Maori and non-Maori outcomes. It is sole Maori with low literacy, poor education, and living in geographical concentrations that have labour market problems, not the Maori ethnic group as a whole (there are probably also sub-cultural associations with benefit dependence, sole parenthood, early natality, drug and alcohol abuse, physical violence, and illegal cash cropping). In other words the policy issue may need to be viewed primarily at a sub-cultural and socio-economic level rather than the coarse macro ethno-cultural level of Maori/non-Maori binaries.

Solutions to these sub-cultural and socio-economic class problems are likely to be significantly more complex than simply delivering programmes culturally appropriate to Maori. There is no guarantee that Maori delivery will be successful in the particular sub-cultures where the primary problems are likely to be found. Of course, equally there is no guarantee that it will not be successful. The issue is ultimately empirical and should be treated as such, rather than axiomatically.

While Maori focussed policy prescriptions may in fact be effective, like policy fashions of the late 1980s predicated on beliefs in market solutions to most problems, Maori-based solutions to disparity may be over-sold. Again, good empirical evaluations of new policies are crucial to avoiding any adverse consequences of any over-selling.

For reasons of social justice and efficiency, effective policy to close the gaps needs to focus on those most disadvantaged or at risk. People who are most disadvantaged are those who identify solely as Maori, with low skills, poor outcomes, and living in communities where the Maori population is high and outcomes are on average poor.

Broad based policies which target the Maori population, which may be thought to close the gaps (such as fisheries settlements, other treaty settlements, cheap access to the radio spectrum etc.), risk being captured by the considerable number of Maori who already have jobs, skills, high incomes and good prospects.

Effective policy needs to provide strong incentives and good monitoring to ensure the desired outcome is met – helping low skilled sole Maori without work in areas of high Maori population concentration to acquire good jobs and better skills.

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