The Wealth Distributions of Migrant and Australian-Born Households*

Rochelle Belkar

School of Economics, University of New South Wales

Abstract

Wealth is an important measure of overall economic well-being, and influences migrants' ability to integrate into their new country. Using data from the 2002 HILDA survey, this study explores the disparity between the wealth distributions of Australian and foreign-born households. Using quantile regressions, the results reveal that immigrants accumulate less wealth than their Australian-born counterparts and that the gap grows throughout the distribution. Further analysis reveals that migrants are able to catch up to their native born counterparts not only through greater time in Australia, but also through human capital accumulation, part of which may be achieved in Australia.

Keywords: wealth distribution, wealth differentials, immigrant, HILDA, quantile regression

JEL: D31, J61, C39

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I Introduction

Economic integration of immigrants is a key issue, especially in Australia where a large proportion of the population are foreign-born. In June 2002, 23 per cent of the population were born overseas and 52 per cent of Australia's population growth was from net overseas migration (OECD, 2003; ABS, 2004). A key measure of migrants' settlement success is their ability to accumulate wealth relative to native-born Australians. Yet while there has been considerable focus on immigrants' labour market outcomes, including earnings assimilation and probabilities of employment (recent studies include Wilkins, 2003; Cobb-Clark, 2003; Thapa, 2004), wealth accumulation has received no attention. With the Household Labour and Income Dynamics in Australia (HILDA) survey it is now possible to compare the wealth levels of Australian versus foreign-born households and investigate wealth differentials across the distribution.

Wealth accumulation is an important gauge of the success of immigrants' economic assimilation. Focussing on labour-market earnings ignores other sources of income, such as savings, inheritance, and returns from investment. Wealth is also a more permanent and stable measure of economic situation than income, as it allows the financing of both current and future consumption. Wealth also facilitates economic success in broader ways. As Zhang (2003) noted, "wealth affects access to the credit market, and allows family members to venture into business activities, pursue higher education, or spend more time looking for a better job". Thus, wealth can enhance the speed of economic integration and earnings assimilation into an immigrant's new home.

This paper is the first study to explore migrants' wealth-accumulation behaviour in Australia and thus presents a unique insight into immigrants' ability to achieve economic success. Using

quantile regressions, we show that the wealth gap increases along the distribution. Moreover, the length of time in Australia has an important role in migrants' wealth accumulation. Specifically, the disadvantaged wealth position of migrants is likely to recede the longer one lives in the country. We conjecture that this catch-up occurs through human-capital accumulation.

II. Previous Research

The theoretical literature suggests a number of reasons why immigrants' wealth might differ from native-born families. Immigrants generally self-select to move to a new country and therefore are not a random sample drawn from the source country's population (Borjas, 1994). Furthermore, Australia's strict regulations as to the number and type of visas offered accentuate selectivity (Cobb-Clark, 2003). As such, migrants' motives and incentives to save, and thus accumulate wealth, are likely to differ from the general native-born population. Given the possibility of return migration and the prevailing assumption that expected earnings in the host country exceed expected earnings in the source country, Galor and Stark (1990) establish that migrants have an incentive to save more than natives do. Dustmann (1997) further illustrates that if labour-market shocks between countries are correlated, then the sign and size of the savings of immigrants relative to natives is ambiguous. A further reason why immigrant wealth experience might differ to a native born is discrimination. The existence of labour market discrimination, particularly of immigrants from non-English speaking backgrounds (Tran-Nam and Neville, 1988; Junankar *et al*., 2002; Thapa, 2004), and possible initial difficulties in asset market engagement, would create nativity wealth differentials.

While immigrant wealth accumulation has not been examined for Australia, the issue has been explored in North America. The US evidence suggests that foreign-born households have less

wealth at all points of the distribution (Cobb-Clark and Hildebrand, 2003). Whether immigrants' wealth catches up over time is a matter of contention. Amuedo-Dorantes and Pozo (2002) and Cobb-Clark and Hildebrand (2003) find that immigrants accumulate less wealth than natives, whereas Carroll *et al.* (1998) and Hao (2004) find evidence that migrants' wealth eventually exceeds that of the native born population. The Canadian literature shows that wealth differentials exist between Canadian and immigrant families, but that the gap closes with length of time in Canada (Carroll *et al.*, 1994; Shamsuddin and DeVoretz, 1998; and Zhang, 2003). Furthermore, Zhang showed that, contrary to the US evidence, the direction of the nativity wealth gap is not uniform. Immigrants in mid-to-upper wealth percentiles have greater wealth than their Canadian-born counterparts, whereas the opposite is true for those at the bottom of the distribution. Thus, the available international evidence shows a nativity wealth gap is likely to exist but there is no consensus on the direction of the gap and whether assimilation should occur.

III Data

The HILDA Survey is a national household panel funded by the Department of Family and Community Services. It provides data on a variety of labour market and earnings characteristics, including wealth. The first wave in 2001 comprised 7,682 household interviews, and 13,969 personal interviews from each household member aged 15 years and over. In the second wave in 2002, interviews were again sought from all household members aged 15 years and over from both responding and non-responding persons from the first wave. A total of 13,041 individual interviews from 7,245 households were obtained, representing an 87 per cent household response rate. A supplementary wealth module, covering detailed questions on household assets and liabilities, was included in 2002 and funded by the Reserve Bank of Australia. This was the first survey-based study in over 30 years to directly measure household wealth and its components in

Australia. Accordingly, this study is restricted to a cross-sectional investigation. An overview of the wealth data is presented in Heady *et al*. (2005).

The unit of analysis is the household given that the majority of questions regarding assets were asked at the household level. Any reference to age, education and so forth refers to the major income earner within the household, called the reference person. Accordingly, following Zhang (2003), an immigrant household is one where the major (gross annual) income recipient is foreign-born. In order to account for household size, wealth is transformed using an adult equivalence scale of the square root of the number of individuals residing within the household. This approach "lies in the middle of the range" of possible equivalence scales (Barrett *et al*., 2000).

From the 7,245 responding households, 4,669 have complete information. This sample consists of 3,567 (76.4 per cent) Australian-born households and 1,102 (23.6 per cent) immigrant households, which is consistent with the proportion of migrants and natives in the Australian population. A probit model of those with missing wealth confirms that, controlling for other factors, migrants are no more likely than Australian-born households to have incomplete wealth information (Table A1).

Figures 1 to 3 present kernel density estimates of equivalent wealth, home equity and income for Australian and foreign-born households.[1] The Kolmogorov-Smirnov test, which measures whether the largest vertical difference between the two cumulative distributions is statistically

[1] For a summary of the technique, see Pagan and Ullah (1999).

significant, is used to test for the affinity of densities.[2] The distributions are censored at the 1st and 95th percentiles to provide a clearer visual representation of the densities, although the analysis covers the whole distribution.

Figure 1 demonstrates that the shape of the two wealth distributions are both highly skewed with mean net worth almost double the median (Table A2 provides means and various percentiles of equivalent wealth, assets and debts, home equity and household income). The densities appear similar and the Kolmogorov-Smirnov test confirms this, with a p-value of 0.80. Given the closeness of the two wealth distributions, the notable disparity in the home equity distributions is surprising (Figure 2). In contrast to total wealth, there are a higher proportion of immigrant families at the top-tail of the distribution suggesting that migrants hold a significantly larger proportion of wealth in housing (p-value equals 0.01).[3]

The income distribution (including both labour and non-labour income), shown in Figure 3, is much less skewed than wealth, as expected. The native-born distribution has a lower density at lower income levels and higher density at higher levels, suggesting greater earnings for Australian-born households. However, the test indicates that the two income distributions are equal (p-value equals 0.11), but this result could reflect the test having low power in the tails.

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[2] The densities presented do not incorporate weights, although a check of the densities using population weights produced a negligible difference.

[3] Home equity is defined as home value less home debt (mortgage and other home loans) and is the largest component of household wealth on average.

Given the findings on immigrant earnings gaps, this result may seem surprising although it might reflect different characteristics between the two groups.

While the broad native and immigrant distributions are revealing, they conceal disparities in migrant performance based on length of time in Australia. Figure 4 illustrates the disparities in equivalent wealth as a function of time since arrival. Migrants are divided into four groups—5 or less years in Australia (94 observations), 6-15 years in Australia (n=219), 16-25 years (n=179) and over 25 years in Australia (n=610)—and compared to the 3,567 Australian born households.[4] With the evidence of immigrant catch-up over time in the labour market, an interesting question is whether immigrants are also able to close a wealth gap over time.

Figure 4 provides evidence of catch-up. There are few recent immigrants at the top end of the distribution and a significant proportion close to zero; the position is quite different after 25 years in Australia. Indeed, both the median, mean, 10^{th} and 90^{th} percentile net worth increase with time since arrival and is higher than the wealth of Australian-born households after 25 years. This could be an indication of catch-up or less discrimination in labour, asset or credit markets over time. In all cases, we reject equality of distributions using the Kolmogorov-Smirnov test, where the rejection in the last case comes from immigrants having greater wealth than natives. These results confirm that despite the equality in wealth for immigrant and Australian households overall, there are differences depending on time since arrival.

[4] Justification for this division is discussed later in the paper.

IV Determinants of Wealth

(i) Model

One obstacle to modelling wealth is the non-normality of its distribution. The typical approach is to take the natural logarithm of wealth, and therefore either exclude negative and zero observations or set these to an arbitrarily small value, such as $1. Although the logarithmic transformation diminishes the effects of very large values of wealth, it also exaggerates small values and so is not a robust procedure (Walker, 2000). Some studies use complex transformations, such as Shamsuddin and DeVoretz (1998), which exclude all families with net worth less than $3,500. Meanwhile, Cobb-Clark and Hildebrand (2003) take an inverse hyperbolic sine transformation, which approximates the negative log of the distribution for negative values. However, these procedures might affect the comparison of subgroups. For example, the exclusions could result in a different selection from the population of immigrants and native-born households, and thus affect inference. Accordingly, in this study no transformation of wealth is made.

To characterise the entire conditional wealth distribution we employ the simultaneous quantile regression estimator introduced by Koenker and Bassett (1978). This estimator enables inference to be drawn where, for instance, a nativity wealth gap exists only at the bottom of the distribution. OLS, which simply estimates the conditional mean, may not adequately capture such effects. A further advantage of the technique, particularly under non-normal errors, is that no distributional assumptions are required so the method is robust to extreme observations in the dependent variable. Moreover, the estimator is consistent and asymptotically normal (Buchinsky, 1998).

In order to estimate the nativity wealth gap at the q^{th} quantile we estimate

$$W_i = X_i\beta^q + I_i\delta^q + \varepsilon_i^q \qquad (1)$$

assuming $Q^q(\varepsilon^q|\ I_i, X_i) = 0$, where W_i is the equivalent wealth level of the i^{th} household, X_i is a vector of characteristics describing the lifecycle stage of the reference person i, I_i is a dummy variable that equals one if the reference person in the i^{th} household is an immigrant and zero if Australian born, ε_i is the error term and $Q^q(\cdot)$ denotes the q^{th} conditional quantile. The coefficient δ^q is interpreted as the estimated conditional nativity wealth gap at the q^{th} quantile controlling for other factors through the inclusion of X_i.

(ii) Variables

The dependent variable is household equivalent wealth. The equivalence procedure provides an estimate controlling for household composition and is the standard method of accounting for different household sizes. This is particularly important if immigrant and native-born families are of different size. The variable definitions and sub-sample means are presented in Table 1.

We model wealth in two stages. First, a simple model specification is estimated, drawing on factors that describe the life-cycle stage of the family and thus directly influence savings behaviour (Model 1). Age is modelled as a quadratic to reflect accumulation and dissipation of wealth over the lifecycle. Couples are expected to accumulate greater wealth than singles (Schmidt and Sevak, 2004), and the presence of children, whether dependent or not, will also alter savings motives—perhaps to save for children's education or a bequeath motive. Although using an equivalised scale should correct for economies of scale based on household size, it is unlikely to control for all effects of household composition.

The density estimates indicate that time since arrival has a significant impact on wealth accumulation, although it is unclear whether the effect is linear or diminishes over time. Theory provides no suggestion regarding specification, so consistent with the literature the variable (set to zero for the native born) is estimated linearly.

Migrants may remit funds to their home country and so are more likely to under-report wealth. A dummy variable for whether a migrant has a parent living in the same household is included as a proxy for the absence of overseas remittances.[5]

Ethnicity may affect wealth through channels such as attitudes to risk and saving and discrimination. When we controlled for country of origin, a proxy for ethnicity for the migrant subgroup, it had no significant impact on wealth.[6] While this may be surprising, it is consistent with Carroll *et al*.'s (1994) and Gibson and Scobie's (2004) results for Canada and New Zealand respectively. Accordingly, the country of origin variable is not included.

A further model is estimated with variables the human-capital literature predicts are important explanators of labour income differentials, and thus wealth differentials (Model 2), along with the life-cycle variables described above. This includes educational attainment, including whether a migrant has an Australian qualification, and labour market experience—specifically, current labour market status and years spent in and out of the labour market (as a quadratic). English

[5] This refers to the reference person's own parent and not the partner's parent.

[6] Results available upon request.

proficiency (both a self-reported measure and the interviewer's opinion of a respondent's language difficulties), gender, health and locality are also all likely to be important explanators of wealth differentials (Richardson *et al.*, 2004; Deere and Doss, 2006; Wenzlow *et al.*, 2004).

Life-cycle theory suggests that households base savings and consumption decisions on permanent income. However, including permanent income may cause an endogeneity problem, as wealth generates income, rendering an instrument necessary. While food and rent expenditure, measuring non-durable consumption and provided in HILDA, could act as an instrument, this is left for future work.

For most variables, we assume that the impact on wealth will be the same across the migrant and Australian-born groups. To confirm this, interactions for each variable were added to Model 2, but the vast majority were highly insignificant. Only the age interaction was significant at the top tail of the distribution. However, age is highly correlated with time since arrival (ρ=0.65) and when included in Model 2 (without the other interactions), was imprecisely estimated throughout the distribution. Moreover, the inclusion of this variable resulted in enormous standard errors on the migrant dummy, while the coefficient estimates were largely unchanged.

(iii) Nativity Wealth Gap

Table 2 presents the coefficients estimates for migrant status (δ) and time since arrival from the two models estimated at the 10th to 90th percentile, along with the unconditional wealth gap. A robust measure of the mean is included for comparison, calculated by performing OLS on a 2.5

per cent winsorised sample of equivalent wealth (Angrist and Krueger, 1999).[7] Consistent with the density estimates presented earlier, at no point on the distribution is there a significant raw wealth gap between migrant and Australian-born households. Once life-cycle factors are controlled for, however, an Australian-born household clearly accumulates significantly greater wealth at each quantile, becoming larger in magnitude as we move up the distribution. This is amplified once human-capital factors are added (except at the 90th percentile), with the median migrant household accumulating $72,470 less equivalent wealth than an Australian-born household.

Using the estimated variance-covariance matrix, we can test the equality of nativity wealth gaps along the distribution. With an F-statistic of 6.56 and 5.74 in Model 1 and Model 2 respectively, each with an associated p-value close to 0.00, the equality of gaps throughout the whole distribution is strongly rejected. A further key result in Table 2 is that the conditional mean wealth gap, estimated via OLS using the winsorised sample, is a poor representative of the distribution, lying at or near the top of the distribution. Furthermore, the OLS confidence intervals fail to capture the lower end of the distribution.

While the negative coefficient on the migrant dummy presents a rather pessimistic view of migrant performance, the positive and generally significant time since arrival variable suggests a narrowing of the wealth gap. Yet Borjas (1994, 1999) suggests this result is ambiguous, as it may reflect either greater assimilation or a decline in relative skills across successive migrant cohorts.

[7] OLS was a poor representative of the distribution, generally overestimating the magnitude of the wealth gap. For example, the mean raw nativity wealth gap was 12.91 and insignificant. This exceeds each quantile estimate.

If ability and skills have declined, recent immigrants are likely to earn less than earlier cohorts and therefore a positive coefficient would not reflect wealth convergence. This explanation seems to fit the U.S. experience, as a change in ethnic mix in the post-war era resulted in a decline in skills. In Australia, the opposite has occurred—policy changes have led to a greater proportion of skilled migrants (Withers, 1987). Consequently, interpreting the positive coefficient as reflecting the presence of assimilation is more compelling. Note, that once human capital factors are included, the coefficient on time since arrival is insignificant for the 80^{th} and 90^{th} percentiles, implying that these factors are able to explain part of the wealth gap at the top-tail of the distribution.

While not the focus of this study, some notable findings relating to the other coefficient estimates include the insignificance of English fluency and proficiency, both jointly and individually, and the significant impact on wealth accumulation of an Australian qualification for migrants at all but the top-tail of the distribution. The imprecise estimation at the top-tail points to overseas credentials being more highly regarded for high net worth individuals. The estimation results for the full model are provided in Table A3. Other results are available upon request.

(iv) Cohort Effects

While we established that migrants accumulate less wealth than their Australian-born counterparts throughout the entire distribution, this does not distinguish between those migrants entering Australia under different policies or economic conditions. Following Zhang (2003), the previous models are re-estimated, replacing the immigrant status and time since arrival variables with three cohort dummies—5 or less years in Australia, 6-25 years in Australia (arriving between 1977 and 1996), and over 25 years in Australia. Each dummy corresponds to a change in

policy with a growing emphasis on skills. From 1977 immigration policy began to focus on the quality of immigrants and strengthened considerably in 1997 (DIMA, 2001). Consequently, from a policy perspective, the performance of the separate cohorts will be of interest. However, without explicit data on the visa categories in which migrants entered, only broad conclusions on the impact of policy on wealth can be drawn.

Figure 5 presents the cohort dummy coefficients for the full model, and is interpreted as the wealth gap between a typical Australian-born household and an average immigrant family from that cohort. Once life-cycle and human-capital factors are controlled for, the wealth gaps are negative for all cohorts at all points of the distribution, in contrast to the positive wealth gap for the earliest cohorts shown in the density estimates of Figure 4. While the confidence intervals are not shown here, the wealth differentials are significant for each cohort at all but the top-tail of the distribution for the earliest and most recent migrant cohorts. Note that, once human capital factors were added to the life-cycle factors, the cohort wealth gaps grew in magnitude.

The distribution of the wealth gap for the 6-25 year cohort appears most dissimilar from the other two distributions, where the gap continues to widen along the distribution, in contrast to the peak that occurs around the median for the earliest and most recent cohorts. While the dataset does not distinguish between visa categories, we can surmise that the greater emphasis on skilled and business migrants after 1997 is a factor in the relatively superior wealth position for high net worth households in the most recent cohort. Wave 4 of the HILDA survey will include detailed questions regarding immigration streams, and so the impact of immigration policy on wealth accumulation can be tested in future work.

In the lower half of the distribution, the pattern is more straightforward, with those living in Australia the longest being the most successful in closing the wealth gap, followed by the 6-25 year group; the most recent migrants exhibit the largest wealth gap. However, tests for equality of all three cohort wealth gaps at each quantile show that they are generally equal at the 5 per cent significance level.

Overall, the differing unconditional and conditional wealth effects suggest that migrants have distinct characteristics from Australian-born households. To illustrate how these characteristics influence wealth accumulation, an Australian-born is given the characteristics of a typical migrant from a particular cohort, and these characteristics are then used to predict wealth for an Australian-born household. In order to generate the 'typical' individual at a specific quantile, the method of Arulampalam *et al*. (2004) and Machado and Mata (2005) is followed. First, a random sample of 10 households is drawn, with replacement, from a particular cohort of interest. These are then sorted by wealth in order to obtain an observation for each decile. We repeat this 500 times and then take the average of each characteristic at the appropriate quantile. Finally, these are used to predict wealth, using the coefficient estimates from Model 2. The predicted values can be interpreted as the estimated wealth of a particular cohort, if the cohort wealth gap did not exist.

This procedure was performed for each cohort and the Australian-born sample. Figure 6 presents the results. The earliest migrant cohort has the most wealth-inducing characteristics. Interestingly, if the migrant wealth gap did not exist, the middle cohort would be predicted to accumulate more wealth than the most recent cohort throughout the entire distribution. Compared to the typical Australian's predicted wealth, the most recent cohort and those in the middle cohort in the 40^{th} to 90^{th} quantiles have generally less wealth inducing characteristics.

The substantial difference between the unconditional and conditional nativity wealth distributions, where the latter displays a significant wealth gap, can thus be reconciled through the superior wealth-inducing characteristics of migrants arriving in Australia prior to 1977 at all wealth levels, and those arriving between 1977 and 1997 at the lower part of the distribution. The results suggest that migrants accumulate greater wealth partly through age, an important wealth-inducing characteristic, and importantly through the accumulation of human-capital, particularly the advancement of skills in Australia through both labour market experience and education. This indicates that acquiring country-specific human capital is important for many, and in this way, migrants are able to catch-up in wealth.

(v) Second Generation Migrants

The above analysis confirms that once life cycle and human capital determinants are accounted for, migrants accumulate less wealth than their Australian-born counterparts. Is this the case for second-generation migrants, that is, Australians born to foreign parents? Or, do the wealth of this group mirror their Australian born counterparts? We briefly analyse this section of society, which comprise 24.6 per cent of our sample of Australian-born households.

Chiswick (1977), Carliner (1980), and Rooth and Ekberg (2003) discuss in detail the reasons why foreign parentage may influence labour market outcomes. Being raised in a household less familiar with the local labour market, discrimination—particularly contingent on ethnicity—and lower motivation compared to immigrant parents, along with superior country-specific human capital, have all been proposed to explain earnings differentials between children of immigrants and natives. It is likely that these factors will affect wealth accumulation behaviour as well.

Despite the rationale as to differences between Australian-born and second-generation households, the density estimates in Figure 7 demonstrate that few differences in wealth exist based on foreign parentage, particularly at the tails. The Kolmogorov-Smirnov test fails to reject equality between the wealth distribution of second-generation and Australian-born households, with a p-value of 0.286, and between 1st generation migrants with p-value 0.275.

Moreover, a dummy variable equal to one if the reference person is a second-generation migrant, and zero otherwise, is added to the full model (Model 3). This additional variable is imprecisely estimated at all points on the distribution (indicating that being an Australian with a foreign-parent has no systematic impact on wealth) while the migrant dummy remains significant. Consequently, the wealth gaps that migrants experience may not be mirrored in their children's asset and labour market outcomes. This result corroborates Chiswick and Miller's (1985) analysis of the experience of immigrant generations in the Australian labour market.

V Conclusion

This paper explores the existence and magnitude of a nativity wealth gap in Australia, using the 2002 HILDA survey. It is the first study to conduct a comparative analysis of wealth between different groups in Australian society. By exploring assimilation from a wealth perspective, rather than that of labour-market performance, a more comprehensive indication of migrants' settlement success is provided.

While this study finds that immigrants accumulate less wealth than their Australian-born counterparts throughout the entire distribution, there is evidence of catch-up. Through greater

time in Australia and accumulation of human capital, the disadvantaged wealth position of immigrants appears to recede. A further encouraging finding is that children of immigrants appear to experience no discrimination in relation to wealth accumulation.

Finally, this paper found that the nativity wealth gap generally grows throughout the distribution. Only in the top-tail is there some evidence that the wealthiest migrants are able to accumulate comparable wealth to their Australian-born counterparts. Furthermore, it is noteworthy that those at the top-half of the distribution in the most recent migrant cohort perform relatively well. Each of these migrants were subject to the most recent changes to immigration policy, including the greater focus on skills and restricted access to welfare in the first two years upon arrival. Accordingly, the policy changes may have induced migrants with initial higher net worth following arrival, or those capable of eliminating any wealth gap in a short space of time, to self-select to move to Australia.

A notable limitation to this study is the use of cross-section data, which prevents an adequate separation of assimilation effects from cohort effects. Panel data would make possible this distinction, offering a richer picture of immigrant performance in the host country. Fortunately, Wave 6 of the HILDA survey will include another wealth module, facilitating a longitudinal study of wealth dynamics.

Figure 1

Distribution of Household Equivalent Wealth

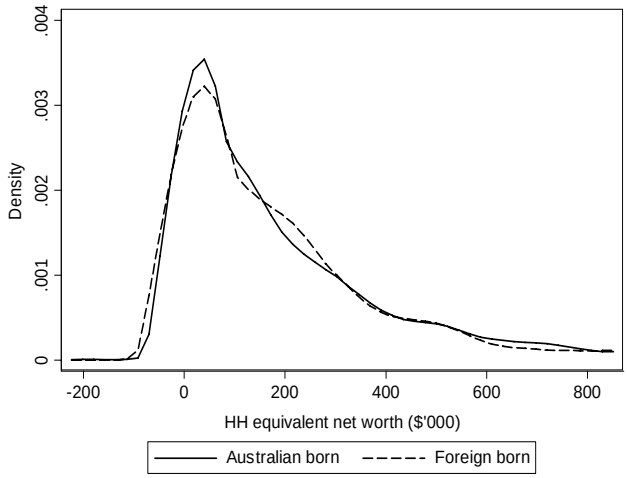


Figure 2

Distribution of Household Equivalent Home Equity

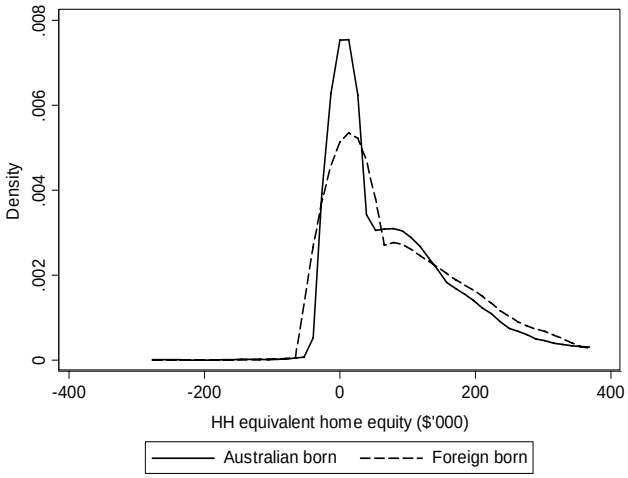


Figure 3

Distribution of Household Equivalent Gross Income

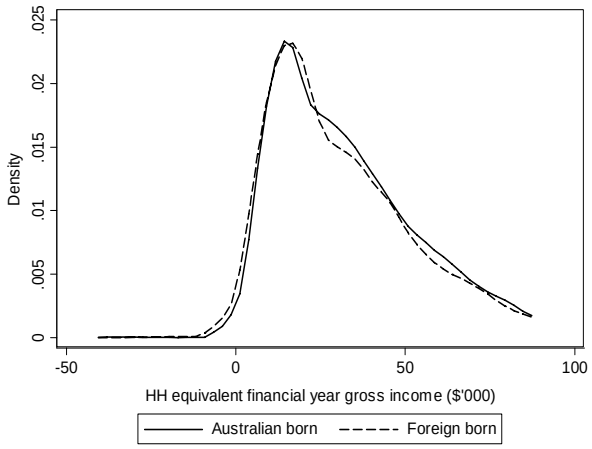


Figure 4

Distribution of Household Equivalent Wealth Given Time since Arrival

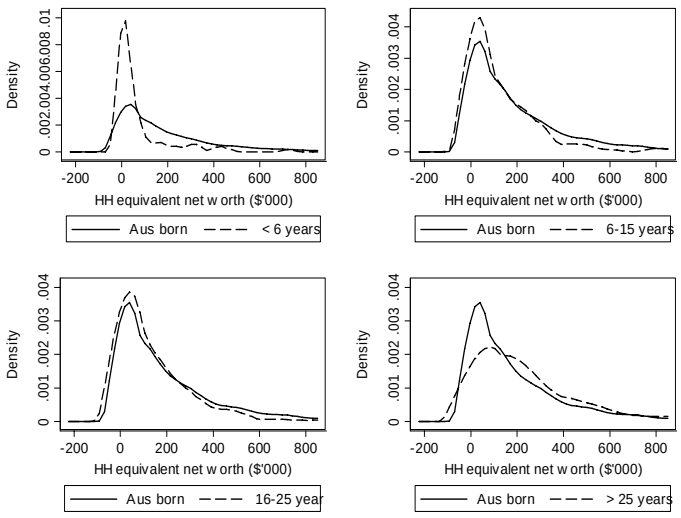


Table 1

Variable Definitions and Sub-Sample Means

Variable	Definition	Australian Born n=3567	Foreign Born n=1102
Dependent Variable			
Wealth	Adult equivalent wealth	236.06 (379.15)	248.97 (477.06)
Model 1			
Migrant	1 if foreign born	0.00	1.00
Yearaus	Years in Australia	-	27.71 (16.14)
Age	Age of reference person in years	46.21 (16.92)	50.31 (16.43)
Couple Kids	1 if couple with kids	0.26	0.32
Couple No Kids	1 if couple without kids	0.28	0.29
Lone Parent	1 if a lone parent	0.10	0.08
Lone Person	1 if single and no kids	0.35	0.31
Kids	No. of children (dependent and non-dependent)	1.78 (1.59)	1.81 (1.48)
Parent At Home	1 if migrant and parent lives in household	-	0.01
Model 2			
Tert	1 if university or graduate diploma	0.20	0.26
Trade	1 if trade qualification	0.39	0.37
Highschool	1 if no higher education	0.40	0.36
Ausqual	1 if has an Australian qualification	0.99	0.48
Employyears	Years in employment	22.49 (13.98)	25.24 (14.11)
Unemployyears	Years in unemployment	0.65 (1.98)	0.62 (2.38)
Employ	1 if employed	0.67	0.60
Unmploy	1 if unemployed	0.04	0.03
Nilf	1 if not in the labour force	0.29	0.37
Gender	1 if female	0.41	0.38
English	1 if proficient in English (self reported)	1.00	0.84
Language Difficulty	1 if language difficulty (interviewer reported)	0.00	0.11
Health	1 if has a long-term illness or disability	0.24	0.25
Region	1 if living in a remote area	0.16	0.08
Model 3			
Migrant Parent	1 if Australian born has migrant parent	0.25	-

Note: Standard deviations are in brackets for continuous variables.

Table 2

The Nativity Wealth Gap and Time Since Arrival Coefficient Estimates

	Migrant			Time Since Arrival	
	Unconditional	Model 1	Model 2	Model 1	Model 2
Mean	-3.35	-92.43***	-105.32***	1.92***	1.81***
	(9.13)	(15.26)	(16.57)	(0.47)	(0.48)
10th	0.22	-16.06***	-22.41***	0.31**	0.36**
	(0.56)	(3.62)	(4.11)	(0.12)	(0.16)
20th	-2.40	-43.03***	-50.70***	1.10***	0.89***
	(2.44)	(6.18)	(5.94)	(0.26)	(0.25)
30th	-4.36	-45.36***	-70.03***	1.31***	1.24***
	(5.32)	(7.49)	(9.39)	(0.27)	(0.32)
40th	-5.10	-52.18***	-67.64***	1.27***	1.11***
	(6.60)	(7.43)	(11.28)	(0.29)	(0.41)
50th	9.60	-63.35***	-72.47***	1.50***	1.02**
	(8.43)	(8.75)	(10.33)	(0.37)	(0.42)
60th	8.26	-66.13***	-85.31***	1.20***	1.07**
	(7.81)	(11.84)	(11.29)	(0.44)	(0.44)
70th	-3.76	-70.16***	-85.40***	1.20*	1.27**
	(11.74)	(16.03)	(16.24)	(0.70)	(0.60)
80th	-20.44	-88.33***	-93.00***	1.94**	1.33
	(19.23)	(19.15)	(21.88)	(0.81)	(0.85)
90th	-37.05	-96.07***	-83.51**	2.08	1.01
	(24.59)	(27.82)	(39.09)	(1.47)	(1.58)
N	4669	4669	4620[d]		

Notes: a. Standard errors in parenthesis; obtained using 200 bootstrap repetitions
b. *** significant at 1% level, ** significant at 5% level, * significant at 10% level
c. Additional variables used in Model 1 and Model 2 are described in Table 1 and full estimation results are available in Appendix.
d. The experience variables have 49 missing observations.

Figure 5

Quantile Regression Estimates for Cohort Effects in Model 2

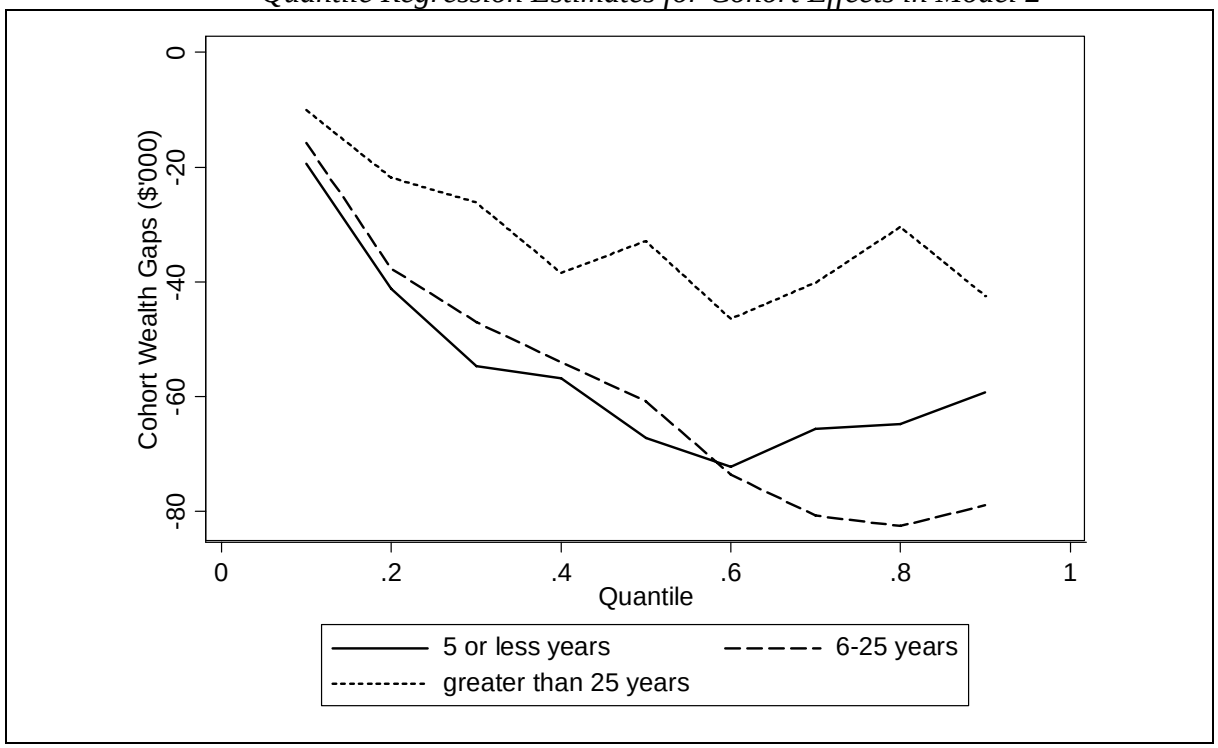


Figure 6
Counterfactual Predicted Equivalent Wealth for Migrant Cohorts

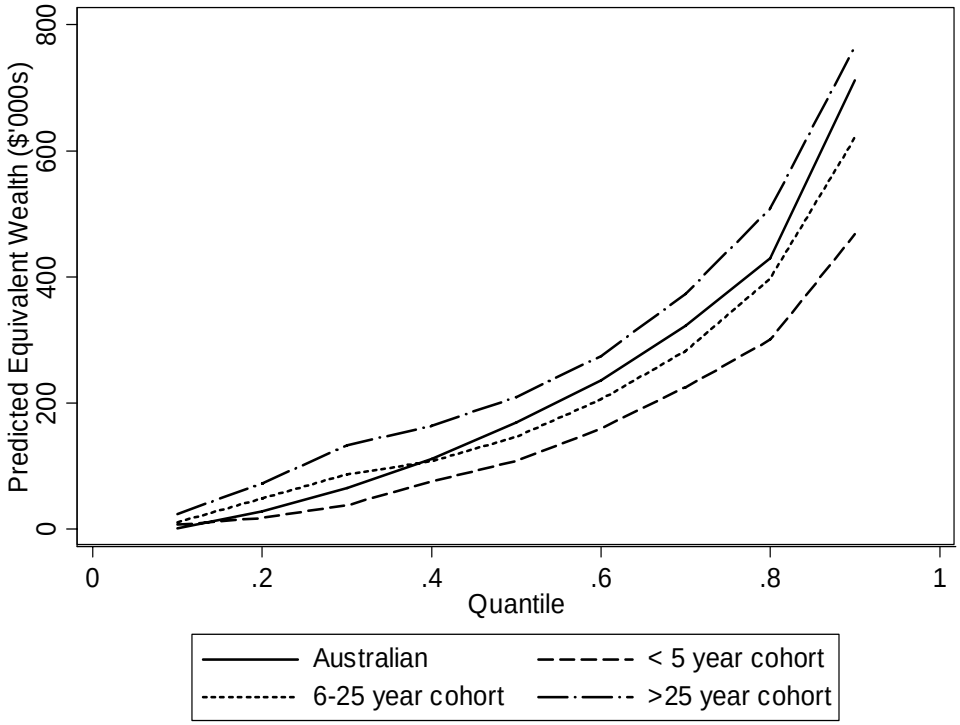
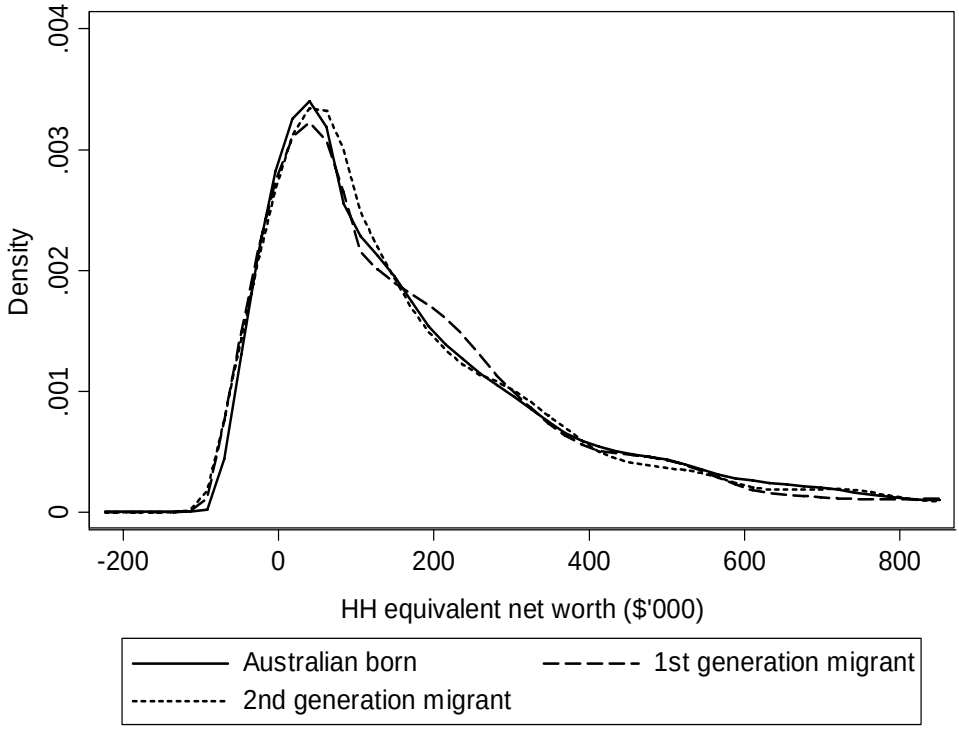


Figure 7
Distribution of Household Equivalent Wealth by Migrant Generation



Appendices

Table A1
Probit Estimates for Missing Wealth

	Coefficient	**Standard Error**[a]
< 5 Years	0.067	0.113
6-25 Years	0.059	0.066
> 25 Years	-0.083	0.066
Age	0.015	0.008*
Age Squared	0.000	0.000
Couple Nokids	0.184	0.043***
Couple Kids	0.613	0.047***
Lone Parent	0.313	0.061***
Kids	-0.036	0.012***
Parent At Home	0.830	0.246***
Tert	-0.142	0.044***
Othertert	-0.063	0.036*
Ausqual*Migrant	0.073	0.068
Employyears	-0.025	0.005***
$Employyears^2$	0.000	0.000***
Unemployyears	-0.031	0.013**
$Unemployyears^2$	0.000	0.001
Employ	0.139	0.049***
Unmploy	0.002	0.102
Gender	0.182	0.037***
English	0.014	0.103
Language Difficulty	0.165	0.115
Health	0.032	0.040
Region	0.029	0.045
Constant	-1.030	0.195***
Pseudo R^2	0.031	
Observations	7160	

a. *** significant at 1% level, ** significant at 5% level, * significant at 10% level

Table A2
Descriptive Statistics by Migrant Status

			Percentile		
	n	Mean ($)	Median 50th ($)	10th ($)	90th ($)
Australian-born	3567				
Net Worth		236,064	123,020	1,545	560,006
Assets		277,112	166,702	4,690	633,692
Debts		39,589	5,657	0	112,627
Home Equity		95,921	55,000	0	247,487
Income		35,656	28,995	10,862	68,003
Foreign-born	1102				
Net Worth		248,970	131,152	1,720	524,372
Assets		287,581	168,487	4,332	612,469
Debts		41,063	4,021	0	119,784
Home Equity		111,394	65,176	0	282,842
Income		35,802	28,065	10,869	70,550

Table A3

Quantile Regression Coefficients for Model 2 (Dependent Variable: Equivalent Wealth)

	Mean	**10th**	**20th**	**30th**	**40th**	**50th**	**60th**	**70th**	**80th**	**90th**
Migrant	-105.32***	-22.41***	-50.70***	-70.03***	-67.64***	-72.47***	-85.31***	-85.40***	-93.00***	-83.51**
	(16.57)	(4.11)	(5.94)	(9.39)	(11.28)	(10.33)	(11.29)	(16.24)	(21.88)	(39.09)
Yearaus	1.81***	0.36**	0.89***	1.24***	1.11***	1.02**	1.07**	1.27**	1.33	1.01
	(0.48)	(0.16)	(0.25)	(0.32)	(0.41)	(0.42)	(0.44)	(0.60)	(0.85)	(1.58)
Age	24.51***	3.10***	6.50***	7.86***	10.59***	12.54***	14.31***	19.55***	21.32***	36.30***
	(1.79)	(0.47)	(0.77)	(0.96)	(1.18)	(1.30)	(1.66)	(2.38)	(3.27)	(5.96)
Age Squared	-0.19***	-0.02***	-0.05***	-0.06***	-0.08***	-0.09***	-0.10***	-0.15***	-0.16***	-0.28***
	(0.02)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.03)	(0.05)
Couple Nokids	71.42***	22.39***	37.60***	41.77***	42.84***	45.51***	51.36***	45.64***	65.04***	139.72***
	(8.91)	(3.57)	(4.26)	(4.69)	(6.51)	(6.75)	(9.36)	(12.21)	(21.20)	(41.89)
Couple Kids	16.72	20.94***	33.05***	37.77***	34.41***	34.02***	23.47**	13.93	4.59	16.43
	(10.22)	(3.60)	(4.16)	(5.17)	(6.55)	(7.20)	(9.17)	(10.73)	(13.47)	(24.61)
Lone Parent	-29.75**	4.24	3.12	3.30	-3.85	-5.21	-9.12	-26.11*	-25.96	-12.29
	(13.43)	(3.64)	(4.33)	(5.80)	(7.53)	(9.04)	(10.15)	(13.58)	(18.44)	(27.11)
Kids	-13.76***	-2.26**	-5.14***	-7.00***	-9.69***	-11.59***	-12.29***	-16.04***	-17.41***	-33.64***
	(2.70)	(1.04)	(1.30)	(1.58)	(1.95)	(2.36)	(2.56)	(3.50)	(4.57)	(6.54)
Parent At Home	-7.92	7.15	13.75	-2.16	15.41	54.16	21.84	-32.32	-9.91	-26.09
	(81.11)	(18.68)	(22.39)	(40.42)	(48.03)	(50.87)	(46.44)	(47.71)	(68.00)	(95.47)
Tert	126.17***	14.88***	31.27***	45.24***	53.94***	66.08***	91.12***	137.98***	179.09***	193.22***
	(9.56)	(3.62)	(4.30)	(5.50)	(7.14)	(8.03)	(13.01)	(16.90)	(18.73)	(34.83)
Othertert	46.73***	3.61*	8.14***	13.13***	14.62***	19.60***	28.84***	37.53***	48.11***	48.19***
	(7.87)	(2.17)	(3.15)	(3.80)	(4.72)	(4.87)	(5.79)	(7.53)	(11.14)	(17.49)
Ausqual*Migrant	22.94	9.07**	16.04**	18.22**	22.74**	30.65***	37.98***	28.62*	25.84	19.54
	(15.00)	(4.29)	(6.74)	(8.59)	(11.05)	(11.28)	(11.94)	(16.72)	(22.41)	(34.68)
Employyears	-1.38	0.23	-0.17	0.15	0.02	-0.54	-0.21	-0.66	-0.71	-9.54**
	(1.24)	(0.32)	(0.56)	(0.64)	(0.82)	(0.88)	(1.08)	(1.63)	(2.30)	(4.56)
$Employyears^2$	0.07***	0.00	0.03**	0.03**	0.04**	0.06***	0.06***	0.09***	0.11***	0.35***
	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.03)	(0.04)	(0.09)
Unemployyears	-23.37***	-4.85***	-6.73***	-8.11***	-11.27***	-12.71***	-16.06***	-20.16***	-20.36***	-25.82***
	(2.63)	(1.03)	(1.12)	(1.73)	(2.00)	(2.04)	(2.42)	(2.97)	(3.84)	(5.04)
$Unemployyears^2$	0.53***	0.15**	0.18**	0.21*	0.28**	0.34***	0.42***	0.51***	0.44*	0.48*
	(0.10)	(0.06)	(0.08)	(0.11)	(0.13)	(0.13)	(0.16)	(0.19)	(0.25)	(0.28)
Employ	31.85***	15.31***	18.74***	23.48***	26.06***	32.19***	28.94***	23.23**	18.23	30.45
	(10.69)	(4.00)	(5.28)	(5.09)	(6.54)	(7.40)	(8.51)	(11.17)	(15.87)	(26.16)
Unmploy	28.68	15.81***	17.94***	19.25***	20.84***	23.60***	26.60***	27.46**	31.63	40.66
	(20.84)	(4.84)	(5.77)	(6.89)	(8.00)	(8.64)	(9.77)	(12.87)	(19.80)	(27.82)
Gender	-7.01	0.22	2.20	0.47	0.04	-1.30	-6.66	-0.62	-6.19	-19.35
	(8.09)	(2.47)	(3.42)	(4.45)	(5.26)	(5.49)	(6.87)	(9.43)	(11.34)	(18.82)
English	23.00	7.04	4.66	-1.66	-3.23	-17.73	-18.32	2.77	-3.03	60.88
	(24.41)	(8.90)	(9.94)	(16.76)	(19.61)	(19.03)	(18.75)	(24.70)	(27.25)	(37.80)
Language Difficulty	-23.4	5.66	0.97	7.59	-10.35	-28.09	-17.29	-14.16	-34.36	-11.54
	(28.10)	(9.96)	(10.45)	(17.16)	(20.49)	(22.27)	(22.05)	(25.95)	(33.33)	(42.15)
Health	-47.37***	-11.17***	-17.66***	-21.78***	-23.64***	-29.54***	-37.58***	-44.18***	-58.80***	-73.30***
	(8.59)	(3.02)	(3.36)	(4.59)	(5.24)	(5.67)	(6.20)	(8.68)	(13.01)	(20.29)
Region	-22.93**	-1.52	-10.16**	-15.65***	-16.93***	-17.27***	-22.85***	-13.49	-13.72	-17.42
	(9.73)	(2.86)	(4.36)	(4.37)	(5.31)	(6.30)	(7.70)	(10.12)	(12.28)	(19.63)
Constant	-520.19***	-100.51***	-167.86***	-190.19***	-230.54***	-247.45***	-260.04***	-355.60***	-353.09***	-603.16***
	(43.92)	(15.85)	(20.58)	(24.99)	(29.17)	(31.05)	(36.18)	(49.64)	(59.53)	(107.31)
Pseudo R^2	0.27	0.03	0.08	0.12	0.14	0.15	0.16	0.16	0.18	0.18
Observations	4620									

Notes: a. Standard errors in parenthesis; obtained using 200 bootstrap repetitions

b. *** significant at 1% level, ** significant at 5% level, * significant at 10% level

c. Base person is Australian born, male, lone person, high school education, not in the labour force, not fluent in English but no language difficulty, no long-term illness, and lives in a metropolitan or inner- regional area.

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