

A Comparative Analysis of the Nativity Wealth Gap*

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Abstract. This paper investigates the sources of disparities in the relative wealth position of immigrant households residing in Australia, Germany and the US. Our results indicate that wealth differentials are largely the result of disparity in the education level and demographic composition of the native and immigrant populations, while income differentials play a role that is relatively minor and concentrated in the bottom half of the wealth distribution. Moreover, our estimates reveal that the relatively small wealth gap between Australian-born and foreign-born households is not explained by the distribution of immigrants' characteristics.

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1 Introduction

The economic and social consequences of population aging are being debated in many countries worldwide. In the coming decades, many countries will experience a dramatic expansion in the proportion of the population over the age of 65 alongside a constant, or in some countries even declining, workforce-age population.¹ The anticipated fiscal pressure from the increased demand for old-age pensions and health care – in the face of a more or less constant tax base – have left governments contemplating their policy options, including the potential role of increased immigration. While experts agree that immigration alone cannot provide a long-term, permanent solution to the effects of population aging (see, for example, Visco (2001) and Holzmann (2005)), even in the short term the power of large-scale immigration to mitigate the fiscal effects of population aging is limited by the extent to which immigrants accumulate wealth and achieve economic security in the same way as natives.

In particular, immigrant populations also age. This aging process depends not only on birth and death rates within the foreign-born population and the speed with which these rates assimilate to the respective fertility and mortality rates of natives, but also on past and future policy decisions regarding the size and composition of immigrant cohorts. In Australia, for example, the foreign-born population is currently aging more rapidly than the native-born population, while in Germany and the United States immigrants are as likely as the native-born to be over the age of 55.² Thus, like their native-born counterparts, substantial numbers of immigrants are also at (or near) retirement age. Unfortunately, we know very little about immigrants' capacity to provide for themselves in old age, although there are reasons to believe that both wealth levels and portfolio allocations depend on nativity (see Amuedo-Dorantes and Pozo (2002); Cobb-Clark and Hildebrand (2006a, 2006b)).

This paper contributes to filling this void by analyzing the wealth gap between immigrant and native households in Australia, Germany and the United States. To this end, we take advantage of recent data collections in each of these countries that provide a unique opportunity to assess the wealth position of immigrant households. Differences in survey design and coverage will prevent us from directly comparing wealth levels across countries, however, following on studies of cross-national differences in the gender wage gap (Blau and Kahn 1992), we will assess how the nativity wealth gap differs across countries. We are particularly interested in addressing the following questions: First, how does household net worth vary by nativity status,

¹See for example, Gruber and Wise (2001) and Visco (2001).

²Fully 14.6 percent of the foreign-born population is between the ages of 55-64 in comparison to 7.9 percent of the Australian-born population. In effect, 35.7 percent of Australians aged 55-64 years old are foreign-born in comparison to 21.9 percent of the population overall (authors' calculations based on Australian Bureau of Statistics (ABS) (2003)). In Germany and the United States, the age difference between the foreign born and natives is less severe. In Germany, 12.6 percent of the foreign-born population is between 55 and 64 years old, while 12.4 percent of the German-born population is in this age range (authors' calculations based on data from the Mikrozensus 2004). In the United States, the proportion of individuals aged 55 and above is virtually identical in the foreign- (20.2 percent) and native-born (20.5 percent) populations (Schmidley 2001).

region of origin, and immigration cohort? Second, how important are factors such as income differentials, disparity in educational attainment, and demographic characteristics in producing these wealth gaps? Finally, what can we say about the role that the institutional setting might play in generating any nativity wealth gap?

These are important questions given that wealth provides the resources necessary to maintain living standards in retirement or in times of economic hardship. Moreover, wealth is a fundamental component of overall economic well-being that directly influences immigrants' ability to integrate into host-country society. Wealthier families have more political influence and live in neighborhoods with better schools, enhanced health facilities, and less crime (Gittleman and Wolff 2000, Altonji and Doraszelski 2005). At the same time, immigrants' economic well-being is almost certainly linked to the institutional setting making it difficult to generalize research findings across national boundaries.

Australia, Germany and the United States provide an interesting case study because they span the spectrum from a traditional immigration country accepting mainly permanent, skilled immigrants (Australia) to a country with a long history of accepting only temporary, predominantly unskilled workers (Germany). The results of our comparative analysis are necessarily inferential, but nonetheless provide some important insights into the ways that the institutional framework or housing markets might influence the relative wealth position of immigrant families.

Our empirical findings suggest that wealth differentials are largely the result of disparity in the education level and demographic composition of the native and immigrant populations, while income differentials play a role that is relatively minor and concentrated in the bottom half of the wealth distribution. Moreover, our estimates reveal that the relatively small wealth gap between Australian-born and foreign-born households is not explained by the distribution of immigrants' characteristics. In particular, since disparities in educational attainment and demographic characteristics serve to narrow rather than widen the wealth gap between Australian-born and foreign-born households, we would expect immigrants to Australia to have a wealth advantage if they accumulated wealth in the same way as the native-born population.

2 The Nativity Wealth Gap

Conceptually, variation in household wealth stems from differences in inherited wealth, rates of return, or savings behavior which in turn is a function of both income and consumption patterns. Thus, there are several ways in which both the wealth levels and portfolio choices of immigrants may differ on average from those of their native-born counterparts. Immigrants are usually non-representative of both the sending and receiving country populations, because disparity in the social and economic conditions in the home and the host countries leads to a self-selection amongst those who decide to migrate (Borjas 1987). Migration policy is designed to select those individuals, out of the population of potential migrants, who will be allowed enter a country. To the extent that these selection processes result in differences between natives and immigrants in terms of observable and unobservable characteristics, we would expect disparity in the wealth levels of these two popula-

tions. Moreover, given the nature of these selection processes it is likely that the nativity wealth gap will differ across receiving countries.

However, wealth levels may differ even when comparing similar native and immigrants. First, social norms in the sending country are likely to influence not only inter vivos transfers and inheritances, but also immigrants' post-migration savings behavior, asset allocation, and, consequently, rates of return. Chiteji and Stafford (1999), for example, argue that portfolio choices are influenced by a "social learning process" in which parents' decisions to hold certain kinds of assets can influence the financial choices their children make, while Dohmen, Falk, Huffman, and Sunde (2006) provide evidence that children's attitudes towards risk and trust are linked to those of their parents. Moreover, immigrants to Germany are significantly more risk averse than native-born Germans suggesting that attitudes towards risk may depend on nativity status (Bonin, Constant, Tatsiramos, and Zimmermann 2006).

Second, theoretical models suggest that relative economic conditions (including labor market risk) in receiving and sending countries interact with expectations regarding return migration to determine immigrants' savings choices (Galor and Stark 1990, Dustmann 1997). Dustmann (1997), for example, shows that whether migrants save more or less than similar natives is theoretically a function of the correlation in labor-market shocks in the two countries. In related research, Amuedo-Dorantes and Pozo (2002) find that in the U.S. increased income uncertainty has a larger positive effect on the wealth level of natives, pointing to more precautionary savings amongst native-born families. The ability to diversify portfolios across two labor markets (rather than one) may reduce immigrants' income risk leading to less need for precautionary savings.

Third, immigrants face earnings profiles that appear to differ in terms of both levels and earnings risk. A large economics literature documents that many new immigrants experience a relative earnings gap at arrival that diminishes with years since arrival. The pattern is remarkably consistent, though the magnitude of the initial earnings gap and the speed of convergence continue to be debated (Chiswick 1978, Borjas 1994). Almost nothing is known about the role of earnings uncertainty, a lack of financial information, or variation in consumption behavior in producing wealth outcomes though all would be expected to contribute to producing a nativity wealth gap.

Empirical evidence suggests that Canadians accumulate more wealth than recent immigrants to Canada, though the nativity gap disappears amongst more established immigrants (Shamsuddin and DeVoretz 1998, Carroll, Rhee, and Rhee 1994). Zhang (2002) also concludes that recent immigrants to Canada are at a relative wealth disadvantage, though he finds that the mean nativity wealth gap is not significantly different from zero for couples and is in fact positive and significant for singles. In contrast, the median net worth of U.S.-born households is approximately three times the median net worth of foreign-born households. Moreover, the extensive diversity in wealth position amongst immigrant households suggests that the process of economic and social integration in the United States has historically been very uneven (Cobb-Clark and Hildebrand 2006a).

Though the evidence is limited, nativity status is also likely to be linked to both the retirement expectations as well as the eventual retirement behavior of immi-

grants. Cobb-Clark and Stillman (2006), for example, demonstrate that relative to natives, middle-aged immigrants to Australia are more uncertain about the age at which they will retire, more likely to expect to never retire, and less likely to be formulating standard retirement plans. Some of this uncertainty may be generated by the fact that many immigrants anticipate either returning to their home country or moving frequently between the home and receiving countries after retirement (De Coulon and Wolff 2006). Thus, foreign-born status has large and direct effects on individuals' expectations regarding retirement. Whether these expectations reflect differences in the eventual retirement behavior of immigrant workers remains a question for future research.

3 Institutional Setting

The comparative nature of our analysis provides an opportunity to shed light on the ways in which a country's institutional setting might affect the nativity gap in wealth levels and portfolios allocations. Australia, Germany, and the United States provide an interesting case for studying this issue because, although each accepts large numbers of immigrants, the substantial differences in each country's domestic institutions are almost certainly related to the wealth position of immigrants.

3.1 Immigration and Settlement Policy

Australia, Germany and the United States are three countries with very different immigration histories and migration policies. Australia and the U.S. are both traditional, immigrant-receiving countries and immigration has been a cornerstone of economic, social, and cultural development. Historically, both countries favored immigration from Europe, leaving little scope for immigration from other continents. While the U.S. distributed visas based on the national origin of the foreign-born population enumerated in the 1920 U.S. census (Antecol, Cobb-Clark, and Trejo 2004), Australia followed a "White Australia Policy" by first accepting mainly immigrants from Britain and only expanding the immigration base to include migrants from other European countries after World War II. The U.S. moved away from selecting immigrants on the basis of national origin in 1965 (Briggs 1984); Australia followed in 1973 (Antecol, Cobb-Clark, and Trejo 2004).

In recent decades both countries have broadly differentiated between three types of migrants: (i) immigrants accepted on humanitarian grounds (refugees and asylum seekers); (ii) family migrants; and (iii) economic migrants. Despite the similarities in this typology, however, migration policy in Australia and the United States differs substantially in the way in which visas are allocated across these three types of migrants. The United States places more weight on the reunification of families, with relatively few visas reserved for immigrants selected on the basis of their labor market skills. In contrast, Australia has for many years placed relatively more weight on accepting economic migrants using numerical testing to judge the admissibility

of skilled immigrants since the late 1970s (Birrell 1990). In 2002, for example, 40.5 percent of all immigrants to Australia entered the country as skilled workers under the point system, while 26.3 percent entered as family migrants. In contrast, only 16.4 percent of immigrants to the United States entered as employment-based immigrants, while 63.3 percent entered either as immediate relatives of U.S. citizens or as family-sponsored migrants (Antecol, Cobb-Clark, and Trejo 2004). Relative to continental Europe, humanitarian immigration played a rather minor role in both Australia and the United States.

In contrast to these traditional immigration countries, Germany refused to consider itself an immigrant-receiving country until the late 1990s despite the fact that it had more immigration per-capita than the United States in almost all years in the post-WWII period (Schmidt and Zimmermann 1992). Germany has also had a rather ad-hoc immigration policy which – unlike Australian and U.S. policy – has centered predominantly on temporary migration. Specifically, many low-skilled workers were actively recruited from Italy, Spain, Greece, Turkey, Morocco, Portugal, Tunisia and the former Yugoslavia for the German manufacturing industry in the 1960s and early 1970s when Germany faced a shortage of low-skilled labor. Even though these workers were expected to stay only temporarily, many of them decided to stay permanently (Schmidt and Zimmermann 1992, Bauer, Dietz, Zimmermann, and Zwintz 2005). Increasing social tensions and fears of a recession following the first oil-price shock led the German government to stop active labor recruitment in 1973. Since then immigration to Germany has been almost exclusively based on family reunification and humanitarian considerations. The European political situation in the late 1980s resulted in a dramatic increase in asylum seekers, refugees and family migrants as well ethnic Germans from Eastern European countries. In the early 1990s, however, the German government reduced individuals' rights to asylum under German Constitutional Law and tightened the rules for the admission of ethnic Germans, leading to a sharp reduction of migrant inflows (Bauer, Larsen, and Matthiessen 2004).

In response to an increased demand for high-skilled labor, Australia Germany and the United States have all recently adopted initiatives to expand the opportunities for skilled workers to migrate. Like Canada and New Zealand, Australia has increased the number of visas for permanent migrants selected under the points system leading the number of skills-based immigrants to Australia to triple between 1995 and 2005 (cite settler arrivals). In contrast, Germany and the United States are focused in large part on the temporary inflow of highly-skilled workers. Specifically, the U.S. has dramatically increased the number of H1-B visas issued (Lowell 2001), whereas Germany passed a new immigration law relaxing the requirements for high-skilled foreigners to obtain permission to stay and to work in Germany (cite?)

This policy environment results in immigrant populations that are quite different in terms of their skills and settlement intentions. Immigrants to Australia are by and large relatively skilled and permanent. Immigrants to Germany, on the other hand, are mainly unskilled and, at least notionally, temporary. These differences are expected to contribute to producing a nativity wealth gap which is likely to be larger in Germany than in Australia.

3.2 Labor Markets

There is a large literature assessing the relative earnings of immigrants and the role of immigration policy in the economic integration of immigrants. This research indicates that immigrants to Australia have a lower earnings disadvantage upon entry as well as a slower rate of earnings assimilation than immigrants to the United States (Chiswick and Miller 1985). Miller and Neo (2003) conclude that these differences stem from institutional differences in labor markets in the two countries. In particular, the complex system of award rates of pay (minimum wages) at the State and Federal level provides immigrants with some degree of earnings protection when they first enter the Australian labor market, while the greater flexibility of the U.S. labor market speeds the earnings adjustment of new arrivals.³ At the same time, the German labor market is considered to be quite rigid in comparison to that in Australia or the United States. Both labor costs and unemployment in Germany are relatively high and Germany follows a stronger redistribution policy through higher tax rates (OECD 2006). Consequently, it is perhaps not surprising that similar studies for Germany show that, upon arrival, immigrants face an even higher relative earnings disadvantage and experience no significant earnings assimilation over time (Bauer, Dietz, Zimmermann, and Zwintz 2005).

The economic integration of immigrants is also linked to the immigration policy setting. Studies of the impact of selection policy on the earnings adjustment of immigrants typically adopt one of two empirical strategies. Some studies compare migrants' relative earnings trajectories across countries with different immigration policies, for example Canada and the United States (see (Antecol, Cobb-Clark, and Trejo 2004) for a review). Others compare the earnings adjustment of immigrants entering in different admission categories, for example, skilled versus family migrants in Australia. Overall, these studies show that a policy of points testing can be effective in altering the skills mix of the immigrant flow in comparison to policies that predominantly select immigrants on the basis of their family relationships (Borjas 1993, Duleep and Regets 1992, Antecol, Cobb-Clark, and Trejo 2003). Moreover, skills-based immigrants have a lower relative earnings disadvantage upon entry than comparable family migrants, but a lower speed of earnings assimilation (Jasso and Rosenzweig 1995, Duleep and Regets 1996).

Wealth accumulation is closely related to households' long-run earnings potential. To the extent that immigrants earn higher relative wages at entry in Australia and enjoy faster earnings adjustment in the United States, we would expect that the nativity wealth gap would be lower in these two countries than in Germany where immigrants remain at an earnings disadvantage years after migration.

3.3 Financial and Housing Markets

Institutional barriers associated with ethnicity, nativity, legal status, or language skills may limit migrants' access to financial markets and hinder the purchase of certain assets like housing. (Osili and Paulson 2004), for example, find that U.S.

³See Miller and Neo (2003) for a review of the evidence on labor market flexibility in Australia and the United States.

immigrants are less likely to have a savings or checking accounts than are similar natives. For some, opening a bank account may be difficult due to a general lack of documentation, while other new arrivals may simply find it difficult to establish a credit rating.⁴ Interestingly, the propensity to own a bank account decreases as the ethnic concentration of the metropolitan area increases suggesting that the social interactions embodied in ethnic enclaves may affect the way in which immigrants conduct their financial affairs ((Osili and Paulson 2004)). Consistent with this, Osili and Paulson (2005) also find that immigrants from countries with institutions that are more effective in protecting individual property rights are more likely to participate in U.S. financial markets.

Although evidence of a direct link is lacking, the inability – or unwillingness – to fully participate in the host country’s financial markets is almost certainly related to the common finding that immigrant households have significantly lower home-ownership rates than comparable native households (Painter, Yang, and Yu 2001)(Borjas 2002, Clark, Deurloo, and Dieleman 1997, Coulson 1999, Myers and Lee 1996, Painter, Yang, and Yu 2003). At the same time, there are important international differences in home-ownership rates among the domestic population more broadly. While the rate of home ownership is similar in Australia and the United States (approximately 70.0 percent), it is much lower in Germany (approximately 40 percent) (Proxenos 2002). Proxenos (2002) argues that legal systems and laws of land tenure, governmental housing and tax policy, and lenders’ margins – all of which vary substantially between countries – combine to produce an institutional settling which may be more or less favorable to home-ownership. The United States and Australia, for example, have legal environments in which the regulations regarding property ownership are transparent and consistent, while the U.S. housing finance system is amongst the most efficient in the world (Proxenos 2002).

These institutions almost certainly contribute to the relatively high home ownership rates in these countries. Nothing is known, however, about the ways in which the broader institutional setting might lead to a nativity gap in home-ownership or indeed wealth levels more broadly.

3.4 Welfare and Pension Systems

Limited access to social welfare programs and the potential for remigration may alter the savings behavior of immigrants and affect wealth accumulation. Shamsuddin and DeVoretz (1998), for example, find that the wealth levels of Canadian immigrants dissipate faster and are more sensitive to social security wealth in a way that is consistent with immigrants’ limited access to Canada’s old-age security pension. Such limitations are becoming more common. In 1996, for example, the United States passed the Personal Responsibility and Work Opportunity Reconciliation Act restricting non-citizens’ access to the welfare system (Fix and Passel 2002). Similarly, Australia has moved to extend the period that new immigrants must wait

⁴ In particular, identity cards, known as *matriculas consulares*, issued by the Mexican government have had the greatest impact in giving illegal immigrants access into the U.S. banking system (Sheridan 2002).

before becoming eligible for income support (Chiswick and Miller 2006). (Thomas ... anything for Germany).

Given our focus on overall wealth levels, cross-country differences in pension systems are also of particular interest as these institutional differences affect the incentives to accumulate wealth. The pension system in Australia has two components: a means-tested, aged pension financed through general tax revenue and private pension plans financed by mandatory worker and employer contributions. Currently, the standard retirement age is 65 for men and 62.5 for women (see Gong, Ryan, and Whelan (2006)). In the United States, the Social Security program is also financed through general tax revenue. However, unlike the Australian Aged Pension, U.S. Social Security pays benefits to retirees (and their beneficiaries) under uniform formulas based on individual's previous earnings histories without regard to recipients' wealth or non-wage income. Most U.S. workers also save for retirement through employer-sponsored defined benefit or defined contribution pension plans and through tax-deferred savings accounts called IRAs (individual retirement accounts). Germany's pay-as-you-go state pension system is similar to U.S. Social Security in that it is not means-tested. Individuals earn points that are calculated from their individual annual contributions to the pension system. For employed persons, these contributions amount to 19.5 percent of gross income; half of which is paid by the employer and half of which is paid by the employee. (Thomas ... is this the only savings vehicle for retirement???)

The OECD (2005) reports that the mandatory pension systems in Australia and the United States deliver a lower average pension than in Germany. In Germany, the weighted, average pension reaches about 42.6 percent of average earnings, whereas the average pension in Australia (39.1 percent) and the United States (36.5 percent) is a much smaller fraction of average earnings. Comparisons of average pension wealth (see OECD (2005)), i.e. the present value of the future stream of pension payments, are useful for taking different features of specific pension systems (i.e., the level at which pensions are paid, retirement age, life expectancy and the adjustment of pensions to wage and price growth) into account. These calculations indicate that the net pension wealth for individuals with average earnings is highest in Germany (\$US 262,000) followed by Australia (\$US 189,000) and the United States (\$US 183,000).

We can only speculate about how these cross-country differences in welfare and pension systems affect the nativity wealth gap. Restricted access to the welfare system and the relatively low replacement rate of the U.S. pension system would be expected to lead immigrants to accumulate wealth in order to cope any financial difficulties and provide for their own retirement. Thus, we might expect the nativity wealth gap to be smaller in the United States than in Australia or Germany. At the same time, these institutional differences may have a more direct effect on the way in which wealth is held – liquid vs. non-liquid assets or pension vs. non-pension wealth – rather than the overall wealth level.

4 Data and Descriptive Analysis

4.1 Data Sources

The data used in this paper are drawn from three nationally representative panels providing migration history data and comparable measures of household wealth. The Australian data come from the the *Household, Income and Labour Dynamics in Australia* (HILDA) Survey, which is a longitudinal survey of Australian households focusing on the interaction between labour market, families and social welfare.⁵ The empirical analysis of this paper specifically exploits the 2002 release of HILDA (wave 2) which includes 13,041 individual respondents residing in 7,245 households. Wave 2 included a special module on the measurements of key household wealth components, making the HILDA data the only available micro data source to examine questions related to nativity and the distribution of wealth in Australia.

The data used to study the foreign-born native wealth-gap have been extracted from the German *Socio-Economic Panel* (SOEP). The SOEP is a representative longitudinal survey including German and immigrant households which started in 1984. In 2005, approximately 22,000 persons in nearly 12,000 households were sampled. In this paper, data are retrieved from the 2002 wave.⁶ Since less than two percent of the foreign-born population lives in East-Germany, the analysis focuses on households residing in West-Germany. Immigrants are defined as foreign-born individuals who immigrated to Germany since 1948 (including foreign-born persons with German citizenship).

The sample for the US is drawn from the 2001 panel of the *Survey of Income and Program Participation* (SIPP), which is the only US microdata combining both migration history data and household wealth information.⁷ The 2001 SIPP panel is a short rotating panel, which is representative of the civilian non-institutionalized population living in the United States. Approximately 35,100 households were interviewed in the first wave of the panel. Each household in the sample was interviewed at four month intervals over a period of roughly three years beginning in February 2001. Information on immigrants were obtained from the migration history module collected in wave 2 and household wealth data were drawn from the topical module on assets and liabilities collected in wave 3 between October 2001 and January 2002.

To facilitate comparisons across the three countries, we restricted all three samples to include only native- and foreign-born couple-headed households in which the reference person is between 25 years and 75 years old. Native-born households comprise all coupled-headed households in which both respondents are born in Australia,

⁵See, Wooden, Freidin, and Watson (2002), for details.

⁶The data used in this paper was extracted from the SOEP Database provided by the DIW Berlin (<http://www.diw.de/soep>) using the Add-On package PanelWhiz v1.0 (Oct 2006) for Stata(R). PanelWhiz was written by Dr. John P. Haisken-DeNew (john@panelwhiz.eu). The PanelWhiz generated DO file to retrieve the SOEP data used here and any Panelwhiz Plugins are available upon request. Any data or computational errors in this paper are our own. Haisken-DeNew and Hahn (2006) describe PanelWhiz in detail.

⁷ See, (?), for details.

Germany or the US, respectively. A married foreign-born household is defined as a household in which both partners are born outside of the respective country. In all three countries we have dropped “mixed households” in which one partner is native-born and the other is foreign-born. After excluding all observations with missing values on one or more of the variables of interest results in a sample of 2,245 native-born, couple-headed households and 586 couple-headed foreign-born households in Australia, 2,392 native-born, couple-headed households and 270 couple-headed immigrant households in Germany, and 10,296 native-born, couple-headed households and 1,057 couple-headed foreign-born households in the US.

4.2 Measuring Net Worth

Our measure of total household net worth for Australia has been derived from wealth components either estimated at the household level or directly measured at the individual level.⁸ The resulting measure broadly falls into categories that correspond to the components of wealth derived in both the German and the US data. These components include own home and other real estate equity, net financial wealth (including total interest earning assets in banks, cash investments, stock and mutual funds, value of life insurance policies, trust funds and collectibles), total market value of vehicles and unsecured debt (including credit card debt, HECS and other personal debts).⁹

Since the SOEP contains information about the components of net worth only at the individual level, an aggregate wealth measure was generated at the household level. This measure includes equity in ones own home (i.e., house or apartment), equity in property, net financial assets, the cash surrender value of insurance policies, the value of commercial enterprises, the value of tangible assets minus the value of private, unsecured individual debt. These categories are comparable to those in the HILDA and the SIPP data. Unfortunately, a large number of households in the SOEP (about 36 percent) report a net worth equal to zero. Given the structure of the SOEP survey, these represent missing values rather than valid responses. Consequently, German households reporting zero net worth have been dropped from the sample.

Information about the total net worth for US households was collected three times in the 2001 SIPP panel in waves 3, 6 and 9. We use information collected in wave 3. As the components of wealth were collected at the individual level only, our analysis relies on derived household-level measures of the key components of wealth provided in the assets and liabilities module. The derived measure of household total net worth includes total home equity, total equity in other real estate, the net value of all financial assets, business equity, the market value of certain assets (specifically cars, mobile home, boats, etc.) and the total value of unsecured debts.

Due to the large deviations between different categories and the broad definition of the components of net worth in the three data sets, a direct comparison of our

⁸See, Marks, Heady, and Wooden (2005), for a comprehensive and detailed description of the household wealth module of HILDA.

⁹Table 7 of the Appendix contains detailed information about the definition of the components of our measures of net worth.

absolute measures of net worth across countries is not possible. Consequently, following the literature on international comparisons of the gender earnings gap (Blau and Kahn 1992), our analysis concentrates on relative rather than absolute wealth measures. In particular, since wealth levels are not directly comparable across countries, we focus on the comparison of percentages of the wealth gap attributable to different (explained or unexplained) factors. In order to permit such a comparison, we converted our measures of net worth into US dollars using purchasing power parity (PPPs) conversion factors provided by the OECD for the year 2002.¹⁰

Tables 1 to 3 present some descriptive statistics for our measure of the net worth of native- and foreign-born households across the three countries. Overall, the nativity wealth gap is positive in all three countries with native-born households having substantially higher net worth than foreign-born households on average. However, the nativity wealth gap is considerable smaller in Australia than in Germany or the US. In Australia, the net worth of immigrant households is approximately 91 percent of the average wealth level of their native-born counterparts. In contrast, the net worth of immigrant households amounts only to about 45 and 50 percent of the net worth of native households in Germany and the US, respectively. Almost 99 percent of Australian-born households report a positive net worth, while the share of immigrant households in Australia with positive net worth is similar (97.2 percent). Again, the story for Germany and the US appears to be different and immigrant households in both countries are more likely to owe more than they own than are native households. Restricting our attention to households that report positive net worth does not change the picture very much. Conditional on having positive net worth, immigrant households in Australia hold approximately 92 percent of the respective wealth level of native households, while immigrant households hold only about half the wealth of native households in Germany (52 percent) and the US (55 percent).

Figures 1 to 3 plot the weighted kernel density estimates of the observed cumulative distribution of net worth (in \$US) for immigrant and native households in the three countries. These figures graphically depict the magnitude of the nativity wealth gap at various points of the distribution. Specifically, the horizontal distance corresponding to 0.5 on the vertical axis represents the gap in the median net worth of natives and immigrants. The figures show that in all three countries native households have a wealth advantage over immigrants households at all points of the wealth distribution. The nativity wealth gap is the smallest in Australia and the largest in Germany. Note that these descriptive statistics are in line with the results of empirical studies on the effectiveness of different immigration policies. In what follows, we will be seeking to explain these unconditional wealth gaps using decomposition analysis.

In addition to household net worth, Tables 1 to 3 contain a description of the relevant socioeconomic and background characteristics of native and immigrant households. Socioeconomic characteristics comprise the household net income (in \$US), age and education in years, the number of children below 18 years old in household, household size and variables indicating the immigration cohort of immigrant house-

¹⁰In particular, the conversion factors are 1.340 for Australia, 0.959 for Germany and 1.000 for the US. See <http://www.oecd.org/std/ppp/>

holds. Background characteristics include information about the region of residence and the region of origin of immigrant households.

The differences across countries in the relative characteristics of immigrants and natives are largely as expected given the institutional setting. In all three countries immigrant households have a lower income on average than native households. Again, this disparity is smallest for Australia. Immigrant households in Australia have fewer children under the age of 18, are smaller, and have older heads with more education than native households. In all these dimensions, we see the reverse pattern for Germany and the US. In Australia and Germany, the majority of the immigrant population either immigrated between 1965 and 1974 or after 1984, whereas in the US more than half of the immigrant population captured in the SIPP arrived after 1984. Immigrants to Australia primarily come from Europe and Asia, while in Germany, most immigrant households originate from Central and Eastern Europe or Turkey and immigrants to the US come predominantly from Asia and Mexico.

4.3 Determinants of Net Worth

In order to examine how wealth levels vary with household characteristics, it is necessary to investigate the relative importance of the determinants of household net worth. Since the net worth distributions are usually skewed to the right, linear regression models are typically estimated using a log transformation of wealth to obtain a log-normally distributed dependent variable (see e.g. Shamsuddin and DeVoretz (1998)). However, since a log transformation is not appropriate for households with zero or negative net worth, we estimate a quantile regression to model the determinants of household net worth at the median of the distribution.¹¹

Specifically, we estimate the following cross-sectional quantile regression model of the determinants of net worth (W_{hc}) for native and immigrant households h residing in country c ,

$$W_{hc} = \beta_{0c} + \mathbf{X}_{hc}\beta_{1c} + I_{hc}(\beta_{2c} + \mathbf{D}_{hc}\beta_{3c} + \mathbf{R}_{hc}\beta_{4c}) + \varepsilon_{hc}, \quad (1)$$

where \mathbf{X}_{hc} contains information about income (i.e. the real amount of household net income)¹², education (education in years and education of spouse in years) and demographic characteristics (the number of children below 18 years, the household size and squared functions of age and age of spouse). I_{hc} represents a dummy

¹¹An alternative approach to the log transformation is the adoption of an inverse hyperbolic sine transformation (Burbidge, Magee, and Robb 1988, Cobb-Clark and Hildebrand 2006a, Sinning 2006). However, due to the nonlinear nature of this transformation, the calculation of the required marginal effects is computationally demanding.

¹²We also estimated an alternative specification including a squared function of household net income to the model. However, the quadratic term of household net income was dropped because the corresponding coefficients turned out to be insignificant in all cases.

variable for immigrant households, \mathbf{D}_{hc} indicates the period of immigration of the respective immigration cohort and \mathbf{R}_{hc} is a vector of region of origin dummies. The vector β_c includes the model parameters to be estimated. ε_{hc} is the error term of the regression model.

In order to ease the interpretation of the immigrant dummy, we restrict the model parameters of immigration cohorts and regions of origin to sum up to zero, i.e. $\sum_m \beta_{3cm} = 0$ and $\sum_n \beta_{4cn} = 0$, where m and n are the numbers of immigration cohorts and regions of origin, respectively. Consequently, β_{2c} may be considered as the overall difference in the wealth level between native and immigrant households, while the coefficients of β_{3c} and β_{4c} denote the deviations of immigration cohorts and regions of origin from the overall wealth gap, respectively.

Table 4 reports the estimates of the median quantile regression for the three countries.

5 Decomposition of the Wealth Gap

5.1 Decomposition Method

To investigate the source of the wealth gap between native- and foreign-born households, the semi-parametric decomposition method proposed by DiNardo, Fortin, and Lemieux (1996) is applied. This approach allows us to assess the impact of explanatory factors on differences in the wealth distribution between native and immigrant households.¹³

In particular, we consider a dummy variable I indicating the immigration status of the observed household. Further, w denotes wealth and x is a vector of wealth determinants. Each observation in our data is then drawn from a joint density function, f , over the vector (w, x, I) . Thus, the marginal distribution of wealth w for native ($j = 0$) and immigrant ($j = 1$) households may be written as

$$\begin{aligned} f^j(w) &\equiv f(w|I = j) = \int_x f(w, x|I = j)dx \\ &= \int_x f(w|x, I = j)f_x(x|I = j)dx, \end{aligned} \tag{2}$$

expressing the marginal wealth distribution for group j as the product of two conditional distributions (Greene 2003, DiNardo, Fortin, and Lemieux 1996).

In order to consider the source of wealth disparities between different groups, we will partition the vector of wealth determinants (x) into three components: 1) income (y); 2) educational attainment (e); and 3) household demographic composition (d). Thus, $x = (y, e, d)$. Given this partitioning and the same logic as behind equation (2), we can write the wealth distribution of group j as follows:

¹³Cobb-Clark and Hildebrand (2006b) provide a detailed illustration of the application of the decomposition method of DiNardo, Fortin, and Lemieux (1996) to the nativity wealth gap.

$$\begin{aligned}
f^j(w) &\equiv f(w|I = j) & (3) \\
&= \int_y \int_e \int_d f(w, y, e, d|I = j) dydedd \\
&= \int_y \int_e \int_d f(w|y, e, d, I = j) f_{y|e,d}(y|e, d|I = j) \times \\
&\quad f_{e|d}(e|d, I = j) f_d(d|I = j) dydedd.
\end{aligned}$$

Equation (3) includes four conditional densities: the conditional wealth distribution f given the determinants x and group membership I , the conditional income distribution ($f_{y|e,d}$) given education, household composition, household demographics and group membership, the conditional education distribution $f_{e|d}$ given demographics and group membership and the distribution f_d of demographic characteristics conditional on immigration. Expressing the wealth distributions as we have in equation (3) results in a number of interesting counterfactual wealth distributions. In particular, we can define the wealth distribution (f^A) that would prevail if immigrants retained their own conditional income distribution $f_{y|e,d}$, but had the same conditional distributions of wealth, education and demographic characteristics as natives. Specifically,

$$\begin{aligned}
f^A(w) &= \int_y \int_e \int_d f(w|y, e, d, I = 0) f_{y|e,d}(y|e, d, I = 1) \times & (4) \\
&\quad f_{e|d}(e|d, I = 0) f_d(d|I = 0) dydedd.
\end{aligned}$$

Equation (4) may be used to isolate the effect of income disparities on the wealth gap. In particular, it answers the following question: what would the immigrant wealth distribution look like if immigrants faced their own conditional income distribution, but otherwise had the same distribution of the remaining wealth determinants and (conditional on x) accumulated wealth in the same way as natives? This can then be compared to another wealth distribution (f^B) that would result if immigrants retained both their own conditional income and education distributions, but had the same demographic characteristics, and wealth distributions as natives. Similarly, f^C is the counterfactual wealth distributions that results when we also allow immigrants to retain their own demographic characteristics, additionally. Using these counterfactual distributions, the wealth gap between native and immigrant households can be decomposed in the following way:

$$\begin{aligned}
f^0(w) - f^1(w) &= [f^0(w) - f^A(w)] + [f^A(w) - f^B(w)] \\
&\quad + [f^B(w) - f^C(w)] + [f^C(w) - f^1(w)] & (5)
\end{aligned}$$

In equation (5), the first right-hand-side term captures the effect of disparities in conditional income distributions on the wealth gap. Similarly, the second term reflects the effect of differences in educational background, while the third captures the effect of demographic characteristics. Finally, the fourth term arises from differences between the conditional (on x) wealth distributions of immigrants and natives.

Since we explicitly consider several different components of the wealth gap, the proportion of the wealth gap attributable to each of the explanatory factors will depend on the sequence (or order) in which we consider them (DiNardo, Fortin, and Lemieux 1996). In particular, the decomposition in equation (5) reflects one possible sequence – for example, first income, second education, third demographic characteristics – in which the wealth determinants for immigrants are substituted for those of the natives (see Cobb-Clark and Hildebrand (2006b)). There are of course many other possible sequences. Using equation (3) to decompose the wealth gap between groups into three components leads to 6 (3!) relevant sequences. Since we have no particular preference for one sequence over another, we will calculate each in turn and present results based on the simple average across all possible sequences. This corresponds to the Shapley decomposition rule advocated by Shorrocks (1999).

In order to implement the decomposition given in equation (5), it is necessary to have estimates of counterfactual distributions f^A , f^B and f^C . Applying the method proposed by DiNardo, Fortin, and Lemieux (1996), we obtain these counterfactual distributions by reweighting the wealth distribution of native households.¹⁴ Specifically, our first counterfactual wealth distribution can be constructed as follows:

$$f^A(w) = \int_y \int_e \int_d \Psi_{y|e,d} f(w|y, e, d, I = 0) f_{y|e,d}(y|e, d, I = 0) \times f_{e|d}(e|d, I = 0) f_d(d|I = 0) dy de dd, \quad (6)$$

where

$$\Psi_{y|e,d} = \frac{f_{y|e,d}(y|e, d, I = 1)}{f_{y|e,d}(y|e, d, I = 0)} \quad (7)$$

is a reweighting factor. In effect, the wealth distribution of natives is simply reweighted by the ratio of conditional income distributions of the two groups. Following DiNardo, Fortin, and Lemieux (1996), we can write the reweighting factor required to produce the counterfactual wealth distribution f^A as

¹⁴Figures 1-3 reveal that the net worth distribution of immigrants is considerably narrower than that of natives in all three countries. Therefore, reweighting the immigrant wealth distribution would involve extrapolating the immigrant conditional wealth distribution beyond the income range actually observed in the data (Barsky, Bound, Kerwin, and Lupton 2002). For that reason, we have chosen to create our counterfactual distributions by reweighting the wealth distribution of native households.

$$\Psi_{y|e,d} = \frac{P(I = 1|y, e, d)P(I = 0|e, d)}{P(I = 0|y, e, d)P(I = 1|e, d)}. \quad (8)$$

The construction of counterfactual distributions f^B and f^C is straightforward.

5.2 Decomposition Results

In order to understand the source of the disparity in the wealth levels of natives and immigrants, we decompose the nativity wealth gap into three separate vectors of wealth determinants: 1) income, which includes household net income and household net income squared; 2) educational attainment, which includes years of education for the household head and the spouse; and 3) household composition, which includes household size, an indicator variable for children less than age 18 in the household, as well as age and age squared of both partners. Our analysis controls for current, after-tax household income because none of our data sets provides a measure of permanent income.¹⁵

One advantage of the DiNardo, Fortin, and Lemieux (1996) approach is that by estimating the entire counterfactual wealth distribution makes it possible to decompose differences in summary statistics for these wealth distributions. In the following, we consider two alternative types of measures that are useful in describing the differences in the wealth holdings of natives and immigrants: the nativity wealth gap at various percentiles of the distribution and disparity in wealth dispersion as reflected in the wealth gap between the 90-10, 90-50, and 50-10 percentiles. We present results that are obtained by calculating each of the relevant counterfactuals and then taking the simple average of the results over all of the 6 possible decomposition sequences (see Shorrocks (1999)). Bootstrapping methods using a normal approximation with 1000 replications are used to calculate standard errors. Results for the decomposition analysis are reported for all three countries in Table 5.

Not surprisingly, native households are wealthier than foreign-born households (see Table 5). At the same time, the magnitude of the nativity wealth gap differs substantially across countries. Immigrants to Australia have approximately \$25,800 less wealth at the median than native-born Australians, while in the United States the median nativity wealth gap is almost twice this (approximately \$54,000) and in Germany the median wealth gap exceeds \$123,000. The nativity wealth gap is even larger at the top of the wealth distribution reaching approximately \$200,000 in the United States and as much as \$300,000 in Germany at the 90th percentile. These results indicate that there is substantial disparity in the economic well-being of immigrant and native families. Moreover, this disparity varies dramatically across receiving countries.

Interestingly, income differentials explain relatively little of this nativity wealth gap in Germany and the United States. At the median and in the top half of the wealth distribution, for example, conditional income functions do not contribute

¹⁵**Robustness checks: alternative income measures.**

significantly to the overall wealth gap between immigrants and natives. Income differentials explain a modest fraction of the gap – between 3 and 15 percent – in the bottom half of the German and U.S. wealth distributions. Relative to Germany and the United States, income differentials account for much larger share of the wealth gap between immigrant and native households in Australia, but the wealth gap itself is much smaller in Australia and the income component is often not significant. For example, at the median, more than \$11,500 of the overall \$25,800 nativity wealth gap in Australia (45 percent) stems from the fact that – conditional on their characteristics – foreign-born and Australian-born households have different earnings. This effect is not statistically significant, however. Similarly, in the top half of the Australian wealth distribution – as is the case in Germany and the United States – differences in the conditional income functions do not have a significant effect on the nativity wealth gap. Overall, these results suggest that – conditional on education and other household characteristics – income disparities do not lead to a significantly higher nativity wealth gap at the top of the wealth distribution. Income differentials translate into wealth differentials only in the bottom of the distribution – especially in Australia. Given the empirical evidence on the large nativity earnings gap and the often slow earnings assimilation of immigrants in these countries, this result is somewhat surprising. At the same time, theory suggests that it is permanent rather than current income that is most closely related to consumption, savings decisions, and ultimately wealth accumulation. Our data unfortunately do not provide us with a sensible permanent income measure and our results are consistent with the theoretically weaker relationship between current income and wealth.

In all three countries, educational differences explain much more of the nativity wealth gap than do the conditional income functions. Again, Australia appears to be different as immigrants have more education on average than native-born Australians. Our decomposition results indicate that this educational advantage contributes to reducing the actual nativity wealth gap we observe. In other words, if immigrants had the same educational qualifications as the native-born population we would expect that immigrants' wealth disadvantage would be approximately \$19,000 higher than we observe it to be. On the other hand, the relative education disadvantage of immigrant households in the United States and Germany accounts for significant portion of their wealth disadvantage. Education differences account for about one quarter of the nativity wealth gap in Germany. In the United States, disparities in the conditional education functions explain an increasingly large proportion of the nativity wealth gap as one moves up the wealth distribution leaving almost almost half of the nativity wealth gap explained by educational differences at the 90th percentile.

Household characteristics – like education differentials – explain a large portion of the nativity wealth gap in all three countries. In Australia, immigrant households are typically older and smaller than native-born households. Consequently, their relative demographic characteristics – like their relative educational advantage – contribute to reducing the overall nativity wealth gap by approximately \$40,000. In the United States, however, approximately one third of the median wealth gap is explained by households' demographic characteristics. Demographic composition explains between 9 and 29 percent of the observed wealth gap in Germany.

Overall, these results indicate that wealth differentials are largely the result of disparity in the education level and demographic composition of the native and immigrant populations, while income differentials play a role that is relatively minor and concentrated in the bottom half of the distribution. Interestingly, Australia differs from the United States and Germany in that the educational and demographic differences serve to narrow rather than widen the nativity wealth gap. If immigrants to Australia accumulated wealth in the same way as the native-born population, we would expect that they would have a median wealth advantage of approximately \$48,000. Instead we observe a median wealth gap of \$28,500 implying that immigrant households to Australia accumulate substantially less wealth given their characteristics than similar native-born households. Thus, although we observe a very small wealth gap in Australia, this gap is completely unexplained. In Germany, approximately half of the observed \$123,000 median nativity wealth gap is unexplained by immigrants' income, education, and demographic characteristics. Much less of the wealth gap in the United States is unexplained by immigrants' characteristics. Only about \$14,000 of the overall \$54,000 gap at the U.S. median cannot be explained by the fact that immigrants to the United States have lower income, less education, and are on average younger with larger families.

In short, the relatively small wealth gap in Australia obscures the fact that immigrant households are relatively advantaged in their characteristics. Unfortunately, they do not translate their educational and demographic advantage into higher wealth levels. In Germany more than half of the wealth gap is unexplained, while in the U.S. only one third of the gap cannot be explained by the relatively less favorable educational and demographic structure of immigrant households.

6 Conclusions

Moving beyond a narrow focus on the economic assimilation of immigrant workers to also consider the economic well-being of immigrant families and the economic integration of immigrant communities is vital given the growing number of individuals worldwide living outside their country of birth.¹⁶

As these are cross-sectional estimates it is not clear whether this represents true assimilation or changes in the characteristics of migration cohorts. (Set this as an important question for future research.)

¹⁶The International Labour Organization, for example, recently estimated that worldwide the number of migrants now exceeds 120 million people (Stalker 2000).

7 Tables and Figures

7.1 Descriptive statistics

TABLE 1: Descriptive Statistics, HILDA (2002)*

	Natives			Immigrants		
	Mean	Std. Dev.	N	Mean	Std. Dev.	N
Net Worth	303224.92	9491.62	2245	270364.56	16469.61	586
Median Net Worth	187661.94	5687.43	2245	163452.23	12069.60	586
Net Worth if >0	314922.39	9752.36	2153	283954.98	16890.15	559
% >0	0.985	0.003	2245	0.972	0.011	586
Net Financial Wealth	58920.34	3751.83	2245	45653.62	5973.97	586
Business Equity	38860.77	4113.19	2245	27746.22	6722.70	586
Housing Equity	185542.80	5791.37	2245	182319.18	10116.71	586
Vehicles Equity	19901.01	672.79	2245	14645.54	1231.30	586
Superannuation	95638.88	3337.61	2245	57799.64	5700.81	586
Household Net Income	48142	973.09	2245	42465	1991.43	586
Age	47	0.30	2245	51	0.58	586
Kids<18	0.973	0.026	2245	0.765	0.045	586
Education	11.91	0.05	2245	12.14	0.14	586
Spouse Education	11.45	0.05	2245	11.70	0.13	586
New South Wales	0.306	0.011	2245	0.373	0.024	586
Victoria	0.249	0.010	2245	0.283	0.021	586
Queensland	0.230	0.010	2245	0.112	0.014	586
South Australia	0.079	0.006	2245	0.074	0.010	586
Western Australia	0.087	0.006	2245	0.128	0.014	586
Tasmania	0.032	0.004	2245	0.005	0.002	586
Northern Territories	0.004	0.002	2245	0.007	0.004	586
Australian Capital Territory	0.013	0.002	2245	0.018	0.005	586
<1965				0.168	0.016	586
1965-1974				0.227	0.019	586
1975-1984				0.138	0.017	586
>1984				0.467	0.024	586
English Speaking				0.321	0.021	586
Europe				0.278	0.021	586
Asia				0.278	0.023	586
Other				0.123	0.016	586

Note: * Amounts in \$US Purchasing Power Parities.

TABLE 2: Descriptive statistics, SOEP (2002)*

	Natives			Immigrants		
	Mean	Std.Dev.	N	Mean	Std.Dev.	N
Net Worth						
Net Worth	223349.55	8427.31	2392	101382.27	13998.67	270
Median Net Worth	241333.02	8656.55	2254	125740.01	15267.20	232
Net Worth if > 0	194851.92	6601.05	2392	26068.82	9375.52	270
% > 0	0.93	0.01	2392	0.83	0.03	270
Net Worth by Age Group						
25-34	93806.17	13146.352	223	38028.870	13635.20	48
35-44	190495.28	11450.291	628	96401.651	34609.47	77
45-54	250658.92	16524.554	601	125767.663	17972.43	70
55-64	267542.46	19473.813	548	128424.120	45302.43	47
65-75	256273.21	24876.566	392	100040.386	29976.37	28
Components of Net Worth						
Net Housing Value	66996.75	2624.30	2392	34521.79	5172.28	270
Net Value of Property	20620.04	2389.17	2392	7648.88	3569.01	270
Assets	11454.88	1018.39	2392	4615.51	2294.56	270
Business Equity	9338.67	1610.77	2392	3056.10	2419.63	270
Tangible Assets	1485.92	213.69	2392	362.26	179.92	270
Cash Surrender Value of Policies	20217.55	1481.37	2392	9861.63	1881.42	270
Value Financial Debt	2734.80	375.31	2392	2810.37	792.20	270
Explanatory Variables						
Household Net Income	35629.88	476.81	2392	30921.91	1212.16	270
Age	51	0.40	2392	48	1.14	270
Kids<18	0.705	0.028	2392	1.189	0.112	270
Education	12.45	0.08	2392	11.33	0.20	270
Spouse Education	11.82	0.08	2392	10.67	0.23	270
Place of Residence						
Berlin	0.026	0.006	2392	0.009	0.006	270
Schleswig-Holstein	0.047	0.007	2392	0.022	0.012	270
Hamburg	0.019	0.004	2392	0.001	0.001	270
Lower Saxony	0.137	0.011	2392	0.162	0.034	270
Bremen	0.013	0.003	2392	0.016	0.010	270
North Rhine-Westphalia	0.255	0.014	2392	0.273	0.049	270
Hesse	0.078	0.008	2392	0.086	0.021	270
Rhineland-Palatinate, Saarland	0.084	0.009	2392	0.066	0.018	270
Baden-Wuerttemberg	0.149	0.011	2392	0.250	0.041	270
Bavaria	0.185	0.011	2392	0.116	0.024	270
Immigration Cohort						
<1965				0.046	0.015	270
1965-1974				0.349	0.050	270
1975-1984				0.214	0.036	270
>1984				0.390	0.044	270
Region of Origin						
OECD Member Country				0.189	0.050	270
Central and Eastern Europe				0.379	0.043	270
Turkey				0.293	0.041	270
Ex-Yugoslavia				0.086	0.025	270
Other				0.053	0.020	270

Note: * Amounts in \$US Purchasing Power Parities.

TABLE 3: Descriptive Statistics, SIPP (2001)*

	Natives			Immigrants		
	Mean	Std. Dev.	N	Mean	Std. Dev.	N
Net Worth	164540.14	2842.71	10296	83461.76	5756.68	1057
Median Net Worth	74527.67	1365.35	10296	20223.23	2600.87	1057
Net Worth if >0	188104.74	3104.15	9116	105300.46	6838.57	851
% >0	0.887	0.003	10296	0.814	0.012	1057
Net Financial Wealth	56518.75	1585.74	10296	15520.22	2361.47	1057
Business Equity	14786.63	1105.28	10296	9281.11	2670.33	1057
Housing Equity	87954.94	1419.09	10296	55365.65	3509.45	1057
Vehicles Equity	5279.82	88.54	10296	3294.77	211.77	1057
401k/Thrift Accounts	18692.84	446.93	10296	8278.46	955.13	1057
Household Net Income ^a	17440	148.99	10296	13024	397.31	1057
Age	48	0.13	10296	44	0.38	1057
Kids<18	0.859	0.011	10296	1.359	0.041	1057
Education	13.56	0.02	10296	12.11	0.13	1057
Spouse Education	13.41	0.02	10296	11.68	0.13	1057
New England	0.048	0.002	10296	0.047	0.007	1057
Middle Atlantic	0.133	0.004	10296	0.168	0.012	1057
East North Central	0.173	0.004	10296	0.081	0.009	1057
West North Central	0.080	0.003	10296	0.019	0.004	1057
South Atlantic	0.191	0.004	10296	0.164	0.012	1057
East South Central	0.069	0.003	10296	0.004	0.002	1057
West South Central	0.114	0.003	10296	0.119	0.011	1057
Mountain	0.050	0.002	10296	0.057	0.007	1057
Pacific	0.115	0.003	10296	0.337	0.015	1057
<1965				0.062	0.008	1057
1965-1974				0.112	0.010	1057
1975-1984				0.263	0.014	1057
>1984				0.563	0.016	1057
Europe ^b				0.143	0.012	1057
Asia				0.305	0.015	1057
Mexico				0.305	0.015	1057
Central/South America				0.173	0.012	1057
Other				0.074	0.008	1057

Note: * Amounts in \$US. ^a Quarterly income reported. ^b Includes also Canada and Australia.

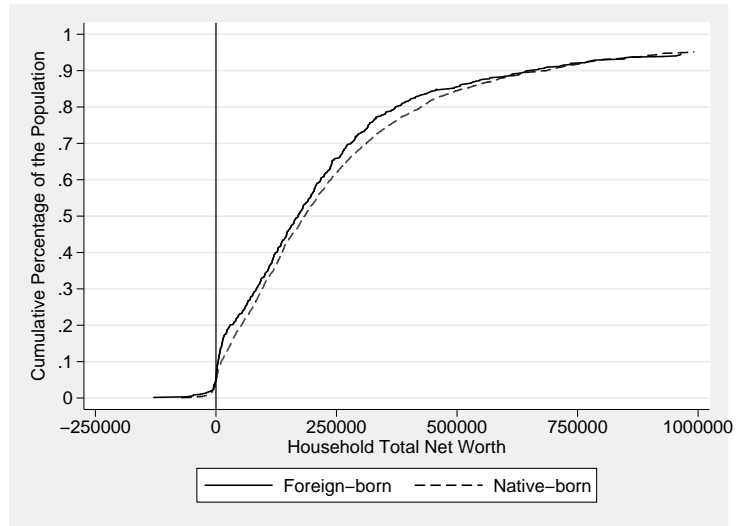


FIGURE 1: Cumulative Distribution of Net Worth in \$US Purchasing Power Parities, HILDA (2002)

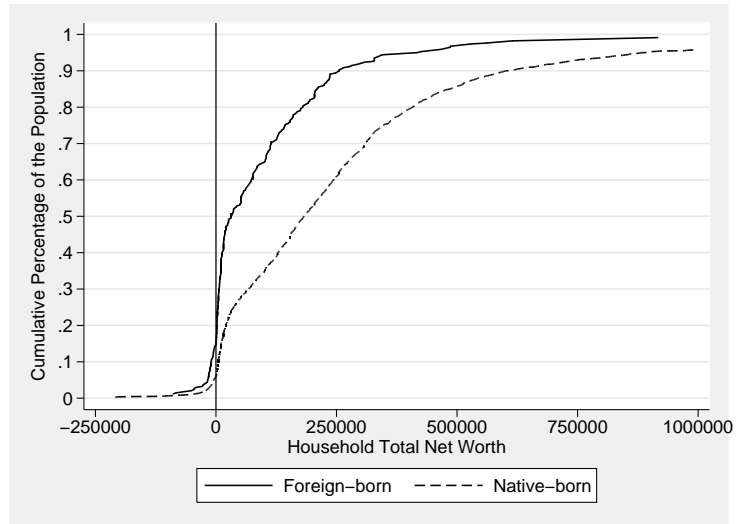


FIGURE 2: Cumulative Distribution of Net Worth in \$US Purchasing Power Parities, SOEP (2002)

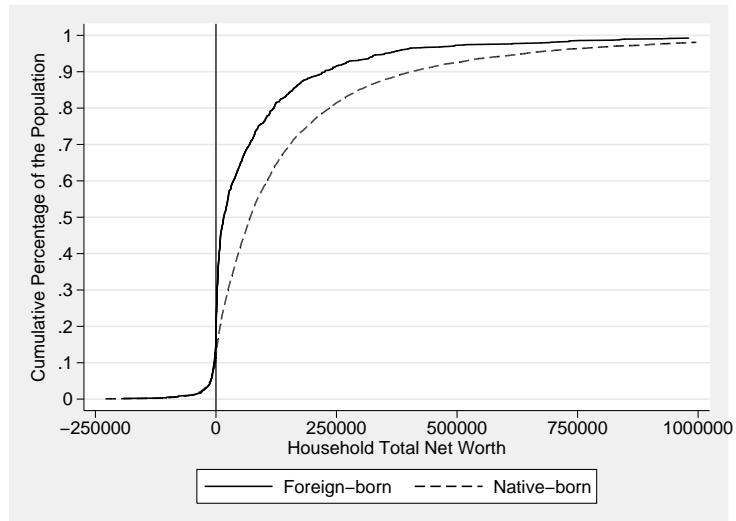


FIGURE 3: Cumulative Distribution of Net Worth in \$US, SIPP (2001)

7.2 Quantile Regression

TABLE 4: Median Quantile Regression Native-Born and Foreign-Born Households

	Australia		Germany		United States	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Household Net Income	2.38***	0.11	4.19***	0.19	3.50***	0.06
Education	20650.58***	1826.69	7708.47***	1496.99	8202.90***	365.55
Kids<18	6049.07	3876.88	20517.36***	4342.53	4002.60***	839.49
Age	19310.05***	2471.12	7956.52***	2685.01	-731.80	494.64
Age ²	-105.85***	25.43	-34.37	26.08	46.40***	4.96
Immigrant	-53796.69***	12192.24	-56215.74***	17740.61	5179.19	4179.43
Immigration Cohorts						
Year of Migration<1965	3831.95	20030.93	-3147.45	36598.12	31361.66***	9041.61
Year of Migration 1965-1974	7244.25	17142.15	-4811.77	22228.99	-13409.98**	6792.27
Year of Migration 1975-1984	3276.68	20772.59	3151.13	24216.88	-691.53	5380.89
Year of Migration >1984	2489.54	30585.28	4808.09	25702.41	-17260.14***	4640.14
Regions of Origin						
English Speaking	-12497.31	15075.65				
Europe	18537.27	17441.70				
Asia	-4129.83	17356.74				
Other	-42783.16	55068.28				
OECD			-5151.02	28596.07		
Central and Eastern Europe			16094.94	27021.08		
Ex-Yugoslavia			-1848.85	33072.04		
Turkey			-15575.61	23728.79		
Other			6480.54	44744.27		
Europe					6471.63	6688.56
Asia					-9372.72*	5036.50
Mexico					34072.31***	5101.39
Central/South America					-7087.35	5939.91
Other					-24083.88***	8473.25
Constant	-748484.71***	60235.44	-395370.20***	68194.57	-160248.32***	12765.05
N	2,836		2,662		11,353	

7.3 DFL decomposition

TABLE 5: DFL decomposition – Foreign-Born to Native-Born Households

	Raw Gap	Income	Education	Demography	Unexplained
Australia					
10 th	8406.71	3201.99	-5998.38	-13285.69	24488.80
	[3271.86	[1822.20]	[2111.02]	[3332.39]	[5214.50]
		(38)	(-71)	(-158)	(291)
25 th	24358.95	6981.46	-8195.39	-22188.30	47761.19
	[11172.24	[3596.68]	[3157.14]	[5211.24]	[12097.16]
		(28)	(-33)	(-91)	(196)
50 th	18258.95	7069.77	-13958.95	-28583.20	53731.34
	[13411.77	[8561.36]	[4742.80]	[5823.40]	[14862.45]
		(38)	(-76)	(-156)	(294)
75 th	42611.94	2118.53	-25169.90	-45157.58	110820.90
	[20422.06	[31848.92]	[9147.20]	[13445.70]	[29826.16]
		(4)	(-59)	(-105)	(260)
90 th	47971.64	8975.62	-34494.52	-43300.49	116791.04
	[61100.36	[69697.91]	[15935.78]	[20525.02]	[81868.40]
		(18)	(-71)	(-90)	(243)
Germany					
10 th	16214.80	563.95	2365.31	5464.89	7820.64
	[2988.34]	[595.79]	[1421.54]	[2200.65]	[4058.24]
		(3)	(14)	(33)	(48)
25 th	20855.05	702.81	4862.35	10076.12	5213.76
	[4373.83]	[1022.94]	[1519.60]	[2600.25]	[3369.02]
		(3)	(23)	(48)	(25)
50 th	128309.18	2013.90	31400.50	30213.85	64680.92
	[16731.41]	[4534.49]	[8713.06]	[12741.35]	[21750.74]
		(1)	(24)	(23)	(50)
75 th	163404.61	4193.78	31694.04	24849.40	102667.38
	[17588.14]	[6033.80]	[8815.23]	[9739.70]	[19162.90]
		(2)	(19)	(15)	(62)
90 th	290208.56	8662.15	59878.00	38675.71	182992.69
	[51989.02]	[15122.47]	[19644.25]	[17587.95]	[43936.22]
		(2)	(20)	(13)	(63)
United States					
10 th	1980.55	235.17	858.69	2471.01	-1584.32
	[1002.31]	[406.04]	[276.14]	[433.84]	[1191.00]
		(12)	(43)	(125)	(-80)
25 th	15792.23	2300.61	6330.20	5385.51	1775.92
	[843.46]	[1691.97]	[1189.68]	[647.80]	[940.01]
		(15)	(40)	(34)	(11)
50 th	54304.44	4261.18	20583.84	14282.74	15176.68
	[3070.84]	[12503.11]	[8753.94]	[2511.23]	[6270.28]
		(8)	(38)	(26)	(28)
75 th	105479.49	2310.24	53708.05	28424.52	21036.68
	[8497.99]	[30542.10]	[13452.16]	[6514.46]	[30635.88]
		(2)	(51)	(27)	(20)
90 th	195645.38	-10506.57	114300.30	47908.96	43942.69
	[19098.54]	[47451.95]	[21711.34]	[10526.87]	[54541.00]
		(-5)	(58)	(24)	(22)

TABLE 5 CONTINUED

	Raw Gap	Income	Education	Demography	Unexplained
Australia					
P50-P10	9852.23 [12843.23]	3867.78 [7155.99]	-7960.57 [3310.28]	-15297.51 [4785.65]	29242.53 [14048.90]
P75-P25	18252.98 [19279.64]	-4862.93 [28887.76]	-16974.50 [6889.46]	-22969.27 [12255.80]	63059.70 [26968.97]
P90-P50	29712.68 [58122.60]	1905.84 [63121.00]	-20535.57 [13126.89]	-14717.28 [18971.63]	63059.70 [76404.09]
Germany					
P50-P10	112094.37 [16181.05]	1449.94 [4349.59]	29035.19 [8177.96]	24748.95 [12047.39]	56860.27 [20810.98]
P75-P25	142549.55 [16557.07]	3490.97 [5372.75]	26831.68 [8337.29]	14773.28 [8522.17]	97453.61 [18190.84]
P90-P50	161899.38 [49808.38]	6648.25 [12621.29]	28477.49 [18006.86]	8461.86 [14629.50]	118311.77 [44959.63]
United States					
P50-P10	52323.89 [2885.75]	4026.02 [12190.67]	19725.15 [8661.20]	11811.73 [2329.58]	16761.01 [5991.53]
P75-P25	89687.26 [8345.93]	9.63 [29006.83]	47377.85 [13050.21]	23039.01 [6278.24]	19260.76 [29958.23]
P90-P50	141340.94 [18409.38]	-14767.76 [43039.32]	93716.47 [24026.03]	33626.22 [9654.78]	28766.01 [51815.23]

Note: Percent of total variation explained in parenthesis. Standard errors of explained variation are reported in brackets.

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Appendix

TABLE 6: Definition of Variables

Variable	HILDA	SOEP	SIPP	Description
Household Net Income	X	X	X	Monthly household net income in \$US purchasing power parities.
Age	X	X	X	Age in years.
Kids<18	X	X	X	Number of children below 18 years in household.
Household Size	X	X	X	Number of persons in household.
Education	X	X	X	Education in years.
Spouse Education	X	X	X	Education of spouse in years.
New South Wales	X			0/1-variable; 1 if region: New South Wales; 0 otherwise.
Victoria	X			0/1-variable; 1 if region: Victoria; 0 otherwise.
Queensland	X			0/1-variable; 1 if region: Queensland; 0 otherwise.
South Australia	X			0/1-variable; 1 if region: South Australia; 0 otherwise.
Western Australia	X			0/1-variable; 1 if region: Western Australia; 0 otherwise.
Tasmania	X			0/1-variable; 1 if region: Tasmania; 0 otherwise.
Northern Territories	X			0/1-variable; 1 if region: Northern Territories; 0 otherwise.
Australian Capital Territory	X			0/1-variable; 1 if region: Australian Capital Territory; 0 otherwise.
Berlin		X		0/1-variable; 1 if region: Berlin; 0 otherwise.
Schleswig-Holstein		X		0/1-variable; 1 if region: Schleswig-Holstein; 0 otherwise.
Hamburg		X		0/1-variable; 1 if region: Hamburg; 0 otherwise.
Lower Saxony		X		0/1-variable; 1 if region: Lower Saxony; 0 otherwise.
Bremen		X		0/1-variable; 1 if region: Bremen; 0 otherwise.
North Rhine-Westphalia		X		0/1-variable; 1 if region: North Rhine-Westphalia; 0 otherwise.
Hesse		X		0/1-variable; 1 if region: Hesse; 0 otherwise.
Rhineland-Palatinate, Saarland		X		0/1-variable; 1 if region: Rhineland-Palatinate, Saarland; 0 otherwise.
Baden-Wuerttemberg		X		0/1-variable; 1 if region: Baden-Wuerttemberg; 0 otherwise.
Bavaria		X		0/1-variable; 1 if region: Bavaria; 0 otherwise.
New England			X	0/1-variable; 1 if region: New England; 0 otherwise.
Middle Atlantic			X	0/1-variable; 1 if region: Middle Atlantic; 0 otherwise.
East North Central			X	0/1-variable; 1 if region: East North Central; 0 otherwise.
West North Central			X	0/1-variable; 1 if region: West North Central; 0 otherwise.
South Atlantic			X	0/1-variable; 1 if region: South Atlantic; 0 otherwise.
East South Central			X	0/1-variable; 1 if region: East South Central; 0 otherwise.
West South Central			X	0/1-variable; 1 if region: West South Central; 0 otherwise.
Mountain			X	0/1-variable; 1 if region: Mountain; 0 otherwise.
Pacific			X	0/1-variable; 1 if region: Pacific; 0 otherwise.
<1965	X	X	X	0/1-variable; 1 if year of immigration before 1965; 0 otherwise.
1965-1974	X	X	X	0/1-variable; 1 if year of immigration between 1965 and 1974; 0 otherwise.
1975-1984	X	X	X	0/1-variable; 1 if year of immigration between 1975 and 1984; 0 otherwise.
>1984	X	X	X	0/1-variable; 1 if year of immigration after 1984; 0 otherwise.