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ABSTRACT

A Comparative Analysis of the Labour Market Performance of University-Educated Immigrants in Australia, Canada, and the United States: Does Policy Matter?

We examine data from Australia, Canada, and the U.S. to inform the potential for immigrant screening policies to influence the labour market performance of skilled immigrants. Our estimates point to improvements in employment rates and weekly earnings of male university-educated immigrants in all three countries concomitant with skilled immigration policy reforms. Nonetheless, the gains are modest in comparison to a substantial and persistent performance advantage of U.S. skilled immigrants. Given that there is increasingly little to distinguish the skilled immigration policies of these countries, we interpret the U.S. advantage as primarily reflecting the relative positive selectivity of U.S. immigrants.

JEL Classification: J24, J15, J08

Keywords: skilled migration, immigrant selection policies, immigrant labour market performance

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1. Introduction

Recent years have seen a push in the U.S. and in a number of European countries, including the U.K. and Germany, for governments to adopt `point systems' for screening prospective immigrants on human capital criteria. The appeal of a `points system' reflects not only concerns about the potential adverse effects of unskilled migrant flows on public finances and wage inequality, but also the potential for skilled immigrants to raise economic growth through their contributions to trade, entrepreneurship, and innovation. Evidence that skilled immigrants may have the potential to produce positive productivity spillovers on their native-born coworkers (Ottaviano and Peri 2006; Hunt and Gauthier-Loiselle 2010), goes a long way in making the economic case for immigration where public opinion is growing increasingly skeptical.

Ironically, at the same time that the U.S. and Europe push for `points systems,' Australia and Canada have been struggling to find policy remedies to address the disappointing labour market performance of their own skilled immigrants. Beginning in the late 1990s, Australia made significant revisions to its 'points system' introducing pre-migration language testing and credential assessment. In addition, it implemented a `two-step' immigration system, in large part mimicking the U.S.'s system of relying on employers, rather than governments, to screen skilled migrant workers. In the face of evidence that recent Canadian university-educated immigrants were lagging behind their Australian counterparts (Hawthorne 2008), the Canadian government made similar reforms to its `points system' in the mid-2000s and also began to increasingly draw on skilled migrants employed on temporary work permits and student visas as a source of new permanent residents.

To outside observers, these contrasting policy directions suggest a lack of consensus on optimal skilled immigration policy, despite agreement on its objectives. This is perhaps understandable, given that the economics literature offers little evidence on what works. In fact, if anything, the evidence suggests that differences in immigrant screening policies are not what underlie differences in the economic performance of immigrants across countries or within countries over time. Duleep and Regets (1992), for example, compare immigrants in Canada and the U.S. using the 1980/1981 Censuses and conclude that the Canadian `points system' had little impact on immigrant earnings relative to the U.S. system based on family-reunification objectives. Similarly, Antecol, Cobb-Clark, and Trejo (2003) compare the English-language fluency, education, and income of Australian, Canadian, and U.S. immigrants and find little difference in skills among immigrants originating from similar regions.

Instead, the economics literature emphasizes two key factors largely outside the scope of immigration policy. First, beginning with the seminal work of Chiswick (1978), studies of immigrant earnings have emphasized the role of differences in the average unobservable labour market skills, abilities, or ambitions of immigrants (or what is referred to generically as immigrant "quality") across and within destination countries arising from migrants' own decisions about whether to migrate and where. Applying a standard Roy model to migrants' settlement decisions, Borjas (1987) shows that immigrants

may be positively or negatively selected on their skills depending on the relative incentives of workers from the lower and upper ends of the origin-country skill distribution to migrate. For example, destination countries whose social welfare systems offer a safety net to migrants at the lower end of the income distribution will tend to attract immigrants with relatively low skill levels, whereas countries with high returns to skill will tend to attract migrants with higher average skills (in both cases, relative to non-migrants from the same source country). Examining migrant flows to Australia, Canada, and the U.S. prior to 1980, Borjas (1993) finds that while `points systems' may have some potential in raising the observable human capital characteristics of immigrants, immigrant earnings differentials across destination countries largely reflect unobservable skill differences driven by host-country differences in income inequality. More recently, Jasso and Rosenzweig (2009) examine the role of world skill prices and proximity of origin to destination countries and conclude that: "there is no evidence that selection mechanisms used to screen employment migrants … play a significant role in affecting the characteristics of skill migration."

At the same time, a separate literature has argued that variations in immigrant labour market performance, particularly across arrival cohorts within destination countries, do not reflect migrant "quality" differences, but rather the influence of destination-country labour markets, including differences in wage structures and labour market institutions. In accounting for the deteriorating labour market outcomes of U.S. immigrant arrival cohorts through the 1980s and 1990s, researchers have emphasized broader wage inequality trends affecting all workers, which have exacerbated the relative earnings gaps of U.S. immigrants who tend to fall at the lower end of the earnings distribution (Lalonde and Topel 1992; Butcher and Dinardo 2002; Lubotsky 2011). Canadian researchers have, on the other hand, emphasized the deteriorating labour market earnings of all new labour market entrants, both foreign- and native-born (Green and Worswick 2012). Finally, Antecol, Kuhn, and Trejo (2006), provide some evidence that the greater regulation of Australian labour markets results in immigrant assimilation in employment rates, whereas in Canada and the U.S. where labour markets are more competitive, immigrant assimilation is more evident in the relative progression of immigrants' weekly earnings.

In this article, we examine Census and survey data from Australia, Canada, and the United States spanning the 1991-2011 period to provide new evidence on the potential for immigrant screening policies to influence the entry labour market performance of skilled immigrants. To do so, we consider whether there is evidence of improvements in the relative employment rates and weekly earnings of university-educated foreign-born men arriving in Australia and Canada in the 2000s consistent with their immigration policy reforms. We restrict attention to university-educated men not only because they comprise an increasing share of all new immigrants (by the late 2000s, roughly one-half of prime-age male new arrivals in Australia and Canada were university-educated), but more importantly, because they are more likely to have been admitted through skilled immigrant screening policies. Administrative data indicate that 82% of the 487,845 university-educated men who became Canadian permanent residents between 2000 and 2010 entered as economic-class immigrants, and 77% of this group entered as principal

applicants under the Canada's `points system.' Over a similar period, over 60% of male university-educated Australian immigrants entered under the skilled migration stream.

To attribute the observed changes in immigrant outcomes to policy, one of course has to be careful to account for the effects of concomitant changes in migrant selectivity and broader labour market trends in Australia and Canada.[1] To do so, we employ a three-pronged strategy. First, we compare the observed patterns in the relative performance of Australian and Canadian university-educated immigrants to their U.S. counterparts, where due to political gridlock, immigration policy remained essentially unchanged through the 2000s. Second, we compare the performance of immigrants from a common origin country or region – China, India, the Philippines and North America – to account for the effects of changing selectivity incentives emanating from origin countries. Finally, to net out the effects of changes in destination country labour markets, we follow Green and Worswick's (2012) strategy of comparing immigrant earnings and employment outcomes to those of young native-born workers entering the destination country's labour markets at the same time.

The existing literature documents a significant deterioration in the labour market performance of recent immigrants through the 1980s and 1990s in Canada (Baker and Benjamin 1994; Grant 1999; Aydemir and Skuterud 2005) and the U.S. (Borjas 1985). In contrast, our estimates point to relative gains in the weekly earnings of recent university-educated immigrants in all three countries over the 1990-2010 period. Moreover, the timing of the gains appears more consistent with the effects of immigration policy than migrant self-selection, since the U.S. gains coincide with the growth of their H-1B program through the 1990s, while the Australian and Canadian gains coincide with the ramping-up of their `points system' criteria and shifts towards `two-step' immigration in the late 1990s (Australia) and mid-2000s (Canada). Relative changes in earnings inequality, on the hand, should have concentrated U.S. gains in the 2000s and the Australian and Canadian gains in the 1990s.

Nonetheless, despite the Australian and Canadian gains, we find evidence of a much larger and persistent performance advantage in the full-time earnings of university-educated immigrant men in the United States. We argue that this persistent advantage, which is evident even among immigrants from the same origin countries, must reflect either that U.S. immigrants are different from their Australian and Canadian counterparts upon arrival ("immigrant selectivity") or that their post-migration experiences are different. The fact that the U.S. advantage is largest among immigrants born in India, among those employed in STEM jobs, and in the middle of the earnings distribution points to the influence of the H-1B program. Of course, migrants who enter the U.S. on an H-1B visa also avoid job search at arrival, unlike their Australian and Canadian counterparts, who are screened from abroad through `points systems.'

[1] There now exist a number of other studies examining the effectiveness of Australia and Canada's recent immigration policy reforms (Cobb-Clark 2003; Hawthorne 2008; Richardson and Lester 2004; Begin, Goyette, and Riddell 2010). However, none of these papers attempt to account for the possible concomitant effects of migrant selectivity and domestic labour markets. An exception is Clarke and Skuterud (2013), which employs a similar strategy to that here, but uses data up to 2006 and does not include the United States comparison group.

However, the performance advantage of U.S university-educated immigrants is much less apparent in entry employment rates, particularly in comparison to Australia. It also does not appear to decrease with years since migration and has persisted even as the Australian system of employer-sponsored migration has converged to that of the U.S. (so that recent Australian immigrants are similarly likely to arrive with pre-arranged employment). We conclude that the U.S. advantage is most consistent with the relative positive selectivity of U.S. immigrants owing to higher returns to immigrants' skills in the U.S. (Clarke and Skuterud 2016) and, perhaps also, higher returns to U.S. labour market experience in immigrants' source countries (Borjas and Bratsberg 1996). Overall, our findings suggest that while immigration policy has the potential to improve immigrant labour market performance on the margin, this potential is limited by large differences in the incentives of migrants of varying abilities and ambitions to settle in particular destination countries.

The remainder of the paper is organized as follows. In the following section, we describe the policy, selectivity, and domestic labour market differences that are likely to underlie the observed differences in the relative labour market performance of university-educated immigrants in Australia, Canada, and the United States. We then describe our empirical strategy for isolating the effects of policy, followed by a discussion of our results. We conclude with a discussion of how immigrant-screening policies interact with migrant selectivity and broader features of domestic labour markets to affect the labour market performance of skilled immigrants.

2. Background

In the latter half of the 1990s, Australia made a number of reforms to its skilled-worker immigration program as part of a broader objective to increase the skilled-worker stream share of immigration inflows. In hindsight, these reforms amount to what is arguably the most significant reform of Australian immigration policy since its decision in 1979 to introduce a `points system' for screening skilled migrants. While the details are complex and continue to evolve, one can distinguish two distinct pieces that would be expected to influence either the skills of university-educated migrants that are selected or their ability to integrate into Australian labour markets.

First, in 1996, the government introduced a new temporary work visa scheme, known as the 457 visa, allowing employers to more easily recruit foreign skilled workers to fill job vacancies that could not be filled domestically. The program stipulates a minimum annual salary for workers issued 457 visas, which is below average annual earnings in the overall Australian population, but considerably above the annual earnings of minimum wage workers. When combined with the longer-term growth in the number of international students studying at Australian post-secondary institutions, many of whom transition to employment 'bridging visas' following graduation, Australia has experienced a substantial increase in the transition of individuals from temporary visas to permanent residency, or what has been coined `two-step' migration. The share of new permanent visas granted to on-shore applicants increased from 22

percent in 1997-1998 to 50 percent by 2010-2011.[2] Among those admitted in the skilled stream, 60 percent transitioned from a temporary visa by 2011, of which approximately 60 percent transitioned from 457 visas and 40 percent from international student visas.

One would expect `two-step' immigrants to have superior long-term labour market outcomes for at least two reasons. Most obviously, employers will tend to have better information about the skills of prospective migrants, particularly difficult to measure skills, than what is evaluated in the 'points system.' Second, being recruited directly from abroad, immigrants avoid job search at arrival. If pre- and post-migration job search are equivalent, the gains from `two-step' immigration may be only short-term. However, to the extent that there are sunk costs in the migration decision, we would expect the outside options and reservation wages of immigrants who arrive in the destination country without pre-arranged employment to be lower, which may have longer-term effects on earnings. For example, immigrants may be forced to take low-wage `survival jobs' at arrival, but may experience difficulties transitioning out of these jobs (Skuterud and Su 2012). [3]

In 1999, the Australian government also revised the criteria of its `points system' with the objective to `select for success' among principal applicants (Hawthorne 2005). The key features of the reform were an introduction of pre-migration mandatory English-language tests and a formal system of assessing foreign credentials to insure that the professional skills that were being credited in the selection process would also be recognized by Australian employers. In addition, consistent with the push towards `two-step' migration, the system put increasing emphasis on pre-arranged employment and waived the work experience requirement for students completing qualifications at an Australian educational institution, thereby effectively placing greater weight on Australian qualifications in its `points system' (Birrell and Perry 2009). Finally, new migrants were restricted from accessing income support programs in their first two years following migration.

One would expect all of these reforms to have improved labour market outcomes for new Australian immigrants. The current evidence evaluating these changes is however mixed. Cobb-Clark (2003) compares the employment and wage outcomes of a cohort of Australian immigrants arriving in the early 1990s to a cohort arriving immediately following the 1999 reforms and finds evidence of substantial improvements, but acknowledges that the broader improvement in Australian labour market conditions may have contributed to these gains. Similarly, Hawthorne (2008) compares the performance of a cohort

[2] *Perspective on Migrants 2009* (ABS, Catalog No:3416.0) and *Immigration Update 2010-11* (Department of Immigration and Citizenship).

[3] To date there is little direct evidence of the effect of `two-step' migration. The empirical challenge is identifying transitions from temporary visas, which is typically not possible using the standard survey and Census data used to study immigrant labour market performance. Gregory (2014) uses information on country of birth in the Australian Labour Force Survey (LFS), together with the fact that non-English speaking (NESB) `two-step' migrants are much more likely to have been initially admitted on student visas, as opposed to employment visas, to provide evidence of the effects of the `two-step' system. His results point to an increase in part-time employment rates of migrants admitted on student visas, but little change in the employment rates of those admitted on work visas. He is, however, unable to examine wage outcomes, which are not available in the Australian LFS data.

of Australian and Canadian immigrants arriving in the early 2000s, and finds evidence of superior Australian performance, but does not take account of the possible influence of changing migrant selectivity and relative improvements in Australian labour market conditions. Finally, Clarke and Skuterud (2013) use Australian and Canadian Census data spanning the 1986-2006 period to compare the relative employment and earnings performance of immigrants and find little evidence of policy effects, after comparing immigrants from similar source countries and controlling for broader entry conditions affecting all new labour market entrants.

In response to mounting evidence of the inability of its system to meet the current labour market needs of the economy, Canada shifted the focus of its `points system' in the early 1990s away from occupational shortages to a `human capital model' emphasizing the educational attainment of migrants (Ferrer, Picot, and Riddell 2014). This shift was entrenched with the passing of the 2002 *Immigration and Refugee Protection Act (IRPA)*, which put increasing emphasis on the labour market experience and language ability of applicants, in addition to their education levels. While this de-emphasis on immigrant occupations and current labour market needs can be seen as diverging from the Australian policy over the same period, with the 2006 election of a Conservative government, the general direction of Australian and Canadian policy converged. In particular, Canada followed the Australian lead by launching a Foreign Credentials Referral Office in 2007, intended to provide foreign-trained professionals with occupational credential assessment and referral services on Canadian credential recognition. In addition, the government introduced measures making it easier for companies to recruit foreign workers on temporary work visas, thereby substantially increasing the inflows of temporary foreign workers, as well as the proportion of new permanent residents transitioning from a temporary work permit. However, the rise of `two-step' immigration has been more modest in Canada. According to administrative data, in 2011 roughly 20 percent of new Canadian permanent residents admitted through an economic-class program had transitioned from a temporary visa, compared to 10 percent a decade earlier. As in Australia, we expect this series of Canadian policy reforms to have improved the labour market outcomes of new Canadian immigrants arriving, particularly in the latter half of the 2000s.[4] Indeed, there is evidence that both *IRPA* (Begin, Goyette, and Riddell 2010) and `two-step' migrants (Sweetman and Warman 2014) have improved outcomes, although it is difficult to ascertain what impact changes in migrant selectivity and broader labour market conditions may have had on these improvements.[5]

[4] While IRPA was passed in 2002, due to a significant backlog in processing permanent-residency applications, there was a significant lag in the implementation of the new `points system.' According to data from Begin, Goyette, and Riddell (2010), by 2005 only 37% were being screened through the IRPA points grid. We, therefore, expect any benefit of IRPA to be observed in our data primarily in the latter half of the 2000s.

[5] The Conservative government, elected in 2006, also introduced a number of new immigration programs beyond the Federal Skilled Worker Program (the `points system'), including a Provincial Nominee (PN) program intended to increase the settlement of immigrants outside Toronto and Vancouver, and the Canadian Experience Class (CEC) program, intended to provide a pathway beyond the standard 'points system' for former international students and temporary foreign workers. However, as discussed in the following section, up to 2011 very few of the male university-educated immigrants that we focus on in our analysis were admitted under these new programs.

In sharp contrast to Australia and Canada, U.S. immigration policy has remained essentially unchanged since 1990 due to political gridlock in Washington. A key objective of the 1990 *Immigration Act* was to shift immigration away from a system based exclusively on family-reunification to a system where selecting migrants on their education and skills plays a larger role. The screening mechanism introduced was a `two-step' system in which skilled foreign workers are recruited by U.S. employers through temporary work visas, most notably the H-1B visa targeting workers in "specialty occupations," and subsequently transition to permanent residency. The annual number of visas issued is however capped and the cap has fluctuated over the years. Lowell (2000) estimates the H-1B stock population taking into account H-1B annual inflows and expected emigration, deaths, and transitions to permanent residency. Her updated results, described in Kerr and Lincoln (2010), point to significant growth through the 1990s, followed by a levelling off after 2000. Consistent with a `two-step' system, the share of new U.S. permanent residents admitted under the skill-stream increased in the first half of the 1990s, but has hovered around 15 percent since.[6]

This `leveling off' of the U.S. skill-stream share is also confirmed by our own analysis of data from the U.S. Survey of College Graduates. Both the 2003 and 2013 surveys included a question asking all foreign-born respondents through which immigration program they first entered the United States. Extracting the sample of foreign-born, university-educated, men aged 25-59 (to match our sample), these data suggest little change through the 2000s in the proportion of U.S. immigrants initially admitted on a temporary, as opposed to permanent, visa, although there has been some shift away from work permits to student visas. Specifically, in 2003, 74% of university-educated male immigrants admitted to the U.S. in the previous 5 years reported initially entering the U.S. on a temporary visa, compared to 70% in 2013. However, 34% of this group in 2013 entered on a student visa, compared to 26% in 2003.

To estimate the impact of Australia's and Canada's immigration reforms we need an estimate of how the labour market outcomes of recent Australian and Canadian immigrants *would have* evolved through the 2000s, had their immigration policies not been reformed. The relative stability of U.S. immigration policy, particularly through the 2000s, provides a comparison group to estimate this counterfactual. Of course, U.S. immigrant earnings may have evolved differently because wage structures affecting all U.S. workers evolved differently or because factors affecting the selectivity of migration emanating from immigrants' origin countries may have evolved differently. To account for changes in wage structures, we compare new immigrants to native-born new labour market entrants within each destination country, and to account for selectivity factors emanating in source countries, we compare immigrants originating from a common source country. However, this still leaves open the possibility that U.S. immigrant earnings evolved differently through the 2000s due to factors affecting selectivity emanating from within Australia, Canada, or the United States.

[6] Office of Immigration Statistics, *Yearbook of Immigration Statistics*, Homeland Security, various years.

Unfortunately, it is difficult to know precisely what factors drive migrants' choices of where to settle. The theory of migrant selectivity emphasizes differences in earnings inequality (Borjas 1987). Specifically, the standard Roy model of migrant selectivity predicts that destination countries with higher levels of inequality, relative to the origin country, will tend to attract relatively high-skilled migrants seeking higher returns to their skills. On the other hand, destination countries with lower levels of inequality, relative to the origin country, will tend to attract relatively less-skilled migrants, as the relative compression of the income distribution provides a form of insurance for these workers. Moreover, the greater the differences between origin- and destination-country inequality, the greater these selection pressures will be.[7] Differential changes over time in the performance of immigrants from a particular origin country should therefore be interpreted in light of the evolution of income inequality in Australia, Canada, and the United States through the 1990s and 2000s. For example, an increase in U.S. relative to Canadian inequality through the 1990s should result in greater gains through the 1990s in the average performance of new U.S. immigrants.

Appendix Table 1 reports Gini coefficients of the distribution of market and disposable (post-tax-and-transfer) income in the total population, as well as the ratio of the 90th and 10th percentiles of the disposable income distribution. While one could argue that it is the income distribution in the university-educated population that is relevant for migrant selectivity in our analysis, it is unclear that this is the relevant distribution for university-educated immigrants who may anticipate facing challenges in attaining jobs commensurate with their education levels. We therefore focus on inequality in both market (pre-tax-and-transfer) and disposable income in the total population using published data from the OECD. The inequality statistics reported in Table A1 have two key features relevant for our analysis. First, income inequality was highest in the U.S. throughout the 1990-2010 period, particularly in disposable income, with little difference between Australia and Canada.[8] Second, inequality grew more in Australia and Canada through the 1990s, but substantially more in the U.S. through the 2000s. These differences suggest that U.S. university-educated immigrants should be relatively positively selected on their skills, in comparison to Australian and Canadian immigrants, throughout our period of analysis. However, the U.S. advantage in immigrant selectivity should have diminished through the 1990s and increased through the 2000s.

An examination of Table A1 also reveals that income inequality worsened in Australia during the 1990s. Since there was little change in selection policy, at least until the late 1990s, improving outcomes for immigrants during the 1990s would be consistent with this greater inequality. Similarly, since there was little change in Canadian selection policy during the 1990s, improving immigrant outcomes in the

[7] Note that these predictions are based on a mean-preserving comparison of income inequality across destination countries. Relative changes in mean income across destination countries will also tend to impact relative selectivity. Comparing differences in income levels is however complicated by the need to adjust for purchasing power differences across destination countries.

[8] Greater inequality in the United States, compared to Australia and Canada, based upon disposable income, reflects both higher `pre-tax' returns to skills and lower marginal income tax rates.

1990s would also be consistent with inequality-induced migrant selectivity. However, through the 2000s, there was little change in selection policy in the U.S. and a considerable rise in inequality. Over this period, improving outcomes for U.S. immigrants would be consistent with this increase in inequality. This implies that evidence of improvements in the relative performance of U.S. immigrants through the 1990s is inconsistent with migrant selectivity, since the relative growth in Australian and Canadian inequality through the 1990s should have advantaged Australian and Canadian immigrants. On the other hand, evidence of relative gains in Australian and Canadian immigrant performance through the 2000s is consistent with the influence of immigration policy reforms, since the large increase in U.S. inequality through the 2000s should have resulted in a U.S. advantage in migrant selectivity.

The key advantage of comparing immigrants from a common origin country such as China or India is that differences in the relative performance of immigrants across destination countries effectively "differences out" the influence on migrant selectivity of factors emanating from the origin country. Nonetheless, in order to help us interpret changes over time in the performance of immigrants from a particular origin country, it is worth considering how inequality has evolved in the four countries or regions that we consider: China, India, Philippines, and North America. Based on World Bank data, in the late 1980s China had similar levels of inequality to Australia, Canada, and the U.S., but Chinese inequality grew substantially more in the following two decades.[9] This implies that Chinese immigrants should have been increasingly negatively selected in all three destination countries, but the level of this negative selection should have been greater in Australia and Canada where inequality levels are lower. Indian inequality has similarly grown, but the increase has not been very different from that in Australia, Canada, and the United States. Throughout the period of our analysis, inequality was slightly higher in India than in Australia and Canada, but considerably lower than in the United States. We would, therefore, expect Indian immigrants to the U.S. to be positively selected but negatively selected in Australia and Canada. As for the Philippines, inequality grew through the 1990s, but subsequently decreased through the 2000s returning to its levels of the early 1990s. However, over the entire period it is considerably higher than in all three destination countries implying negative selectivity. Finally, Canadian (U.S.) immigrants in the U.S. (Canada) should be positively (negatively) selected, but this selectivity should have decreased (increased) through the 1990s, but increased (decreased) through the 2000s.

3. Methodology

3.1 Data

Our empirical work examines Census and survey microdata files from the three countries spanning the period 1990-2011. Australia and Canada conduct quinquennial Censuses in common years. For Australia, we accessed confidential data through the Australian Bureau of Statistics using a remote access data laboratory (RADL) system. In the years 1991 through 2001, these data provide random 1%

[9] The World Bank data (*World Development Indicators*).

samples of the Australian population. For 2001 and 2006, 5% samples are provided. For Canada, we accessed the confidential Census master files providing 20% random samples of the population in 1991, 1996, 2001, and 2006. For 2011, the long-form Canadian Census was replaced with a voluntary survey. The National Household Survey (NHS) sampled one-in-three Canadian households and obtained a 68.6% response rate.[10] Finally, for the United States we use 5% random samples from the 1990 and 2001 decennial Censuses and pooled 1% samples from the American Community Survey (ACS) for the years 2005-2006 and 2009-2011.[11]

With some notable exceptions, discussed below, these data provide broadly comparable information on demographic and labour force characteristics of individuals, as well as information on country of birth and year of arrival of the foreign-born population. Several sample restrictions are imposed in order to create consistent samples. First, the sample is restricted to prime-age (25-59) males who have completed a university degree. We restrict attention to prime-age men in order to minimize the influence of sample selection issues arising from differential latent labour supply propensities of immigrant women. We restrict attention to the university educated, because this group is most likely to have been screened through a skilled-worker immigration program. University-educated immigrants also comprise an increasing share of all new immigrants in all three destination countries. This is evident in Table 1, where we estimate the education distribution of recent prime-age male immigrants across arrival cohorts. The results reveal a persistent increase in all three destination countries since the late 1990s in the share of new immigrants with university degrees, so that by the late 2000s roughly 50% of Australian and Canadian immigrants held university degrees and 40% of U.S. immigrants. Finally, our focus on university-educated immigrants has the advantage that the mix of countries from which Australian, Canadian, and U.S. university-educated immigrants originate is more similar than it is for less educated immigrants. This is evident in Table 2, where we compare the origin country distribution of recent immigrants across education groups. Among immigrants with high school or less, nearly three-quarters of U.S. immigrants are from Central and South America, compared to only 1.5% and 16% of Australian and Canadian immigrants, respectively. Similarly, 33% and 52% of Australian and Canadian immigrants are from Asia, compared to only 14% of U.S. immigrants. However, among immigrants with university degrees, the distributions are roughly similar. For example, Asia accounts for 46%, 58%, and 50% of Australian, Canadian, and U.S. immigrants with Bachelor's degrees. Consequently, differences in the average labour market performance of immigrants are more likely to reflect differences in the screening policies of

[10] We use the sampling weights provided with the data, which are designed to insure the national representativeness of the final NHS sample, at least on observable dimensions. However, to the extent that university-educated immigrants who chose not to respond to the NHS were different on unobservable dimensions related to earnings from their native-born counterparts who did not respond, our estimates, particularly for the most recent arrival cohort will be biased.

[11] Both the Canadian Census and the U.S. Census and ACS files contain population weights, representing the inverse of the probability of inclusion in the sample. We standardize these weights, so that the cumulative sum of the weight variable is equal to the number of observations in each Census year.

destination countries and less likely to reflect differences in migration costs, which are more important for immigrants with lower levels of education and income.

Since we are primarily interested in the relative performance of immigrants within their first five years following migration and our first year of data is from 1991, we limit the immigrant samples to individuals who migrated after 1985. In order to avoid spurious correlations in our sample between age at migration and years since migration arising from our age restriction, we also exclude all immigrants whose current age and arrival cohort indicate a possibility that they entered their destination country before the age of 20. Finally, we exclude all Quebec residents from the Canadian sample, because the province of Quebec has historically administered their own immigrant screening policies, which have historically put relatively more emphasis on the French-language abilities of prospective migrants and less on their human capital characteristics. By focusing on Canadian immigrants outside Quebec, our results are not only more likely to reflect the national-level policy changes described in Section 2, but also increase the comparability of the estimates by focusing on three English-speaking migrant destinations.

There are two differences in the Census data that are especially relevant to our analysis. First, both the Australian and U.S. questionnaires ask all foreign-born individuals the year in which they first arrived in the destination country, but do not identify whether respondents are currently temporary or permanent residents. The Canadian Census (and 2011 NHS), on the other hand, identify the year in which permanent residency was obtained, but also samples temporary residents and provides an indicator distinguishing them. In order to make the samples as comparable as possible, we include temporary residents in the Canadian samples and use information (available for all respondents) on place of residence one and five years ago to identify their arrival cohort.[12] For current permanent residents, on the other hand, we assume their year of arrival is the year in which they became a permanent resident. As discussed in Section 2, this is less of a problem in the Canadian data, since 'two-step' migration is less common. Also, ignoring the years of Canadian residence prior to obtaining permanent residency should result in the estimated entry earnings of Canadian immigrants being upward biased, so that the relatively large entry earnings gaps of Canadian immigrants that we identify are, if anything, downward biased.

The second inconsistency in our data is that the Canadian and U.S. data identify labour market earnings and weeks worked in the previous year, allowing us to construct weekly earnings. The Australian Census, however, only asks respondents to identify their usual weekly total income, including self-employment income, government transfers, and investment income. To limit the amount of non-earnings income in the Australian data, we further restrict the samples used to estimate the earnings regressions (but not the employment regressions) to full-time wage-and-salary workers. In Canada and the U.S., full-time status is identified off a question asking respondents whether they worked mostly full-time hours in the previous year, whereas self-employed workers (who we exclude) are identified as those whose main

[12] For temporary residents who report living outside Canada one or five years ago, we assume they arrived in the previous 5 years. For those who responded living in Canada five years ago, we assume they arrived 5-9 years ago.

source of income in the previous year was self-employment income. In Australia, on the other hand, full-time status is identified using information on the number of hours worked in all jobs in the week prior to the Census, while self-employment status is based on activity in the Census reference week.[13]

After imposing the full set of sample restrictions, we obtain the following sample sizes of prime-aged university-educated men: 23,292 (immigrant) and 43,143 (native-born) for Australia; 204,295 (immigrant) and 306,810 (native-born) for Canada; and 144,315 (immigrant) and 113,195 (native-born) for the United States. In Table 3, we report sample means of the key variables used in our analysis separately for these six groups. In all three countries, immigrant mean earnings fall below that of natives, but the gap is substantially larger in Canada than Australia or the United States. Similarly, immigrant employment rates are consistently lower than natives, with the largest gaps in Canada, followed by the U.S. and Australia.[14] The largest difference in Table 3 is that one-half of U.S. university-educated immigrants have a graduate degree, compared to roughly one-third of Australian and Canadian immigrants. This difference is also evident among natives, but to a much smaller extent. The proportion of immigrants employed in STEM occupations is, however, almost identical. Finally, as shown in Table 2, the source-country distribution of university-educated immigrants is not substantially different. As with lower education groups, the largest difference is that U.S. immigrants are more likely to be of Central or South American origin (17% compared to 2% and 6% for Australia and Canada, respectively).

3.2 Empirical Specification

As discussed above, a key challenge in isolating the effects of immigrant screening policies on immigrant labour market outcomes is to account for differences in broader labour market conditions both within and across destination countries. The standard approach in the literature is to identify these conditions using native-born workers in the destination countries. The difficulty is deciding which native-born workers are the most relevant comparison group for recent university-educated male immigrants. The predominant approach in the literature is to compare immigrants to similarly aged natives. However, there is evidence for the U.S. and Canada that the return to foreign labour market experience has deteriorated over time and is essentially zero for the most recent arrival cohorts (Friedberg 2000; Aydemir and Skuterud 2005). This suggests that the integration experience of new immigrants is very much like that of all new labour market entrants. Indeed, Green and Worswick (2012) find evidence that half of the deterioration in the entry earnings of Canadian immigrants through the 1980s can be accounted for by changing labour market conditions affecting all new labour market entrants, as opposed to declining skill levels across immigrant arrival cohorts. There is also evidence that the macroeconomic conditions that

[13] Note, also, that in Canada part-time weekly hours are defined as less than 30, whereas in Australia and the U.S. it is defined as less than 35.

[14] We have also examined self-employment rates and part-time rates. Immigrant and native self-employment rates are almost identical in Australia and the US, but slightly higher for immigrants in Canada (0.14 compared to 0.11). Part-time rates are, however, consistently higher for immigrants, with the largest difference in the US (0.11 compared to 0.07).

immigrants face at entry have long-term effects for immigrant workers (Aydemir 2003), similar to evidence found for new native-born labour market entrants (Oreopoulos, von Watcher, and Heisz 2012).

Following the Green and Worswick's (2012) approach of comparing recent immigrants to native-born new labour market entrants, we examine changes over time in the employment rates and earnings of new immigrants by estimating the following empirical specification:

$$y_{ijrt} = \alpha + \sum_{j=2}^{5} \beta_j C_j + f(yse_{jrt}) + \sum_{j=2}^{5} \delta_j (C_j \cdot yse_{jrt}) + \lambda_1 ur_{rt} + \pi grad_{ijr} + X_r^{'}\gamma + M_{ijr} \cdot \left[\sum_{j=1}^{5} \beta_j^m C_j + \sum_{j=1}^{5} \delta_j^m (C_j \cdot yse_{jrt}) + \theta_1 fexp_{jrt} + \theta_2 (fexp_{jrt} \cdot yse_{jrt}) + \pi^m grad_{ijr} \right] + \varepsilon_{ijrt} \quad (1)$$

where y_{ijrt} is either an employment dummy variable or log weekly real earnings of individual i from labour market entry cohort j, residing in geography r, observed in year t; C_j are six (5) cohort dummies indicating the period of labour market entry (1986-1990, 1991-1995, 1996-2000, 2001-2005, and 2006-2010); $f(yse_{jt})$ is a quadratic years-since-labour-market-entry profile common to immigrants and natives; ur_{rt} is a detrended regional unemployment rate; $grad_{ijrt}$ is a graduate degree dummy variable; X_r is a vector of geography dummies indicating the city, state, or province of residence; M_{ijr} is an immigrant dummy variable; $fexp_{ijr}$ is years of foreign labour market experience; and ε_{ijrt} is a random error term with a conditional mean of zero.[15]

For natives, we assume that the year of labour market entry is the year in which an individual turned 24. Similar to immigrants, we restrict the native-born sample to individuals who entered the labour market after 1985 (so the reference cohort in the regressions is 1986-1990). For immigrants, on the other hand, we assume that the year of labour market entry is their year of arrival in the destination country. Finally, foreign experience is calculated as the difference between an immigrant's age of arrival and 24 (and assumed to be zero for all native-born men). Year of arrival is, however, only identified in 5-year intervals for immigrants in the Australian data. To ensure that our results are not being driven by differences in measurement error, we construct similar intervals in the Canadian and U.S. data and use the midpoint of these intervals to obtain a unique year of arrival and age at arrival to define the years since entry (yse_{jt}) and years of foreign experience ($fexp_{ijr}$) variables for immigrants.[16] A consequence of this feature of the Australian data is that there is no variation in years since entry for the most recent arrival cohort (2006-2010), so that we are unable to estimate the return to yse_{jt} for this immigrant cohort. However, we also estimate the model for Canada and the U.S. using the continuous measure of year of migration (these results are reported in Table A5 in the appendix).

[15] Real earnings are constructed using either a regional-level (Australian), provincial-level (Canada), or state-level (US) all-items consumer price index (CPI) with a 2010 base year.

[16] Similarly, the 1991 and 1996 Australian Census files only provide current age in 5-year intervals. We, therefore, restrict the age variable in the 1991 and 1996 Canadian Censuses and the 1990 U.S. data to the same intervals and define year of entry and years since entry using the midpoints of these intervals.

Note that we allow the linear term in the quadratic years-since-entry profile in equation (1) to vary by entry cohort for both natives and immigrants. To improve the efficiency of the estimates, particularly where we restrict attention to immigrants from a particular source country, we do not allow the effect of foreign experience on entry earnings to vary across immigrant entry cohorts. However, the foreign experience effect is allowed to influence the slope of the immigrant-specific years-since-entry profile. A negative estimate of the coefficient θ_2 suggests lower post-migration wage growth for immigrants who arrive at older ages.

Of primary interest is the comparison of the estimates of the immigrant cohort effects β^m across destination countries, both in terms of their historical values and their evolution over time. To the extent that immigrants face the same average skill prices as natives, these cohort effects reflect variation in the average quantity of skill of university-educated men. To see this, assume that the level of real weekly earnings is equal to the product of an individual's skill (Q_{ij}) and the price of that skill (P_{ijrt}), where variation in prices across individuals could reflect heterogeneity in the types of skills individuals have, outcomes of the job search process, or even discrimination. Log real weekly earnings are then given by $y_{ijrt} = p_{ijrt} + q_{ij}$. If the mean skill of natives does not vary across the native-born entry cohorts, so that $E(q_{ik} \mid j=k, M_{ijrt}=0)=E(q_{il} \mid j=l, M_{ijrt}=0)$ for all $k \neq l$, then:

$$\beta_k = E[p_{ijr,t+k} \mid j=k, yse_{jrt}=0, M_{ijr,t+k}=0] - E[p_{ijrt} \mid j=0, yse_{jrt}=0, M_{ijrt}=0], \quad (2)$$

so that the native entry cohort effects capture the change in average skill prices across cohorts relative to the base cohort 0. If we further assume that immigrants face the same average skill prices as natives within any period $t=t^*$, that is $E(p_{ijrt}|t=t^*, M_{ijrt}=1) = E(p_{ijrt}|t=t^*, M_{ijrt}=0)$, then:

$$\beta_k^m = E[q_{ijrt} \mid j=k, yse_{jrt}=0, M_{ijrt}=1] - E[q_{ijrt} \mid j=0, yse_{jrt}=0, M_{ijrt}=0], \quad (3)$$

so that the immigrant cohort effects capture differences in average skill between natives and immigrants who entered the labour market in the same period. Moreover, if mean native skill is cohort-invariant, then variation in the immigrant cohort effects over time must reflect changes in average immigrant skill across entry cohorts. We expect immigrant screening policies to have their primary effect by influencing this average skill level of university-educated immigrants.

The assumption that immigrants receive the same labour market returns to their skills is no doubt a strong one. First, there is compelling evidence from Canada that immigrants face labour market discrimination in recruiting based on their names (Oreopoulos 2011). However, we are primarily interested in how employment rates and earnings of immigrants from a particular origin country have evolved differently in Australia, Canada, and the United States. We find it difficult to think of reasons why differences in the extent of discrimination against immigrants could explain these differences. Of greater relevance, in our view, is the possibility that immigrants face greater job search frictions than similarly-educated natives. For example, migration may involve a sunk cost, so that immigrants' outside job options are lower, thereby forcing them to lower their reservation wages. Or perhaps, immigrants lack the social

networks of natives, which adversely impacts their job offer arrival rates. Consistent with this idea, Bowlus, Miyairi and Robinson (2016) find that lower job offer arrival rates can account for three-quarters of the earnings gap of Canadian immigrants. It is via this mechanism that we imagine `two-step' migration, which essentially avoids the job search process at arrival, will potentially enhance the labour market performance of immigrants.

We focus on employment rates and earnings at the time of arrival and not subsequent assimilation profiles for three reasons. First, assimilation will primarily reflect immigrants' post-migration human capital investments, which we think is less clearly related to the skills that immigrant selection policies, like the `points system,' are intended to screen. Second, our estimates of assimilation are also more likely than our estimates of entry earnings to be biased by non-random out-migration of immigrants. Of course, we are in part relying on established immigrants to identify our cohort effects, but we have explored outmigration rates in our samples of university-educated immigrant men and they do not appear to be sizable. Finally, we are most interested in the relative performance of the most recent arrival cohort (2006-2010), for whom identifying assimilation necessarily entails out-of-sample predictions.

We also estimate conditional (on cohort) quantile earnings regressions, which compare percentiles of the earnings distributions of native-born and immigrant university-educated men. As before, assuming the native skill distribution is cohort-invariant and that immigrants face the same prices for skills as natives at given points of their distributions, the estimated differentials reflect the relative skills of immigrants across the skill distribution. Given that we expect the criteria of the `points system,' such as pre-migration English-language test scores, to primarily screen skills at the lower end of the distribution, we would expect any advantage in Australian and Canadian immigrant skills to be most evident at the lower percentiles of the earnings distribution.

Finally, income in the Australian Census questionnaire is reported in intervals. The standard approach in the existing literature is to transform these intervals into a continuous variable using the category midpoints. This requires that an arbitrary point be chosen for the unbounded top interval. Instead, we estimate model (1) using a censored linear regression model, which we estimate by maximum likelihood. Specifically, for individual i in census year t we observe whether they have income in some interval (y_L and y_U), where the upper limit is infinity for the top category. The contribution to the likelihood of each individual is $Pr(y_L \leq y_{it} \leq y_U)$. This amounts to estimating an ordered Probit model with known cut points.

4. Results

We begin our analysis by comparing employment rates and log weekly earnings in the full sample of full-time university-educated male workers. The estimates of β_j in equation (1) are estimates of the expected employment rates or earnings (conditional on geography and the de-trended unemployment rate) of native-born workers in their first 5 years following labour market entry relative to natives who entered in

the 1986-1990 period. The immigrant coefficients, β_j^m on the other hand, estimate the expected employment rates or earnings of immigrants in the 5-year period following their arrival relative to natives who entered the labour market in the same 5-year period.

The first three columns of Table 4 report the results from the employment rate regressions. The estimates for the earliest immigrant entry cohort (1986-1990) suggest little difference in the magnitude of the employment rate gaps of recent immigrants between the three countries. This is broadly consistent with the estimates provided by Antecol, Kuhn, and Trejo (2006). Moreover, the estimates suggest that Australian immigrants have experienced the largest relative gains in employment rates since the 1990s, followed by U.S. immigrants. The improvement in the entry employment rates for the 1991-1995 immigrant arrival cohort, relative to the 1986-1990 cohort, during a period with no significant change in immigrant selection policy, is more consistent with positive immigrant selectivity arising from greater inequality in Australia during this period. In contrast, the Australian gains, at least since the late 1990s are more consistent with the growing importance of `two-step' immigration. Similarly, for the U.S., the gains in immigrant employment rates since the mid-1990s are consistent with the expansion of the H-1B. However, they are also consistent with increasing U.S. inequality and positive selectivity of U.S. immigrants, particularly between 1996-2000 and 2001-2005. For the most recent arrival cohorts, there is no evidence of shortfalls in the employment rates of Australian university-educated immigrants. In contrast, in Canada, where more than 70% of new immigrants in the late 2000s became permanent residents upon initial arrival, as opposed to transitioning from a temporary work or student visa, immigrant employment rates at the time of labour market entry were 5 percentage points below those of natives. For immigrants arriving at older ages, the estimated negative returns to foreign experience suggest that these employment rate gaps are even larger, particularly in Canada.

However, the estimates also suggest greater gains in employment rates in the years following entry for Canadian immigrants. This is evident in the immigrant years-since-entry (*yse*) effects, which are close to 0.01 in Canada for the most recent cohorts, compared to 0.004-0.008 in the U.S. and 0.001-0.002 in Australia. This implies that within 5 years of arrival, the initial employment rate gap of 5 percentage points for Canadian immigrants has closed. Moreover, within 10 years of entry, the relative employment rates of university-educated men are roughly equivalent in the three destination countries. Once again, this is consistent with the `two-step' migration process providing Australian and U.S. immigrants with an initial advantage over Canadian immigrants, who are more likely to have to engage in job search at the time of arrival.

Turning to the earnings results in the following columns of Table 4, the results for the first two immigrant entry cohorts, corresponding to immigrants who arrived in the late 1980s and early 1990s, suggest substantial earnings gaps for new university-educated immigrants in all three destination countries. The magnitudes of the gaps are relatively modest for U.S. immigrants (between 14 and 17 log points, compared to 20 and 37 log points for Australian and 22 to 24 log points for Canadian immigrants).

This difference is consistent with U.S. immigrants being relatively positively selected owing to the historically higher *levels* of U.S. inequality in both market and disposable income.

As noted in Section 2, the late 1980s and early 1990s was characterized by little change in immigrant screening policies in Australia and Canada. Similarly, while the U.S. introduced a new *Immigration Act* in 1990, the significant growth of the H-1B program that the *Act* gave rise to did not begin until the latter half of the 1990s (Kerr and Lincoln 2010). Consistent with this stability in policy, the estimates in Table 4 suggest little change in the entry earnings of Canadian and U.S. immigrants between the late 1980s and early 1990s. However, the Australian estimates suggest significant improvements in immigrant earnings over this period. Table A1 indicates that during this period of substantial economic growth, Australian inequality increased significantly relative to Canadian and U.S. inequality, particularly in market incomes. The large improvement in Australian immigrant entry earnings between the 1986-1990 and 1991-1995 cohorts (17 log points) therefore appears most consistent with increasing positive selectivity of Australian immigrants owing to this rising inequality.

The late 1990s and 2000s saw a movement in all three countries towards more targeted selection policies. The U.S. estimates point to a significant increase in the earnings of immigrants arriving in the 1996-2000 period and a levelling-off of relative immigrant earnings through the 2000s. This is consistent with the evidence in Kerr and Lincoln (2010) of an expansion of the H-1B program in the 1990s and a subsequent levelling-off in the 2000s. While the persistently superior earnings performance of U.S. immigrants is consistent with higher earnings inequality in the U.S., the stability of U.S. immigrant earnings through the 2000s, during a period with relatively little change in selection policy, but a substantial increase in inequality, is less consistent with inequality driving migrant selectivity. On the other hand, the improvement in the entry earnings of successive Australian immigrant cohorts between the late 1980s and early 2000s appears consistent with its selection policy reforms, including the increase in `two-step' immigration. While it is true that the entry earnings of Australian-born new labour market entrants were similarly improving over this period, the estimated immigrant gains are relative to the native-born, suggesting something beyond these broader economic conditions is responsible.

The Australian estimates, however, also point to a significant deterioration in the earnings of the most recent immigrant arrival cohort (2006-2010), with only a modest offsetting improvement in their employment rates. We think there are two factors that account for this deterioration. First, there has been a compositional change in the source country distribution between Australian immigrants arriving in 2001-2005 and 2006-2010 periods. Importantly, the share of immigrants from India increased from 15.2 percent for the 2001-2005 cohort to 23.3 percent for the most recent arrival cohort. Immigrants from India typically earn between 20-27 log points less than the native-born. Excluding immigrants from India, reduces the estimated entry effect for the most recent cohort from -0.149 to -0.096 log points. Second, in 2001, Australia introduced a pathway for international students to gain permanent residency by providing additional points for education completed in Australia and relaxing the requirement that applicants have relevant work experience in their nominated occupation. Immigrants transitioning from

a student visa to permanent residence mainly applied under the independent skill class, which does not require sponsorship by an employer. In 2009, this pathway was restricted through a dismantling of the Migrant Occupation in Demand List (MODL). Data on the share of visas granted onshore under the skilled independent class in the total skill class show a considerable and sustained increase from 2001 to 2009 consistent with this policy, followed by a dramatic and sustained drop. In order to gain permanent residency under this policy, applicants needed to apply within six months of obtaining their educational qualification. Consequently, the deteriorating entry earnings for the most recent arrival cohort are consistent with a greater share of new immigrants transitioning from student visas and entering the labour market without a job offer.

Finally, the earnings performance of the most recent cohorts of Canadian immigrants continues to lag behind those of their Australian and U.S. counterparts, despite evidence of some improvement for the 2006-2010 cohort. A persistent entry earnings gap of roughly 25 log points, that became even larger for the early 2000s cohort, decreased to 17 log points for the most recent cohort. This suggests that, while Canada's reforms to its `point system' in the mid-2000s, including introducing pre-migration language testing and credential assessment, have been effective in selecting immigrants who are less likely to experience obstacles in integrating into Canada's labour markets, there are still significant challenges for Canadian immigrants. An important question is to what extent the inferior entry earnings of Canadian immigrants reflects that they are more likely to arrive without pre-arranged employment and must, therefore, engage in job search at arrival. Comparing the estimated returns to years-since-entry (yse) in the earnings results in Table 4 provide some evidence of this, but only for the 2001-2005 cohort (the Canadian estimate is 0.012 compared to -0.024 and -0.011 for Australia and the U.S., respectively), whose entry earnings were exceptionally low (34.1 log point gap). We explore this further below.

Overall, the results from Table 4 point to a substantial performance advantage for U.S. university-educated immigrants, in comparison to Australian and Canadian immigrants. There is evidence that recent policy reforms in Australia and Canada have narrowed this gap to some extent, but it remains substantial for the most recent cohort. In Figure 1, we examine whether these patterns are different at the lower and upper ends of the earnings distribution by plotting the estimated entry effects from quantile regressions at the 10th, 50th, and 90th percentiles. The complete set of estimates from these regressions and their standard errors are reported in Table A2 in the appendix.[17]

[17] The income data in the Australian census is provided in intervals. In order to estimate the quantile regressions for Australia, the expected income within each interval is estimated by first estimating an interval regression with no covariates. This calculates $E[ln(y_{ijrt})|ln(y_L) \leq ln(y_{ijrt}) \leq y_U)]$. Since the interval regression is identified under the assumption that $ln(y_{ijrt})$ is normally distributed, this expectation only depends upon the estimated first and second moments of the normal distribution. The expected income within an interval is used as the dependent variable in the quantile regressions. However, once attention is restricted to university-educated male workers, more than 10% of both native-born and immigrant observations have earnings in the top interval, so that estimating a conditional quantile regression for the 90th percentile for Australia is not possible.

Figure 1 reveals two main results informing our analysis. First, in all three countries the magnitudes of the immigrant earnings gaps are mostly larger at the lower end of the distribution than at the top. For Canada, the gaps are particularly large. Specifically, the estimates predict that among Canadian immigrants who arrived in the 2001-2005 period with no foreign work experience facing the sample average unemployment rate (8.6%), the 10th percentile of log weekly real earnings is 5.52. This falls below the 5th percentile of the overall male native-born earnings distribution, including all education groups. Second, to the extent that the improvements in immigrant entry earnings identified in Table 4 reflect policy reforms, it appears that policy effects were not uniform over the immigrant earnings distribution. In Australia, the gains are larger in the middle of the distribution, perhaps reflecting the growth of `two-step' immigration. Unfortunately, due to the censoring of income data in the Australian data, we are unable to obtain Australian estimates for the 90th percentile. However, the comparison of the 10th and median estimates does suggest that the deterioration in mean earnings for the most recent cohort is also evident at the 10th and 50th percentiles.

In Canada, the improvement for the most recent arrival cohort is more evident at the lower end and middle of the distribution than at the top. This is consistent with policy effects, since we would expect pre-migration language tests and credential assessment to improve earnings primarily at the lower end of the distribution. Moreover, as the result of the substantial gain at the lower end of the distribution for the most recent Canadian arrival cohort (2006-2010), there is relatively little difference in the performance gap of Canadian and U.S. immigrants at the 10th and 90th percentiles. Rather, for the most recent cohort, the performance advantage of U.S. immigrants appears largest in the middle of the distribution. This is also true in the Australian-U.S. comparison. Given that one would expect the `points systems' of these countries to primarily affect earnings by screening out migrants who are expected to be particularly unsuccessful, the relatively small gaps at the 10th percentile appear consistent with the effects of screening policies.

Finally, the improvement in U.S. immigrant earnings in the late-1990s appears strongest in the middle and top end of the distribution. This is broadly consistent with the growth of the H-1B program in the late 1990s, since one would expect this program, which targets specialty occupations, to primarily boost average immigrant earnings by increasing the inflow of immigrants at the upper end of the earnings income distribution. What is less clear is what explains the substantial gains for U.S. immigrants at the 10th percentile through the 2000s.

The current literature emphasizes the importance of source-country earnings distributions in understanding differences in the performance of immigrants across destination countries. Moreover, the analysis of Borjas (1993), and more recently Clarke and Skuterud (2013), suggest that `points systems' work primarily by shifting the source-country distribution immigrants. However, an important distinguishing feature of our analysis is our focus on university-educated workers. As evident in Table 3, this focus serves to significantly narrow differences in the origin-country distributions of Australian, Canadian, and U.S. immigrants. Nonetheless, despite the similarity of the source-country distributions, it

is possible for small differences in source countries to have comparatively large effects on average immigrant performance if migrant selectivity is evolving differently across destination countries. To insure that the improvements in immigrant outcomes identified in Table 4 reflect immigration policy reforms, as opposed to migrant selectivity, we compare the relative performance of immigrants originating from the same country. By doing so, any effect of migrant selectivity should reflect "push" and "pull" factors emanating from the destination, not the origin, country.

Figure 2 shows relative immigrant entry earnings estimates by country of origin. We perform the analysis for three countries of origin with large enough samples to obtain statistically meaningful estimates: China, India, and the Philippines. We also add North America as an additional group, which includes U.S. immigrants in Canada, Canadian immigrants in the U.S., and Canadian and U.S. immigrants in Australia. The estimated coefficients and standard errors are reported in Table A3 in the appendix.

Chinese immigrants fare substantially worse in Australia than in Canada or the U.S. and much worse than the average Australian immigrant. However, their entry earnings have been improving for successive cohorts, which is consistent with selection policies increasing language requirements and the shift toward `two-step' immigration. Given the exceptionally large increases in Chinese inequality through the 1990s and 2000s (Sicular 2013), Chinese immigrants to Australia should have become increasingly negatively selected through the 1990s and 2000s. The large gains in the average earnings of Chinese immigrants in Australia over the two decades are, therefore, impressive. Chinese immigrants in Canada and the U.S., on the other hand, show little overall improvement over the past two decades. In large part, this reflects a significant deterioration, particularly in Canada, in the earnings of the 1996-2000 and 2001-2005 Chinese entry cohorts. This deterioration is consistent with the large increase in Canadian immigrants trained in STEM fields through the latter half of the 1990s and the subsequent downturn of the IT sector in the early 2000s (Picot and Hou 2009). Comparing the 2001-2005 and 2006-2010 cohorts, the improvement for Chinese immigrants is, however, particularly large (24 log points compared to 17 log points in the sample of all immigrants), which is consistent with the introduction of the pre-migration language testing for Canadian immigrants in the mid-2000s. Finally, Chinese entry earnings also improved substantially in the U.S. between the late 1980s and early 1990s, but there is little evidence of gains subsequently. Nonetheless, as in the full population, the results for Chinese immigrants point to a substantial U.S. performance advantage, which has persisted through the 1990s and 2000s.

Turning to Indian migrants, there is little evidence in the Australian or Canadian estimates of improving earnings performance consistent with selection policy reforms. In Canada, there is improvement between the late 1980s and late 1990s, but this was a period of relative policy stability. In the U.S., on the other hand, the entry earnings of recent Indians grew over the entire sample period, so that by the early 2000s, average entry earnings for university-educated Indian men were 21 log points above those of their native-born counterparts. Given the high concentration of university-educated Indian men in H-1B flows, the exceptional performance of Indian immigrants in the U.S. almost certainly reflects

the H-1B program.[18] However, it is also the case that over our sample period, the level of Indian income inequality exceeds that in Australia and Canada, but is less than U.S. inequality. The migrant selectivity hypothesis suggests that Indian immigrants to the U.S. should be positively selected, but negatively selected in Australia and Canada. It, therefore, seems likely that selectivity pressures are also responsible for the U.S. advantage. In fact, it is possible that the H-1B program interacts in an important way with inequality. The substantial difference in the performance of Indian immigrants in Australia and the U.S., even as their `two-step' migration programs have converged, suggests that employer-driven selection programs are effective in as far as earnings returns to skill are sufficient to attract the most skilled foreign workers. The combination of high salaries and a mechanism for U.S. employers to recruit foreign talent appears to be an example of highly successful skilled immigration policy.

Similar to China, the level of inequality in the Philippines exceeded that in Australia, Canada, and the United States throughout the sample period. The migrant selectivity hypothesis, therefore, implies that immigrants from the Philippines should be negatively selected in all three countries, but relatively less so in the United States, where inequality is closer to inequality in the Philippines. However, inequality in the Philippines grew at approximately the same rate as that in Australia, Canada, and the U.S., suggesting little change in the (negative) selectivity of immigrants across cohorts. Consistent with the between-country differences in the levels of inequality, the estimates in the bottom-left panel of Figure 2 point to substantial earnings gaps for Filipino immigrants in all three countries, but relatively small gaps in the United States. However, similar to the Chinese, but not the Indian case, there is evidence of improving entry earnings, consistent with the timing of selection policy reforms. In particular, an initial earnings gap of roughly 60 log points for Filipino immigrants in Australia in the late 1980s declined to only 12 log points by the late 1990s. Similarly, a persistent gap of roughly 50 log points between the late 1980s and early 2000s declined to 33 log points for the most recent cohort of Filipino immigrants to Canada. The fact that these gains are evident among Filipino and Chinese immigrants, but not Indian immigrants, who are more likely to be fluent in English at arrival, once again points to the possible influence of pre-migration language testing in improving earnings outcomes at arrival.

Finally, we compare the performance of immigrants born in Canada or the United States. With the exception of the 1986-1990 Australian cohort, which is estimated very imprecisely, all the estimates suggest earnings advantages relative to native-born new labour market entrants. However, for the two most recent arrival cohorts (2001-2005 and 2006-2010), the advantages are largest for Canadian-born immigrants in the United States. Moreover, as with Indian immigrants, there is little evidence of improvements in the earnings performance of Australian and Canadian immigrants concomitant with their selection policy reforms. Given the similarity of the convergence in selection policies, particularly

[18] The share of approved H-1B visas for workers born in India increased from 43% in 2004, to 53% in 2010, to 78% in 2014. See various annual issues of *Characteristics of H-1B Specialty Occupations*, Department of Homeland Security.

between Australia and the U.S., these results once again emphasize the positive selectivity of skilled immigrants in the U.S. owing to the higher returns to skill.

The exceptional performance of Indian immigrants in the U.S. suggests that immigrant selection policies, such as the H-1B program, may have an important influence on the occupational backgrounds of immigrants or their occupational choices following migration. To examine this issue further, we consider the entry earnings of workers in STEM and non-STEM occupations separately. The results of this analysis are presented in Figure 3 (the regression estimates are in Table A4 of the appendix). We highlight two main results. First, immigrant STEM workers in all three countries tend to outperform their non-STEM counterparts. This difference is particularly large in the U.S., where non-STEM immigrants consistently experience entry earnings disparities exceeding 10 log points, while U.S. university-educated immigrant STEM workers throughout the 1990s and 2000s had earnings exceeding those of their U.S.-born counterparts. Second, the gains in the late 1990s and early 2000s in Australia, and for the most recent arrival cohort in Canada, are evident for STEM and non-STEM workers. However, there is a much larger increase in the entry earnings of Australian STEM workers 1996-00 and 2001-05, consistent with the expansion of `two-step' migration and the increasing share of STEM workers in this program. In contrast, the improvement for the most recent immigrant cohort in Canada is roughly equivalent for STEM and non-STEM workers consistent with the ramping up of its `points system' which was not been targeted at STEM workers. Finally, in the U.S., there is less clear evidence of improvement among STEM and non-STEM workers than in the full sample of all immigrants in Table 4. This suggests that an important part of the overall U.S. gains reflects a compositional shift in skilled immigration towards STEM workers. Indeed, in our U.S. sample, the share of recent (within 5 years of arrival) university-educated male immigrants employed in a STEM occupation increased from 25% to 35% between 1986-1990 and 2006-2010. Over the same period, the share of U.S.-born university-educated new labour market entrants employed in a STEM occupation decreased from 22% to 17%.

We conclude our analysis by further examining two alternative explanations for the performance advantage of U.S. university-educated immigrants that we have identified. First, it is possible that using employment-based visas, such as H-1B visas, as the immigration gateway increases the likelihood that immigrants are employed in the period immediately after arrival, but any earnings advantage is short-lived. To examine this possibility, we need to compare the estimated returns to years-since-entry, but as noted above, the Australian data do not allow us to distinguish years since arrival for immigrants who arrived within the previous five years. We, therefore, restrict attention to the Canadian and U.S. data and redefine the years-since-entry variable as a continuous variable, allowing us to distinguish immigrants who are within 1 and 2 years of arrival. The results from re-estimating equation (1) using this variable are presented in Table A5 in the appendix. Overall, there is little evidence of earnings assimilation. The 2001-2005 Canadian cohort did experience substantial post-migration earnings gains (average earnings converged to the native-born comparison group by 1 log point per year), but their entry earnings gap was also exceptionally large (36 log points). Similarly, the 1991-1995 U.S. cohort appears to have experienced

some earnings convergence to the native comparison groups (0.4 log points per year), but again, their entry earnings gap was larger than for any other cohort (20 log points). With these two exceptions, there is little evidence of earnings assimilation. Moreover, there is no evidence that the substantially larger entry earnings shortfalls of Canadian immigrants are temporary. In fact, for the most recent cohort (2006-2010), post-migration earnings growth appears greater for U.S. immigrants, despite them experiencing no earnings gap at arrival.

The second issue we examine is the possibility that university-educated immigrants in the U.S. outperform their Australian and Canadian counterparts because their degrees are less likely to be foreign. Unfortunately, with the exception of the 2006 and 2011 Canadian data, there is no way to distinguish foreign and domestic degrees in our data. However, as noted above, data from the U.S. Survey of College Graduates indicates that roughly 20% of college-educated U.S. immigrants initially entered the U.S. on a student visa. In comparison, Canadian administrative data suggest that 6% and 11% of new permanent residents in the 2000-2004 and 2005-2006 periods, respectively, had studied in Canada prior to obtaining permanent residency (see Table 1 in Hou and Bonikowska 2015). Similarly, Australian administrative data indicate that approximately 13% of new permanent visas were granted to immigrants that initially entered on a student visa. This suggests that U.S. immigrants are, indeed, more likely to have domestic degrees, which one would expect to provide them with an earnings advantage.

To obtain some evidence on this issue in our data, we further restrict our immigrant samples to migrants who arrived in the destination country at the age of 30 or older, since this should exclude the vast majority with domestic degrees. The results are provided in Table A6 in the appendix. Consistent with there being a positive return to foreign labour market experience for university educated men, relative immigrant earnings at the time of labour market entry are systematically higher when we restrict attention to university-educated immigrants arriving at older ages. Moreover, while U.S. immigrants continue to outperform their Canadian counterparts by substantial margins, the Australian estimates are much closer to the U.S. estimates. In fact, the 2001-2005 Australian immigrant cohort appears to outperform their U.S. counterpart. This is consistent with the exceptionally high returns to foreign work experience for Australian immigrants that are evident in all the regressions, including those that restrict attention to immigrants from a particular origin country (Table A2). An interesting question, beyond the scope of our analysis, is to what extent this reflects Australia's extensive system of pre-migration foreign credential assessment. Regardless, despite this system and the broader convergence of `two-step' migration in Australia and the U.S., even for the most recent arrival cohort, the estimates point to a U.S. performance advantage. Given the persistently higher levels of U.S. income inequality, this advantage appears more consistent with the positive selectivity of U.S. migrants as a result of the higher returns to skills offered in U.S. labour markets.

5. Conclusion

There are two main findings of our analysis. First, in contrast to much of the current literature, we find evidence of improving relative labour market earnings of university-educated immigrant men through the 1990s and 2000s in Australia, Canada, and the United States. Moreover, the timing of these gains roughly coincides with immigration policy reforms within these countries: the expansion of the H-1B program in the U.S. in the late 1990s; the ramping up of Australia's `points system' and shift towards `two-step' migration in the late 1990s and through the 2000s; and the similar policy reforms in Canada in the mid-2000s. Second, despite these recent gains for Australian and Canadian immigrants, our estimates point to a larger and persistent performance advantage in the full-time earnings of university-educated immigrant men in the United States. This advantage is evident even among immigrants from the same source country and tends to be largest among immigrants born in India, among those employed in STEM jobs, and in the middle of the earnings distribution.

One interpretation of the exceptional performance of U.S. skilled immigrants is that `two-step' immigration, which accounts for the migration pathway of roughly three-quarters of the U.S. immigrants in our sample, leads to superior labour market outcomes, because immigrants avoid job search at arrival. There are three reasons we think this interpretation is lacking. First, in comparison to Australian immigrants, we find no evidence of a U.S. advantage in employment rates among the most recent cohorts. Rather the U.S. advantage is evident only in full-time earnings. Second, comparing post-migration earnings growth of Canadian and U.S. immigrants suggests that the U.S. advantage is not a short-term phenomenon. Third, the advantage persists even as the importance of `two-step' immigration in Australia, and to a lesser extent Canada, has converged to the United States. If the U.S. advantage simply reflected the potentially long-term effects of job search frictions for Australian and Canadian immigrants, we would expect the earnings performance of Australia's most recent arrival cohorts, who have superior employment outcomes to their U.S. counterparts, to be much closer in magnitude to the U.S. estimates.

It also seems unlikely that the large U.S. performance advantage reflects lower levels of labour market discrimination in the U.S. or the beneficial effects of basing immigrant selection on family-reunification objectives, as emphasized by Duleep and Regets (1992). Data from the U.S. Survey of College Graduates suggests that less than one-quarter of our university-educated male sample initially entered the U.S. as permanent residents under any stream. Moreover, of the 780,452 managers and professionals who obtained U.S. legal permanent residence status between 2005 and 2011, only 35% entered under a family-stream program.[19] In comparison, 20% and 13% of male university-educated new permanent residents through the 2000s in Australia and Canada, respectively, entered under a family-stream program. Although, U.S. family-stream share is highest, the difference relative to Australia and Canada seems unlikely to be large enough to account for the large difference in their average labour market

[19] See Table 9 of the *U.S. Yearbook of Immigration Statistics*, Department of Homeland Security, various issues. Family-stream includes both "family sponsored preferences" and "immediate relatives of U.S. citizens."

performance. We also find it difficult to conceive of reasons why Indian, Chinese, or Filipino university-educated immigrants would experience more discrimination in Australian and Canadian labour markets than in the United States. Certainly, we are not aware of any evidence consistent with this explanation.

Overall, in our view the persistent performance advantage of university-educated immigrants in the U.S. appears most consistent with the hypothesis that U.S. university-educated migrants are relatively positively selected owing to persistently higher income inequality in the United States and a greater role for employers in immigrant selection. Moreover, the fact that the performance advantage is larger in the middle of the earnings distribution than at the lower end, suggests that it is primarily driven by higher returns to labour market skills in the U.S., as opposed to the relative economic security of Australia's and Canada's more generous social welfare systems, which should primarily serve to depress relative immigrant earnings at the lower end of the distribution.

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Table 1: Education distribution of recent immigrants by education group and arrival cohort

	AUS		*CAN*		*USA*	
High school or less						
1986-1990	0.434	(0.013)	0.390	(0.003)	0.594	(0.002)
1991-1995	0.354	(0.017)	0.348	(0.003)	--	
1996-2000	0.330	(0.014)	0.226	(0.003)	0.571	(0.002)
2001-2005	0.229	(0.005)	0.241	(0.002)	0.524	(0.005)
2006-2010	0.221	(0.004)	0.245	(0.003)	0.480	(0.005)
Some post-secondary						
1986-1990	0.329	(0.012)	0.351	(0.003)	0.144	(0.002)
1991-1995	0.318	(0.016)	0.336	(0.003)	--	
1996-2000	0.304	(0.014)	0.262	(0.003)	0.118	(0.001)
2001-2005	0.284	(0.006)	0.229	(0.002)	0.121	(0.003)
2006-2010	0.295	(0.004)	0.270	(0.003)	0.120	(0.003)
Bachelor's degree						
1986-1990	0.158	(0.010)	0.173	(0.002)	0.138	(0.002)
1991-1995	0.212	(0.014)	0.215	(0.002)	--	
1996-2000	0.238	(0.013)	0.326	(0.003)	0.162	(0.002)
2001-2005	0.308	(0.006)	0.339	(0.003)	0.185	(0.004)
2006-2010	0.301	(0.004)	0.321	(0.003)	0.210	(0.004)
Graduate degree						
1986-1990	0.078	(0.007)	0.086	(0.002)	0.124	(0.002)
1991-1995	0.116	(0.011)	0.101	(0.002)	--	
1996-2000	0.128	(0.010)	0.186	(0.002)	0.149	(0.001)
2001-2005	0.179	(0.005)	0.191	(0.002)	0.170	(0.004)
2006-2010	0.183	(0.004)	0.164	(0.002)	0.190	(0.004)

Notes: Recent immigrants are those who arrived within the previous 5 years. Standard errors in parentheses.

Table 2: Source region distribution of recent immigrants by education group

	AUS		*CAN*		*USA*	
<u>High school or less</u>						
Europe	0.223	(0.006)	0.152	(0.002)	0.081	(0.001)
Asia	0.331	(0.006)	0.524	(0.003)	0.137	(0.001)
N. Africa & Middle East	0.079	(0.004)	0.077	(0.001)	0.022	(0.001)
Sub-Saharan Africa	0.045	(0.003)	0.053	(0.001)	0.021	(0.000)
North America	0.034	(0.002)	0.023	(0.001)	0.010	(0.000)
Other America	0.015	(0.002)	0.161	(0.002)	0.724	(0.002)
Pacific	0.274	(0.006)	0.015	(0.001)	0.006	(0.000)
<u>Some post-secondary</u>						
Europe	0.374	(0.006)	0.263	(0.002)	0.186	(0.003)
Asia	0.264	(0.005)	0.436	(0.003)	0.247	(0.003)
N. Africa & Middle East	0.031	(0.002)	0.068	(0.001)	0.043	(0.001)
Sub-Saharan Africa	0.113	(0.004)	0.062	(0.001)	0.060	(0.002)
North America	0.021	(0.002)	0.035	(0.009)	0.046	(0.002)
Other America	0.012	(0.001)	0.117	(0.002)	0.404	(0.004)
Pacific	0.185	(0.005)	0.020	(0.001)	0.014	(0.001)
<u>Bachelor's degree</u>						
Europe	0.283	(0.006)	0.153	(0.002)	0.169	(0.002)
Asia	0.455	(0.006)	0.576	(0.003)	0.496	(0.003)
N. Africa & Middle East	0.040	(0.002)	0.099	(0.002)	0.056	(0.001)
Sub-Saharan Africa	0.074	(0.003)	0.048	(0.001)	0.045	(0.001)
North America	0.045	(0.003)	0.046	(0.001)	0.046	(0.001)
Other America	0.025	(0.002)	0.065	(0.001)	0.175	(0.002)
Pacific	0.077	(0.003)	0.014	(0.001)	0.013	(0.001)
<u>Graduate degree</u>						
Europe	0.250	(0.007)	0.234	(0.003)	0.280	(0.003)
Asia	0.540	(0.008)	0.503	(0.004)	0.438	(0.003)
N. Africa & Middle East	0.042	(0.003)	0.088	(0.002)	0.047	(0.001)
Sub-Saharan Africa	0.056	(0.004)	0.048	(0.002)	0.038	(0.001)
North America	0.050	(0.004)	0.072	(0.002)	0.036	(0.001)
Other America	0.026	(0.003)	0.049	(0.002)	0.149	(0.002)
Pacific	0.037	(0.003)	0.009	(0.001)	0.012	(0.001)

Notes: Recent immigrants are those who arrived within the previous 5 years. Standard errors in parentheses.

Table 3: Sample means

	AUS				*CAN*				*USA*			
	Native-born		Immigrants		Native-born		Immigrants		Native-born		Immigrants	
Log weekly earnings	7.355	(0.003)	7.334	(0.005)	7.164	(0.002)	6.942	(0.003)	7.132	(0.003)	7.076	(0.003)
Employed	0.966	(0.001)	0.941	(0.002)	0.944	(0.001)	0.863	(0.001)	0.944	(0.001)	0.891	(0.001)
Cohort 1986-1990	0.199	(0.002)	0.165	(0.002)	0.334	(0.001)	0.173	(0.001)	0.364	(0.001)	0.265	(0.001)
Cohort 1991-1995	0.226	(0.002)	0.129	(0.002)	0.268	(0.001)	0.202	(0.001)	0.276	(0.001)	0.219	(0.001)
Cohort 1996-2000	0.219	(0.002)	0.179	(0.003)	0.200	(0.001)	0.260	(0.001)	0.198	(0.001)	0.299	(0.001)
Cohort 2001-2005	0.186	(0.002)	0.278	(0.003)	0.131	(0.001)	0.236	(0.001)	0.111	(0.001)	0.138	(0.001)
Cohort 2006-2010	0.146	(0.002)	0.249	(0.003)	0.067	(0.001)	0.129	(0.001)	0.051	(0.001)	0.079	(0.001)
Years since entry	9.243	(0.035)	8.151	(0.041)	9.437	(0.014)	7.494	(0.014)	9.520	(0.019)	8.371	(0.016)
Unemployment rate	6.381	(0.007)	6.395	(0.009)	9.069	(0.006)	8.575	(0.007)	7.585	(0.006)	7.333	(0.006)
Graduate degree	0.205	(0.002)	0.382	(0.003)	0.156	(0.001)	0.343	(0.001)	0.279	(0.001)	0.503	(0.001)
STEM occupation	0.253	(0.002)	0.315	(0.004)	0.217	(0.001)	0.321	(0.001)	0.169	(0.001)	0.309	(0.001)
Years of foreign experience	--		8.244	(0.044)	--		10.357	(0.019)	--		7.973	(0.020)
China	--		0.091	(0.002)	--		0.138	(0.001)	--		0.101	(0.001)
India	--		0.151	(0.002)	--		0.128	(0.001)	--		0.204	(0.001)
Philippines	--		0.049	(0.001)	--		0.081	(0.001)	--		0.066	(0.001)
UK	--		0.179	(0.003)	--		0.036	(0.000)	--			
Europe	--		0.260	(0.003)	--		0.189	(0.001)	--		0.209	(0.001)
Asia	--		0.492	(0.003)	--		0.564	(0.001)	--		0.478	(0.001)
N. Africa & Middle East	--		0.051	(0.001)	--		0.097	(0.001)	--		0.018	(0.000)
Sub-Saharan Africa	--		0.069	(0.002)	--		0.049	(0.001)	--		0.046	(0.001)
North America	--		0.041	(0.001)	--		0.039	(0.000)	--		0.037	(0.000)
Other America	--		0.021	(0.001)	--		0.055	(0.001)	--		0.169	(0.001)
Pacific	--		0.066	(0.002)	--		0.008	(0.000)	--		0.009	(0.000)
Number of observations	43,143		23,292		306,810		204,295		113,195		144,315	

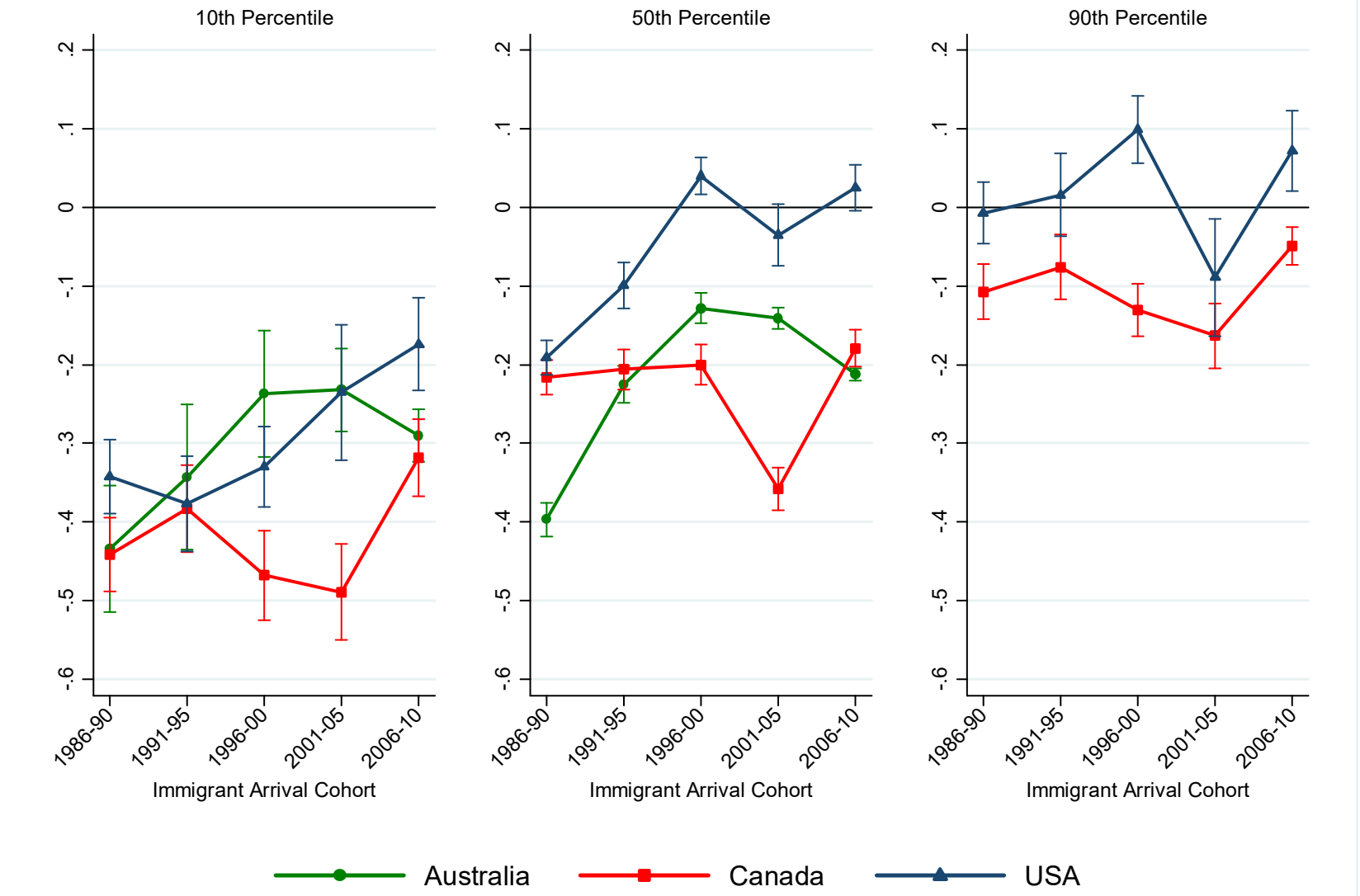
Notes: Standard errors in parentheses. The "log weekly earnings" and "STEM occupation" means are based only on the sample of wage and salary workers used to estimate the earnings regressions.

Table 4: Relative immigrant earnings and employment rates

	EMPLOYMENT						EARNINGS					
	AUS		*CAN*		*USA*		*AUS*		*CAN*		*USA*	
Natives:												
cohort 91-95	-0.005	(0.008)	-0.010	(0.003)	-0.003	(0.004)	-0.007	(0.016)	-0.068	(0.008)	0.046	(0.013)
cohort 96-00	-0.006	(0.008)	-0.024	(0.004)	-0.016	(0.004)	0.032	(0.017)	-0.014	(0.009)	0.077	(0.012)
cohort 01-05	0.012	(0.007)	-0.029	(0.005)	-0.035	(0.007)	0.044	(0.014)	-0.078	(0.010)	0.025	(0.019)
cohort 06-10	0.018	(0.006)	-0.026	(0.005)	-0.048	(0.007)	0.058	(0.012)	0.017	(0.014)	-0.036	(0.018)
yse	0.004	(0.001)	0.002	(0.001)	0.000	(0.001)	0.054	(0.002)	0.057	(0.001)	0.075	(0.002)
$yse^2/100$	-0.018	(0.003)	-0.015	(0.002)	-0.008	(0.002)	-0.112	(0.008)	-0.093	(0.005)	-0.185	(0.007)
cohort 91-95 * yse	0.000	(0.001)	0.000	(0.000)	0.000	(0.000)	0.004	(0.001)	0.009	(0.001)	-0.005	(0.001)
cohort 96-00 * yse	0.000	(0.001)	0.002	(0.000)	0.001	(0.001)	0.005	(0.002)	0.010	(0.001)	-0.010	(0.002)
cohort 01-05 * yse	0.000	(0.001)	0.003	(0.001)	0.003	(0.001)	0.012	(0.002)	0.028	(0.002)	-0.010	(0.003)
cohort 06-10 * yse	0.000	(0.001)	0.004	(0.002)	0.004	(0.003)	0.021	(0.003)	0.027	(0.005)	-0.019	(0.007)
Immigrants:												
cohort 86-90	-0.045	(0.016)	-0.054	(0.005)	-0.060	(0.005)	-0.367	(0.034)	-0.235	(0.013)	-0.169	(0.014)
cohort 91-95	-0.016	(0.017)	-0.093	(0.005)	-0.062	(0.006)	-0.199	(0.040)	-0.222	(0.015)	-0.140	(0.017)
cohort 96-00	-0.017	(0.013)	-0.068	(0.005)	-0.086	(0.005)	-0.127	(0.035)	-0.263	(0.014)	-0.030	(0.014)
cohort 01-05	-0.005	(0.008)	-0.061	(0.006)	-0.025	(0.009)	-0.065	(0.021)	-0.341	(0.016)	-0.071	(0.025)
cohort 06-10	0.001	(0.005)	-0.045	(0.004)	-0.029	(0.007)	-0.195	(0.013)	-0.175	(0.013)	0.005	(0.017)
cohort 86-90 * yse	0.002	(0.001)	0.003	(0.000)	0.002	(0.000)	0.010	(0.002)	-0.001	(0.001)	-0.002	(0.001)
cohort 91-95 * yse	0.001	(0.001)	0.006	(0.000)	0.004	(0.001)	0.001	(0.003)	-0.003	(0.001)	0.000	(0.002)
cohort 96-00 * yse	0.002	(0.001)	0.007	(0.001)	0.008	(0.001)	-0.005	(0.004)	0.000	(0.002)	-0.006	(0.002)
cohort 01-05 * yse	0.001	(0.001)	0.009	(0.001)	0.004	(0.002)	-0.024	(0.004)	0.012	(0.003)	-0.011	(0.004)
fexp	-0.002	(0.000)	-0.005	(0.000)	-0.004	(0.000)	0.027	(0.001)	0.010	(0.001)	0.010	(0.001)
(fexp*yse)/100	-0.024	(0.006)	-0.001	(0.003)	-0.002	(0.003)	-0.184	(0.013)	-0.135	(0.008)	-0.190	(0.008)
Native R^2	0.065		0.001		0.005		--		0.146		0.154	
Immigrant R^2	0.129		0.028		0.019		--		0.052		0.071	
Native sample	43,143		306,810		113,195		31,447		264,060		105,965	
Immigrant sample	23,292		204,295		144,315		16,521		149,025		129,150	

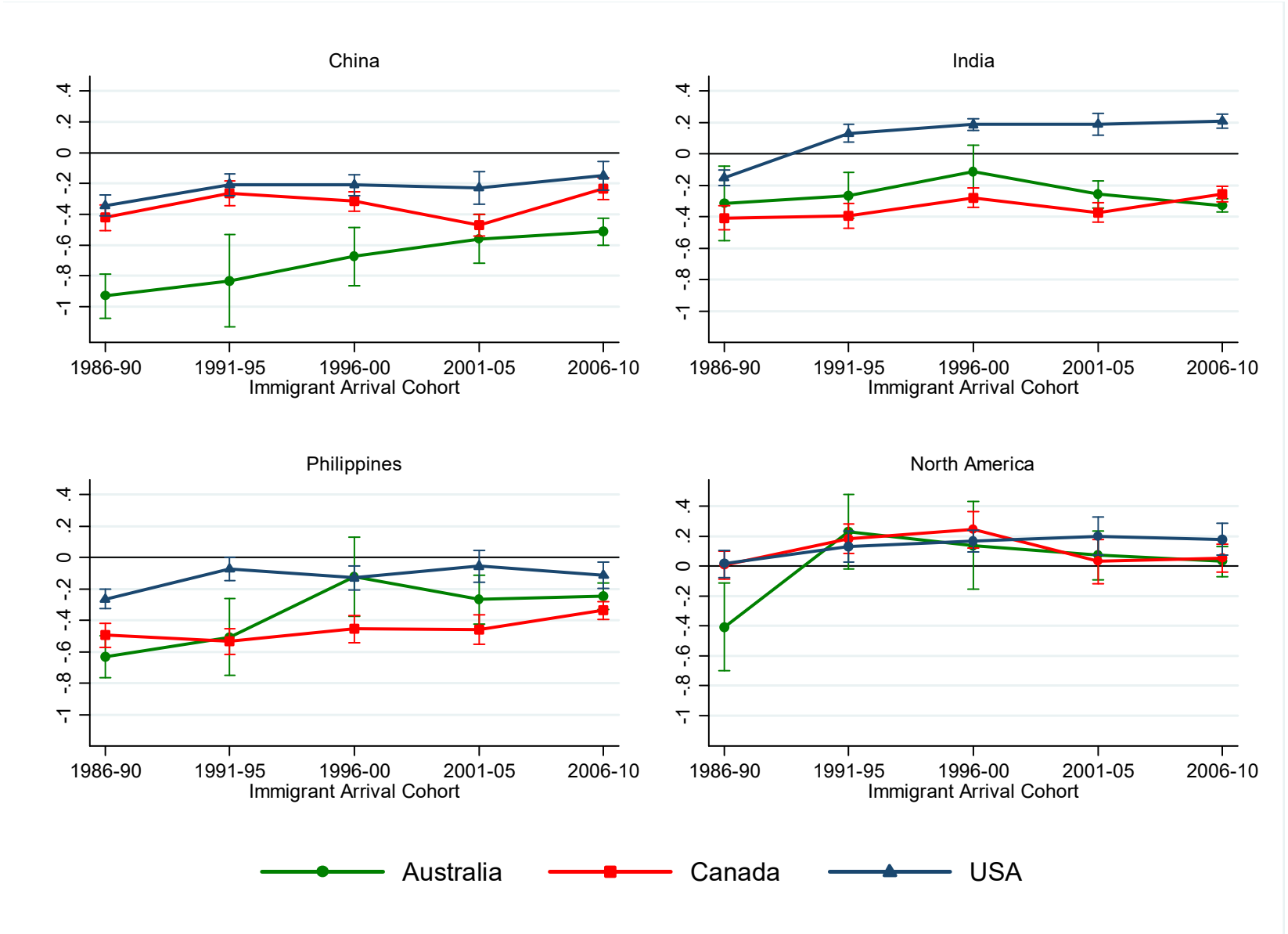
Notes: The first six columns use as dependent variable the log of weekly earnings on a sample of full-time, university-educated, male workers. Columns six to twelve use the proportion of university-educated men in paid employment as the dependent variable. Additional controls in the regression include geographic indicators (see text for a detailed explanation of geographical indicator in each country).

Figure 1. Relative conditional log weekly earnings of recent immigrants by arrival cohort at the 10th, 50th and 90th percentiles



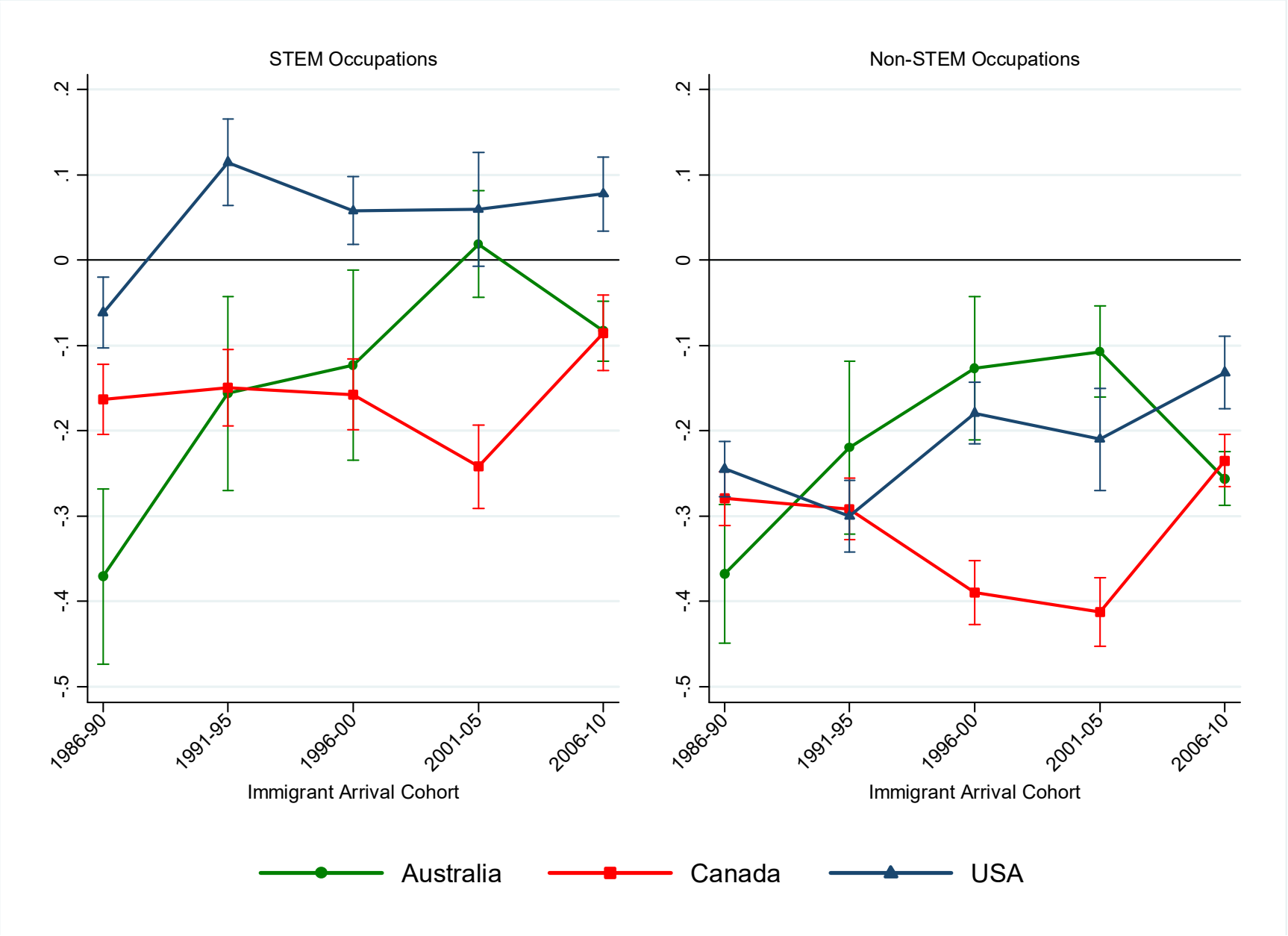
Notes: Estimates are from the regression reported in Table A2. 95% confidence bands are shown.

Figure 2: Relative log weekly earnings of recent immigrants by arrival cohort and origin country



Notes: Estimates are from the regression reported in Table A1. 95% confidence bands are shown.

Figure 3: Relative conditional log weekly earnings of recent immigrants by STEM and non-STEM occupations



Notes: Estimates are from the regression reported in Table A3. 95% confidence bands are shown.

Table A1: Income inequality in Australia, Canada, and the United States, 1990-2010.

	Gini – market income			Gini – disposable income			P90/P10 – disposable income		
	AUS	*CAN*	*USA*	*AUS*	*CAN*	*USA*	*AUS*	*CAN*	*USA*
1990	0.422	0.403	0.450	0.279	0.287	0.349	4.0	3.8	5.6
2000	0.476	0.440	0.476	0.317	0.315	0.357	4.3	4.0	5.4
2010	0.469	0.447	0.499	0.334	0.319	0.380	4.5	4.1	6.1
1990s change	+0.054	+0.037	+0.026	+0.038	+0.028	+0.008	+0.3	+0.2	-0.2
2000s change	-0.007	+0.007	+0.023	+0.017	+0.004	+0.023	+0.2	+0.1	+0.7
Total change	+0.047	+0.044	+0.049	+0.055	+0.032	+0.031	+0.5	+0.3	+0.5

Notes: Income is annual individual equivalent (household income divided by the square root of household size) income in the total population.
Source: OECD database on income distribution (IDD). 1990 numbers for USA is for 1989. 1990 numbers for Australia are from Table 4.5 in Johnson and Wilkins (2006).

Table A2: Relative immigrant earnings at the 10th, 50th and 90th percentiles

	10th						50th						90th			
	AUS		*CAN*		*USA*		*AUS*		*CAN*		*USA*		*CAN*		*USA*	
Natives:																
cohort 91-95	0.002	(0.026)	-0.145	(0.014)	0.100	(0.027)	-0.033	(0.007)	-0.070	(0.005)	0.003	(0.013)	0.007	(0.009)	0.069	(0.022)
cohort 96-00	-0.018	(0.027)	-0.092	(0.017)	0.068	(0.025)	-0.016	(0.007)	-0.019	(0.006)	0.039	(0.012)	0.072	(0.010)	0.141	(0.021)
cohort 01-05	0.054	(0.022)	-0.220	(0.019)	-0.038	(0.036)	0.058	(0.006)	-0.062	(0.007)	0.007	(0.018)	0.010	(0.010)	0.178	(0.033)
cohort 06-10	0.009	(0.018)	-0.172	(0.038)	-0.183	(0.035)	0.061	(0.005)	0.022	(0.012)	-0.015	(0.017)	0.190	(0.011)	0.102	(0.031)
yse	0.034	(0.003)	0.051	(0.002)	0.066	(0.003)	0.048	(0.001)	0.053	(0.001)	0.065	(0.002)	0.068	(0.002)	0.097	(0.003)
$yse^2/100$	-0.059	(0.011)	-0.112	(0.010)	-0.190	(0.014)	-0.090	(0.003)	-0.094	(0.004)	-0.146	(0.006)	-0.068	(0.008)	-0.198	(0.011)
coh 91-95*yse	0.003	(0.002)	0.014	(0.001)	-0.006	(0.002)	0.006	(0.000)	0.008	(0.000)	0.000	(0.001)	0.006	(0.001)	-0.009	(0.002)
coh 96-00*yse	0.009	(0.003)	0.016	(0.002)	-0.005	(0.003)	0.010	(0.001)	0.010	(0.001)	-0.005	(0.001)	0.004	(0.002)	-0.016	(0.003)
coh 01-05*yse	0.007	(0.003)	0.040	(0.004)	0.002	(0.006)	0.011	(0.001)	0.025	(0.001)	-0.004	(0.003)	0.021	(0.002)	-0.034	(0.006)
coh 06-10*yse	0.027	(0.005)	0.057	(0.012)	-0.012	(0.013)	0.020	(0.001)	0.025	(0.004)	-0.007	(0.006)	-0.005	(0.004)	-0.047	(0.011)
Immigrants:																
coh 86-90	-0.434	(0.041)	-0.441	(0.024)	-0.342	(0.024)	-0.397	(0.011)	-0.216	(0.011)	-0.191	(0.011)	-0.107	0.018)	-0.007	(0.020)
coh 91-95	-0.343	(0.047)	-0.383	(0.028)	-0.377	(0.031)	-0.225	(0.012)	-0.206	(0.013)	-0.099	(0.015)	-0.076	0.021)	0.016	(0.027)
coh 96-00	-0.237	(0.041)	-0.468	(0.029)	-0.330	(0.026)	-0.128	(0.010)	-0.200	(0.013)	0.040	(0.012)	-0.130	0.017)	0.099	(0.022)
coh 01-05	-0.232	(0.027)	-0.489	(0.031)	-0.235	(0.044)	-0.141	(0.007)	-0.358	(0.014)	-0.035	(0.020)	-0.163	0.021)	-0.089	(0.038)
coh 06-10	-0.290	(0.017)	-0.318	(0.025)	-0.174	(0.030)	-0.212	(0.004)	-0.179	(0.012)	0.025	(0.015)	-0.049	0.012)	0.072	(0.026)
coh 86-90*yse	0.010	(0.002)	0.006	(0.002)	0.004	(0.002)	0.013	(0.001)	0.000	(0.001)	0.001	(0.001)	-0.007	0.002)	-0.011	(0.001)
coh 91-95*yse	0.007	(0.004)	0.001	(0.003)	0.007	(0.003)	0.003	(0.001)	0.000	(0.001)	-0.002	(0.001)	-0.011	0.002)	-0.005	(0.002)
coh 96-00*yse	-0.001	(0.004)	0.006	(0.003)	0.008	(0.003)	-0.005	(0.001)	-0.001	(0.001)	-0.008	(0.002)	-0.009	0.002)	-0.017	(0.003)
coh 01-05*yse	-0.006	(0.005)	0.017	(0.005)	-0.014	(0.008)	-0.014	(0.000)	0.018	(0.002)	-0.012	(0.004)	-0.004	0.004)	0.008	(0.007)
fexp	0.017	(0.001)	0.000	(0.001)	-0.003	(0.001)	0.032	(0.004)	0.004	(0.001)	0.005	(0.000)	0.033	0.001)	0.040	(0.001)
(fexp*yse)/100	-0.117	(0.016)	-0.089	(0.016)	-0.154	(0.013)	-0.204	(0.003	-0.095	(0.007)	-0.168	(0.006)	-0.254	0.011)	-0.280	(0.010)
Native sample	31,447		264,060		105,965		31,447		264,060		105,965		264,060		105,965	
Imm sample	16,521		149,025		129,150				149,025		129,150		149,025		129,150	

Notes: The dependent variable is the log of weekly earnings. For Australia, the median regression results are for the 45th percentile. Regressions use a sample of full-time, university-educated, male workers. The first six columns show results for a quantile regression at the tenth percentile. Columns 7 to 10 show results for the median (Canada and the US only) and columns 11 to 14 show results for the top 90th percentile (Canada and the US only). Additional controls include indicator for graduate studies and its interaction with immigrant indicator, and geographic indicators (see text for a detailed explanation of geographical indicator in each country).

Table A3: Relative immigrant earnings by origin country

	1. CHINA						2. INDIA					
	AUS		*CAN*		*USA*		*AUS*		*CAN*		*USA*	
cohort 86-90	-0.932	(0.073)	-0.423	(0.043)	-0.343	(0.035)	-0.314	(0.121)	-0.406	(0.040)	-0.152	(0.025)
cohort 91-95	-0.832	(0.153)	-0.264	(0.041)	-0.207	(0.036)	-0.264	(0.075)	-0.393	(0.041)	0.131	(0.028)
cohort 96-00	-0.675	(0.096)	-0.316	(0.032)	-0.209	(0.035)	-0.113	(0.086)	-0.279	(0.032)	0.188	(0.020)
cohort 01-05	-0.560	(0.080)	-0.470	(0.036)	-0.229	(0.055)	-0.257	(0.045)	-0.372	(0.032)	0.190	(0.035)
cohort 06-10	-0.514	(0.046)	-0.232	(0.036)	-0.150	(0.047)	-0.327	(0.021)	-0.254	(0.025)	0.209	(0.022)
cohort 86-90 * yse	0.025	(0.005)	0.006	(0.003)	0.013	(0.002)	0.011	(0.008)	-0.003	(0.003)	0.005	(0.002)
cohort 91-95 * yse	0.033	(0.011)	-0.002	(0.004)	0.007	(0.003)	0.007	(0.006)	-0.005	(0.004)	-0.006	(0.003)
cohort 96-00 * yse	0.019	(0.010)	0.000	(0.004)	0.012	(0.003)	-0.014	(0.009)	-0.011	(0.004)	-0.004	(0.002)
cohort 01-05 * yse	-0.009	(0.011)	0.027	(0.005)	0.004	(0.008)	-0.008	(0.007)	0.002	(0.005)	-0.014	(0.006)
fexp	0.031	(0.005)	-0.004	(0.002)	0.007	(0.002)	0.023	(0.003)	0.001	(0.002)	-0.011	(0.002)
(fexp*yse)/100	-0.225	(0.045)	-0.082	(0.026)	-0.214	(0.021)	-0.168	(0.038)	-0.002	(0.023)	-0.093	(0.019)
Immigrant R^2			0.094		0.064				0.054		0.053	
Immigrant sample	1,241		21,155		13,215		2,708		20,085		27,545	

	3. PHILIPPINES						4. NORTH AMERICA					
	AUS		*CAN*		*USA*		*AUS*		*CAN*		*USA*	
cohort 86-90	-0.632	(0.069)	-0.493	(0.039)	-0.264	(0.031)	-0.409	(0.149)	0.006	(0.047)	0.014	(0.046)
cohort 91-95	-0.505	(0.125)	-0.533	(0.042)	-0.074	(0.038)	0.228	(0.127)	0.180	(0.050)	0.128	(0.053)
cohort 96-00	-0.121	(0.129)	-0.455	(0.045)	-0.129	(0.038)	0.136	(0.150)	0.242	(0.061)	0.167	(0.037)
cohort 01-05	-0.267	(0.079)	-0.459	(0.049)	-0.054	(0.052)	0.071	(0.084)	0.029	(0.074)	0.198	(0.065)
cohort 06-10	-0.246	(0.042)	-0.336	(0.029)	-0.111	(0.043)	0.030	(0.051)	0.053	(0.048)	0.179	(0.054)
cohort 86-90 * yse	0.015	(0.005)	0.002	(0.003)	0.003	(0.002)	0.017	(0.009)	0.001	(0.004)	0.000	(0.004)
cohort 91-95 * yse	0.006	(0.009)	0.006	(0.004)	-0.005	(0.004)	-0.015	(0.010)	-0.009	(0.006)	-0.003	(0.005)
cohort 96-00 * yse	-0.020	(0.013)	0.010	(0.005)	0.005	(0.004)	-0.003	(0.015)	-0.019	(0.009)	-0.006	(0.004)
cohort 01-05 * yse	-0.015	(0.013)	0.024	(0.008)	-0.007	(0.008)	-0.026	(0.016)	-0.007	(0.014)	-0.022	(0.009)
fexp	0.012	(0.004)	0.005	(0.002)	-0.007	(0.002)	0.027	(0.005)	0.038	(0.003)	0.037	(0.003)
(fexp*yse)/100	-0.188	(0.041)	-0.091	(0.024)	-0.143	(0.021)	-0.187	(0.061)	-0.291	(0.043)	-0.101	(0.037)
Immigrant R^2			0.077		0.053				0.106		0.016	
Immigrant sample	911		12,915		8,605		696		6,305		4,960	

Notes: The dependent variable is the log of weekly earnings. Regressions use a sample of full-time, university-educated, male workers. Panel 1, restricts the immigrant sample to Chinese immigrants, panel 2 to Indian immigrants, panel 3 to Filipino immigrants and panel 4 to "North American" immigrants. Only coefficients for immigrants are shown. Additional controls include unemployment rate, indicator for graduate studies and its interaction with immigrant indicator, and geographic indicators (see text for a detailed explanation of geographical indicator in each country).

Table A4: Relative earnings of immigrants in STEM and non-STEM occupations

	1. STEM OCCUPATIONS						2. NON-STEM OCCUPATONS					
	AUS		*CAN*		*USA*		*AUS*		*CAN*		*USA*	
Natives:												
cohort 91-95	-0.029	(0.027)	-0.017	(0.014)	0.059	(0.023)	0.008	(0.019)	-0.076	(0.009)	0.051	(0.015)
cohort 96-00	0.052	(0.029)	0.039	(0.015)	0.114	(0.021)	0.027	(0.021)	-0.037	(0.011)	0.078	(0.014)
cohort 01-05	0.046	(0.024)	-0.029	(0.016)	0.066	(0.030)	0.043	(0.017)	-0.104	(0.012)	0.032	(0.022)
cohort 06-10	0.066	(0.020)	0.119	(0.024)	0.073	(0.031)	0.055	(0.014)	-0.025	(0.017)	-0.044	(0.021)
yse	0.049	(0.003)	0.048	(0.002)	0.061	(0.003)	0.056	(0.002)	0.061	(0.001)	0.080	(0.002)
$yse^2/100$	-0.103	(0.015)	-0.069	(0.009)	-0.139	(0.012)	-0.117	(0.010)	-0.103	(0.006)	-0.198	(0.009)
cohort 91-95 * yse	0.005	(0.002)	0.004	(0.001)	-0.004	(0.002)	0.003	(0.001)	0.010	(0.001)	-0.005	(0.001)
cohort 96-00 * yse	0.004	(0.003)	0.003	(0.002)	-0.010	(0.003)	0.005	(0.002)	0.012	(0.001)	-0.010	(0.002)
cohort 01-05 * yse	0.013	(0.004)	0.027	(0.003)	-0.009	(0.005)	0.012	(0.003)	0.029	(0.002)	-0.011	(0.004)
cohort 06-10 * yse	0.017	(0.006)	0.011	(0.008)	-0.011	(0.010)	0.023	(0.004)	0.033	(0.006)	-0.021	(0.008)
Immigrants:												
cohort 86-90	-0.371	(0.052)	-0.163	(0.021)	-0.061	(0.021)	-0.367	(0.041)	-0.279	(0.016)	-0.245	(0.017)
cohort 91-95	-0.156	(0.058)	-0.149	(0.023)	0.115	(0.026)	-0.220	(0.052)	-0.291	(0.018)	-0.300	(0.022)
cohort 96-00	-0.123	(0.057)	-0.157	(0.021)	0.058	(0.020)	-0.127	(0.043)	-0.390	(0.019)	-0.179	(0.018)
cohort 01-05	0.019	(0.032)	-0.242	(0.025)	0.060	(0.034)	-0.107	(0.027)	-0.412	(0.021)	-0.210	(0.031)
cohort 06-10	-0.083	(0.018)	-0.085	(0.022)	0.078	(0.022)	-0.256	(0.016)	-0.235	(0.016)	-0.132	(0.022)
cohort 86-90 * yse	0.013	(0.003)	0.001	(0.002)	0.007	(0.002)	0.009	(0.003)	-0.001	(0.001)	-0.002	(0.001)
cohort 91-95 * yse	0.002	(0.004)	0.002	(0.002)	-0.003	(0.002)	0.000	(0.004)	-0.003	(0.002)	0.006	(0.002)
cohort 96-00 * yse	0.000	(0.006)	0.003	(0.003)	0.008	(0.003)	-0.007	(0.004)	0.002	(0.002)	-0.004	(0.002)
cohort 01-05 * yse	-0.028	(0.005)	0.011	(0.004)	0.003	(0.006)	-0.022	(0.005)	0.012	(0.003)	-0.007	(0.005)
fexp	0.024	(0.002)	0.009	(0.001)	0.013	(0.001)	0.029	(0.001)	0.013	(0.001)	0.016	(0.001)
(fexp*yse)/100	-0.150	(0.020)	-0.073	(0.014)	-0.142	(0.012)	-0.200	(0.017)	-0.166	(0.010)	-0.224	(0.010)
Native sample	7,893		57,025		17,940		23,554		207,035		88,025	
Immigrant sample	5,148		48,490		39,890		11,373		100,535		89,260	

Notes: The dependent variable is the log of weekly earnings. Regressions use a sample of full-time, university-educated, male workers. Panel 1, restricts the immigrant sample to individuals working in STEM occupations, panel 2 to individuals working in NON-STEM occupations. Additional controls include unemployment rate, indicator for graduate studies and its interaction with immigrant indicator, and geographic indicators (see text for a detailed explanation of geographical indicator in each country).

Table A5: Earnings regressions with continuous years since entry variable

	CAN		*USA*	
Natives:				
cohort 91-95	-0.060	(0.008)	0.046	(0.013)
cohort 96-00	0.002	(0.009)	0.074	(0.012)
cohort 01-05	-0.062	(0.010)	0.023	(0.019)
cohort 06-10	0.028	(0.014)	-0.037	(0.020)
yse	0.061	(0.001)	0.074	(0.002)
$yse^2/100$	-0.106	(0.005)	-0.181	(0.007)
cohort 91-95 * yse	0.008	(0.0010	-0.005	(0.001)
cohort 96-00 * yse	0.008	(0.001)	-0.009	(0.002)
cohort 01-05 * yse	0.025	(0.002)	-0.009	(0.003)
cohort 06-10 * yse	0.024	(0.005)	-0.019	(0.008)
Immigrants:				
cohort 86-90	-0.243	(0.014)	-0.161	(0.014)
cohort 91-95	-0.219	(0.015)	-0.197	(0.018)
cohort 96-00	-0.278	(0.015)	-0.043	(0.014)
cohort 01-05	-0.359	(0.017)	-0.090	(0.026)
cohort 06-10	-0.147	(0.028)	-0.009	(0.027)
cohort 86-90 * yse	0.000	(0.001)	-0.002	(0.001)
cohort 91-95 * yse	-0.004	(0.001)	0.004	(0.002)
cohort 96-00 * yse	0.001	(0.002)	-0.004	(0.002)
cohort 01-05 * yse	0.010	(0.003)	-0.009	(0.004)
cohort 06-10 * yse	-0.017	(0.008)	0.006	(0.010)
fexp	0.010	(0.001)	0.012	(0.001)
(fexp*yse)/100	-0.143	(0.009)	-0.207	(0.008)
Native sample	264,060		105,965	
Immigrant sample	149,025		129,150	

Notes: The dependent variable is the log of weekly earnings. Regressions use a sample of full-time, university-educated, male workers. The variable *yse* is measured continuously rather than in intervals, using detailed information contained in the US and CAN data only. Additional controls include unemployment rate, indicator for graduate studies and its interaction

Table A6: Relative weekly log earnings of immigrants who arrived at age 30 or above.

	AUS		*CAN*		*USA*	
Natives:						
cohort 91-95	-0.009	(0.016)	-0.066	(0.008)	0.045	(0.013)
cohort 96-00	0.028	(0.017)	-0.008	(0.009)	0.079	(0.012)
cohort 01-05	0.041	(0.014)	-0.071	(0.010)	0.028	(0.019)
cohort 06-10	0.057	(0.012)	0.022	(0.014)	-0.031	(0.018)
yse	0.054	(0.002)	0.059	(0.001)	0.076	(0.002)
$yse^2/100$	-0.115	(0.008)	-0.101	(0.006)	-0.189	(0.008)
cohort 91-95 * yse	0.004	(0.001)	0.009	(0.001)	-0.005	(0.001)
cohort 96-00 * yse	0.005	(0.002)	0.009	(0.001)	-0.010	(0.002)
cohort 01-05 * yse	0.012	(0.002)	0.026	(0.002)	-0.010	(0.003)
cohort 06-10 * yse	0.021	(0.003)	0.025	(0.005)	-0.020	(0.007)
Immigrants:						
cohort 86-90	-0.264	(0.039)	-0.177	(0.019)	-0.057	(0.020)
cohort 91-95	-0.119	(0.047)	-0.174	(0.021)	-0.085	(0.026)
cohort 96-00	0.013	(0.048)	-0.280	(0.020)	0.022	(0.021)
cohort 01-05	0.130	(0.031)	-0.321	(0.022)	0.023	(0.031)
cohort 06-10	-0.031	(0.021)	-0.109	(0.018)	0.102	(0.022)
cohort 86-90 * yse	0.008	(0.003)	0.002	(0.002)	0.000	(0.002)
cohort 91-95 * yse	-0.002	(0.004)	0.002	(0.002)	0.003	(0.002)
cohort 96-00 * yse	-0.010	(0.005)	0.009	(0.002)	-0.002	(0.003)
cohort 01-05 * yse	-0.031	(0.005)	0.020	(0.003)	-0.012	(0.005)
fexp	0.014	(0.002)	0.008	(0.001)	0.007	(0.001)
(fexp*yse)/100	-0.142	(0.022)	-0.183	(0.014)	-0.229	(0.014)
Native sample	31,447		264,060		105,965	
Immigrant sample	10,003		101,945		67,320	

Notes: The dependent variable is the log of weekly earnings. Regressions use a sample of full-time, university-educated, male workers. Immigrant sample is restricted to individuals arriving after 30 years of age. Additional controls include unemployment rate, indicator for graduate studies and its interaction with immigrant indicator, and geographic indicators (see text for a detailed explanation of geographical indicator in each country).