### DO SELECTION CRITERIA MAKE A DIFFERENCE? VISA CATEGORY AND THE LABOUR FORCE STATUS OF AUSTRALIAN IMMIGRANTS

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#### Abstract:

This paper assesses the role of selection criteria in the immigrant settlement process by analysing the labour force status of immigrants entering Australia under different immigration programs. In particular, do immigrants selected on the basis of labour market skills rather than family relationships have higher participation and employment rates immediately after migration? To what extent does this represent a head start as opposed to a long-term labour market advantage? Information from the Longitudinal Survey of Immigrants to Australia (LSIA) are used address these questions.

The results highlight the importance of visa category in predicting the likelihood that an immigrant desires employment and is successful in finding it. For the most part, migrants selected in part for their labour market skills have better labour market outcomes. Much of the difference in the labour market status of immigrants in different programs remains even once we have controlled for the effects of human capital and other productivity-related characteristics. Over time, the relative gap in the labour force participation rates of immigrants in different visa categories increases, while the gap in employment rates decreases. Finally, net of visa category, labour market outcomes are better for native English speakers and for those who visited Australia prior to migration.

**JEL Codes: J23, J61** 

#### I. Introduction

Immigration policy is generally concerned with two related questions; First, what is the appropriate level of immigration and second, what criteria should be used to select among potential migrants? Policy makers' answers to these questions are usually contentious and a matter of great public debate. In particular, concerns are often raised about whether the appropriate balance has been struck between skilled and family migration with many advocating a greater emphasis on labour market skills in the immigrant selection process. Policy appears to increasingly be moving in this direction. For example, the U.S. Immigration Act of 1990 established separate family-based and skill-based immigration streams dramatically increasing the number of U.S. visas reserved for skill-based immigrants in the process (Vialet and Eig, 1990).<sup>1</sup> Canada increased its intake of skilled independent migrants almost five fold between 1984 and 1995 (Stahl, Inglis, and Gutman, 1993; Inglis, Birch, and Sherington, 1994). In Australia, the Howard government has moved to increase the number of places for skilled migrants—who will in the future be subject to even tougher entry requirements—while at the same time cutting the overall size of the immigration program (The Australian, 1996; Canberra Times, 1998).

These policy changes stem in large part from the widely-held view that immigrants selected on the basis of their labour market skills find the transition into the host country labour market easier than immigrants selected on the basis of their family relationships. Unfortunately, information about the type of visa an immigrant holds is often lacking from standard data sets making it difficult for researchers to assess the role that selection criteria might have played in the settlement process.

My goal is to gain insight into the role of selection criteria in the immigrant settlement process by analysing the labour force and employment status of immigrants entering Australia under different immigration programs. Do immigrants selected on the basis of labour market skills rather than family relationships have higher participation and employment rates immediately after migration? To what extent does this represent

<sup>&</sup>lt;sup>1</sup> Between 1991 and 1992, the number of employment-based immigrants entering the United States increased 95 per cent from just under 60,000 to more than 116,000 (USINS, 1990).

a head start as opposed to a long-term labour market advantage? In answering these questions, information from the Longitudinal Survey of Immigrants to Australia (LSIA) is analysed. These data provide the opportunity to follow a cohort of recent immigrants to Australia as they enter the Australian labour market and begin looking for work. Unlike other data sets, detailed information about immigrants visa status is provided.

The results of this analysis highlight the importance of an individual's visa status in predicting the likelihood that he/she desires employment and is successful in finding it. For the most part, migrants selected in part for their labour market skills have better labour market outcomes. Furthermore, much of the difference in the labour market status of immigrants in different programs remains even once we have controlled for the effects of human capital and other productivity-related characteristics. Over time, the relative gap in the labour force participation rates of immigrants in different visa categories increases, while the gap in employment rates decreases. Finally, net of visa status, labour market outcomes are better for native English speakers and for those who visited Australia prior to migration.

In the following section of the paper, the existing international literature on the relationship between selection criteria and immigrant outcomes is reviewed, while a detailed overview of the LSIA data is presented in Section III. Following that I discuss the estimation strategy and the empirical results. The focus will be on first, the factors related to labour market participation and second, conditional on participation, the factors related to employment. The final section of the paper discusses some general conclusions and provides suggestions for future research.

#### II. The Labour Market Outcomes of Family and Skilled Immigrants

Researchers have begun to examine whether immigrants selected primarily on the basis of labour market-related skills have better labour market outcomes than immigrants selected primarily on the basis of their family relationships.<sup>2</sup> The difficulty is that labour

<sup>&</sup>lt;sup>2</sup> Lowell (1996) suggests that the superior performance of skill-based immigrants may not necessarily be a foregone conclusion. In particular, he notes that the jobs held by family- and skill-based immigrants are often similar, that sponsoring family members often provide a great deal of support, and that highly skilled migrants are often unable to completely transfer their skills into the new labour market.

force surveys and Censuses may identify the foreign born, but typically provide only limited information about the immigration process itself.<sup>3</sup> In general we do not know who was selected on the basis of their skills and who was selected on the basis of their family relationship. Principal migrants are usually indistinguishable from accompanying family members.

#### Canada and the United States

Some researchers have tried to indirectly these data limitations by exploiting the dissimilarities in immigration policy and the similarities in labour markets between Canada and the United States to assess the aggregate role of the selection process in generating immigrant outcomes (Chiswick, 1987; Duleep and Regets, 1992, 1996; Borjas, 1993). The results are mixed. Duleep and Reggets (1992) conclude that immigrants to Canada—who are more likely to be skill-based—are younger and have more language ability than U.S. immigrants, but there are no consistent education differences. Furthermore, the differences in migrant characteristics generated by Canada's relative emphasis on skills in the selection process do not appear to translate into a consistent earnings advantage for Canadian immigrants relative to native-born workers of the same age. On the other hand, Borjas (1993) concludes that the Canadian point system did "attract" more educated immigrants because it altered the national origin mix of Canadian immigration and not because the expected wages of skills of any particular national origin group were higher in Canada.

An alternative methodology uses time series data on immigrant flows within a single country (Green and Green, 1995) or across countries (Green, 1995) to gauge the impact of policy changes (Green and Green, 1995; Green, 1995). Both of these methods rely upon the characteristics of the existing stock of immigrants to identify the impact of immigration policy. This raises difficulties because the existing immigrant population is the result of a complex interaction in both the demand for and supply of immigrants as well as the forces of selective remigration (Chiswick, 1987; Cobb-Clark, 1993). Perhaps

<sup>&</sup>lt;sup>3</sup> Generally only the year of immigration is provided—often only in aggregated categories—making it difficult to identify the exact policy regime under which an immigrant entered the host country.

because the demand for immigrants—i.e., immigration policy—is only one of a number of forces influencing migrant characteristics, the overarching conclusion of this research is that specific selection policies play only a limited role in determining the composition of the immigrant stock.

Finally there have been a limited number of U.S. studies that use individual level data to evaluate the impact of policy on immigrant outcomes. While immigrants entering as spouses of U.S. citizens appear less skilled at labour market entry than skilled immigrants, over time the occupational distributions of the two groups of migrants become similar (Jasso and Rosenzweig, 1995). Sorensen, *et al.* (1992) also point to the similarities in employment- and family-based immigrants in the United States noting the two groups have similar labour market attachments, naturalise at the same rate, and tend to make geographic decisions based on the same factors.

#### Australia

While numerous studies compare the labour market status of Australian immigrants relative to the native born at various stages in the settlement process (see Wooden, *et al.*, (1994) for a review), less is known about the role of immigrant selection criteria on subsequent success in the Australian labour market. It does appear that refugees are more likely to have difficulties in finding employment than non-refugees, though the gap narrows somewhat over time (Miller, 1986; Wooden, 1991). Unfortunately, however, neither author was able to control for an individual's English ability raising the possibility that the disparity stems at least in part from refugees' relative lack of English language skills.

Williams, *et al.* 1997, analyse information from the first wave of the LSIA and conclude that there is a close link between visa category and labour market status six months after entry. Note surprisingly, relative to refugees and family migrants, immigrants who entered Australia under a skilled visa category have higher labour force participation rates, lower unemployment rates and find employment in occupations that are more similar to those held prior to migration. The question is, however, do these

differences at labour market entry represent a long run advantage or merely a head start? Using data from both waves one and two of the LSIA to estimate a flexible model of labour market status, it will be possible to assess how relative outcomes change over time. In addition, Williams, *et al.* (1997) did not disaggregate on the basis of gender raising questions about whether the underlying relationships are the same for both men and women.

#### II. The Longitudinal Survey of Immigrants to Australia

The Longitudinal Survey of Immigrants to Australia documents the initial labour market experiences of a cohort of immigrants to Australia.<sup>4</sup> A longitudinal study was undertaken because it was recognised that in order to completely understand the settlement process, the same individuals must be studied at different stages in that process.

The population represented by the sample is all principal applicants aged 15 and older who arrived in Australia between September 1993 and August 1995. A total of 5192 principal applicants were interviewed starting in March of 1994 approximately five to six months after immigrants' arrival. A total of 4469 immigrants were re-interviewed starting in March of 1995 (approximately 18 months after arrival), and it is now possible to begin assessing the first 18 months of the settlement process.<sup>5</sup>

The sample used in the analysis is restricted to principal applicants aged 19 to 64. A total of 2830 men and 2076 women met this sampling restriction. LSIA respondents were asked about their "current main activity". Individuals were coded as employed if they responded that their current main activity was a wage or salary earner or conducting a business. Labour market participants are employed individuals or

<sup>&</sup>lt;sup>4</sup> Technical details about the LSIA data can be found in Appendix 2 of Williams, *et al.* (1997) and the User Documentation for the data set. Along with interviewing principal applicants, complete information was also collected for migrating-unit spouses and limited information was collected for other members of the household.

<sup>&</sup>lt;sup>5</sup> Cross-sectional data are often used to draw conclusions about the time path of the settlement process. This approach implicitly assumes that cohorts arriving at different points in time and entering the labour market under different macro-economic conditions are the same. The LSIA provides an important opportunity to analyse the actual short-term settlement experience of a particular cohort of immigrants.

individuals responding that they were unemployed and looking for either part-time or full-time work.<sup>6</sup>

Non-humanitarian immigration to Australia is separated into two components: one based on close family relationship (Preferential Family) and the other based on potential labour market contribution. Skill-based migration includes independent migrants without family relationships who are points tested (Independents), migrants with pre-arranged offers of employment (Employer Nomination Scheme) and migrants intending to establish businesses in Australia who meet certain capital requirements (Business Skills). The Concessional Family program lies between the family-based and skill-based migration streams assessing potential migrants on both skills and more distant family relationships.<sup>7</sup>

Table 1 provides information about labour force participation and unemployment rates of Australian immigrants at six months and then again at 18 months after entry. As expected, Business Skills and Employer Nomination Scheme immigrants have very high participation rates (82 per cent) and very low unemployment rates (3 per cent) immediately after migration. Other skill-based migrants—Concessional Family and Independent—also have high participation rates, although their probability of being unemployed is higher. Less than half of humanitarian migrants, on the other hand, have entered the labour market six months after arrival and those who have are likely to be unemployed. Overtime, aggregate participation rates increase slightly (from 58 to 62 per cent) while unemployment falls across the board. Even amongst Humanitarian migrants unemployment falls from 86 per cent to 56 per cent.<sup>8</sup>

<sup>&</sup>lt;sup>6</sup> Note that the measure of unemployment used here will differ from standard Australian Bureau of Statistics definition.

<sup>&</sup>lt;sup>7</sup> Until 1989 the Concessional Family and Independent classes were combined and fell under the skilled immigration category. For more details see Parcell, *et. al.*, 1994.

<sup>&</sup>lt;sup>8</sup> Reflecting the relative size of various immigration programs, the sample is dominated by immigrants in the Preferential Family category (55.0 per cent). The next largest groups are the Independent and Humanitarian categories, at 18.5 and 14.3 per cent respectively. Further descriptive information about the characteristics of individuals in different visa categories can be found in Appendix Table A1.

	Prefer Fan	ential nily	Conc al Fa	ession mily	Busi Skills	iness s/ENS	Indep	endent	Hum ari	anit- an	То	tal
Wave:	1	2	1	2	1	2	1	2	1	2	1	2
Labour Force Status												
Employed	32.3	40.5	51.0	66.9	80.0	89.6	62.9	79.3	7.2	24.3	37.6	48.7
Unemployed	20.6	11.0	28.2	15.7	2.2	3.0	22.6	9.6	42.4	30.9	24.0	13.7
NILF	47.2	48.5	20.8	17.4	17.8	7.4	14.5	11.1	50.4	44.8	38.3	37.6
Unemployment rate	38.9	21.4	35.6	19.0	2.7	3.2	26.4	10.8	85.5	56.0	39.0	22.0
Participation rate	52.9	51.5	79.2	82.6	82.2	92.6	85.5		49.6	55.2	61.6	62.4

# Table 1: Distribution of Labour Market Status by Visa CategoryPrincipal Applicants Aged 19 to 64(Per Cent)

#### **IV.** Labour Force Status and Visa Category: Empirical Results

#### The Determinants of Labour Force Participation

The analysis begins by considering the factors related to labour market participation. Specifically, are immigrants selected on the basis of their labour market skills more likely to enter the Australian labour market? Do the differences between groups persist or dissipate over time?

Individuals are assumed to participate in the labour market whenever the return to market work exceeds the value of their time in alternative activities. Specifically, the probability of immigrant i participating in the Australian labour market in Wave t is assumed to be given by:

$$\Pr(y_{it} \quad 0 \mid X_{it}) = (X_{it}\beta_t) \tag{1}$$

where is the standard normal cumulative distribution function and  $X_{it}$  is a vector of human capital (education and English ability), demographic (age, gender, marital status, and region of origin) and geographic (State/Territory of residence) variables that are thought to be related to market wages and the value of one's time in non-market activities. Although the data do not provide a direct measure of labour market experience, pre-migration occupation and employment status are included to act as potential controls for the effects of experience. Finally, information about whether an immigrant visited Australia prior to migration is included as a measure of the degree of information an immigrant has about employment opportunities in the Australian labour market.

Equation (1) was estimated for male and female principal applicants separately using a pooled probit model and the unbalanced sample.<sup>9</sup> Because the primary interest is in relative changes in labour market outcomes over the settlement process, I began by specifying a flexible functional form in which the coefficients on the independent variables

<sup>&</sup>lt;sup>9</sup> All estimation was done in STATA 5.0. Equation (1) was also specified allowing for the presence of unobserved individual effects that in turn produce correlation among the error terms. Random effects probit models that allow individuals' error terms to be correlated over time were then estimated. However, the estimated within group correlation was small (0.19 for men and 0.25 for women) suggesting that the efficiency gains from taking it into account were minor. Furthermore, the random effects probit model is limited by the assumption that there is no correlation between any of the explanatory variables and the individual effects themselves. Conditional fixed effects logit models do not require this assumption, but would not allow us to estimate marginal effects. Because the standard pooled probit does not require this assumption and produces consistent—though inefficient results (Maddala, 1987)—I have chosen to report the results from the standard pooled probit regressions. The results from the random effects estimation were substantially the same and are available upon request.

were allowed to take different values in Waves 1 and 2. This flexible specification was tested against a more restrictive functional form with a single coefficient using a Wald test. For both men and women, the null hypothesis that Waves 1 and 2 could be pooled and a single coefficient estimated was soundly rejected and the flexible model was adopted.<sup>10</sup>

Probit coefficients are somewhat difficult to interpret and so it has become standard to report the change in the probability associated with a change in the independent variable. These marginal effects are reported in Table 2.<sup>11</sup> Only the marginal effects that are based on coefficients significantly different from zero at five per cent are reported.<sup>12</sup> Where relevant, the omitted category is indicated in the square brackets. Finally, Table 2 also reports whether there was a significant difference in the effect of each independent variable between Waves 1 and 2.

Labour force participation immediately after migration is related to visa category, but only for women. Once productivity-related characteristics are controlled, there is no significant difference in the probability of participation for men entering Australia under different immigration categories. Thus, the low participation rate of male Humanitarian immigrants is explained by the other demographic and human capital variables included in the model.

On the other hand, female principal applicants selected entirely (Preferential Family) or in part (Concessional Family) on the basis of family relationships or for humanitarian reasons had lower probabilities of participation (28.6, 13.3, and 23.3 percentage points respectively) even after controlling for other characteristics. This suggests there may be unmeasured differences in productive skills or preferences toward work for women, but not men, which are related to visa category and which influence entry into the labour market immediately after migration.

<sup>&</sup>lt;sup>10</sup> The test statistics were: for men,  $X^2 = 147.1$  with 38 degrees of freedom and for women,  $X^2 = 67.1$  with 38 degrees of freedom.

<sup>&</sup>lt;sup>11</sup> Actual probit coefficients and robust standard errors are available upon request.

<sup>&</sup>lt;sup>12</sup> Note that for continuous variables such as age, the marginal effect represents the effect of an infinitesimal change in the independent variable on the probability that an immigrant was in a specific labour market state. For discrete variables, such as marital status, the marginal effect represents the effect of a one unit change in the independent variable. See the STATA manual for more details.

	Men			Women			
	Wave 1	Wave 2	Significant Difference?	Wave 1	Wave 2	Significant Difference?	
Human Capital							
Married	-	3.8		-11.2	-11.5		
Age	2.7	3.3		3.0	4.2		
Age squared	-0.0	-0.0		-0.0	-0.0		
Visa Catagory [Rusiness Skills/ENS]							
Preferential Family		9.8	Ves	28.6	127	Vas	
Concessional Family	-	-9.0	108	-20.0	-42.7	Vos	
Independent	-	-		-13.3	-20.5	168	
Humanitarian	-	- 177		-	-10.9		
	-	-1/./		-23.5	-34.0		
English [Only or Best]	15.0	• • •		140	1.6.0		
Well/Very Well	-17.0	-20.6	**	-16.9	-16.8		
Badly/Not at All	-49.2	-34.9	Yes	-38.2	-33.8		
Education [Technical Qualification]							
Higher Degree	6.4	-		12.7	-		
Post Graduate Degree	6.2	9.1		-	-		
Bachelor Degree	-	-		-	-		
Trade Qualification	-	-		-	-		
Year 12	-	-		-9.3	-	Yes	
Year 10-11	-	-		-	-		
Less than Year 10	9.4	-		-	-		
Currently Enrolled in School	-33.2	-28.2		-25.2	-10.9	Yes	
Pre-Migration Occupation							
[Para-Professionals]							
Managers and Administrators	-	-		-	-		
Professionals	-	-		-	-14.2		
Tradespersons	-	8.4		-	-		
Clerks	-	-		-	-		
Salespersons/Personal Service	-	-		-	-		
Plant/Machine Operators and Drivers	-	-		-	-		
Labourers and Related Workers	8.2	-		-	-		
Unemployed	10.5	-		-	-		
Not in Labour Force	-	-		-	-		
State of Residence [Queensland]							
NSW	-	6.5		-	-		
Victoria	6.5	6.0		11.1	-	Yes	
South Australia	-	-			-		
Western Australia	_	_		-11 2	-11 3		
Other				11.2	11.5		
Guier	_	-		_	_		
Region of Origin [Europe / USSR]							
Oceania / Antarctica	-	-		-	-		
Mid-East / North Africa	-	-		-	-		
Asia	-	-		-	-		
North/South/Central America	8.3	-		-	-		
Africa (except North Africa)	-	-		-	-		
Visited Australia Prior to Migration	-	-		7.1	11.4		
<b>Employed Prior to Migration</b>	-	-		-	-		

 Table 2: Change in the Probability of Labour Market Participation by Gender (Marginal Effects)

Note: Omitted categories are in brackets. Reported marginal effects are significant at five percent. Columns 4 and 7 indicate whether Waves 1 and 2 coefficients are significantly different at five percent.

The gap in the participation rates of Business Skills/Employer Nomination Scheme immigrants and other immigrant groups generally widened rather than narrowed in the 12 months between the first and second waves of the LSIA survey. Eighteen months into the settlement process, men in both the Preferential Family and Humanitarian programs had significantly lower participation rates, while there was a significant gap in participation rates for women which ranged from 18.9 to 42.7 percentage points across all visa categories. This widening of the gap occurred even as all groups continued entering the labour market, because the increase in participation was particularly rapid among Business Skills/Employer Nomination Scheme migrants despite a high rate of participation initially.<sup>13</sup>

In addition to visa category, human capital characteristics are also related to participation. For example, higher levels of education—compared to having a technical qualification—are associated with greater participation. Men with a higher degree or post graduate degree were approximately 6 percentage points more likely to be labour market participants six months after arrival. Women with a higher degree had higher participation rates than women with a technical qualification, though there was no significant difference for women with a post graduate degree. There is little difference in initial participation for other educational groups, however. Over time, the effects of education largely disappear and for the most part there are no significant differences in the participation rates of those with different qualifications. Thus, with respect to participation education provides a head start rather than a permanent advantage.

Given the importance of English language ability in generating good outcomes in the Australian labour market, it is not at all surprising that English language ability is strongly related to the labour market participation of Australian immigrants. The effects of English ability on participation are broadly consistent for men and women. Relative to those individuals reporting that they spoke English "only or best", men and women reporting that they spoke English "well or very well" had a lower probability of labour market participation in both waves of the survey. Immigrants who spoke English "badly

<sup>&</sup>lt;sup>13</sup> Including a gender dummy and estimating the model for the sample as a whole points to significant changes between Waves 1 and 2 in the relative participation rates across all visa categories.

or not at all" had participation rates that were more than 30 percentage points lower even eighteen months into the settlement process. These relationships are net of the influence of other variables, say region of origin or visa category, which may be related to English ability and which may also influence participation rates. Unlike education, the advantage afforded by good English skills is persistent.

Although region of origin was not a significant predictor of labour market participation once other characteristics are taken into account, women who visited Australia prior to migration had a probability of participation six months after arrival that was 7.1 percentage points higher than non-visitors. Twelve months later, this relative advantage had grown to 11.4 percentage points, suggesting that women who visited Australia prior to immigration and decided to continue with the immigration process had participation rates which were higher not just immediately after migration, but also higher over the longer run. Interestingly, men visiting prior to migration did not have higher participation rates.

Finally, there seem to be location differences in participation probabilities once other characteristics of immigrants are controlled. Participation is generally higher in Victoria relative to Queensland, although this effect dissipates for women over time. At the same time, women in Western Australia had participation rates that were consistently lower.

#### The Determinants of Employment

While the above analysis sheds light on the factors related to an immigrant's desire to seek work in the Australian labour market, we also want to assess the factors related to successfully finding employment. Restricting the working-age sample of LSIA immigrants to those who were labour market participants, the above model was used to estimate the probability that an immigrant was employed. As before, the hypothesis the data can be pooled is rejected and I estimate a flexible employment equation in which the

effects of specific variables are allowed to differ between Waves 1 and 2.<sup>14</sup> The marginal effects from this pooled probit regression are reported in Table 3.<sup>15</sup>

Six months after arrival, labour market participants in all visa categories were significantly less likely to be employed than individuals in Business Skills/Employer Nomination Scheme programs. The magnitude of these differences was very large for both men and women, but not particularly surprising in light of the weight given to prearranged employment in the selection of migrants in the Employer Nomination Scheme and the ability to create job opportunities in the selection of Business Skills migrants. What is more interesting is the similarity of employment probabilities among other migrants. After controlling for demographic characteristics and human capital endowments, there is little difference in the employment rates of Independent, Concessional Family, and Preferential Family migrants in spite of the differences in the criteria used to select them. Although, employment rates are somewhat lower for men in the Humanitarian program have an employment rate that is higher than that for women in the Preferential Family category.

Is also interesting to focus on how these patterns among the various visa groups changed over time. Although the gap in participation rates between Business Skills/Employer Nomination Scheme immigrants and other immigrants groups widened between the first and second waves of the LSIA survey, the gap in employment narrowed. In all cases, the gaps in the relative employment were significantly smaller in Wave 2 than in Wave 1. The selection criteria embodied in different immigration programs certainly reflect a head start in terms of finding employment, but may not in the longer run result in any permanent employment advantage once other characteristics are controlled. Still, eighteen months into the settlement process the gaps in relative employment remain large indicating that it may take a long time for the head start to completely disappear.

<sup>&</sup>lt;sup>14</sup> The test statistics were: for men,  $X^2 = 302.6$  with 38 degrees of freedom and for women,  $X^2 = 153.8$  with 38 degrees of freedom.

<sup>&</sup>lt;sup>15</sup> As before, the model was also specified allowing for an individual effect. The estimated within group correlation was small, however, (0.17 for men and 0.14 for women) leading me to chose to report the pooled probit rather than the random effects probit results. The actual coefficients for both the pooled probit and the random effects probit models were substantially the same are available upon request.

	Men			Women			
	Wave	Wave	Significant	Wave	Wave	Significant	
Human Capital	1	2	Difference?	I	2	Difference?	
Human Capital		6.2		7.4		37	
Married	-	-6.3		-/.4	-	Yes	
Age	1.9	-		-	-		
Age squared	-0.0	-0.0		-	-		
Visa Category [Business Skills/ENS]							
Preferential Family	-63.0	-35.2	Yes	-83.9	-48.7	Yes	
Concessional Family	-58.4	-32.6	Yes	-79.4	-47.7	Yes	
Independent	-58.8	-26.8	Yes	-76.6	-29.1	Yes	
Humanitarian	-78.5	-59.8	Yes	-81.1	-56.2	Yes	
English [Only or Best]							
Well/Very Well	-16.2	-14.1		-10.8	-10.5		
Badly/Not at All	-24.9	-26.6		-21.9	-20.8		
Education [Technical Qualification]							
Higher Degree	-11.1	-		-	-23.8		
Post Graduate Degree	-15.1	-	Yes	-	-		
Bachelor Degree	-10.1	-		-	-		
Trade Qualification	-	8.2	Yes	-	-		
Year 12	-	-		-	-		
Year 10-11	-	-		-	-23.6		
Less than Year 10	-	-		-	-17.5	Yes	
Currently Enrolled in School	-	-14.4		-	-		
<b>Pre-Migration Occupation</b>							
[Para-Professionals]							
Managers and Administrators	-	-		-	-		
Professionals	-	-	\$7	-	-		
Tradespersons	9.9	-	Yes	-	-		
Clerks Salasmersons/Demonal Service	-	-23.4	res	-	-		
Plant/Machine Operators and Drivers	10.0			-	-		
I abourers and Related Workers	_	_	Ves	_	-		
Labourers and Related Workers		_	Ves	_	_		
Not in Labour Force	-	-	105	_	-		
State of Residence [Queensland]	11.1			11.0			
NSW	-11.1	-		-11.9	-		
Victoria	-24.5	-	Yes	-31.2	-		
South Australia	-23.6	-		-	-26.6		
Western Australia	-13.9	-	Yes	-17.7	-	Yes	
Other	-	-		-	-		
Region of Origin [Europe / USSR]							
Oceania / Antarctica	-	-		-	-		
Mid-East / North Africa	-	-		-	-		
Asia	-	-		-	-		
North/South/Central America	-	-		-	-		
Africa (except North Africa)	-	-		-	-		
Visited Australia Prior to Migration	8.2	11.1		19.1	19.1		
Employed Prior to Migration	-	-		-	-		
1							

#### Table 3: Change in the Probability of Employment by Gender (Marginal Effects)

Note: Omitted categories are in brackets. Reported marginal effects are significant at five percent. Columns 4 and 7 indicate whether Waves 1 and 2 coefficients are significantly different at five percent.

Not surprisingly, both men and women who spoke English "only or best" had higher employment probabilities than other immigrants. Furthermore, the employment advantage to being a native English speaker was quite persistent over time. Those speaking English "well or very well" had employment probabilities that were between 10.5 and 16.2 percentage points lower, while employment probabilities were between 20.8 and 26.6 percentage points lower for those speaking English "badly or not at all".

In terms of employment, English language ability clearly matters. The persistent employment disadvantages Wooden (1991) finds for male refugees may be due—at least in part—to his inability to control for language differences in the two groups as he suggests. Although LSIA data provide information about the initial rather than long run settlement process, this analysis does show that once language skills are taken into account, employment rates early in the settlement process are only moderately lower for male Humanitarian migrants.

Conditional on being in the labour market, men and women who visited Australia prior to migration had a probability of being employed six months after arrival that was 8.2 to 19.1 percentage points higher than those who had not. Furthermore, this effect persisted over time suggesting that visiting prior to migration may give migrants a permanent advantage in finding employment. It is striking that we find this even after taking factors such as visa category and English ability into account. Most likely, the relationship stems from the fact that visitors have better information about the Australian labour market. This is consistent with Miller (1986) who concludes that obtaining information about Australian job opportunities from relatives or the Australian government prior to migration allows migrants to reduce their predicted probability of unemployment considerably. Perhaps visiting prior to migration allows some immigrants who discover that they are likely to have poor employment chances in Australia to change their minds and choose not to migrate. Alternatively, it may provide information that allows visitors to search for employment more effectively once they are in Australia. These results strongly suggest that a critical issue in an understanding of the immigrant labour market adjustment processes is the role of prior information.

Finally, six months after arrival, immigrants in some States/Territories had relatively low probabilities of being employed when compared to immigrants in Queensland. State/Territory differences in immigrant employment probabilities disappear for the most part in the second wave of the data. The exception is South Australia where women had a 26.6 percentage point lower probability of employment. Interestingly, Wooden (1991) did not find evidence of significant State/Territory effects. This may be due to differences in overall macroeconomic conditions in the two time periods under consideration or the fact that the current analysis focuses only on the first eighteen months after arrival.

#### V. Conclusions

This paper assesses the relationship between selection criteria and the subsequent settlement of immigrants into the Australian labour market. The primary focus is on how the determinants of labour force status change over time. This is critical to understanding whether immigrants selected on the basis of labour market skills rather than on the basis of family relationships or for humanitarian reasons have a permanent advantage in the labour market or merely a head start.

The results indicated that the selection criteria embodied in different immigration programs have only a limited role in influencing labour market participation immediately after arrival. Once other characteristics are taken into account, male migrants selected for humanitarian reasons or on the basis of family relationships do not have significantly lower participation rates than men selected on the basis of labour market skills. Only among women are there significant differences in the participation rates of humanitarian, family-based, and skill-based migrants six months after arrival. To a large extent, early participation in the Australian labour market is driven by the other demographic and human characteristics included in the model. Over the settlement process, however, the relative gap in the participation rates of immigrants in different categories. Employment is more closely related to visa category. Six months after arrival, immigrants in all visa categories were significantly less likely to be employed than migrants in the Business Skills/Employer Nomination Scheme programs. Over time, skill-based migrants' head start in finding employment dissipates to some extent, although the relative gaps in employment remain large even 18 months after arrival.

While paying particular attention to visa category, this analysis also reaffirms the importance of English language ability in determining labour market outcomes for Australian immigrants. Native English speakers are more likely to seek work and are more successful in finding it. This advantage to speaking English "only or best" is broadly consistent across gender and remarkably persistent over time. Eighteen months into the settlement process, the ability to speak English continues to give migrants a permanent labour market advantage.

Although these results shed light on the role of selection criteria and individual human capital, particularly English, in producing good labour market outcomes, there remains much we do not know about the settlement process. Perhaps most importantly, this analysis is decidedly short run, dealing only with the first eighteen months after an immigrant's arrival in Australia. Even over this short time frame, however, there is strong evidence of structural changes in the determinants of labour market status. The factors related to good labour market outcomes change over time. Whether or not there continues to be structural changes in the determinants of participation and employment over the longer run remains an issue that must await future waves of the LSIA.

The relationships between pre-migration experiences and subsequent labour market outcomes are of special interest because first, they have received little attention in the previous immigration literature and second, because they provide an additional basis on which to select immigrants. Additional research which assessed the extent to which the labour market advantages resulting from visiting Australia prior to migration are due to improved information versus migrant selectivity would be particularly useful.

Finally, we also do not know much about the role of local labour market conditions or internal migration in facilitating the settlement of immigrants, yet these results show that geographic location is also important, even after controlling for an immigrant's characteristics.

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Characteristics	Preferentia Family	al Concession al Family	- Business Skills/ ENS	Indepen den <sup>t</sup>	Humani- tarian	Total
Total	55.0	8.5	3.7	18.5	14.3	100.0
Male	36.3	71.2	85.6	75.4	65.7	52.5
Female	63.7	28.8	14.4	24.6	43.4	47.5
Age Distribution						
Less than 24 years old	18.6	0.6	*	1.2	11.3	12.2
25-34	50.3	44.8	22.3	72.3	37.1	51.0
35-44	17.6	40.0	47.0	26.3	31.6	24.2
45-54	5.7	11.5	25.1	*	12.3	6.8
55-64	7.8	3.1	5.2	*	7.7	5.9
Marital Status						
Married	85.2	70.1	79.4	61.1	58.9	75.5
Widowed/Separated/ Divorced	8.3	5.6	3.7	2.2	13.3	7.5
Never Married	6.6	24.4	17.0	36.7	27.8	17.1
Education						
Higher Degree	2.6	9.5	33.7	17.7	2.1	7.1
Post Graduate Degree	3.1	8.5	8.6	9.5	2.8	4.9
Bachelor Degree	17.5	32.6	18.8	33.9	15.8	21.6
Technical Qualification	23.9	27.8	17.5	22.1	17.4	22.7
Trade Qualification	4.6	14.1	3.3 11.2	14.6	6.5 24.2	/.J 16.4
Year 10, 11	21.9	2.9	2.0	1.2	24.5	10.4
Vear 7-9	86	2.5	2.9	*	12.3	6.1
Year 6 or Less	59	*	1.8	*	74	0.7 4 4
Other	0.7	*	*	*	1.5	0.6
Currently Enrolled in School Visited Prior to Migration	43.6	44.2	77.1	49.9	5.0	40.5
Usual Hours Prior to Migration	n					
0	29.2	5.0	6.2	5.1	41.7	23.7
1-31	11.3	8.3	4.6	5.8	8.4	9.3
31+	59.5	86.7	89.2	89.1	49.9	67.0
Pre-Migration Occupation						
Managers and administrators	11.5	9.6	37.0	7.7	12.1	11.6
Professionals	24.1	40.3	47.9	50.8	20.3	32.6
Para-professionals	4.5	8.4	2.1	8.8	4.6	5.8
Tradespersons	13.3	27.8	5.7	25.7	25.2	18.7
Clerks	17.8	5.3	1.5	2.2	8.4	11.1
personal service workers	16.6	4.2	3.1	3.5	9.2	10.9
Plant & machine	5.0	1.5	*	*	10.4	4.1
Labourers & related workers	6.8	3.0	*	*	8.8	4.9
Pagion of Onigin						
Oceania and Antarctica	37	2.5	*	15	*	2.6
Europe and the former USSR	28.0	30.5	32.0	38.5	42.1	32.0
Middle-East and North Africa	10.3	5.7	2.2	2.9	23.4	10.1
Southeast Asia	27.9	18.9	10.2	6.2	24.1	21.9
Northeast Asia	12.7	19.0	27.1	19.5	*	13.2
Southern Asia	7.4	13.8	3.9	21.6	2.7	9.8
North America	4.9	*	8.9	2.4	*	3.5
South/Central America	2.0	2.4	*	1.7	0.9	1.8
Atrica (excluding North Africa)	3.0	7.0	14.4	5.6	6.8	4.8

 Table A1: Demographic and Human Capital Characteristics, by Visa Category, Wave 2 (Per Cent)

*Note:* \* indicates sample size too small to be reliable.

Variable	Coefficient	St Error	Coefficient	St Error
	Way	ve 1	Way	ve 2
Married	0.086	0.071	0.166	0.082
Age	0.116	0.021	0.141	0.022
Age squared	-0.002	0.000	-0.002	0.000
Visa Category [Business Skills/ENS]				
Preferential Family	-0.022	0.107	-0.367	0.138
Concessional Family	0.019	0.111	-0.205	0.144
Independent	0.068	0.116	-0.101	0.145
Humanitarian	-0.155	0.126	-0.606	0.157
English [Only or Best]				
Well/Very Well	-0.616	0.088	-0.732	0.104
Badly/Not at All	-1.537	0.098	-1.093	0.124
Education [Technical Oualification]				
Higher Degree	0.320	0.121	0.213	0.142
Post Graduate Degree	0.311	0.147	0.511	0.186
Bachelor Degree	0.072	0.093	0.150	0.110
Trade Qualification	0.185	0.115	0.182	0.138
Year 12	0.123	0.104	-0.019	0.141
Year 10-11	0.239	0.133	0.137	0.160
Less than Year 10	0.530	0.124	0.251	0.147
Currently Enrolled in School	-1.010	0.101	0.904	0.083
<b>Pre-Migration Occupation [Para-Professionals]</b>				
Managers and administrators	-0.024	0.154	0.032	0.181
Professionals	-0.088	0.146	-0.020	0.169
Tradespersons	0.289	0.151	0.439	0.175
Clerks	0.439	0.244	0.008	0.255
Salespersons personal service workers	0.129	0.182	0.027	0.203
Plant and machine operators and drivers	0.389	0.213	0.416	0.244
Labourers and related workers	0.449	0.206	0.057	0.226
Unemployed	0.644	0.257	0.414	0.291
Not in Labour Force	0.148	0.211	0.116	0.238
State of Residence [Oueensland]				
NSW	0.117	0.097	0.310	0.114
Victoria	0.314	0.104	0.291	0.120
South Australia	0.222	0.146	-0.286	0.169
Western Australia	-0.098	0.122	-0.156	0.137
Other	-0.093	0.149	-0.130	0.180
Region of Origin [Europe / USSR]				
Oceania / Antarctica	-0.248	0.141	-0.120	0.161
Mid-East / North Africa	-0.242	0.151	0.002	0.176
Asia	0.088	0.120	0.202	0.131
North/South/Central America	0.459	0.222	0.032	0.241
Africa (except North Africa)	-0.083	0.162	-0.094	0.195
Visited Australia Prior to Migration	0.061	0.070	0.132	0.082
Employed Prior to Migration	0.238	0.189	0.195	0.218

#### Table A2a: The Determinates of Labour Market Participation for Men (Probit Coefficients and Standard Errors)

Variable	Coefficient	St Error	Coefficient	St Error	
	Way	ve 1	Wave 2		
Married	-0.074	0.038	0.030	0.039	
Age	0.000	0.015	-0.015	0.013	
Age squared	-0.000	0.000	0.000	0.000	
Visa Category [Business Skills/ENS]					
Preferential Family	-0.839	0.050	-0.487	0.117	
Concessional Family	-0.794	0.032	-0.477	0.127	
Independent	-0.766	0.054	-0.291	0.142	
Humanitarian	-0.811	0.015	-0.562	0.114	
English [Only or Best]					
Well/Very Well	-0.108	0.042	-0.105	0.048	
Badly/Not at All	-0.219	0.067	-0.208	0.076	
Education [Technical Qualification]					
Higher Degree	-0.103	0.072	-0.238	0.087	
Post Graduate Degree	-0.096	0.072	-0.134	0.088	
Bachelor Degree	-0.018	0.046	-0.095	0.060	
Trade Qualification	0.108	0.088	-0.183	0.150	
Year 12	0.013	0.053	-0.124	0.086	
Year 10-11	-0.007	0.081	-0.236	0.097	
Less than Year 10	0.065	0.064	-0.175	0.098	
Currently Enrolled in School	0.013	0.054	-0.002	0.042	
<b>Pre-Migration Occupation [Para-Professionals]</b>					
Managers and administrators	-0.072	0.088	-0.011	0.099	
Professionals	-0.072	0.066	0.043	0.072	
Tradespersons	0.044	0.083	-0.066	0.113	
Clerks	-0.021	0.069	-0.014	0.085	
Salespersons personal service workers	0.055	0.072	0.077	0.079	
Plant and machine operators and drivers	0.072	0.102	0.140	0.090	
Labourers and related workers	0.001	0.120	0.052	0.110	
Unemployed	0.056	0.126	0.079	0.119	
Not in Labour Force	0.087	0.082	-0.042	0.114	
State of Residence [Queensland]					
NSW	-0.119	0.064	-0.013	0.065	
Victoria	-0.312	0.073	-0.112	0.077	
South Australia	-0.193	0.118	-0.266	0.130	
Western Australia	-0.177	0.092	0.049	0.080	
Other	-0.002	0.085	0.000	0.103	
Region of Origin [Europe / USSR]					
Oceania / Antarctica	0.038	0.103	0.081	0.079	
Mid-East / North Africa	0.048	0.081	0.035	0.087	
Asia	-0.002	0.070	0.084	0.079	
North/South/Central America	0.181	0.054	0.056	0.113	
Africa (except North Africa)	-0.008	0.117	-0.116	0.174	
Visited Australia Prior to Migration	0.191	0.025	0.191	0.027	
Employed Prior to Migration	0.150	0.090	0.038	0.092	

## Table A2b: The Determinates of Labour Market Participation for Women (Probit Coefficients and Standard Errors)

Variable	Coefficient	St Error	Coefficient	St Error
	Way	ve 1	Way	ve 2
Married	-0.148	0.078	-0.206	0.096
Age	0.065	0.027	0.032	0.027
Age squared	-0.001	0.000	-0.001	0.000
Visa Category [Business Skills/ENS]				
Preferential Family	-1.802	0.156	-0.984	0.178
Concessional Family	-1.638	0.149	-0.910	0.171
Independent	-1.653	0.149	-0.761	0.177
Humanitarian	-2.682	0.182	-1.676	0.189
English [Only or Best]				
Well/Very Well	-0.493	0.082	-0.433	0.101
Badly/Not at All	-0.716	0.107	-0.757	0.122
Education [Technical Qualification]				
Higher Degree	-0.341	0.132	-0.153	0.151
Post Graduate Degree	-0.444	0.140	-0.082	0.156
Bachelor Degree	-0.312	0.106	-0.216	0.117
Trade Qualification	-0.021	0.123	0.304	0.147
Year 12	-0.033	0.124	0.180	0.167
Year 10-11	-0.101	0.167	-0.118	0.172
Less than Year 10	-0.194	0.147	-0.223	0.149
Currently Enrolled in School	-0.187	0.130	-0.429	0.091
<b>Pre-Migration Occupation [Para-Professionals]</b>				
Managers and administrators	0.326	0.179	-0.052	0.224
Professionals	0.296	0.167	-0.081	0.204
Tradespersons	0.372	0.173	-0.276	0.211
Clerks	0.081	0.253	-0.653	0.300
Salespersons personal service workers	0.390	0.198	-0.042	0.239
Plant and machine operators and drivers	0.385	0.237	-0.032	0.267
Labourers and related workers	0.353	0.228	-0.420	0.259
Unemployed	0.305	0.299	-0.454	0.308
Not in Labour Force	0.094	0.243	-0.027	0.258
State of Residence [Queensland]				
NSW	-0.349	0.124	-0.070	0.134
Victoria	-0.705	0.129	-0.051	0.140
South Australia	-0.662	0.175	-0.203	0.203
Western Australia	-0.413	0.146	0.013	0.170
Other	-0.105	0.208	0.250	0.232
Region of Origin [Europe / USSR]				
Oceania / Antarctica	0.054	0.177	0.010	0.174
Mid-East / North Africa	0.000	0.170	0.009	0.187
Asia	0.036	0.148	-0.124	0.123
North/South/Central America	-0.284	0.191	-0.196	0.237
Africa (except North Africa)	0.299	0.157	0.147	0.193
Visited Australia Prior to Migration	0.290	0.073	0.410	0.088
Employed Prior to Migration	-0.233	0.212	0.127	0.218

## Table A3a: The Determinates of Employment for Men<br/>(Probit Coefficients and Standard Errors)

Variable	Coefficient	St Error	Coefficient	St Error
	Way	/e 1	Way	ve 2
Married	-0.236	0.118	0.098	0.131
Age	0.000	0.047	-0.048	0.044
Age squared	-0.000	0.001	0.000	0.001
Visa Category [Business Skills/ENS]				
Preferential Family	-2.803	0.335	-1.387	0.346
Concessional Family	-2.796	0.342	-1.296	0.363
Independent	-2.429	0.334	-0.808	0.367
Humanitarian	-3.670	0.384	-1.551	0.378
English [Only or Best]				
Well/Very Well	-0.334	0.122	-0.326	0.141
Badly/Not at All	-0.626	0.176	-0.591	0.199
Education [Technical Qualification]				
Higher Degree	-0.310	0.200	-0.664	0.223
Post Graduate Degree	-0.288	0.201	-0.393	0.234
Bachelor Degree	-0.059	0.145	-0.290	0.173
Trade Qualification	0.421	0.421	-0.516	0.387
Year 12	0.043	0.179	-0.366	0.235
Year 10-11	-0.024	0.259	-0.655	0.247
Less than Year 10	0.232	0.252	-0.500	0.254
Currently Enrolled in School	0.044	0.180	-0.005	0.137
Pre-Migration Occupation [Para-Professionals]	1			
Managers and administrators	-0.221	0.254	-0.034	0.318
Professionals	-0.224	0.197	0.146	0.252
Tradespersons	0.153	0.306	-0.203	0.327
Clerks	-0.068	0.218	-0.046	0.270
Salespersons personal service workers	0.192	0.270	0.280	0.324
Plant and machine operators and drivers	0.262	0.416	0.588	0.529
Labourers and related workers	0.002	0.390	0.181	0.414
Unemployed	0.198	0.481	0.290	0.500
Not in Labour Force	0.314	0.336	-0.132	0.346
State of Residence [Queensland]				
NSW	-0.365	0.185	-0.042	0.208
Victoria	-0.877	0.193	-0.338	0.218
South Australia	-0.544	0.303	-0.731	0.328
Western Australia	-0.507	0.241	0.168	0.295
Other	-0.005	0.275	0.001	0.336
Region of Origin [Europe / USSR]				
Oceania / Antarctica	0.131	0.373	0.297	0.330
Mid-East / North Africa	0.168	0.303	0.120	0.311
Asia	-0.006	0.227	0.273	0.257
North/South/Central America	0.890	0.486	0.198	0.434
Africa (except North Africa)	-0.026	0.374	-0.341	0.473
Visited Australia Prior to Migration	0.708	0.107	0.723	0.121
Employed Prior to Migration	0.504	0.314	0.127	0.308

#### Table A3b: The Determinates of Employment for Women (Probit Coefficients and Standard Errors)