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Former Temporary Foreign Workers and International Students as Sources of Permanent Immigration

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Economic outcomes of former Temporary Foreign Workers (TFWs) and former international students (ISs) are compared to those of Skilled Worker Principal Applicants who have no Canadian experience at the time of landing. Controlling for only variables from the immigration points system, former TFWs have both higher earnings and employment rates, while ISs are no lower. When models are estimated separately by gender, male immigrants who were former TFWs have superior outcomes. Overall, the evidence provides support for the Canadian Experience Class in that former TFW, and to a lesser extent IS, status provides signals regarding immigrants' labour market integration.

Keywords: immigrants, Temporary Foreign Workers, international students, Canada, IRPA, points system, Canadian Experience Class

Dans cette étude, nous comparons la situation sur le marché du travail de deux catégories de citoyens qui ont immigré au pays en suivant des processus différents : d'une part les anciens travailleurs étrangers temporaires (TET) et les anciens étudiants étrangers (EE), et d'autre part les travailleurs qualifiés admis à titre de demandeurs principaux qui n'avaient aucune expérience de travail canadienne au moment de leur arrivée. Quand nous tenons compte des seules variables liées au système de points, nos résultats montrent que les revenus et le taux d'emploi sont plus élevés chez les TET mais moins élevés chez les EE. Quand on estime les modèles en tenant compte du sexe, on observe que la situation sur le marché du travail des immigrants hommes qui sont d'anciens TET est meilleure. Globalement, nos résultats indiquent que la situation des TET – et celle des EE, mais dans une moindre mesure – sur le marché du travail étant meilleure, cela fournit des informations intéressantes sur l'intégration des immigrants au marché de l'emploi.

Mots clés : immigrants, travailleurs étrangers temporaires, étudiants étrangers, Canada, LIPR, système de points, catégorie de l'expérience canadienne

Introduction

Economic outcomes of immigrants have declined in many traditional immigrant-receiving countries, prompting ongoing reform of immigration selection policies. A resultant major innovation in Canadian immigration policy is the Canadian Experience Class (CEC), which started in September 2008. We view this as part of a restructuring and diversification of the Economic Class, with a shift away from the points-based Skilled Worker Program as its mainstay.[1] Under the CEC, permanent immigration is facilitated for some skilled categories of Temporary Foreign Workers (TFWs), and former International Students (ISs), who are able to apply to transfer their temporary resident status to permanent status in an expedited manner and normally without leaving the country.[2] Under previous and existing policies such individuals were treated similarly to other applicants, or were given a small number of points for adaptability.

Using the TFW and IS programs as screening devices for economic immigrants may plausibly improve the economic outcomes of new immigrants (Campolieti et al. 2013) since former TFWs will likely not experience the

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same difficulty with the portability of their human capital because their skills have already been recognized by at least one Canadian employer. Similarly, former ISs have obtained their education in Canada and therefore should not experience difficulties receiving a "normal" return to their education, and presumably their language skills and Canada-specific knowledge should be appropriate to the Canadian labour market. While the hypothesis underlying this policy change is that selecting a higher proportion of people with preimmigration Canadian human capital should improve economic integration, there is currently no direct Canadian empirical evidence to justify such a policy proposal. In this paper, we examine the labour market outcomes of immigrants who entered under the pre-CEC system, and who happen to have been former TFWs and ISs, as a proxy for those TFWs and ISs who will enter under the new CEC.[3] For a comparison group we employ Skilled Worker Principal Applicants (SWPAs) admitted under the points system, who have traditionally had the best labour market outcomes of the various immigration streams.

We find that most pre-CEC TFWs and ISs entered the permanent immigration stream in the Economic Class. Relative to SWPAs, male TFWs do very well in terms of both earnings and employment outcomes. When we control for elements in the points system, TFW status still has a large impact on earnings. Even after controlling for differences in educational attainment and other demographic characteristics, we find that four years after landing, male TFWs experience on average a 62 percent advantage in earnings over other immigrants who were also assessed under the points system, but who do not have any preimmigration host country human capital. Of course, much of the variation in outcomes remains unexplained, leaving room for additional useful predictors. We also find some evidence that female TFWs and former ISs perform well economically, but not to the same degree as male TFWs. However, recall that we are comparing TFWs and ISs against SWPAs, so parity still suggests strong outcomes. Of course, the context in which the TFWs and ISs in our data entered Canada—since they were processed through the selection system as it then existed—differs appreciably from that which will exist for the proposed CEC. Nevertheless, these findings suggest that previous experience in Canada and/or the associated selection process is associated with improved labour market outcomes, and that TFW status provides policy-makers with useful information about potential immigrants' economic success.

In the next section we discuss relevant Canadian research, and in the third section we discuss data and methodology. In the fourth section, we include information on the points system to see what additional information TFW or student status provides for earnings and employment relative to other SWPAs. Then, in the fifth section, we estimate traditional earnings and employment regressions for SWPAs in which we analyze males and females separately, as well as controlling for demographic factors and exploring several extensions. In the sixth section, we consider the generalizability of the findings for the CEC program, while the final section concludes.

Background

Research has found deteriorating economic outcomes for more recent cohorts of new immigrants to Canada. Entry earnings fell in the 1980s (Baker and Benjamin 1994; Bloom, Grenier, and Gunderson 1995), but relatively rapid integration from that low base was observed in the boom of the late 1980s (Grant 1999). Subsequently, outcomes fell in the early and mid-1990s (Aydemir and Skuterud 2005; Green and Worswick 2010), but recovered slightly later in the business cycle (Campolieti et al. 2013; Warman and Worswick 2004, forthcoming). Overall, despite the increased emphasis on selection policy in the economic class, and changes to the points system (such as increasing the weight placed on education) economic outcomes of new immigrants have not improved appreciably.[4]

The difficulty that immigrants have transferring their foreign human capital to the Canadian labour market has been a major contributor to their poor labour market outcomes. Schaafsma and Sweetman (2001) and Ferrer and Riddell (2008) find almost no return, and sometimes even a negative return, to foreign work experience. Green and Worswick (2010) and Aydemir and Skuterud (2005) observe that the falling return to foreign work experience is a major source of the observed decline in labour market outcomes. For immigrants without preimmigration Canadian human capital, this can turn into a catch-22, whereby Canadian experience is necessary to get employment, but Canadian employment is needed to acquire the required experience. It is anticipated that immigrants who were previously TFWs in Canada will not experience the same difficulties receiving recognition for their pre-Canadian work experience since it will already have been recognized by a Canadian employer. Such workers undergo a multisided selection process. On one side an employer selects each TFW; on another, after having experienced Canada individuals self-select to apply; and on a third side, the federal government's selection criteria must be met. Undoubtedly, all sides of this selection process are useful in improving the quality of the match between Canada and new immigrants.[5]

While there was no appreciable fall in the return to foreign education in the decades before our data period, compared to the Canadian-born immigrants have traditionally receive a lower average return for their foreign-acquired education. However, in contrast to those who obtain their education abroad, immigrants who come to

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Canada at a young age and obtain Canadian education do very well in the Canadian labour market (Schaafsma and Sweetman 2001). Potentially, the 2013 Selection System, which introduced criteria requiring the premigration assessment of non-Canadian educational credentials, will improve the return to education of future SWPAs. Beyond this, it is plausible that former ISs will have fewer difficulties receiving recognition for their (partly Canadian) educational credentials and therefore experience improved economic outcomes. However, ongoing evaluation is required to see if these expected benefits occur since the CEC requires only two years of postsecondary in Canada, whereas Schaafsma and Sweetman (2001) observe that while those who arrive very young (and therefore have appreciable Canadian education) obtain high annual earnings, those who arrive a bit older and receive only a modest amount of Canadian education do not fare as well.

While there is no research on the labour market outcomes of TFWs or ISs who permanently immigrate to Canada, there is a small amount of research that examines the earnings outcomes of current TFWs in comparison to recently landed immigrants of all classes.[6] Warman (2007b) finds that male TFWs experience much higher earnings than recently landed immigrants. Further, Warman (2010) observes that while recently landed immigrants do not receive any return to their years of foreign work experience, current male TFWs experience a large positive return. As well, male TFWs receive a higher return to their foreign education than recently landed immigrants. We add to the previous literature by examining the effects of premigration TFW and foreign student status on postimmigration labour market outcomes and explore the link between preimmigration host country human capital and economic integration.

Data, Sample for Estimation, and Methodology

Data used come from the Longitudinal Survey of Immigrants to Canada (LSIC).[7] It contains a sample of individual immigrants who applied through a Canadian mission abroad, were age 15 or older at the time of landing, and immigrated between 1 October 2000 and 30 September 2001. They were interviewed six months, two years, and four years after landing. At the first interview the response rate was just over 60 percent, and of those who responded at the first interview, about 65 percent continued through to the third wave. We include only those who remained in the sample to the third wave for our main analysis and employ Statistics Canada's survey weights to recover population parameters. However, in the section "Extensions," we examine attrition.

Our sample is restricted to SWPAs between the ages of 19 and 62 at the time of the first interview.[8] We believe that SWPAs are the appropriate comparator for TFWs and ISs since given the modifications to the selection policy that are underway, the expansion of the CEC is at the expense of the Skilled Worker Program. Also, the SWPAs have the highest labour market outcomes of all immigrant classes, and the goal of the CEC policy is to improve upon those outcomes. For the earnings regressions, we present results for weekly earnings from the main job rather than hourly earnings since weekly earnings combine both the rate of pay as well as hours intensity and so better reflect overall economic outcomes.[9] The key systematic difference is that gaps for TFWs tend to be larger for weekly earnings, since hourly wages and weekly hours are positively correlated. Since there is a 12-month gap between the landing of the first and last immigrants, we use a moving average of the monthly CPI over the reference period for each immigrant to better control for differences in the price level.

Unique to the LSIC is information on whether an immigrant had previously held a Work or Student Visa in Canada. This allows us to compare the economic outcomes between TFWs, ISs, and immigrants who have no preimmigration Canadian human capital. It is, however, possible for non-permanent residents to work in Canada without a Work Visa, as do, for example, Business Visitors entering under NAFTA. Any such workers who immigrated would be included in the non-TFW/IS group. Assuming an associated positive effect of this experience, any observed coefficients for TFWs are thereby biased down by this misclassification. Further, given that TFWs currently require a minimum of one year of Canadian work experience to be eligible under the CEC, it is unlikely that temporary workers without a Work Visa would qualify to enter. Our understanding is that the size of this latter group in our sample is likely quite small.

Analysis Addressing Only Elements of the Canadian Immigration System

First, we investigate earning and employment outcomes focusing exclusively on aspects of the immigration system to examine the additional predictive power of being a former TFW or former IS. Although immigrants in the LSIC sample were selected before the June 2002 Immigration and Refugee Protection Act (IRPA), the data do not allow us to determine key selection criteria under the pre-IRPA system. Therefore, we present results with the points system under IRPA for which the LSIC data are better suited, and also provide estimates using the points system that came into effect in May 2013. We discuss relevant aspects of the three points systems in detail in an online appendix.

Initially we seek to align the analysis closely with policy. We neither identify gender nor control for variables such as source country since the points system does not differentiate on these criteria. An even more

desirable approach might expand the unit of analysis to (adult members of) families since they are treated as a unit in the Economic Class admissions process. If, for example, a policy change increasing the education points for the Principal Applicant also increased spouse's earnings on average, that should be attributed to the policy change (see Sweetman and Warman 2010a). Of course, normalizing across families of different sizes is technically challenging; but, difficult or not, it reflects the way the selection system actually works and if analysis is to inform policy it needs to align closely to it. However, the LSIC is an individual, not a household, survey, so while respondents include principal applicants, spouses/partners, and dependents, we have only limited information for family members not surveyed.

Given the different length of time covered by the three reference periods, we run separate regressions for each cycle. Some other studies look at subsamples of the population based on labour force attachment, perhaps because they are primarily interested in labour market efficiency or workers with substantial labour market attachment. The success of immigration policy, however, should be measured against the activity of all those who land and remain. Therefore, we include the entire sample of SWPAs in the earnings regressions, even those without earnings, for whom we assume weekly earnings of $1 before taking the natural logarithm of earnings. Given the inclusion of people with no earnings, Recentered Influence Function (RIF) regressions are employed to estimate "unconditional quantiles" (medians in this case) as proposed by Firpo, Fortin, and Lemieux (2009). The advantage of this method over conventional quantile regression is that each coefficient is interpreted as the partial effect of a change in the associated independent variable on earnings (which is the interpretation relevant for policy purposes). We also examine employment outcomes using probit regressions, estimating equations of the form

$$Y_i = \beta_o + \delta_1 TFW_i + \delta_2 IS_i + [\pi Pts_i] + \varepsilon_i \quad (1)$$

where Y_i is employment or the natural logarithm of weekly earnings for person i, TFW_i and IS_i are indicators for having had the relevant visa before entry, and Pts_i, included in some specifications, is one of two approaches to control for the points that the respondent would earn under each of IRPA or the 2013 rules. In a first specification *Pts* is excluded so the *TFW* and *IS* coefficients can be observed in isolation. The second specification includes 46 indicator variables for IRPA, or 50 for the 2013 system, representing the various components of the relevant points system in an extremely flexible manner. For example, we include five dummy variables capturing the information of age. In contrast, the third specification constrains the variables to produce two "points totals" for each person; each is an additive weighted linear sum that is as close as we can get it to the, as appropriate, IRPA or 2013 points system. These points totals are, however, slight underestimates since some elements, especially those for "adaptability," are not observed in our data; there is also measurement error in some of the mappings. Those points that derive from being a former *TFW* or *IS* are not included. See Appendix B for a full list of the variables used under the IRPA and 2013 points systems. All regressions also control for months since migration.

Overview of Relevant Points Systems

Three relevant points systems—the pre-IRPA system, under which the LSIC sample was admitted, the initial IRPA system introduced in 2002, and the May 2013 revisions to IRPA—are described and contrasted in the online appendix. Appendix A charts a comparison of the categories and maximum points under the selection systems.[10]

Traditional Earning Equations

Taking a more traditional approach that answers different economic questions than in the section "Analysis Addressing Only Elements of the Canadian Immigration System," we next estimate regressions by running separate analysis on males and females, including a broader set of regressors, and restricting the analysis to people with positive earnings. We estimate the following equation:

$$Y_i = \beta X_i + \delta_1 TFW_i + \delta_2 IS_i + \varepsilon_i \quad (2)$$

using ordinary least-squares where the new X_i matrix includes controls for: age, months since migration, years of school, highest degree before landing, region of origin, region of residence, English and French language ability, marital status, number of children, and a dummy variable for having lived in Canada before immigration not as a tourist and not on a Work or Student Visa, as well as an intercept term.

Empirical Results

Descriptive Statistics

Summary statistics for the three groups (TFWs, ISs, and SWPAs with no preimmigration Canadian human capital) are presented in Table 1 for those in the Economic Class, with subclasses defined where sample sizes permit. Comparing the across- and within-group distributions, it is clear that while a very large proportion of TFWs and ISs are SWPAs, the former two groups make up only a very small proportion of the latter class. Table 2 next gives the breakdown by region of origin. For females only, given the sample sizes, Dependents and Spouses are included. TFWs are much more likely to

Table 1: Across- and Within-Class Distributions of TFW, IS, and Other Immigrants

	Across-Class Distribution (column percent)			Within-Class Distribution (row percent)			
	IS (%)	TFW (%)	Other[a] (%)	IS (%)	TFW (%)	Other* (%)	Total (%)
Males							
Other classes	16.2	15.5	42.2	1.5	1.5	97.0	100
Skilled Workers (Principal Applicants)	83.8	84.5	57.8	5.3	5.5	89.3	100
Total (%)	100.0	100.0	100.0	3.8	3.9	92.4	100
Females							
Other classes	17.5	12.8	44.5	1.2	0.7	98.1	100
Skilled Workers (Principal Applicants)	61.7	43.6	15.9	10.4	5.5	84.2	100
Skilled Workers (Dependents & Spouses)	20.8	43.6	39.7	1.6	2.5	96.0	100
Total (%)	100.0	100.0	100.0	3.0	2.2	94.8	100

Notes: Sample age 19 to 62 at the time of the first cycle.
[a] Other immigrants are all immigrants who have no preimmigration Canadian human capital.
Source: Authors' calculations.

Table 2: Region of Origin by Canadian Exposure Groups

	IS	TFWs	Other[a]
Males[b]			
US, UK, West/North Europe	9.2	30.3	4.6
Asia	51.8	50.4	62.6
Other countries	38.9	19.3	32.8
Females[c]			
US, UK, West/North Europe	12.3	44.7	4.1
Asia	41.5	33.9	64.4
Other countries	46.2	21.3	31.5

Notes: Sample age 19 to 62 at the time of the first cycle.
[a] Other immigrants are all immigrants who have no preimmigration Canadian human capital.
[b] Skilled Workers Principal Applicants.
[c] Skilled Worker Principal Applicants, and Dependents and Spouses.
Source: Authors' calculations.

come from Western countries than are either ISs or "other" SWPAs.

Means of key variables, by group, for male and female SWPAs, and for female Dependents and Spouses, are presented in Table 3. The general patterns are consistent even if the magnitudes of the gaps vary. For both male and female Principal Applicants, all three groups are highly educated. However, while ISs have more years of schooling than other SWPAs, they are slightly less likely to have a university degree. This greater number of years of schooling may reflect ISs with premigration university education coming to Canada to pursue additional university education that doesn't result in a higher degree. Male TFWs have much higher (log) weekly earnings and also work the most hours. For female Principal Applicants, while TFWs have the highest log weekly earnings in the first cycle, the earnings of the three groups converge, and by the third cycle, despite working fewer hours, ISs have higher log weekly earnings than the TFWs. Relative to female Principal Applicants, female Dependents and Spouses have lower log weekly earnings and work fewer hours.

Earning and Employment Regressions for Economic Immigrants Controlling for the Points System

Table 4 is central to our main policy questions. Displayed in the upper panel are the coefficients on the TFW and IS variables from median RIF regressions (including zero earnings); the lower panel contains marginal effects for employment equations estimated by probit regressions. To conserve space we focus on six months and four years after landing, omitting the intermediate interview. In general, however, any patterns are relatively smooth across the three cycles. Recall that our goal is to ascertain how much information is included in the TFW and IS designations, and also to see if there are beneficial outcomes among the two CEC groups compared to other SWPAs. Column 1 of part i of panel 1 in Table 4 shows that, six months after landing, there is a remarkable ([exp(.910)-1]*100% =) 150 percent earnings advantage for the TFWs at the median; this advantage reduces to 78 percent by four years after landing, as seen in column 4, which is still quite large. Clearly, TFW status implies connections that allow rapid labour market success. ISs do not experience an earnings advantage in the first cycle compared to SWPAs, but by four years after landing it is 41 percent. Of course, there are no controls for age or any other characteristic in this regression, and it needs to be remembered that it is earnings (and many other factors) over the life cycle, not only in the first four years after landing, that are relevant for policy-making. In part ii of panel 1, we examine the limited sample that

Table 3: Means by Canadian Exposure Groups for Male Skilled Worker Principal Applicants

	Male Skilled Worker Principal Applicants			Female Skilled Worker Principal Applicants			Female Skilled Worker Dependents and Spouse		
	IS	TFW	Other[a]	IS	TFW	Other[a]	IS	TFW	Other[a]
Years of school[b]	18.99	17.71	16.63	18.89	17.24	16.2	15.73	16.00	15.14
University degree[b]	0.86	0.78	0.88	0.76	0.62	0.85	—[e]	0.62	0.62
Age at cycle 1	31.51	35.75	35.45	30.36	36.42	34.4	28.71	36.48	33.85
Have a child	0.32	0.44	0.59	—[e]	0.34	0.53	—[e]	0.80	0.75
# of children	1.68	1.77	1.58	—[e]	1.90	1.51	—[e]	1.73	1.63
Six months									
Log weekly earnings[d]	6.31	7.08	6.19	6.10	6.47	6.01	5.78	5.83	5.73
Hours worked[c]	24.84	39.86	27.06	24.94	30.26	21.99	21.27	6.92	13.74
Positive hours[d]	35.38	44.31	39.19	31.62	40.99	34.79	36.78	23.25	33.51
Employed	0.67	0.86	0.62	0.67	0.69	0.55	0.52	0.30	0.35
English score	0.74	0.83	0.73	0.70	0.71	0.72	0.70	0.67	0.59
French score	0.32	0.17	0.16	0.39	0.28	0.18	0.07	0.23	0.11
Two years									
Log weekly earnings[d]	6.51	7.16	6.41	6.37	6.52	6.15	5.96	5.92	5.85
Hours worked[c]	31.79	43.76	36.51	34.95	35.26	31.24	26.08	15.71	23.86
Positive hours[d]	37.20	44.96	41.41	37.34	39.12	36.82	33.41	30.38	35.34
Employed	0.79	—[e]	0.74	0.76	—[e]	0.68	—[e]	0.47	0.50
English score	0.75	0.84	0.75	0.72	0.73	0.75	0.76	0.70	0.64
French score	0.35	0.18	0.17	0.40	0.29	0.20	0.06	0.27	0.12
Four years									
Log weekly earnings[d]	6.64	7.22	6.59	6.56	6.43	6.31	6.45	5.68	6.00
Hours worked[c]	36.15	44.18	38.38	32.33	36.54	31.41	31.76	16.04	25.60
Positive hours[d]	38.50	45.08	41.43	35.32	38.23	35.52	38.24	23.58	34.06
Employed	0.82	—[e]	0.84	0.79	—[e]	0.80	—[e]	0.61	0.63
English score	0.76	0.83	0.76	0.71	0.73	0.75	0.77	0.69	0.66
French score	0.34	0.17	0.17	0.41	0.30	0.20	0.06	0.27	0.13

Notes: Sample age 19 to 62 at the time of the first cycle. Standard errors are available on request.
[a] Other immigrants are all immigrants who have no preimmigration Canadian human capital.
[b] At time of landing.
[c] Includes people with zero hours.
[d] Includes only workers with positive hours worked.
[e] Results omitted due to Statistics Canada disclosure rules.
Source: Authors' calculations.

meets the minimum eligibility criteria for admission under the 2013 points system. The reduction in the sample size is notable and illustrates the appreciable role of the minimum criteria as far as we can estimate it in these data. Here, the median earnings advantage for TFWs is higher, at around 194 percent six months after landing; four years after landing it is still at 173 percent. In contrast, ISs have poorer earnings under the 2013 points system. The additional restrictions eliminate any advantage they have over other SWPAs four years after landing.

In columns 2 and 5 of Table 4, immigration points enter as numerous indicator variables and the earnings advantage experienced by TFWs mostly disappears, at least under the IRPA points system. For ISs, under IRPA, the earnings advantage remains at four years after landing; however, it shrinks in magnitude to 30 percent. One interpretation is that compared to other immigrants, the TFW and IS advantage can be (almost) fully explained by elements of the points system, and that, consistent with the results seen earlier, the TFW advantage declines with time while that for ISs increases. However, when we restrict the points to having a linear relationship as in the actual selection system, in columns 3 and 6, the TFWs experience a statistically significant earnings advantage at six months and four years. It is worth noting that each additional point is seen to be associated with about 2 percent higher earnings under IRPA and even more under the 2013 points system. This suggests that IRPA's provision of a maximum of five points for either previous work or study in Canada, and starting in 2013, ten points for work in Canada, was a move in

Table 4: Earnings and Employment Regressions, Controlling for Immigration Category, Canadian Exposure and Points, SWPAs

	Six Months			Four Years		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel 1: Median earnings (includes zero earnings)						
i) IRPA points system						
TFW	0.910***	−0.0528	0.727***	0.576***	0.192	0.441***
	[0.138]	[0.148]	[0.132]	[0.103]	[0.118]	[0.0986]
IS	0.0628	−0.156	0.0584	0.342***	0.261**	0.299***
	[0.152]	[0.164]	[0.149]	[0.107]	[0.117]	[0.109]
46 point variables		Yes	0.221***		Yes	0.160***
or point estimates/10			[0.0307]			[0.0223]
R-squared	0.016	0.106	0.037	0.015	0.076	0.037
Observations	2,241	2,241	2,241	2,241	2,241	2,241
ii) 2013 points system						
TFW	1.080***	0.220	0.697***	1.007***	0.685***	0.771***
	[0.115]	[0.154]	[0.127]	[0.128]	[0.179]	[0.143]
IS	−0.122	−0.381**	−0.194	0.123	−0.124	0.0121
	[0.182]	[0.189]	[0.165]	[0.193]	[0.229]	[0.189]
50 point variables		Yes	0.423***		Yes	0.253***
or point estimates/10			[0.0574]			[0.0628]
R-squared	0.095	0.284	0.178	0.079	0.174	0.107
Observations	528	528	528	528	528	528
Panel 2: Employment						
i) IRPA points system						
TFW	0.217***	−0.0609	0.199***	0.112***	0.0219	0.104***
	[0.0354]	[0.0693]	[0.0370]	[0.0232]	[0.0496]	[0.0250]
IS	0.0652	−0.0282	0.0663	−0.0241	−0.0309	−0.0286
	[0.0406]	[0.0523]	[0.0409]	[0.0340]	[0.0386]	[0.0346]
46 point variables		Yes	0.0433***		Yes	0.0177***
or point estimates/10			[0.0092]			[0.0064]
Pseudo-R^2	0.010	0.092	0.018	0.007	0.0618	0.011
Observations	2,241	2,241	2,241	2,241	2,241	2,241
ii) 2013 points system						
TFW	0.239***	−0.0861	0.169***	0.0980***	0.0197	0.0654*
	[0.0369]	[0.113]	[0.0485]	[0.0265]	[0.0574]	[0.0340]
IS	−0.0036	−0.166*	−0.0156	−0.0514	−0.0180	−0.0760
	[0.0626]	[0.0933]	[0.0628]	[0.0511]	[0.0519]	[0.0559]
50 point variables		Yes	0.133***		Yes	0.0531***
or point estimates/10			[0.0229]			[0.0145]
Pseudo-R^2	0.0441	0.223	0.103	0.031	0.172	0.068
observations	528	528	528	528	528	528

Notes: All regressions include a months since migration variable. Sample aged 19 to 62 at the time of the first cycle. Dependent variables and regression techniques: (a) Median regression ln(weekly earnings) with zero earnings set to $1; (b) probit regression for employment at the interview date. For the 46 points IRPA variables or 50 2013 points system variables, we allow for the points to enter as separate dummy variables, while for the point estimates a continuous variable is included with the potential points predicted. Robust standard errors in brackets. *significant at 10 percent; **significant at 5 percent; ***significant at 1 percent.
Source: Authors' calculations.

the right direction for TFWs; but it may understate the value of that work, at least in these early years. However, our specification does not mirror the actual operation of the immigration system. Whereas we have a continuous gradient across points, the system has a simple threshold of 67 points, and all applicants whether at this threshold or 20 points above the threshold are admitted. These results suggest that distance from the threshold matters for labour market outcomes, and these results support the original design whereby the threshold was to have been adjusted to manage the flow and maximize outcomes (CIC 2010; Sweetman and Warman 2013).

Table 5: Earnings and Employment Regressions for SWPAs

	Males				Females			
	Six Months		Four Years		Six Months		Four Years	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel 1: Log weekly earnings OLS regressions								
TFW	0.908***	0.723***	0.637***	0.484***	0.443***	0.358**	0.126	0.147
	[0.076]	[0.078]	[0.066]	[0.072]	[0.160]	[0.148]	[0.194]	[0.159]
IS	0.111	0.111	0.025	− 0.001	0.092	− 0.063	0.204	0.102
	[0.083]	[0.086]	[0.074]	[0.075]	[0.136]	[0.165]	[0.135]	[0.175]
R-squared	0.11	0.24	0.08	0.19	0.03	0.21	0.03	0.17
Observations	1,147	1,147	1,402	1,402	308	308	415	415
Panel 2: Employment marginal effects from probit regressions								
TFW	0.242***	0.160***	0.104***	0.088***	0.144*	0.117	0.129**	0.082
	[0.037]	[0.054]	[0.026]	[0.028]	[0.086]	[0.108]	[0.054]	[0.066]
IS	0.030	0.016	− 0.031	0.008	0.116*	0.07	0.007	− 0.018
	[0.053]	[0.062]	[0.043]	[0.039]	[0.070]	[0.091]	[0.057]	[0.072]
Pseudo-R^2	0.019	0.204	0.008	0.092	0.007	0.175	0.012	0.129
Observations	1,738	1,738	1,738	1,738	503	503	503	503
Full set of controls	No	Yes	No	Yes	No	Yes	No	Yes

Notes: Sample age 19 to 62 at the time of the first cycle. Panel 1 is restricted to SWPAs with positive earnings, and panel 2 to all SWPAs. All regressions control for a linear months since migration term, a linear age term, and a dummy for having lived in Canada before immigrating, but not having either of the visas on which we focus. Full set of controls include: highest degree before landing dummies (less than high school [default], high school, some post-secondary, trade/college, bachelor, higher than bachelor), region of origin dummies (US/Western Europe/ Australia/NZ [default], Central/South America, Eastern Europe, Southern Europe, Africa, Middle East, East Asia, South/East Asia, South Asia), region of residence dummies (Atlantic provinces, Quebec, Montreal, Ontario, Toronto [default], Western province, BC, Vancouver), English and French language ability, marital status dummies (single previously married [default], married/common law, single never married), number of children aged less than 18 years in household, and a dummy variable for having lived in Canada before immigration not as a tourist and not on a Work or Student Visa. Robust standard errors in brackets.
*significant at 10 percent; **significant at 5 percent; ***significant at 1 percent.
Source: Authors' calculations.

If we use the selection system that came into effect in 2013 (see part ii of panel 1), we see a somewhat different story. When we specify the points in the regressions as separate indicator variables, the TFW advantage is reduced, especially six months after landing; however, it does not disappear and remains still large at four years after landing. Conversely, for ISs, the coefficient is negative in the first six months and there is no advantage four years after landing. As mentioned, key differences between these estimates and those for IRPA are due to the minimum criteria restrictions put in place in 2013.

In panel 2, we present the marginal effects for the employment probit regressions, examining IRPA in part i and the 2013 Selection System in part ii. TFWs are much more likely to be employed in the short run, although this gap declines four years after landing. This advantage disappears when we control for the elements of either points system with separate indicator variables. Conversely, student status does not appear to provide any advantage. When points are constrained to be a continuous variable, TFWs again have an employment advantage at six months and four years after landing. Clearly, the manner in which the elements of the points system are combined strongly affects their explanatory power.

Earning and Employment Outcomes of SWPAs

Table 5 again examines how well TFWs and ISs do in comparison to other SWPAs who have no preimmigration host country human capital. Due to space constraints and since the sample is small, for females we present only overall earnings and employment outcomes and not the extensions. The omitted estimates are available in an online appendix. Unlike Table 4, the earnings regressions in Table 5 include only those with strictly positive earnings in panel 1 and are therefore estimated by OLS. As well, we include a set of statistical controls (listed beneath Table 5), including variables that are not elements of the points system, such as region of origin.

Male, and to a lesser degree female, TFWs have much higher earnings than workers who do not have any preimmigration Canadian human capital. The weekly earnings advantage for males ([exp(0.637)-1]*100% =) is 106

Table 6: Quantile Earnings Recentred Influence Function Regressions for SWPAs

	Six Months		Four Years	
	(1)	(2)	(3)	(4)
Panel 1: 25th quantile				
TFW	0.443***	0.417***	0.290***	0.186***
	[0.0598]	[0.0731]	[0.0505]	[0.0608]
IS	0.0484	0.159	−0.0002	0.0097
	[0.128]	[0.123]	[0.0817]	[0.0847]
R-squared	0.02	0.10	0.02	0.09
Panel 2: Median				
TFW	0.737***	0.576***	0.734***	0.493***
	[0.0579]	[0.0738]	[0.0661]	[0.0733]
IS	0.157	0.139	0.191*	0.0834
	[0.114]	[0.111]	[0.0994]	[0.101]
R-squared	0.06	0.17	0.06	0.17
Panel 3: 75th quantile				
TFW	0.974***	0.702***	1.160***	0.883***
	[0.0951]	[0.0954]	[0.113]	[0.117]
IS	0.137	0.0759	0.136	−0.0676
	[0.115]	[0.112]	[0.116]	[0.113]
R-squared	0.11	0.24	0.08	0.18
Observations	1,147	1,147	1,402	1,402
Full set of controls	No	Yes	No	Yes

Notes: See Table 5.
Source: Authors' calculations.

percent higher six months after landing. TFWs also experience better employment outcomes, with employment rates around 14 to 25 percent higher at six months. Even four years after landing, TFWs have around a 10 to 12 percent higher probability of being employed. ISs do not appear to have an advantage in any of the specifications, except for the coefficient at six months for females in the employment regression, which is on the margins of statistical significance. However, when we look at hourly earnings instead of weekly earnings we find that ISs experience a modest earnings advantage (results not shown). Of course, they are being compared to the highest earning, most likely to be employed, immigration class.

Heterogeneity across the Distribution of Earnings

Delving deeper than the effects at the mean displayed in Table 5, the earnings advantage of the TFWs may vary over the earnings distribution. We examine this by looking at the earning differentials at the 25th, 50th, and 75th quantiles for male SWPAs, again using the RIF estimator discussed in the section "Analysis Addressing Only Elements of the Canadian Immigration System." Although TFWs experience an earnings advantage at the 25th quantile, the earnings advantage is much larger in the upper part of the distribution, as shown in Table 6. As well, while the earnings advantage at the mean decreases with time in Canada (see Table 5), it does not change much at the median and actually increases at the 75th quantile over the four-year period. For ISs, the coefficients are much closer to zero and are typically statistically insignificant.

Stratifying the Sample by Source Region

To explore SWPAs from a different perspective, we look at region of origin and split the male sample into non-Western and Western country of origin samples. Since almost all TFWs from Western countries are employed, we cannot estimate an employment regression for this group. Aydemir and Skuterud (2005) find that immigrants from non-Western countries experience the most difficulty integrating economically and transferring their foreign human capital to Canada. We therefore expect the benefit of having preimmigration Canadian work experience to be greatest for immigrants from non-Western countries.[11] Looking at Table 7, we observe that the TFW earnings advantage is indeed largest where expected. For the Western sample, TFWs experience around a ([exp(.282)-1]*100% =) 33 percent earnings advantage over workers who have no preimmigration human capital (with the full set of controls), while for the non-Western sample, the earnings advantage is 130 percent in the first six months after landing, and drops to 70 percent by four years after landing. ISs do not appear to experience the same benefit in terms of weekly earnings, but when we examine hourly earnings, ISs

Table 7: Stratification by Source Country for Male SWPAs

	Six Months		Four Years	
	(1)	(2)	(3)	(4)
Panel 1: Log weekly earnings, non-Western countries				
TFW	0.853***	0.834***	0.591***	0.529***
	[0.090]	[0.094]	[0.078]	[0.088]
IS	0.073	0.100	0.018	0.001
	[0.090]	[0.098]	[0.079]	[0.081]
R-squared	0.09	0.19	0.06	0.16
Observations	1,042	1,042	1,291	1,291
Panel 2: Log weekly earnings, Western countries				
TFW	0.500***	0.275**	0.381***	0.282**
	[0.144]	[0.131]	[0.115]	[0.111]
IS	0.125	0.307	0.002	0.246
	[0.180]	[0.228]	[0.147]	[0.186]
R-squared	0.36	0.61	0.34	0.59
Observations	105	105	111	111
Panel 3: Marginal effects on employment, non-Western countries				
TFW	0.225***	0.154**	0.083**	0.078**
	[0.046]	[0.067]	[0.036]	[0.035]
IS	0.012	−0.001	−0.038	0.006
	[0.057]	[0.068]	[0.047]	[0.043]
Pseudo-R^2	0.016	0.203	0.005	0.093
Observations	1,595	1,595	1,595	1,595
Full set of controls	No	Yes	No	Yes

Notes: See Table 5.
Source: Authors' calculations.

experience a large statistically significant earnings advantage (results not shown).[12] We also investigate employment rates and find that for the non-Western sample, the estimates are very similar to those presented for the full sample (see panel 3 of Table 7).

Economic Returns to Experience and Education

In Table 8, we look at the return to education and preimmigration (potential) labour market experience for males. As discussed, the economic rate of return to preimmigration work experience has been found to be low to zero, and even negative in some cases, and is one of the main causes of the decline in immigrant earnings. Also, though it has not fallen appreciably in recent decades, on average immigrants experience a lower rate of return to education than the Canadian born. Immigrants selected under the CEC should experience improved economic integration since they should not encounter the same level of difficulty obtaining recognition of their human capital. The human capital of former TFWs should presumably be more portable since their skills have already been recognized by at least one Canadian employer. Similarly, former ISs will have obtained their education in Canada and therefore should not experience difficulties receiving a "normal" return to their education, and presumably their language skills and Canada-specific knowledge should be appropriate to the Canadian labour market. These are key aspects to the potential success of the CEC.

Because of our small sample, we include only a linear experience term, but this is sufficient since Goldmann, Sweetman, and Warman (2011) show that the relationship is close to linear. Consistent with earlier work, in Table 8 the coefficient on preimmigration experience is everywhere negative, and it is statistically significant.[13] This contrasts with the strongly positive slope usually observed for the Canadian born and earlier immigrant cohorts. The TFWs, however, have positive and significant coefficients for their interaction term that are large enough not only to counterbalance the negative coefficient on experience (which is also part of their return) but also to imply they receive a strictly positive return. TFWs appear to be able to transfer at least some of their preimmigration labour market experience to Canada, in stark contrast to the vast majority of immigrants. International ISs who subsequently immigrated have (mostly) positive, but universally statistically insignificant, coefficients on their experience interaction terms. If they are able to transfer the value of their experience, it is to a much lesser degree than the TFWs. It should be noted that unlike the sample in the LSIC used in this analysis,

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Table 8: Returns to Experience and School by Canadian Exposure Groups for Male SWPAs

	Six Months		Four Years	
	(1)	(2)	(3)	(4)
TFW	0.860***	0.705***	0.593***	0.474***
	[0.079]	[0.078]	[0.068]	[0.069]
IS	0.056	0.037	−0.012	0.016
	[0.127]	[0.117]	[0.128]	[0.128]
Experience	−0.007**	−0.008**	−0.009***	−0.012***
	[0.003]	[0.003]	[0.003]	[0.003]
Experience × TFW	0.037***	0.030***	0.024**	0.023**
	[0.011]	[0.011]	[0.010]	[0.010]
Experience × IS	0.012	0.011	−0.017	−0.019
	[0.014]	[0.012]	[0.018]	[0.018]
Years of school	0.019*	0.011	0.017**	0.011
	[0.011]	[0.011]	[0.007]	[0.007]
Years of school × TFW	0.023	0.02	0.016	0.012
	[0.024]	[0.024]	[0.021]	[0.018]
Years of school × IS	0.026	0.043	−0.045*	−0.045*
	[0.034]	[0.031]	[0.026]	[0.025]
R-squared	0.13	0.24	0.10	0.20
Observations	1,147	1,147	1,402	1,402
Full set of controls	No	Yes	No	Yes

Notes: Sample age 19 to 62 at the time of the first cycle. Restricted to people with positive earnings. The experience variables are defined as Experience − 12.5 and the years of schooling variables are defined as Years of School − 16 to allow for easier interpretation of the parameters. All regressions control for a linear months since migration term and a dummy for having lived in Canada before immigrating, but not having either of the visas on which we focus which is interacted with the experience and schooling variables. Full set of controls include: highest degree before landing dummies (less than high school [default], high school, some post-secondary, trade/college, bachelor, higher than bachelor), region of origin dummies (US/Western Europe/Australia/NZ [default], Central/South America, Eastern Europe, Southern Europe, Africa, Middle East, East Asia, South/East Asia, South Asia), region of residence dummies (Atlantic provinces, Quebec, Montreal, Ontario, Toronto [default], Western province, BC, Vancouver), English and French language ability, marital status dummies (single previously married [default], married/common law, single never married), number of children aged less than 18 years in household, and a dummy variable for having lived in Canada before immigration not as a tourist and not on a Work or Student Visa. Robust standard errors in brackets.
*significant at 10 percent; **significant at 5 percent; ***significant at 1 percent.
Source: Authors' calculations.

ISs applying under the CEC are unlikely to have many years of foreign work experience since they will apply soon after the completion of their Canadian schooling.

Turning to education, males have a positive albeit not enormous return to years of schooling, but once the full set of controls are added, the coefficient is reduced in magnitude and is no longer statistically significant. This is mainly due to the inclusion of the English language ability variable, which is correlated with the effect of years of schooling. The TFWs have a positive interaction term, but it is never statistically significant and is sometimes close to zero. In contrast, the ISs' interaction coefficient is negative and statistically significant by the third cycle. This is unexpected, especially the increasing negative trend across the cycles. However, as shown in Table 3, while ISs have similar levels of university completion relative to the other SWPAs (86 versus 88 percent), they have completed more than two years extra schooling but do not appear to have commensurately higher earnings.

Despite the fact that we find that ISs do not receive any return to their education, it is quite possible that those entering under the CEC will have strong economic outcomes. The ISs in our sample do not have any preimmigration Canadian work experience, while those who enter in the CEC program are required to have at least 12 months of Canadian work experience just before their application. Also, while we have information on how long an immigrant was previously in Canada, we do not know when the visit occurred. Therefore, unlike under the CEC for which the applicant must have obtained one year of work experience within the three years preceding the application, there might be a large gap between the period when the ISs (or TFWs) in our sample were in Canada and when they immigrated.

Table 9: Additional Education for Male SWPAs

	Six Months		Four Years	
	(1)	(2)	(3)	(4)
i) Currently in class or training (excluding language training)				
TFW	−0.0812***	−0.0534***	−0.0337***	−0.0404***
	[0.0114]	[0.0201]	[0.00497]	[0.00961]
IS	0.104**	0.0843*	−0.0120	−0.0391**
	[0.0443]	[0.0445]	[0.0185]	[0.0189]
Pseudo-R^2	0.013	0.167	0.004	0.091
Observations	1,738	1,738	1,738	1,738
ii) Hours per week currently in class or training (excluding language training)				
TFW	−0.0155	−0.0235	−0.0461***	−0.0511***
	[0.0290]	[0.0340]	[0.00932]	[0.0120]
IS	0.275***	0.229***	0.0170	0.0141
	[0.0536]	[0.0543]	[0.0294]	[0.0311]
Pseudo-R^2	0.048	0.082	0.004	0.022
Observations	1,738	1,738	1,738	1,738
Full set of controls	No	Yes	No	Yes

Notes: Sample age 19 to 62 at the time of the first cycle. All regressions control for a linear months since migration term and a dummy for having lived in Canada before immigrating, but not having either of the visas on which we focus. Full set of controls include: highest degree before landing dummies (less than high school [default], high school, some post-secondary, trade/college, bachelor, higher than bachelor), region of origin dummies (US/Western Europe/Australia/NZ [default], Central/South America, Eastern Europe, Southern Europe, Africa, Middle East, East Asia, South/East Asia, South Asia), region of residence dummies (Atlantic provinces, Quebec, Montreal, Ontario, Toronto [default], Western province, BC, Vancouver), English and French language ability, marital status dummies (single previously married [default], married/common law, single never married), number of children aged less than 18 years in household, and a dummy variable for having lived in Canada before immigration not as a tourist and not on a Work or Student Visa. Robust standard errors in brackets.
*significant at 10 percent; **significant at 5 percent; ***significant at 1 percent.
Source: Authors' calculations.

Extensions: Educational Training and Attrition

In this section, we begin by exploring whether there are differences in the amount of time devoted to retraining when immigrants first arrive in Canada. We first examine this by looking at differences in school attendance as the main activity in panel 1 of Table 9. Male ISs are more likely to be attending school as their main activity six months after landing than are other immigrants, potentially explaining their initial poorer outcomes. Conversely, male TFWs are less likely to have school attendance as their main activity six months after landing. By four years after landing, the difference between TFWs and ISs has disappeared, and with full controls, both TFWs and ISs are around 4 percent less likely than other immigrants to have school attendance as their main activity.

We examine whether there are differences in educational attendance between TFWs, ISs, and other SWPAs since this influences the amount of time devoted to the labour market (panel 2 in Table 9). Of the three, ISs are most likely, and TFWs least likely, to take educational training when they first arrive, but the difference disappears with time in Canada.[14] However, the magnitude is very large at six months after landing, with ISs being almost 30 percent more likely to take educational training. Again, by four years after landing, TFWs are slightly less likely to take educational training.

We next examine the importance of attrition on the estimates (see Table 10). The LSIC Wave 3 data, which are used in the estimates in the paper, contain only immigrants who still remain four years after landing, with the weights adjusted by Statistics Canada to reflect the new target population. However, the adjustments likely do not capture differences in attrition rates of subpopulations not included in the variables used in the modification of the survey weight.

We find some differences in the attrition rates of the three main groups of interest, with 43 percent of ISs, 35 percent of TFWs, and 37 percent of immigrants without preimmigration Canadian human capital who are in the original Wave 1 sample missing from Wave 3 (results not from tables). SWPAs without premigration Canadian experience who ceased responding to the survey by Wave 3 were around 6 or 7 percent less likely to be employed at the time of the six-month interview. For TFWs, the immigrants who disappear between Wave 1 and Wave 3 had better employment, but no difference

Table 10: Log Weekly Earnings and Employment at the Date of Interview at Six Months after Landing for Wave 1 Sample, Males SWPAs

SWPAs	Log Weekly Wage	Log Weekly Wage	Employed	Employed
Not in Wave 3	−0.0249	−0.0175	−0.0725***	−0.0648***
	(0.0389)	(0.0373)	(0.0205)	(0.0195)
TFW	0.911***	0.773***	0.231***	0.194***
	(0.0774)	(0.0787)	(0.0302)	(0.0365)
TFW × not in Wave 3	−0.0084	−0.0409	0.0996**	0.0975*
	(0.134)	(0.124)	(0.0471)	(0.0514)
IS	0.0787	0.0770	0.0064	0.0626
	(0.0828)	(0.0844)	(0.0494)	(0.0515)
IS × not in Wave 3	−0.373**	−0.445***	−0.0496	−0.0676
	(0.164)	(0.164)	(0.0782)	(0.0747)
R-squared	0.121	0.199	0.034	0.154
Observations	1,573	1,573	2,776	2,776
Full set of controls	No	Yes	No	Yes

Notes: Sample age 19 to 62 at the time of the first cycle. All regressions control for a linear months since migration term, a linear age term, and a dummy for having lived in Canada before immigrating, but not having either of the visas on which we focus. Full set of controls include: highest degree before landing dummies (less than high school [default], high school, some post-secondary, trade/college, bachelor, higher than bachelor), region of origin dummies (US/Western Europe/Australia/NZ [default], Central/South America, Eastern Europe, Southern Europe, Africa, Middle East, East Asia, South/East Asia, South Asia), region of residence dummies (Atlantic provinces, Quebec, Montreal, Ontario, Toronto [default], Western province, BC, Vancouver), English and French language ability, marital status dummies (single previously married [default], married/common law, single never married), number of children aged less than 18 years in household, and a dummy variable for having lived in Canada before immigration not as a tourist and not on a Work or Student Visa. Robust standard errors in brackets.
*significant at 10 percent; **significant at 5 percent; ***significant at 1 percent.
Source: Authors' calculations.

in earnings, at Wave 1 compared to other TFWs. For ISs, although there is no difference in terms of employment, earnings are around 30 percent lower for ISs not in Wave 3 relative to the ISs who are in all three waves.

Accounting for attrition would likely increase the TFW advantage, and attenuate that of ISs. However, we do not pursue examining whether this has had an impact on the Wave 3 estimates. Evidence by Aydemir and Robinson (2008) shows that there is a large amount of outmigration of immigrants from Canada in the first few years after landing, and Picot and Piraino (2012) show that the losses are disproportionately among those with lower earnings. Since a great deal of the LSIC's attrition may be due to emigration, the success of immigration policy is best measured in terms of immigrants who land and remain in Canada.

Generalization of the Findings

We have found that immigrants with preimmigration Canadian human capital, particularly TFWs, tend to have superior labour market outcomes to those of SWPAs, which is traditionally the entry group with the best outcomes. Of course, we have data only on the first four years postmigration and the TFW's advantages may not persist. Nevertheless, those early years represent an important fraction of immigrants' working lives.

TFWs' earnings and employment advantage may not be entirely due to the existence of their preimmigration work experience but may also follow from individual heterogeneity being screened differently in the multi-sided CEC-like selection process compared to the regular Skilled Worker stream. However, under the new CEC, selection may change as individuals apply to the TFW program or come as ISs with the intent of later applying for permanent residency. Further, with the expansion of the CEC, the pool of potential immigrants may have to increase to enable the quality to remain comparable.

Another consideration is that we have only one entry cohort of immigrants, which may not be representative of immigrants entering at other points in the business cycle. The LSIC sample arrived between 2000 and 2001, which was a period of rising unemployment, and therefore may have made the preimmigration Canadian human capital possessed by former TFWs and ISs more important. As well, the IT crash occurred soon after.[15]

A further important aspect which may alter the relative success of CEC applicants relative to SWPAs are the changes from the pre-IRPA to IRPA Selection Systems, and subsequent changes in the 2013 points system, which placed an emphasis on standardized language testing and premigration credential recognition. As well, as mentioned, under the 2013 points system, immigrants must have: (a) work experience in an eligible occupation, (b) arranged employment, or (c) enrolment in a PhD program in Canada, as well as meeting other criteria. These

will likely improve economic outcomes for immigrants selected under the points system.

Conclusion

We examine the earning and employment outcomes of immigrants who have preimmigration Canadian human capital relative to those who do not. We begin by examining the selection system, and determine what additional information former TFW and IS status provide relative to SWPAs. TFWs and ISs have earnings and employment advantages compared to immigrants entering through the Skilled Worker Program. Subsequently, controlling for the predicted points that immigrants would obtain based on their observable human capital under the IRPA or 2013 Canadian points systems, we find that some of the advantage of TFWs and ISs is explained by these characteristics. Of course, the immigration system does not employ these characteristics in the manner we do. It simply establishes a threshold above which applicants are permitted to enter, whereas we are explaining differences in outcomes across the entire distribution of immigration points.

In the next section we again restrict the sample to SWPAs, the class of immigrants directly assessed on economic criteria and the main class under which TFWs and ISs enter. Under the ongoing immigration selection reforms, it is the category being reduced in favour of the CEC. In these models we provide separate analysis based on gender and employ a different specification than that estimated previously. This second regression model answers a distinct question about the relative outcomes of individuals with similar observable characteristics, not all of which are directly relevant for the points system. We find that for males, former TFWs have much better outcomes in terms of entry earnings versus immigrants who have no preimmigration Canadian experience at landing. Former ISs experience no earnings advantage in terms of weekly earnings, but they do experience a modest advantage in terms of hourly earnings.

Looking at various quantiles of the earnings distribution, we find that most of the benefit of our two CEC groups accrues to those in the upper earnings quantiles. When we separate the sample into immigrants from Western and non-Western countries, we find in both cases that TFWs experience a positive earnings advantage, but the relative (since the coefficients represent percentages of different bases) benefit is greatest for immigrants from non-Western countries. Consistent with previous research, we find that recently landed immigrants receive either no return or a negative return for the years of potential foreign work experience; however, TFWs receive a positive return.

Overall we find that male TFWs have superior employment and earnings outcomes in all specifications. For former ISs, we also find some evidence of better labour market outcomes, but the results are not as strong, which is potentially explained by the initial retraining that ISs undertake when they first arrive. For females the results are more mixed, and more modest, but we never observe any deleterious effects associated with the two CEC categories. This new immigration stream gives priority processing to temporary residents with Canadian human capital and will dramatically increase the proportion of economic immigrants who are former TFWs and former ISs. While the TFWs in our sample had particularly good labour market outcomes, ongoing monitoring is required to ascertain if the new system as it actually operates will provide similarly good results. Longer-term results would also be of value. Also, as previously discussed, changes in the scale alone could have an effect. Further, the necessary criteria introduced to the Skilled Worker Program in 2013 will also likely increase the proportion of SWPAs with preimmigration Canadian human capital. This implies a need to monitor the outcomes associated with the current major changes to the immigration system, which should be relatively easy and inexpensive to do using administrative data. Nevertheless, the positive results in this study are indicative of ongoing outcomes that are likely to be quite good.

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Notes

1 See, e.g., Beach, Green, and Worswick (2011), Picot and Sweetman (2012), and Ferrer, Picot, and Riddell (2012).

2 Former ISs require a Canadian degree that consists of at least two years of accredited full-time study in Canada as well as 12 months of work experience within 24 months of completing the degree. TFWs require 12 months of Canadian work experience over the 36-month period prior to the application. (Before 2013 they required 24 months of work experience.) They need to be either employed or within one year of leaving employment in Canada. CEC applicants are not assessed under a points system, but their

screen is pass/fail based on the foregoing, a minimum language threshold, and health and security criteria. The CEC's language requirement depends on the occupation of the Canadian work experience. Immigrants with work experience in managerial or professional occupations (NOC O or A) require moderate language ability in either English or French, while those with experience in technical occupations and skilled trades (NOC B) require basic language ability. See www.cic.gc.ca/ for details.

3 To facilitate the exposition, we will not continue to emphasize that TFWs and ISs were "formerly" in one of those categories—that is, that their status occurred *prior* to applying to immigrate and was not directly assessed for these pre-CEC immigrants.

4 Some recent popular and internal government analyses suggest that non-random measurement error, resulting from fraud in the application process, may be driving a portion of these results (O'Neil 2012).

5 Given that these foreign-born workers are familiar with Canada and have chosen to immigrate, this may also reduce the large postmigration emigration described by Aydemir and Robinson (2008).

6 See Sweetman and Warman (2010b) for a brief description of the TFW program.

7 The CEC does not formally apply to immigrants wishing to live in Quebec. However, while Quebec runs its own economic class immigration (Grenier 2003), it recently introduced a similar program. Results excluding Quebec are broadly similar.

8 Three percent of the sample is older than 55 and the results excluding them are almost unchanged.

9 The weekly earnings variable is derived using a combination of: (a) usual hours per week, (b) salary/wage, and (c) the length of the reference period for the salary/wage. The use of weekly earnings also allows for comparison with studies using census data. Earnings are converted into real terms by using the Consumer Price Index. See Warman (2007a) for a discussion.

10 This table is similar to one in Begin, Goyette, and Riddell (2010), who present a table comparing the selection factors for the pre-IRPA and IRPA points systems.

11 We reran the results, removing people who had self-employment earnings in the main job and restricting the sample to people who had earnings coming only from paid work. We found the results to be very similar to those presented. The TFW coefficient is smaller for the non-Western country sample, but is still large in magnitude and highly statistically significant.

12 When we exclude Quebec, the IC coefficient is large and statistically significant for most specifications for the sample of males from Western countries.

13 As with this previous research, we do not have an actual measure of work experience, and therefore must rely on potential work experience, which is calculated as Age—Years of School—6. The experience variables are defined as Experience—12.5 and the years of schooling variables are defined as Years of School—16 in order to allow for more meaningful interpretation of the constant and TFW and IS coefficients. They are now interpreted as someone with 12.5 years of work experience and 16 years of school instead of zero years of each. This does not affect the coefficients on experience, schooling, or the interaction terms.

14 Part of the change over time may be due to differences in the construction of the educational training variable. In Wave 1, the question was "Since you came to Canada, have you taken any education or training, including language instruction?" Starting in Wave 2, language instruction was excluded from the question. Also, if we do not restrict the sample to SWPAs, but instead look at the full sample, the pattern for TFWs is similar, but the employment advantage for TFWs who attrite is slightly smaller, while the earnings disadvantage of ISs who attrite relative to those who are in all three waves is slightly smaller.

15 However, Imai, Stacey, and Warman (2011) find that the gap between the potential occupational skill requirements in the source country and that in Canada was similar for immigrants regardless of whether they were employed in a computer science–related occupation in the source country.

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Appendix A: Distribution of SWPA Points

Table A1: Selection Factors for the Pre-IRPA, IRPA, and 2013 Regimes

	Pre-IRPA	IRPA	2013 Selection Criteria
Category	Maximum Points	Maximum Points	Maximum Points
Education	16	25	25
Current PhD student	—	—	r
Educational Training Factor (ETF)*	18	—	—
Language ability	15	24	28
Work experience	18	21	15
Age	10	10	12
Arrange employment	10	10	10***r***
Occupational factor	10	—	r
Personal suitability	10	—	—
Relative in Canada / adaptability	5	10	10
Demographic factor	10	—	—
Total available points	112	100	100
Required for pass	70	67	67

Notes: ***r*** – require one of these three necessary factors in 2013 to be eligible to apply as a Skilled Worker.
* Replaced the Specific Vocational Preparation (SVP) in 1997.

Appendix B: List of Point Indicator Variables

IRPA Points System

Education: Six indicators for education (25, 22, 20, 15, 12, and 5 points, with 0 points as the default)

Language Ability: 24 indicators for each of the possible points from language ability (ranging from 1 to 24 points, with 0 points as the default)

Work Experience: Four indicators for work experience (21, 19, 17, and 15 points, with 0 points as the default)

Age: Five indicators for age (10, 8, 6, 4, and 2 points, with 0 points as the default)

Arrange Employment: One indicator for prearranged employment (10 points, with 0 points as the default)

Adaptability: Six indicators for adaptability (10, 9, 8, 5, 4, and 3 points, with 0 points as the default)

2013 Points System

Education: Seven indicators for education (25, 23, 22, 21, 19, 15, and 5 points, with 0 points as the default)

Language Ability: Nine indicators for each of the possible points from language ability (28, 24, 23, 22, 21, 20, 19, 18, 17, with 16 points as the default). Applicants must receive a minimum of four points for each of the four criteria for their First Official Language to be eligible. If they meet a minimum threshold for all four criteria for their Second Official Language, they receive an additional four points.

Work Experience: Four indicators for work experience (15, 13, 11, and 9 points, with 0 points as the default)

Age: 12 indicators for age (12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, and 1 points, with 0 points as the default)

Arrange Employment: One indicator for prearranged employment (10 points, with 0 points as the default)

Adaptability: Two indicators for adaptability (10 and 5 points, with 0 points as the default)

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