

**FIXING THE MIGRANT MISMATCH:
WHAT HAPPENS WHEN FIRMS
VALUE IMMIGRANTS DIFFERENTLY
THAN GOVERNMENTS?**

**Stacey Fitzsimmons, Jen Baggs, Herbert Schuetze,
University of Victoria**

A Pathways to
Prosperity Project

March 2019

Fixing the Migrant Mismatch:

What happens when firms value immigrants differently than governments?

Stacey Fitzsimmons, Associate Professor of Business

Jen Baggs, Associate Professor of International Business

Herbert Schuetze, Associate Professor of Economics

University of Victoria, Canada

Acknowledgements: This research was supported by Pathways to Prosperity (P2P) and funds to the Canadian Research Data Centre Network (CRDCN) from the Social Sciences and Humanities Research Council (SSHRC), the Canadian Institute for Health Research (CIHR), the Canadian Foundation for Innovation (CFI), and Statistics Canada. Although the research and analysis are based on data from Statistics Canada, the opinions expressed do not represent the views of Statistics Canada.

Fixing the Migrant Mismatch:

What happens when firms value immigrants differently than governments?

Immigrant doctors driving Uber, engineers serving as baristas and researchers cleaning offices all represent a fundamental mismatch between national immigrant policy, which determines who is sufficiently valued by the nation to be admitted into the country, and the degree to which a nation's employers also value those same immigrants' skills. Nations whose firms restrict career success among recent immigrants can expect that eventually people will act on their anger, provoking social unrest, protests, riots or worse (Algan, Dustmann, Glitz, & Manning, 2010). This project is an attempt to answer two questions:

- (1) Why does a mismatch exist between the implied value of recent immigrants by national immigration policy and that implied by firm-level practices?
- (2) What can be done to fix it?

In response to the second question, we use evidence to make recommendations for both immigration policy and government support for firm practices. Overall, government policies that encourage firms to adopt supportive practices may help immigrants realize a more equitable future, help firms capitalize on the human capital of immigrant employees, and help nations maximize the economic value of an immigrant workforce. To answer the first question, we examine what's wrong with points-based policies and how firms might be part of the solution.

The problem with points-based immigration policies

The intention behind points-based immigration policies is that recent immigrants' skills will be highly valued by hiring managers, such that they will be able to 'hit the ground running' in their new countries. Consistent with cut-off points in other research, we define recent immigrants as those who immigrated within the past decade (Guo, 2013; Kogan, 2011; Malik &

Manroop, 2017). Indeed, points-based systems are reasonably successful in selecting skilled immigrants (Borjas, 1999; Wanner, 2003). However, there appears to be some disconnect between the skills used to select economic immigrants and the value employers place on those skills. Work experience in the original country yields virtually no return in immigrants' current labor market (Schaafsma & Sweetman, 2001), while foreign education is similarly devalued (Buzdugan & Halli, 2009; Li, 2001). As a result, immigrant skills are significantly underutilized, to the extent that one study suggested the Canadian cost of this work lost was in excess of \$11 billion in 2006 (Reitz, Curtis, & Elrick, 2014). Thus, points-based immigration systems are not ensuring immigrants thrive in their careers after arrival, because the latter part of the process depends on firms recognizing and valuing immigrants' human capital (Friedberg, 2000).

Unfortunately, there is global evidence that this inadequacy results in worse career prospects for immigrants than their non-immigrant peers. After controlling for education and demographic variables, immigrants to France, Germany and the U.K. all receive lower wages and higher levels of unemployment than non-immigrants (Algan et al., 2010), immigrant households in the U.S. take home \$12,400 less per year and are five percentage points more likely to be in poverty, relative to U.S. households as a whole (Pew Research Center, 2013), and male immigrants in Canada earn on average 86 cents for every dollar earned by male Canadian-born employees (Morissette & Sultan, 2013). These population-level differences are mirrored by personal stories of immigrants' frustrations trying to gain access to jobs they were trained to do.

When there is a mismatch between immigration policy at the national level and the degree to which firms value immigrants' human capital, individuals, firms and nations all suffer. In particular, the first decade after immigration sets the trajectory of an immigrant's career in the new country. Moreover, this early trajectory can influence their children's lives and careers (Pew

Research Center, 2013), meaning it is critically important to ensure newcomers are quickly integrated into careers that match their skills. However, the first decade after immigration is also the period of time when interventions are most likely to make a difference in workplace outcomes and career trajectories (Guo, 2013; Kogan, 2011; Malik & Manroop, 2017). For all these reasons, we focus on recent immigrants to discover which interventions have the greatest impact on their outcomes.

How firms might help fix the mismatch

We propose that the mismatch can be partially explained by labor market barriers over which immigrants have some control, such as local language and cultural proficiency (Dustmann & Fabbri, 2003; Yao & van Ours, 2015), and barriers controlled by others, such as discrimination and dismissing foreign credentials or experience (Dietz, Joshi, Esses, Hamilton, & Gabarrot, 2015; Oreopoulos, 2011). Both are known to depress wages and job satisfaction relative to non-immigrants, and relative to individuals' employment prior to immigrating (Guo & Al Ariss, 2015; Guo, 2013). As depicted in figure one, the distinction becomes important when considering which firm practices reduce each type of barrier leading to a better fit between policies used to select immigrants and employment outcomes.

INSERT FIGURE ONE ABOUT HERE

To mitigate barriers over which recent immigrants have little control, any solution must focus on their colleagues and managers. We therefore propose that firm strategies can create an environment in which managers will value immigrants' skills, as is common within internationally-oriented firms. To mitigate barriers over which recent immigrants have some

control, we instead propose that socialization practices such as training can help immigrants build new capabilities.

Mitigating barriers controlled by others through international firm strategy

Individuals' skills are valued to the extent that they are aligned with firm strategy, and thus have some possibility to contribute to organizational capabilities (Felin, Foss, & Ployhart, 2015). We therefore propose that firm strategies to export and compete internationally can create environments in which managers will value immigrants' skills. When firms focus on international markets, they send a strategic signal that frames recent immigrants' foreign experience as a source of international knowledge.

This strategic signal may support recent immigrants by mitigating common practices that devalue foreign credentials and work experience (Barner-Rasmussen, Ehrnrooth, Koveshnikov, & Mäkelä, 2014). For example, internationally-oriented firms are more likely to adopt language policies that allow for linguistic variability (Dietz & Pugh, 2006; Hinds, Neeley, & Cramton, 2014). Others have argued that internationally-oriented firms may be more skilled at procuring work visas, more likely to accept foreign credentials, and have a workplace culture and hiring practices that emphasize the importance of fit with a diverse clientele (Dietz et al., 2015; Guo & Al Ariss, 2015; Lazarova & Cerdin, 2007). Therefore, internationally-oriented firms may be less likely to engage in practices that restrict recent immigrants' career advancement.

In addition, immigrants commonly have human capital that is particularly relevant and valuable within international firms, such as language and culture skills, a global outlook and international market knowledge (Cerdin, Dine, & Brewster, 2014; Kane & Levina, 2017; Zikic, 2015). Thus, the degree of international competition may help to frame recent immigrants' foreign experience as a source of international knowledge. Through this fit between

internationally-oriented human capital and an internationally-oriented competitive landscape, firms may have more to gain by employing recent immigrants. Accordingly, points based immigration policy may be more successful in selecting immigrants whose skill sets are aligned with internationally-oriented firms, resulting in a smaller wage gap for immigrant employees. As a result of both a strategic environment that makes immigrants' skills salient, and firm-level practices that reduce discrimination and practical barriers, we expect the wage gap will be smaller in international firms than in firms focused on the domestic market.

Mitigating individually-controlled barriers through socialization practices

When immigrants have some control over barriers, the solution must support individuals in that process, such as classroom training and socialization practices that help immigrants build new capabilities (Dietz et al., 2015; Zikic, 2015). These practices are usually designed to capture individual-level human capital and aggregate them to the firm, which is relevant for all employees (Malik & Manroop, 2017). However, the socialization process of becoming an organizational 'insider' is especially challenging – and especially important - for individuals who are newcomers to both the firm and the country (Toh & DeNisi, 2007).

It is commonly suggested that the solution to reducing wage disparities between immigrants and non-immigrants is additional training, though the focus of this research is usually gaining employment, not promotions or advancement within employment (Bailey & Waldinger, 1991). For example, immigrants often try to control their own labor market outcomes through re-education to orient themselves around local credential and certificate regimes (Shan, 2009). Some organizations offer training for immigrant employees that ranges from soft skills such as workplace culture and communication, to technical skills such as technical writing or licensure exam preparation (Reitz et al., 2014). Given the evidence that cultural and language skills

support job search and reduce underemployment for individuals still searching for jobs (Guerrero & Rothstein, 2012), we also expect that supportive socialization practices for employees post-hire, such as classroom training, mentorship or sponsorship programs, and organizational support for building language skills could go a long way to supporting recent immigrants as they navigate these types of barriers (Malik & Manroop, 2017).

Ultimately, we examine whether firm strategy and socialization practices mitigate the gap between the value placed on immigrants by national policy and that inferred by immigrants' salaries. We use these results to inform policy recommendations that will encourage firms to adopt practices to help them gain value from immigrant employees.

METHOD

We use linked Canadian employee-employer data from Statistics Canada's *Workplace and Employment Survey* (WES) to examine the relationship between immigrant employees and three dependent variables: wages, job satisfaction and wage satisfaction. The annual data in WES covers the period from 1999-2005 and surveys approximately 6000 firms and 20,000 of those firm's employees each year. The WES data provides detailed information about each surveyed employee and their firms, allowing us to examine the alignment between the points system used to select economic immigrants and the characteristics of employees which firms value. The results in this paper use the 2005 WES data¹. We re-estimated our main results using earlier years of data and found the results qualitatively and quantitatively consistent².

¹ We can not use a time series approach with the WES employee level data as a new sample of employees is drawn in every second year. Accordingly, the employee data forms multiple cross-sections rather than a time series.

² Available from the authors upon request.

Data Context

Canada provides a fertile context for examining immigrant outcomes within a reasonably welcoming political environment. A national policy of multiculturalism provides the frame for selecting approximately 60% of new arrivals through a points-based system that considers education, language ability, work experience, age, arranged employment and adaptability (Statistics Canada, 2017). Australia, the United Kingdom, the United States and New Zealand also use variations on points-based systems, meaning this type of system accounts for a large portion of the world's immigrants (Donald, Jun 1, 2016). Already, 39.4% of the current Canadian population are first- or second-generation immigrants (Statistics Canada, 2015), slightly higher than the projected 37% share of the U.S. population in 2050 (Pew Research Center, 2013). Finally, it is a developed country with relatively small economic shifts over time, meaning estimates are generally stable.

Measures

Outcomes. *Job satisfaction* is a response to the question, “Considering all aspects of this job, how satisfied are you with the job?”. *Wage satisfaction* is a response to “Considering the duties and responsibilities of this job, how satisfied are you with the pay and benefits you receive?”. Both had a response set of 1 to 5, where 1 is “very dissatisfied” and 5 is “very satisfied”.

Predictor variables. *Immigrant* is an indicator equalling 1 for employees born outside of Canada and 0 otherwise (referred to as non-immigrants). We focus our analysis on recent immigrants, who have lived in Canada for 10 or fewer years. We use longer-term immigrants, those living in Canada for more than 10 years, only as a robustness check. Two variables assess the degree to which employees received training, to assess our proposed socialization pathway:

Gov'tTrain is an indicator variable equalling 1 if the firm received government funding for training programs in the past year (offered by 11% of firms in our sample); *Class* is an indicator variable equalling 1 if the employee received firm-funded classroom training related to their job in the past year (undertaken by 36% of employees). *Exporter* is an indicator variable equalling 1 if 10 percent or more of the firm's total sales were exports³. Both training variables were selected as illustrative examples of the socialization pathway, while exporter was selected to illustrate the international strategy pathway. Each variable is tightly aligned theoretically with our proposed arguments, and show adequate variability to detect interaction effects.

Control variables. At the individual level, we controlled education (a categorical variable ranging from 0 for respondents with a primary school education or less, to 9 for respondents with a Doctorate), age, years of experience in their profession (ranges from 1 to 47, mean of 17.6), occupation (6 categories, controlled using dummy variables), and unionization (1 = unionized). At the firm level, control variables were chosen based on their potential to influence the presence and value of employees with an immigrant background. Firm size was measured by the total number of employees. Firm performance was measured with a relative performance index that estimates of firm's performance relative to other firms in their industry (three 5-point scales measuring relative sales, profitability and productivity are summed, resulting in a total range from 3 to 15). Industry was controlled with 14 categorical industry fixed effect variables. Means and standard deviations are presented in Table 1. All correlations between variables are within the range [-0.20 to 0.40], with the exception of age and years of experience, where the correlation is approximately 0.70.

³ We experimented with different cut-offs, and found consistent, or stronger, results for export cutoffs *above* 10 percent of total sales. The results are *not* consistent for export cutoffs *less* than 5% of total sales – possibly because there were a fairly large number of firms in our sample with very, very small exports. While these firms are exporters in an accounting sense, they are perhaps not internationally focused.

Analysis

We use a different survey specific regression model to fit each dependent variable: OLS regression to predict wages and an ordered probit model to predict job satisfaction and wage satisfaction. In both cases, we estimate using appropriate survey weights and bootstrapped standard errors. Our primary estimating equation is specified as follows:

$$Outcome_i = \alpha + \delta Immigrant + \sigma Gov'tTrain + \gamma Class + \theta Exporter + \beta_i Y_i + \beta_j X_j + \epsilon$$

where the workplace outcomes of employee i , $Outcomes_i$, are the natural log of hourly wages or the employee's rating of their job satisfaction or wage satisfaction, Y_i is a vector of the individual level control variables, and X_j is a vector of the firm level control variables. In later specifications we modify equation (1), interacting *Immigrant* with *Gov'tTrain*, *Class* and *Exporter* to examine if those variables moderate the labor market experiences of immigrants.

Results

Depicted in Figure 2 and Table 1, recent immigrants have the lowest average hourly wages, job satisfaction and wage satisfaction, while long-term immigrants experience outcomes closer to those of non-immigrants. Average hourly wages among recent immigrants are more than 3 dollars less than both long-term immigrants and non-immigrants. Table 1 further indicates that while recent immigrants have the lowest mean wages, they also have the highest mean education levels, hinting at the success of Canada's points-based system in selecting skilled immigrants but the disconnect in how employers value those skills. A higher proportion of both recent (17.1%) and long term immigrants (20.3%) work in export oriented firms compared with non-immigrants (12.2%). All models reported ahead control for both individual and firm-level variables, meaning our results compare wages, job and wage satisfaction across otherwise similar

individuals. In the case of job and wage satisfaction, we add the natural log of hourly wages as an additional control variable, meaning we look at satisfaction rates controlling for earnings.

INSERT TABLE ONE AND FIGURE TWO ABOUT HERE

Table 2 provides baseline regression estimates for the combined sample of recent immigrants and non-immigrants. Long-term immigrants are dropped from the sample to isolate effects for recent immigrants⁴. The baseline estimates for immigrant status (row 1, columns 1-3) show that, even after accounting for differences in employee and firm characteristics across recent and non-immigrants, recent immigrants earn less and are less satisfied with their jobs and wages than non-immigrants. Recent immigrants earn hourly wages that are approximately 11 percent lower than a similar non-immigrant working in the same type of firm. This deficit is equivalent to having 11 fewer years of labor market experience for an average worker, as table 2 shows that the combined effect of an additional year of experience and age is a 1% increase in wages for the average worker.

INSERT TABLE TWO ABOUT HERE

We next examine the mitigating effects of export-oriented firms (13.5% of employees work for firms at which exports account for more than 10% of total sales) as an example of the

⁴ Over time, immigrants overcome (at least to some degree) both types labor market barriers. For example, those over which they have control, such as local language and cultural proficiency, are reduced by time in their new country learning both language and cultural norms. Similarly, barriers controlled by others, such as dismissing foreign credentials or experience, become less important as immigrants gain local work experience or credentials. Accordingly, we expect the wages and satisfaction differences between immigrants and non-immigrants will converge the longer immigrants have been in their new home. Re-estimating our model with long-term immigrants rather than recent immigrants confirms this. These results are available from the authors upon request.

international strategy pathway, while government- and firm-provided training are used as examples of the socialization pathway.

INSERT TABLE THREE ABOUT HERE

Table 3 provides the degree to which international export intensity, classroom training and government funded training each mitigate the salary and satisfaction gap between recent immigrants and non-immigrants. For wages (column 1) we report the OLS regression coefficients for our variables of interest, which can be interpreted directly as the change in the dependent variable as a result of a one unit change in each independent variable. For job and wage satisfaction, we report the calculated marginal effects⁵ for the five levels of each dependent variable rather than the coefficients as in an ordered probit regression the coefficients do not directly represent the magnitude of the effect.

INSERT FIGURE THREE ABOUT HERE

Supporting our proposed international strategy pathway, export intensity has a larger positive effect on the wages of recent immigrants than non-immigrants. Non-immigrant employees working at export-oriented firms experience hourly wages around 6.9 percent greater than their counterparts at domestically oriented firms. However, for recent immigrants the wage increase associated with working at an export oriented firm is 8.7 percent. Figure 3 illustrates how this difference acts to narrow the gap between recent immigrant and non-immigrant wages

⁵ The partial derivative of each level of the dependent variable with respect to each independent variable, with all covariates held at their means.

in export oriented firms. For job satisfaction, non-immigrants were 3.4 percent less like to choose “very satisfied” if they worked in an export oriented firm, but recent immigrants were 0.4 percent *more* likely to choose “very satisfied” if they worked in an export oriented firm. Recent immigrants working in export oriented firms were also slightly less likely to choose “very dissatisfied” or “dissatisfied” while non-immigrants were more likely to indicate dissatisfaction if they worked in an export oriented firm. Export orientation had no effect on the wage satisfaction of non-immigrants, but recent immigrants were 0.2 percent more likely to indicate that they were “satisfied” with their wages and 2.2 percent more likely to indicate that they were “very satisfied” with their wages if they worked at an export oriented firm. Thus, export intensity reduces both the satisfaction and wage penalty for recent immigrants relative to non-immigrants.

Supporting our proposed socialization pathway, Table 3 also shows that classroom training has a much larger positive effect on wages, job satisfaction and wage satisfaction among recent immigrants compared to non-immigrants. A non-immigrant who engaged in classroom training at their workplace received an hourly wage boost of almost 8%. This return, however, is significantly higher (almost 13%) for recent immigrants. As expected, the interactions also indicate a greater return to wage and job satisfaction among recent immigrants than non-immigrants. In particular, if they received classroom training, recent immigrants were over 15% more likely to indicate they were “very satisfied” with their job and almost 6% more likely to indicate they were “very satisfied” with their wages. In contrast, non-immigrants receiving classroom training were 4.3% more likely to indicate they were “very satisfied” with their job and 0.4% more likely to indicate they were “very satisfied” with their wages.

The presence of government training at a firm, which has a surprisingly negative effect on non-immigrant wages, job satisfaction and wage satisfaction in our baseline analysis (Table

2), has a positive effect on all three outcomes for recent immigrants. Wages are 4.5% lower among non-immigrants at firms with government funded training, relative to non-immigrants at firms without such training. However, among recent immigrants wages are 3.3% *higher* among those whose firms offer government funded training. Figure 4 illustrates the notable narrowing in the wage gap between recent immigrants and non-immigrants that results from government funded training. The results are similar for job and wage satisfaction where non-immigrants at firms with government funded training are more likely to rate their job and wage satisfaction as low, and less likely to rate it “very satisfied”. Recent immigrants, however, are almost 9% more likely to rate their job satisfaction as “very satisfied” and 4% more likely to rate their wage satisfaction as “very satisfied” if they work at a firm with government funded training.

INSERT FIGURE FOUR ABOUT HERE

Taken together, the differential impacts of international firm strategy (as illustrated by export intensity) and socialization (as illustrated by classroom and government funded training) across non-immigrants and recent immigrants indicate that both pathways may be helpful in breaking down the workplace barriers experienced by recent immigrants. As described ahead, both operate by helping firms capitalize on the human capital of immigrant employees, which is both useful and invites critique.

DISCUSSION

Points-based systems like the one used by Canada in this study typically assign points based on the degree to which various skills or demographic factors affect individuals’ likelihood of labor market success. However this system assumes that human capital is generally applicable

across firms and industries, and that firms will recognize human capital and its potential value. With this study, we question both assumptions. Therefore, rather than looking at the skills that immigrants bring to their new countries, this study instead examines how firms utilize and value these skills.

The mitigating effects of firm-level practices identified in our analysis suggest how immigration and industrial policy might support businesses. When implemented appropriately, these practices could help recent immigrants overcome barriers while helping firms and nations benefit from immigrants' valuable human capital.

With respect to socialization, we found that classroom training and government sponsored training reduces the wage and job satisfaction penalty for recent immigrants relative to non-immigrants. This suggests that governments should support training programs aimed at assisting immigrants within firms. Support should encompass more than the dissemination of information highlighting the positive effects of such training. Within our Canadian sample, government-funded training most commonly supports underemployed individuals, or technical training to support individuals moving into sectors with shortages, such as trades or computer science. Firms often underinvest in general training because beneficial spillover effects (or positive externalities) associated with such investment are not captured directly by the investing firm (Blundell, Dearden, Meghir, & Sianesi, 1999). In addition, immigrants themselves are typically financially constrained and unable to invest in training on their own. All of this suggests that governments should go one step further and invest directly through subsidizing in-firm training programs aimed at immigrants.

Socialization practices that help immigrants integrate to their workplaces should be implemented carefully to avoid solidifying existing power dynamics that assume integration only

occurs among immigrants (Shan, 2009). Our suggested international strategy pathway is more likely to create an environment where both immigrants and non-immigrants are expected to integrate, as this environment reframes immigrant employees as valuable for their international skills and experience.

With respect to international orientation strategy, we found that export intensive firms also have smaller wage and job satisfaction gaps between recent immigrants and non-immigrants. We also saw (in Table 1) that immigrants are more frequently employed in firms that are export oriented. Finally, export intensity is known to be associated with higher productivity (Bernard & Jensen, 1999; Bernard et. al. 2003). Together, these findings indicate that policy makers in countries with high levels of immigration should facilitate the growth of export intensive firms, because they are more likely to hire recent immigrants, draw on their skills and use that human capital to increase productivity. For example, this could be achieved through the removal of barriers to the start-up and growth of export oriented businesses.

At the same time, information regarding the positive outcomes of immigrants employed in export-intensive firms should be incorporated into existing points-based immigration policies. For example, a number of countries assign higher priority (points) to immigrants with arranged employment. Higher points could be awarded to immigrants who are matched to export-intensive firms. Our findings suggest that such strategies would help to create a business environment that will utilize the skills of the country's citizens to its greatest potential and help close the gap experienced by immigrants.

CONCLUSION

Despite rapid growth in numbers, immigrants have been called the “invisible men and women in diversity research” (Bell, Kwesiga, & Berry, 2010: 177) and the “forgotten minority”

(Binggeli, Dietz, & Krings, 2013), because they are so often undervalued and understudied. If this new and growing workplace demographic continues to be both invisible (Bell, Kwesiga, & Berry, 2010) and forgotten (Binggeli et al., 2013), then immigrant nations are suffering a significant missed opportunity by not leveraging the valuable skills already present in their workforces.

Policies which facilitate a match between immigrants and employment or promotion opportunities have the potential for substantial net benefits to individuals, firms and nations. Ultimately the goal of our paper is to close the mismatch between the implied value of immigrants by national immigration policy and that implied by firm-level practices. If more governments and firms adopt the recommendations based on evidence from this study, it could benefit both firms and nations by helping both utilize immigrants' human capital as employees. Even more importantly, a better match could substantially improve the lives of both immigrants and their descendants.

REFERENCES

- Algan, Y., Dustmann, C., Glitz, A., & Manning, A. 2010. The economic situation of first- and second-generation immigrants in France, Germany and the United Kingdom. *The Economic Journal*, 120(542): F4-F30.
- Bailey, T., & Waldinger, R. 1991. Primary, Secondary, and enclave labor markets: A training systems approach. *American Sociological Review*, 56(4): 432-445.
- Barner-Rasmussen, W., Ehrnrooth, M., Koveshnikov, A., & Mäkelä, K. 2014. Cultural and language skills as resources for boundary spanning within the MNC. *Journal of International Business Studies*, 45(7): 886-905.
- Bell, M. P., Kwesiga, E. N., & Berry, D. P. 2010. Immigrants: The new 'invisible men and women' in diversity research. *Journal of Managerial Psychology*, 25(2): 177-188.
- Binggeli, S., Dietz, J., & Krings, F. 2013. Immigrants: A forgotten minority. *Industrial and Organizational Psychology*, 6: 112-118.
- Blundell, R., Dearden, L., Meghir, C., & Sianesi, B. 1999. Human capital investment: The returns from education and training to the individual, the firm and the economy. *Fiscal Studies*, 20(1): 1-23.
- Borjas, G. J. 1999. The economic analysis of immigration. In O. Ashenfelter, & D. Card (Eds.), *Handbook of labor economics*, Vol. 3: 1697-1760. New York: Elsevier.
- Buzdugan, R., & Halli, S. S. 2009. Labor market experiences of Canadian immigrants with focus on foreign education and experience. *International Migration Review*, 43(2): 366-386.
- Cerdin, J.-L., Dine, M. A., & Brewster, C. 2014. Qualified immigrants' success: Exploring the motivation to migrate and to integrate. *Journal of International Business Studies*, 45(2): 151-168.
- Dietz, J., Joshi, C., Esses, V. M., Hamilton, L. H., & Gabarro, F. 2015. The skill paradox: Explaining and reducing employment discrimination against skilled immigrants. *The International Journal of Human Resource Management*, 26(10): 1318-1334.
- Dietz, J., & Pugh, S. D. 2006. I say tomato, you say domate: Differential reactions to English-only workplace policies by persons from immigrant and non-immigrant families. *Journal of Business Ethics*, 52: 365-379.
- Donald, A. Jun 1, 2016. Immigration points-based systems compared, *BBC News*. <https://www.bbc.com/news/uk-politics-29594642>.
- Dustmann, C., & Fabbri, F. 2003. Language proficiency and labour market performance of immigrants in the UK. *The Economic Journal*, 113(July): 695-717.
- Felin, T., Foss, N. J., & Ployhart, R. E. 2015. The microfoundations movement in strategy and organization theory. *The Academy of Management Annals*, 9: 575-632.
- Friedberg, R. M. 2000. You can't take it with you? Immigrant assimilation and the portability of human capital. *Journal of labor economics*, 18(2): 221-251.
- Guerrero, L., & Rothstein, M. G. 2012. Antecedents of Underemployment: Job Search of Skilled Immigrants in Canada. *Applied Psychology*, 61(2): 323-346.
- Guo, C., & Al Ariss, A. 2015. Human resource management of international migrants: Current theories and future research. *The International Journal of Human Resource Management*, 26(10): 1287-1297.

- Guo, S. 2013. Economic integration of recent Chinese immigrants in Canada's second-tier cities: The triple glass effect and immigrants' downward social mobility. *Canadian Ethnic Studies*, 45: 95-115.
- Hinds, P. J., Neeley, T. B., & Cramton, C. D. 2014. Language as a lightning rod: Power contests, emotion regulation, and subgroup dynamics in global teams. *Journal of International Business Studies*, 45(5): 536.
- Kane, A. A., & Levina, N. 2017. 'Am I Still One of Them?': Bicultural Immigrant Managers Navigating Social Identity Threats When Spanning Global Boundaries. *Journal of Management Studies*, 54(4): 540-577.
- Kogan, I. 2011. New Immigrants -- Old Disadvantage patterns? Labour market integration of recent immigrants into Germany. *International Migration*, 49: 91-117.
- Lazarova, M. B., & Cerdin, J.-L. 2007. Revisiting repatriation concerns: Organizational support versus career and contextual influences. *Journal of International Business Studies*, 38: 404-429.
- Li, P. S. 2001. The market worth of immigrants' educational credentials. *Canadian Public Policy*: 23-38.
- Malik, A., & Manroop, L. 2017. Recent immigrant newcomers' socialization in the workplace: Roles of organizational socialization tactics and newcomer strategies. *Equality, diversity and inclusion: An international journal*, 36(5): 382-400.
- Morissette, R., & Sultan, R. 2013. Twenty Years in the Careers of Immigrant and Native-born Workers, *Economic Insights*: Statistics Canada
- Oreopoulos, P. 2011. Why do skilled immigrants struggle in the labor market? A field experiment with thirteen thousand resumes. *American Economic Journal: Economic Policy*, 3(4): 148-171.
- Pew Research Center. 2013. Second-Generation Americans: A portrait of the adult children of immigrants. Washington, D.C.
- Reitz, J. G., Curtis, J., & Elrick, J. 2014. Immigrant skill utilization: Trends and policy issues. *Journal of International Migration and Integration*, 15(1): 1-26.
- Schaafsma, J., & Sweetman, A. 2001. Immigrant earnings: Age at immigration matters. *Canadian Journal of Economics*, 34(4): 1066-1099.
- Shan, H. 2009. Shaping the re-training and re-education experiences of immigrant women: The credential and certificate regime in Canada. *International Journal of Lifelong Education*, 28(3): 353-369.
- Statistics Canada. 2015. Generation Status: Canadian-born children of immigrants, Vol. 2015: Statistics Canada.
- Statistics Canada. 2017. Immigration and ethnocultural diversity: Key results from the 2016 Census. Ottawa: Statistics Canada.
- Toh, S. M., & DeNisi, A. S. 2007. Host country nationals as socializing agents: A social identity approach. *Journal of Organizational Behavior*, 28: 281-301.
- Wanner, R. A. 2003. Entry class and the earnings attainment of immigrants to Canada, 1980-1995. *Canadian Public Policy*, 29(1): 53-71.
- Yao, Y., & van Ours, J. C. 2015. Language skills and labor market performance of immigrants in the Netherlands. *Labour Economics*, 34(June): 76-85.
- Zikic, J. 2015. Skilled migrants' career capital as a source of competitive advantage: Implications for strategic HRM. *The International Journal of Human Resource Management*, 26: 1360-1381.

Table 1: Descriptive Statistics

	Whole Sample	Recent Immigrants	Long-Term Immigrants	Non-Immigrants
<i>Proportion of Population</i>	1.0	0.043	0.138	0.819
<i>Mean Hourly Wage</i>	\$21.67 (0.215)	\$18.28 (0.724)	\$21.45 (0.498)	\$21.93 (0.427)
<i>Mean Job Satisfaction</i>	4.23 (0.009)	4.05 (0.047)	4.15 (0.024)	4.25 (0.010)
<i>Mean Wage Satisfaction</i>	3.92 (0.010)	3.76 (0.049)	3.86 (0.028)	3.93 (0.012)
<i>Proportion of Employees working at Firms with Exports >=10% of Sales</i>	0.135 (0.004)	0.171 (0.021)	0.203 (0.015)	0.122 (0.004)
<i>Proportion of Employees with Classroom Training</i>	0.359 (0.007)	0.338 (0.036)	0.307 (0.017)	0.369 (0.007)
<i>Proportion of Employees working in Firms with Government Funded Training</i>	0.107 (0.004)	0.077 (0.014)	0.085 (0.009)	0.112 (0.005)
<i>Mean Education Index</i>	4.92 (0.028)	5.90 (0.140)	5.23 (0.076)	4.82 (0.030)
<i>Mean Years of Work Experience</i>	17.47 (0.164)	11.76 (0.779)	19.85 (0.414)	17.37 (0.181)
<i>Mean Age</i>	40.82 (0.173)	36.83 (0.738)	45.41 (0.397)	40.26 (0.193)
<i>Mean Firm Number of Employees</i>	482.72 (17.83)	440.72 (124.72)	536.43 (45.14)	475.89 (19.32)
<i>Mean Firm Relative Performance Index</i>	8.39 (0.031)	8.20 (0.156)	8.54 (0.084)	8.38 (0.034)
<i>Proportion Speaking a Different Language</i>	0.102 (0.043)	0.545 (0.037)	0.328 (0.018)	0.041 (0.003)
<i>Proportion of Visible Minorities</i>	0.183 (0.005)	0.645 (0.034)	0.417 (0.019)	0.124 (0.003)
<i>Proportion of Unionized employees</i>	0.262 (0.006)	0.114 (0.020)	0.244 (0.015)	0.273 (0.007)
<i>Proportion of Female Employees</i>	0.567 (0.004)	0.564 (0.021)	0.563 (0.010)	0.568 (0.004)

Standard Errors in parentheses.

Table 2 – Baselines

Dependent Variable:	Recent Immigrants & Non-Immigrants		
	Wages	Job Satisfaction	Wage Satisfaction
Immigrant	-0.111** (0.005)	-0.243** (0.020)	-0.129** (0.015)
Classroom Training	0.080** (0.003)	0.135** (0.007)	0.027** (0.006)
Government Funded Training	-0.043** (0.006)	-0.034** (0.011)	-0.015 (0.008)
Exporter	0.069** (0.005)	-0.092** (0.014)	0.001 (0.012)
ln(wage)		0.345** (0.008)	0.561** (0.008)
Female=1, Male=0	-0.128** (0.003)	0.072** (0.008)	0.036** (0.007)
Visible Minority	-0.083** (0.0004)	-0.037** (0.011)	-0.033** (0.009)
Different Language	-0.033** (0.004)	0.026 (0.015)	-0.048** (0.011)
Education Index	0.057** (0.001)	-0.031** (0.002)	-0.043** (0.002)
Years of Experience	0.007** (0.0002)	0.0007 (0.0005)	-0.011** (0.001)
Age	0.003** (0.0002)	0.004** (0.0004)	0.011** (0.001)
Unionized	0.023** (0.003)	-0.127** (0.010)	0.055** (0.011)
Size (employees)	0.046** (0.001)	-0.026** (0.002)	-0.030** (0.002)
Relative Performance Index	-0.004** (0.001)	0.003 (0.002)	0.004** (0.001)
Occupation Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
R ² ^a	0.5225		
Wald Chi ² (32) ^b	176046	15915	15992
Weighted Population Size	10,133,845	10,133,845	10,133,845

* $p < .05$, ** $p < .01$. Standard Errors in parentheses. Occupation Fixed Effects = binary variables for six occupation types. Industry Fixed Effects = binary variables for 14 industry categories. ^a Probit does not generate meaningful R² values. ^b The combination of survey and bootstrapping methods cannot be used to generate a meaningful overall F test or maximum likelihood for the probit analysis. Instead, we generate Wald chi², which tests how far the set of estimated parameters are from zero.

Table 3 – Interactions & Marginal Effects

Dependent Variable:	Wages	Job Satisfaction		Wage Satisfaction	
		Predicted Level	Marginal Effect	Predicted Level	Marginal Effect
Immigrant	-0.140** (0.007)	1	0.001** (0.0001)	1	0.001** (0.0001)
		2	0.017** (0.001)	2	0.020** (0.001)
		3	0.044** (0.002)	3	0.049** (0.003)
		4	0.082** (0.005)	4	-0.006** (0.001)
		5	-0.144** (0.008)	5	-0.063** (0.004)
Classroom Training	0.078** (0.003)	1	-0.0002** (0.00002)	1	-0.0001** (0.00002)
		2	-0.005** (0.0003)	2	-0.001** (0.001)
		3	-0.013** (0.001)	3	-0.003** (0.001)
		4	-0.024** (0.001)	4	0.0004** (0.0002)
		5	0.043** (0.002)	5	0.004** (0.002)
Government Funded Training	-0.045** (0.006)	1	0.0001** (0.00002)	1	0.001* (0.00003)
		2	0.002** (0.001)	2	0.002* (0.001)
		3	0.005** (0.002)	3	0.004* (0.002)
		4	0.009** (0.005)	4	-0.001* (0.0002)
		5	-0.015** (0.008)	5	-0.005* (0.002)
Exporter	0.069** (0.005)	1	0.0001** (0.00002)	1	0.000 (0.00003)
		2	0.004** (0.001)	2	0.0001 (0.001)
		3	0.010** (0.001)	3	0.0003 (0.002)
		4	0.019** (0.003)	4	-0.00003 (0.0002)
		5	-0.034** (0.004)	5	-0.0004 (0.003)
Immigrant*Exporter	0.018* (0.008)	1	-0.0002** (0.0001)	1	-0.0003* (0.0001)
		2	-0.005** (0.002)	2	-0.007* (0.003)
		3	-0.012** (0.004)	3	-0.017* (0.008)
		4	0.022** (0.008)	4	0.002* (0.001)
		5	0.038** (0.014)	5	0.022* (0.010)
Immigrant*Class Training	0.050** (0.010)	1	-0.0006** (0.0001)	1	-0.0007** (0.0001)
		2	-0.013** (0.001)	2	-0.017** (0.002)
		3	-0.034** (0.003)	3	-0.042** (0.005)
		4	0.064** (0.006)	4	0.005** (0.001)
		5	0.112** (0.010)	5	0.055** (0.007)
Immigrant*Gov't Funded	0.078** (0.023)	1	-0.001** (0.00002)	1	-0.0006** (0.0001)
		2	-0.012** (0.002)	2	-0.015** (0.002)
		3	-0.031** (0.005)	3	-0.036** (0.005)
		4	0.059** (0.009)	4	0.005** (0.001)
		5	0.104** (0.015)	5	0.047** (0.007)
Employee Level Controls:	<i>Gender, Visible Minority Status, Language, Education, Year of Experience, Age, Unionization, Occupation, ln(wage) in columns 2 & 3 only</i>				
Firm Level Controls:	<i>Firm Size, Relative Performance Index, Industry Fixed Effects</i>				
R ^{2a}	0.5227				
Wald Chi ² (32) ^b	182627	17409		17539	
Weighted Population Size	10,133,845	10,133,845		10,133,845	

* $p < .05$, ** $p < .01$. Standard Errors in parentheses. Occupation Fixed Effects = binary variables for six occupation types. Industry Fixed Effects = binary variables for 14 industry categories. ^aProbit does not generate meaningful R² values. ^bThe combination of survey and bootstrapping methods cannot be used to generate a meaningful overall F test or maximum likelihood for the probit analysis. Instead, we generate Wald chi², which tests how far the set of estimated parameters are from zero.

Figure One: Matching firm-level mitigation strategies to immigrant barriers.

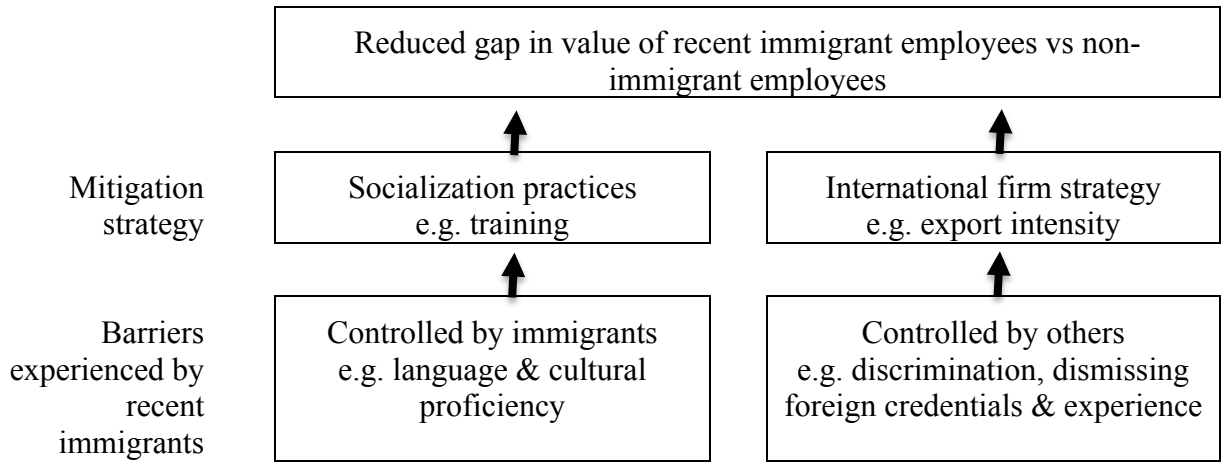


Figure Two: Baseline salaries and satisfaction across groups

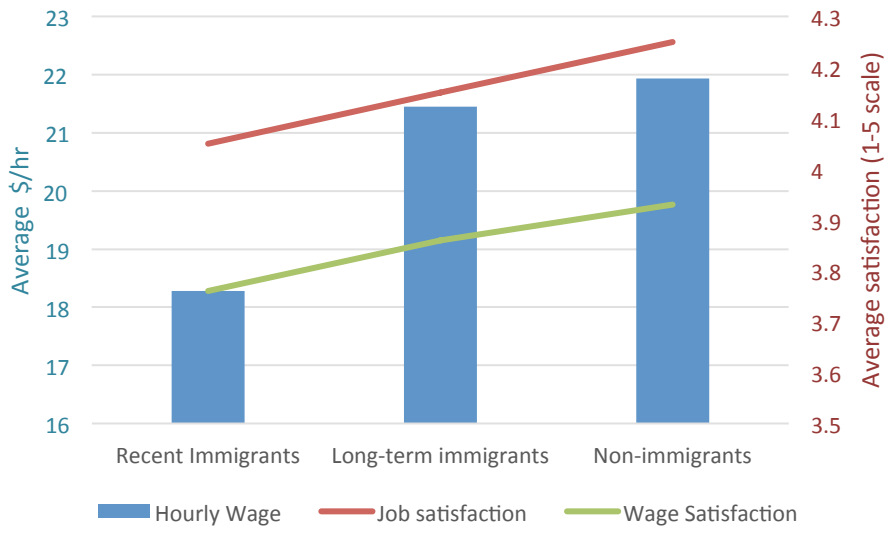


Figure Three: Marginal Effect of Export Status on Hourly Wages

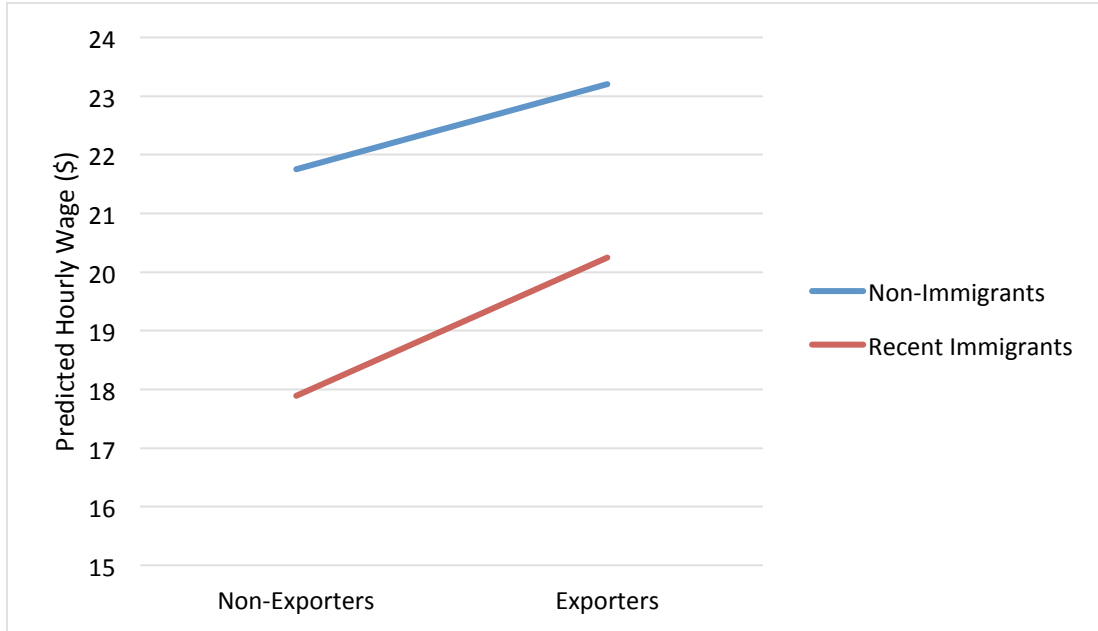


Figure Four: Marginal Effect of Government Funded Training on Hourly Wages

