DISCUSSION PAPER SERIES

Do Top Executive's Immigration Status and Management Perception of Multiculturalism Matter?

Tony Fang
Morley Gunderson
John Hartley

DISCUSSION PAPER SERIES

Do Top Executive's Immigration Status and Management Perception of Multiculturalism Matter?

Tony Fang
Memorial University of Newfoundland and IZA

Morley Gunderson
University of Toronto

John Hartley
Memorial University of Newfoundland

ABSTRACT

Do Top Executive's Immigration Status and Management Perception of Multiculturalism Matter?*

Using data from a largely representative survey of 801 Atlantic Canadian employers, this paper conducts regression analyses to test associations between two diversity variables and five objective and subjective measures of firm performance: revenue change and employment change in the previous three years, projected revenue change and employment change over the next three years and projected provincial economic growth/decline over the next three years. We find that firms with an immigrant CEO and/or owner are more likely to forecast revenue growth, report recent employment growth, and forecast provincial economic growth. Employers who believe that a multicultural workforce enhances creativity are more likely to report recent employment growth and more likely to forecast provincial economic growth in the medium-term. This is consistent with most national studies, which tend to show immigrant-owned companies are more likely to create jobs and firm growth (Picot and Ostrovsky, 2021).

| **Keywords:** | immigrant-owned businesses, management diversity, multiculturalism, organizational performance, employer survey, Atlantic Canada |

Corresponding author:
Tony Fang
Department of Economics
Memorial University of Newfoundland
St. John's, NL, A1C 5S7
Canada

E-mail: tfang@mun.ca

Introduction

Driven largely by international migration, Canada reached a population growth rate unmatched since the 1950's baby boom in 2023 (Serebrin, 2024). Concurrently, some have claimed the country faces serious challenges in the form of stagnant productivity and business investment (Bank of Canada, 2024; Robson & Bafale, 2024). Many studies point out that immigrants are more likely to start businesses than those born in Canada, which can be part of solutions for job creation and productivity growth (Gu et. al., 2020; Picot and Ostrovsky, 2021), though Green *et al.* (2023) hint that this data can be misleading at face value. Within this context, it is more important than ever that researchers advance the understanding of multiculturalism and management diversity and their effects on businesses and the economy.

This article strives to determine if the immigration status of a firm's top executive and its management's perception of multiculturalism, on the one hand, correlate with firm performance, hiring, and perceptions of the economy's future, on the other. The paper uses data from a largely representative telephone survey of 801 employers in Canada's Atlantic region that was conducted in 2019 to test these relationships through regression analysis. As completion of the survey is contingent on substantial hiring experience, micro-firms with four or fewer employees were not included in the analysis. Outside of this caveat, the survey sample is representative of the business population in the region. The survey was stratified by organizational size (measured by the number of employees), urban or rural location, and industry.

We believe that the paper makes several valuable contributions to the literature. First of all, it extends the literature on the link between top management team cultural diversity and firm performance to Canada; in their review of research into this subject, Ponomareva *et al.* (2022)

list the geographical setting of the studies they review, none of which are centered in Canada. Second, we answer Ponomareva *et al.*'s (2022) call for more analysis of how diversity relates to 'mid-range [firm] outcomes' beyond financial performance. On top of past revenue performance, our analysis considers the firm-level change in employment within the recent past as well as projections from managers/executives of anticipated employment and revenue change in the near term at the firm level, and projections of the regional economy in the near term at the macro level. Third, we also study the link between managers'/executives' perceptions of multiculturalism in the workplace and the aforementioned outcomes/projections. Our unique survey data allows for the inclusion of these variables, which are differentiated from those in other studies. It also allows for the assessment of firms helmed by immigrant chief executives, a different approach than most studies on management diversity.

The paper is organized as follows. In the following section, we review the literature and develop our theoretical framework. Next, more details are provided concerning our data and methodology. Then, the results of our descriptive and regression analyses are presented and discussed. Finally, we conclude the paper, summarizing the results and suggesting areas for future research.

Literature Review and Theoretical Framework

Literature Review

The challenges faced by immigrants in Canadian labour markets are very well-documented (e.g., Cukier & Stolarick, 2019; Fang et al., 2013; Lu & Hou, 2020). Among the most important challenges are language barriers, lack of foreign credential recognition, navigating migration

policies, adjusting to a new country culturally and in terms of workplace norms, and potential labour market discrimination. However, recent studies indicate that the labour market outcomes of immigrants in Canada may be improving, due in part to changes in immigrant selection (Hou et al., 2020; Hou, 2024). Since our study concerns immigrant executives and business owners as well as the impacts of multiculturalism, and how they impact actual and perceived organizational and regional economic performance, we will begin by reviewing research on immigrant business ownership and cultural diversity in top management teams, and then pivot to multiculturalism afterward. Studies conducted in multiple countries will be referenced in this section. As there are marked differences between countries in terms of immigrant selection, labour markets, and settlement service provision, among other characteristics, an effort has been made to distinguish the geographical coverage of each study, where applicable.

Owing to the difficulties many immigrants can face, some immigrant business owners may be driven to ownership by necessity rather than by choice (Dabić *et al*., 2020; Li, 2001). Nevertheless, recent research suggests that immigrant business owners in Canada are mainly driven by opportunity (Bousmah, 2021; Lo and Teixeira, 2015). Furthermore, immigrants to the United States and Canada are more likely to start a business than the native-born population and Fortune 500 companies are disproportionately more likely to have been founded by immigrants (Li *et al.*, 2023; Picot and Ostrovsky, 2021). While the 'disadvantage theory' (Dabić *et al*., 2020) may explain part of the business ownership differential, the individual characteristics of those in the immigrant population likely play a dominant role. For example, the immigrant population in Canada is highly educated on average, particularly in science, technology, engineering, and mathematics (STEM; Ostrovsky and Picot, 2020; Picot and Ostrovsky, 2021). On the supply

side, immigrants tend to possess strong unobservable abilities that commonly lead to high pre-migration earnings, such as risk-taking aptitudes (Borjas *et al*., 2019); on the demand side, the Canadian immigration system places a high emphasis on human capital during the immigrant selection process (Lam and Triandafyllidou, 2022). Both sides of the immigration market therefore contribute to the preponderance of immigrant business ownership in Canada.

Many immigrants climb the corporate ladder to reach top leadership positions rather than starting their own business. The biases and discrimination immigrants may face in the Canadian labour market (e.g., Oreopoulos, 2011) do not cease to exist in executive labour markets (e.g., Georgakakis *et al*., 2021 for a European study). Research centered in Sweden finds that managers tend to hire and/or promote job candidates from the same ethnic origin (Åslund et al., 2014). A global review of field experiments concludes that the extent of bias increases when candidates are more culturally distant from the manager (Quillian and Midtbøen, 2021). Discrimination against dissimilar job candidates is typically classified into one of two categories: statistical discrimination and taste-based discrimination (Giuliano *et al*., 2009). Statistical discrimination implies that the employer discriminates not based on explicit prejudice but due to uncertainty associated with hiring a seemingly different candidate and perceived productivity differences from hiring a candidate more ostensibly similar to the employer; on the other hand, taste-based discrimination implies blatant prejudice. Unfortunately for immigrant and ethnic minority job candidates, United States evidence suggests that minority managers also sometimes discriminate against those dissimilar from themselves (Giuliano *et al*., 2009). However, this does imply that increasing ethnocultural diversity among management will likely increase overall

diversity within a firm, since managers from differing backgrounds may partially counteract each others' biases.

Theoretically, there are positive and negative channels through which ethnocultural diversity may impact firms. On the positive side, diversity can improve the knowledge base of firms, leading to enhanced creativity and innovation because of the wider array of perspectives, knowledge, and skills in diverse organizations (Andrevski *et al*., 2014; Hoogendoorn and van Praag, 2012); increase global linkages and access to international markets (Andrevski *et al*., 2014; Kalantaridis and Bika, 2011); and broaden the pool of available labour and resources (Awaworyi Churchill and Valenzuela, 2019; Richard *et al*., 2004). The potentially deleterious effects of diversity include increased transaction costs and decreased trust (Awaworyi Churchill and Valenzuela, 2019), negative social categorization as well as reduced communication and cooperation (Ponomareva *et al*., 2022), and a higher probability of conflict (Hoogendoorn and van Praag, 2012; Ponomareva *et al*., 2022). Studies have shown that the downside risks of diversity can be mitigated when teams are cohesive and well-socialized, according to Ponomareva *et al*.'s (2022) review article.

In line with the theoretical impacts, literature from Europe and elsewhere shows mixed results concerning the relationship between firm performance and ethnocultural diversity (Hoogendoorn and van Praag, 2012; Ponomareva *et al*., 2022). Richard *et al*. (2004) note that laboratory experiments tend to yield positive results while fieldwork results are mixed. The authors posit a non-linear U-shaped relationship between performance and diversity in management teams that may explain the differential results, with performance in slightly diverse teams lagging

6

performance in both homogenous and majority-diverse teams (Richard *et al.*, 2004). The idea is that the possible drawbacks of heterogeneity are mitigated as out-group contacts increase (Richard *et al.*, 2004). Dutch findings from Hoogendoorn and van Praag (2012) align with this theory, as their results indicate that majority-diverse student business teams outperform their slightly diverse and homogenous counterparts.

As for Canadian results, Ng and Tung's (1998) study of Vancouver-area bank branches finds that culturally heterogeneous branches achieve higher profitability and productivity than homogeneous branches. Controlling for immigrant skill level, Gu *et al.* (2020) estimate that there is a small, positive productivity effect associated with a firm-level increase in the share of immigrant workers, and the effect is stronger for lower-skill immigrants. High-skill immigrants are associated with higher profitability (Gu *et al.*, 2020). Moreover, a recent study published by McKinsey & Company finds a positive association between ethnocultural diversity and firm performance based on a large multi-country dataset. On average, firms in the top quartile of ethnocultural diversity were 36% more profitable than firms in the bottom quartile (Hunt *et al.*, 2020). It must be noted that causality is difficult to establish in such studies. Garcia-Castro *et al.* (2010) point out that, when it comes to the relationship between the 'social performance' of firms and their financial performance, companies with good management practices in general tend to adopt socially conscious practices. Unobservable characteristics may therefore explain some, or all, of the positive association between social indicators (such as the hiring of immigrants/racialized people) and traditional performance metrics. This phenomenon is likely at play to some extent with regard to successful firms hiring immigrants; some well-run firms

experience success independent of hiring immigrants but happen to hire such workers. Thus, we do not claim causality in our study.

The link between diversity and innovation is almost unambiguous based on the literature (Leung and Wang, 2015). Research in the United States and Canada indicates that immigrants outperform on patent filing and other innovation indicators (Hunt and Gauthier-Loiselle, 2010; Ostrovsky and Picot, 2020). This is in substantial part due to the propensity for immigrants to be educated in STEM fields (Hunt and Gauthier-Loiselle, 2010; Ostrovsky and Picot, 2020). The selection of immigrants on unobserved ability and the experiences of immigrants in various national contexts likely contribute to the innovation differential, as well.

Theoretical Framework

In this paper, we strive to determine the relationships between 1) having an immigrant top executive, and 2) employers' stance on whether multiculturalism enhances creativity in the workplace, on organizational and regional economic performance perceived by firms. Thus, we analyze whether both factors correlate with 1) past and projected future sales growth, 2) past and projected future employment growth, and 3) sentiment on the medium-term future of the regional economy.

The main theory behind our research is advanced by Van Knippenberg and colleagues. In diverse teams, beliefs and climates supportive of diversity are more likely to lead to positive effects from diversity (Van Knippenberg *et al.*, 2013). Van Knippenberg et al. (2013) forward the theory of *diversity mindsets* – a team's knowledge of its diversity, its effects, and how to engage with it.

The authors emphasize how framing diversity in terms of its benefits (e.g., in terms of information-sharing) is more conducive to positive diversity effects than an approach centered on minimizing the potential drawbacks to diversity (e.g., intergroup conflict, mistrust, and communication issues). Promoting the positives from diversity is therefore more effective than trying to prevent negative outcomes associated with it. We believe our survey question asking whether multiculturalism enhances creativity in the workplace is a proxy for a manager's belief in this promotional view of diversity, indicative of a respondent's diversity mindset. The development of a favourable diversity mindset within a team starts with a team leader's own diversity mindset (Van Knippenberg & van Ginkel, 2022). Van Knippenberg and van Ginkel (2022) highlight the importance of leadership overall when it comes to maximizing the benefits of diversity. Findings from Herdman and McMillian-Capehart (2010) suggest that diversity programs have a more positive effect on the diversity climate in organizations where there is more managerial diversity. We therefore anticipate that organizations with an immigrant top executive will be more likely to foster a positive diversity climate, increasing the benefits of diversity and potentially having a beneficial impact on firm performance measures. However, we do not claim causality.

Below, we develop our hypotheses, pointing to literature specific to each hypothesis to support our main diversity mindset and diversity climate theory.

While the literature is somewhat mixed regarding the effect of diversity on firm performance, we do anticipate that there will be a positive relationship between a firm having an immigrant top executive and sales/employment growth. Canadian evidence seems to point toward a net positive

relationship between multiculturalism and firm performance. Canada's newcomer selection processes and its policy support for multiculturalism may both contribute to a favourable context. Second, immigrant-owned firms tend to be younger on average, and they therefore create more jobs on a net basis (Picot and Ostrovsky, 2021). While 'disadvantage theory' indicates that some immigrants may open up a business as a last resort, recent Canadian research points toward most immigrant business owners being driven by opportunity (Bousmah, 2021; Lo & Teixeira, 2015). Results from Green *et al.* (2023) cast some doubt on this view due to the number of unincorporated businesses owned by immigrants, most of which have no employees; however, our survey data excludes firms with fewer than five employees as the survey is contingent on a sufficient level of hiring experience. Most of these 'last resort' firms would therefore not be captured in our data. This leads us to our first and second hypotheses:

H1: Firms with an immigrant top executive are more likely to report sales growth in the prior three years and more likely to forecast sales growth in the next three years.

H2: Firms with an immigrant top executive are more likely to report employment growth in the prior three years and more likely to forecast employment growth in the next three years.

Regarding the sales and employment projections, there may be differences in the level of optimism harboured by immigrants compared to the native-born population. We conjecture that, if anything, immigrant executives and business owners would be more optimistic than their native-born counterparts. For them to take a chance on building a business or climbing the corporate ladder in Atlantic Canada, they would likely need to have some level of optimism to

10

justify the decision to stay in the region, particularly given Atlantic Canada's lower immigrant retention rates (van Huystee, 2016). The economies of the Atlantic provinces are relatively resource-dependent, relying on industries such as fisheries, mining, and agriculture (Atlantic Canada Opportunities Agency, 2020; Pottie-Sherman & Graham, 2019). The region's four provinces have the smallest, least ethnically diverse populations of the Canadian provinces (Statistics Canada, 2017) and their populations are aging at an advanced rate (Statistics Canada, 2022a). Though they face some economic challenges, the provinces have interesting histories and cultures combined with natural beauty, not to mention a reputation for hospitality. The competition is typically lower than the large urban centres where there is a high concentration of ethnic businesses. Taking into consideration the potential for selection bias among immigrants who stay and own a business in the region as well as the trend toward opportunity-driven business ownership by immigrants in Canada, we arrive at our third hypothesis:

H3: Firms with an immigrant top executive are more likely to forecast growth in the provincial economy in the next three years.

Since creativity and innovation are key benefits of multiculturalism in the workplace, we expect that firms that recognize these benefits are more likely to have strong performance and growth. It is becoming increasingly important to effectively welcome and manage diverse teams; recognizing the value of diversity figures to be a prerequisite to unlocking its potential. Moreover, effective diversity management can attract talent, and seeking diverse candidates widens the pool of available talent (Ng and Burke, 2005). Thus, we make the following hypotheses:

H4: Firms that believe that multiculturalism enhances creativity in the workplace are more likely to report sales growth in the prior three years and more likely to forecast sales growth in the next three years.

H5: Firms that believe that multiculturalism enhances creativity in the workplace are more likely to report employment growth in the prior three years and more likely to forecast employment growth in the next three years.

Along similar lines, we anticipate that firms who believe that there are tangible benefits from multiculturalism will be more optimistic regarding future economic growth in their province. Since immigration is a key driver of economic growth in Canada, firms who value diversity will presumably have a more positive outlook on their province's macroeconomic outlook. Therefore, we make our final hypothesis:

H6: Firms that acknowledge the link between who believe that multiculturalism enhances creativity in the workplace are more likely to forecast growth in the provincial economy in the next three years.

Data and Methods

Data

Our data source is based on a telephone survey of 801 employers in Atlantic Canada, a region in Eastern Canada consisting of four provinces: New Brunswick (NB), Newfoundland and

Labrador (NL), Nova Scotia (NS), and Prince Edward Island (PEI). The survey was conducted in 2019, prior to the COVID-19 pandemic, by a professional research firm after its questionnaire – primarily developed by the first author – was approved by a research ethics board. The timing is important as we would like to generate the estimates to reflect normal business circumstances. In larger organizations, managers with hiring responsibilities responded to the survey; in smaller organizations, the owner/CEO was usually the respondent as they are considered as major decision-makers in the organization and possess good knowledge of both management practices and organizational performance. The survey uses a random sample of organizations stratified along the lines of industry, size (number of employees), and region (urban/rural location). Stratification was done to ensure the survey is roughly representative of the population of firms in the Atlantic region, with the exception that only firms with more than four employees were sampled. Appendix A displays a comparison of survey results to provincial firm characteristics for each province, demonstrating close alignment. The survey sample was constructed based on data from the December 2018 iteration of Statistics Canada's Business Register (Statistics Canada, 2022b). Thus, it includes incorporated firms that have filed a tax return in the prior three years as well as firms (incorporated or otherwise) that have either: 1) submitted payroll remittances to the Canada Revenue Agency or 2) reported $30,000 or more in annual revenue (Statistics Canada, 2022). For the contacted firms that met the sample selection criteria, there was a response rate of approximately 38%. Additionally, there is no evidence of systematic bias that skewed the response rate along the lines of particular firm characteristics. Although the response rate is reasonably high for such a survey and firm characteristics are similar to those in the sample frame, we have included regressions using survey weights in Appendix B. The results are similar to the unweighted regressions.

The survey's question structure varies depending on the topic. However, for most of the key questions, respondents were given a set list of possible responses. Table 1 displays the summary statistics for the variables we include in our analysis. Abbreviated variable names that are used in the regression table (Table 2) are included in parentheses. We have included all complete observations from the survey for each given variable. Observation counts do not match across variables since respondents were given the option to not report an answer for any given survey question.

[Table 1 here]

The first four variables in Table 1 capture an employer's reported sales revenue and employment change in the prior three years as well as their revenue and employment projections for the next three years. These are dependent variables in our regression models. The selection of three years past and future for these variables in the survey is somewhat arbitrary. The logic behind choosing three years is that, for the past, this time span would smooth out some of the aberrational fluctuations that can happen in a single year, while still being fresh in memory. For the projection variables, the logic is that three years is long enough to look somewhat into the future without being so far away that respondents would have difficulties forming opinions. In the survey, if the respondent reported an increase in one of these variables, the value of the response was equal to three. A response of 'no change' equals two, and a decrease response equals one. As with other variables in the survey, respondents were given the option not to respond via a 'don't know/no answer' response; these observations are dropped from our analysis. The means for these key

14

variables all exceed 2, indicating that sales revenue and employment grew in the prior three years for most respondents; a majority also anticipates that these variables will grow in the next three years. The projection of provincial economic growth is the dependent variable in our fifth and final model. The variable measures the extent to which a respondent (dis)agrees with the following statement on a five-point scale: "the provincial economy will grow over the next 3 years." The average response was close to neutral, showing ambivalence about Atlantic Canada's economy in the medium-term (mean = 3.11). It is important to remember that the survey was conducted pre-pandemic, in 2019. Responses are therefore more likely to reflect 'normal' conditions.

Next, Table 1 contains information on our two focal independent variables: whether the owner and/or CEO is an immigrant and the respondent's opinion regarding multiculturalism's effect on creativity. The former variable captures whether the owner or CEO of a firm is an immigrant. If the owner and/or CEO is an immigrant, it is coded to equal one; otherwise, the variable equals zero. 10.9% of firms had an immigrant owner/CEO. The latter variable measures the extent to which a respondent agrees to the following statement, on a five-point scale: "a multicultural workforce enhances creativity in the workplace." On average, respondents agreed with the statement (mean = 4.02, almost identical to the agree response).

The first ten control variables all measure respondents' assessments of various attitudinal statements concerning international immigrants. They are measured on five-point "strongly disagree to strongly agree" Likert scales. The first of the variables asks whether the respondent agrees that immigrants take jobs away from locals (a somewhat commonly held belief that lacks

15

evidence). The export variable determines whether a respondent believes that immigrants

increase export opportunities and are more productive than the Canadian-born (on average).

Concern over immigrant retention measures respondent concern that immigrants will move away

from their province. The following variables indicate whether an employer believes that, on

average, immigrants are harder workers and would take lower pay, respectively, compared to the

Canadian-born. The next two variables assess the level of agreement that language differences

can cause communication difficulties and cultural differences can cause confusion in the

workplace. Next, the training variable measures whether a respondent thinks hiring immigrants

will incur additional training costs. Finally, our last two attitudinal variables determine whether

employers believe that international immigrants are unfamiliar with Canadian workplaces and

hold unreliable credentials, respectively. We include these attitudinal variables as controls in our

regressions because we believe they are unique factors that may influence the performance-

diversity and employment-diversity relationships. For example, they may proxy for effective

diversity management practices, as well as unobservable variables such as welcoming attitudes

toward diverse workers and job candidates. This philosophy ties directly to our theoretical

framework, which underscores the impact of an organization's diversity climate as well as the

influence of organizational leaders when it comes to fostering a positive climate for diversity.

Based on mean values (reported in parentheses, 1 = strongly disagree, 5 = strongly agree),

employers usually do not believe that immigrants take away jobs (1.77), take less pay (2.53),

cause confusion through cultural differences (2.32), lead to additional training costs (2.60), or

hold unreliable credentials (2.06). The average responses are close to neutral for the export

(3.17), productivity (3.01), retention (3.05), work ethic (3.12), language issues (3.32), and

workplace familiarity (2.95) variables. To allay concerns that these attitudinal variables are

multicollinear, we ran a multicollinearity test using Variable Inflation Factors after the regressions. The average value of the VIF is between 2.13 and 2.27, smaller than 5. Therefore, multicollinearity is not a major issue among the independent variables. We did, however, exclude an attitudinal variable indicating whether a respondent believes that immigrant employees are more productive than the Canadian-born. This was done because the variable was strongly correlated with the hardworking attitudinal variable.

The next grouping of controls in Table 1 are the dummy variables for the province where the respondent that was called for the survey is located: 'PEI (12.5%),' 'NL (37.6%),' 'NB (25.0%),' and 'NS (25.0%).' A targeted number of firms was selected for each Atlantic province. Firms were also categorized by size according to the number of employees working within the province where the respondent is situated. As expected, small firms with five to nine employees (33.4% of the sample) and medium-sized firms with ten to 49 employees (54.6%) comprised the vast majority of the sample. Large firms with 50 or more employees (12.0%) were comparatively less represented, in line with firm characteristics in Atlantic Canada. However, it is worth noting that in terms of the number of workers employed, very large firms with more than 500 employees make up nearly half of Canadian employment (Statistics Canada, 2024). Our survey sample was derived from the number of businesses in the Atlantic region, which is why the relative figure of large firms is much lower than it would be based on employment numbers. Furthermore, micro-firms with four employees or less were not included in the survey since they were likely to have little to no hiring experience and few resources to complete the survey. Firm age was included as another control variable. Moreover, a quadratic term for firm age was included since firm growth

may be a function of firm age. The average firm was approximately 32 years old, although this variable displayed a wide range of responses, from zero to 213 years old.

The last grouping of control variables in Table 1 is that for the main industry of the surveyed firms. The survey initially listed 19 North American Industry Classification System industries that we have aggregated into eight broader industries: the primary sector (natural resource extraction industries), manufacturing, trade (retail and wholesale), transportation, construction, professional services, accommodation and food services, and other services. Professional services (29.8% of firms), trade (27.3%), and accommodation and food services (14.5%) were the most represented industries. Healthcare and social assistance organizations were a major factor in the strong representation of professional services; retail trade firms were the main drivers of the trade industry's preponderance. Our final one-off control variable is 'rural,' equalling one if the firm is located in a rural area and zero if the firm is located in an urban area. This distinction was made based on collected postal code information in conjunction with the standard Statistics Canada urban/rural classification method (Statistics Canada, 2019).

Analytical Strategy

Ordinary least squares (OLS) regressions with heteroskedasticity-consistent standard errors are used, as is common with ordered dependent variables like Likert scales. While our dependent variables are ordered they are not cardinal, and OLS imposes cardinality. This means, for example, that not growing must be equal and opposite to growing in terms of magnitude. Ordered logit analysis is not subject to this restriction, but still has the terional odds assumption that each independent variable has an identical effect at each cumulative split of the ordinal

dependent variable. That is, it assumes that the coefficients that describe the relationship between, say, the lowest versus all higher categories of the response variable are the same as those that describe the relationship between the next lowest category and all higher categories. As well, ordered logit models are estimated by maximum likelihood methods which require a larger sample size than OLS, and our sample sizes are not large.

Our model specification is as follows:

$$y_i = \beta_0 + \beta_1 Owner\_Imm + \beta_2 Multiculturalism + \beta_3 A + \beta_4 P + \beta_5 I + \beta_6 S + \beta_7 R + \mathcal{E}$$

Where y_i is outcome i from dependent variables one to five (projected/past sales revenue change, projected/past employment change, and projected change in the provincial economy), β_0 is the intercept, Owner_Imm is the first key binary independent variable, equalling one if the firm's CEO and/or owner is an immigrant, and β_1 is its coefficient. Multiculturalism is the second key variable, indicating the employer's assessment of whether multiculturalism has a positive effect on workplace creativity ranging from 1 = strongly disagree to 5 = strongly agree. β_2 is its coefficient. A, P, I, S, and R are vectors of control variables, and β_3, β_4, β_5, β_6, and β_7 are vectors of coefficients. A is comprised of attitudinal variables towards immigrants, P is the vector of provincial dummy variables, I is the vector of industry dummies, S is the vector for firm size, and R is the vector of other controls. $\mathcal{E}$ is the heteroskedasticity-consistent error term for the regression.

As one of our main variables is sales revenue, we dropped observations from government and non-profit organizations.

Results and Discussion

The results of our five regression models are presented in Table 2. Variable names are shortened for brevity – full names and explanations can be found in Table 1 and the preceding data section. Independent and control variables are in the first column, the other columns consist of coefficients for each of the models, with the dependent variable of each model found in the header from columns two through six. Each regression's sample size is listed below the dependent variable. Observation counts differ due to the different numbers of 'don't know/no answer' for the various dependent, independent, and control variables as well as missing observations. Two panels are included in Table 2. The first panel contains full regression results with all control variables included; the second panel drops all control variables, focusing only on the two main independent variables of interest – whether the firm has an immigrant top executive, and if the responding decision maker thinks that multiculturalism fosters creativity in the workplace. The results from the first panel will be reported and discussed in turn, starting with the results for the two key independent variables followed by a truncated discussion of the control variable results. The results from the second panel follow similar trends to those in the first panel, so we do not discuss them specifically considering they do not control for key variables.

[Table 2 here]

The quality of having an immigrant owner/CEO is positively associated with all five dependent variables. The variable is statistically significant at $p < 0.01$ in one model, significant at $p < 0.05$ in two others, and it is marginally significant ($p < 0.10$) in another model. There is, however, no statistically significant difference in whether sales revenue increased in the previous three years between firms with an immigrant top executive versus firms without one. It is possible that our categorical variable approach masks statistically significant differences in the level of revenue growth, whether it be in percentage change terms, dollar value terms, or both. This is a limitation. Firms with an immigrant executive were, however, significantly more likely to anticipate revenue growth in the following three years, at the 0.01 level. This result supports our hypothesis H1, but we cannot support the previous revenue change part of the hypothesis, although the coefficient is positive. We cannot say for sure the channel(s) through which there is a positive relationship between having an immigrant top executive and anticipating revenue growth. It could relate to factors such as the characteristics of the immigrant executives, unobserved firm characteristics, the global networks of immigrant executives, or differences in general optimism. The immigrant executive variable is significant at $p < 0.05$ in the previous employment growth model but it is only marginally statistically significant ($p < 0.10$) in the anticipated employment growth regression. It is also statistically significant in the anticipated provincial economic growth model, this time at the 0.05 level. These results mean that hypothesis H2 is partially supported while H3 is supported in full. We posit that our selection bias theory may help explain the economic growth projection results, as immigrants who are more optimistic figure to be more likely to stay in Atlantic Canada, despite the relatively low immigrant retention rate in the region overall.

Our second major independent variable in Table 2, the perception of multiculturalism as a driver of creativity, is also positively signed in all five models while being statistically significant in two of them. Both revenue variables, past and projected, have positive coefficients but are not statistically significant. Hypothesis H4 is therefore not supported, as we cannot conclude that changes in sales revenue are related to the belief that multiculturalism fosters creativity in the workplace. Past employment growth is positively correlated with the belief that multiculturalism fosters creativity, and the relationship is statistically significant at the 0.05 level. The projected employment variable, however, does not have a statistically significant relationship with the multiculturalism variable. Therefore, hypothesis H5, that the belief in multiculturalism fostering creativity would positively correlate with employment growth in the recent past and projected employment growth in the near future, is partially supported. Our theory is that this multiculturalism variable is a proxy for effective diversity management and corresponding recruitment practices that would be positive signals for job candidates from diverse populations as well as those who care about equity, diversity, and inclusion. In other words, it is a signal for a welcoming diversity climate. Employers who believe that multiculturalism has positive effects in their workplace may have had better luck hiring in the recent past relative to those who are more skeptical. Finally, the anticipation of economic growth in the provincial economy in the ensuing three years is positively, significantly correlated with belief in a link between multiculturalism and creativity at the 0.05 level, supporting hypothesis H6. We conjecture that employers with positive diversity mindsets would be more optimistic about the increasingly diverse local labour force, which may contribute to this result.

As for our control variables, interesting results can be seen in the variables that capture employer attitudes toward how immigrants affect the workplace. We will discuss select relationships here for the sake of brevity – specifically, attitudinal control variables that are statistically significant at the 0.05 significance level or better. The first is the positive relationship between employment in the past three years and immigrants taking less pay. This relationship is benefit-driven since lower labour costs would be viewed as beneficial by employers. Employers who believe that immigrants are a supply of relatively inexpensive labour would be more likely to hire more employees in the future, all else equal. The control variable 'Immigrants are harder workers' negatively associates with revenue growth in the past three years at the 0.05 level of statistical significance. The hardworking variable is negatively signed across the board, probably speaking to pessimism surrounding the local labour force among the subset of employers who believe that immigrants are harder working than the native-born. The belief that immigrants take jobs from locals has a negatively signed, statistically significant association with revenue growth in the past three years, too. This, too, likely speaks to pessimism, though we cannot say whether the association arises because employers whose firms have been struggling sometimes scapegoat immigrants, because holding this belief could lead to reduced revenue, or because of some other reason, or mix of reasons. Lastly, the belief that immigrants cause confusion in the workplace is positively associated with the expectation of revenue growth in the next three years. This variable also holds a marginally significant negative relationship with the past employment growth variable. The reasons behind these differing correlational signs are not clear.

Regarding our other control variables, the provincial dummy variables usually reach the $p < 0.05$ statistical significance threshold, and they have a positive sign across models, suggesting overall

better performance and better future expectations for firms in PEI, NB, and NS compared with those in NL, the reference group. The only model in which more than one industry variable surpasses the 0.1 threshold for marginal statistical significance is the future employment regression. Relative to the primary sector reference group, the manufacturing, transportation, and professional and technical services industries are positively signed and reach at least the 0.1 p-level for marginal statistical significance in the regression with projected employment growth as dependent variable. The manufacturing industry dummy is the only one of the three variables to surpass the $p < 0.05$ level. Furthermore, the transportation variable is statistically significant at the $p < 0.05$ level or better in the previous employment growth and projected provincial economic growth regressions. Compared with small firms, the reference group, medium-sized firms are more likely to project revenue growth in the next three years at the 0.05 level. At the 0.01 level, large firms are more likely to report past employment growth and, at the 0.05 level, they are less likely to project provincial economic growth, relative to the reference category. Our next standalone control, firm age, is negatively signed and statistically significant in all five models. The squared firm age term reaches statistical significance in all but one regression. Lastly, the rural dummy variable positively associates with revenue in the last three years at the 0.05 significance level, indicating that rural firms were more likely to report revenue growth in the prior three years after controlling for other factors.

Robustness Checks

There can be concerns about the survey response rate and use of the survey weights in our regression analysis. Our data are based on a representative survey of 801 employers in Atlantic Canada. The sample corresponds with a response rate of 38.0 percent, which is decent for this

type of business survey. Our survey sample is also stratified by organization size, urban or rural location, and the industry of the respondent's organization. This ensures that the sample is mostly representative of Atlantic Canadian employers.

The organizational characteristics based on our survey data are largely in line with the firm characteristics in the region from Statistics Canada's Business Registry data (By Province, Appendix A), which our sampling frame is derived from. As a robustness check, we have also applied survey weights to our regression analysis, and the results are reported in Appendix B. Our main findings remain intact to the application of survey weights.

As we have used the OLS model, one can argue the linear probability models are necessarily heteroskedastic. OLS where the dependent variable takes on only discrete values is also heteroskedastic. As such, we applied the vce(robust) method in Stata to obtain heteroscedasticity consistent standard errors. Again, the main results hold well in terms of signs, magnitudes, and statistical significance. Other alternative regression specifications are included in Appendix C.

There are also concerns that many of the attitudinal independent variables might be highly collinear. Given the small sample this would lead to coefficients that are not statistically significant because of the multicollinearity rather than a lack of any univariate relationship. We ran a multicollinearity test using VIF (Variable Inflation Factors) after the regressions. The average value of the VIF is between 2.13 and 2.27, smaller than 5. Therefore, multicollinearity is not a major issue among the IVs.

We have also run a correlation coefficient matrix among the DVs and IVs, the correlation coefficient between owner_imm & multicult is small and insignificant (0.0531, p=.1460). There is one exception. The correlation coefficient between "Hardworking" and "High Productivity" is very high and statistically significant (0.7466, p=0.0000), which is not surprising. We removed the "High Productivity" but added a quadratic term of the firm age variable. as a robustness check. The main results do not change much, and they can be compared with alternative specifications that are found in Appendix C.

Limitations

While we contend that the unique features of our survey data outweigh any potential drawbacks, we do acknowledge some limitations to our analysis. First of all, the data is self-reported and is therefore based on accurate responses by survey respondents. Minimizing biased/erroneous responses is part of the reason why the survey did not ask for numeric figures for past revenue and employment, which could be construed as another limitation. Social desirability bias and perception bias are other limitations along the same vein. The former is mitigated by ensuring responses are anonymized and having a third party conducting the survey over the phone. The analysis is also cross-sectional, so we cannot prove causality.

Conclusion

This paper uses regression analysis to study the association between two measures of firm-level diversity and a number of employer-reported outcomes and projections using Atlantic Canadian survey data. The diversity measures are 1) whether the firm has at least one immigrant owner or CEO; and 2) whether the employer believes that multiculturalism in the workplace enhances

creativity. A firm having an immigrant owner or CEO is positively associated with the firm's representative projecting future revenue growth, reporting recent firm-level employment growth, and anticipating growth in their provincial economy over the next three years. The correlation between having an immigrant top executive and reporting recent revenue growth does not reach statistical significance, while the projection of future employment growth is positively correlated with the existence of an immigrant top executive at a marginal level of statistical significance. The other key independent variable in the study, the survey respondent's perception of multiculturalism's effect on workplace creativity, positively correlates with recent employment growth and with a positive outlook for the provincial economy. On the other hand, the multiculturalism variable's association with the three other dependent variables (past revenue, projected revenue growth, and projected employment growth) does not reach statistical significance, though its sign is consistently positive. We hypothesize that the diverse human capital characteristics (knowledge, skills, and perspectives) of immigrant executives, the self-selection of immigrant executives who build a business in Atlantic Canada, the global networks of immigrant executives, and strong talent attraction as well as optimism regarding the future labour force among firms that value multiculturalism all contribute to the results, which indicate strong performance for immigrant-led firms.

We believe the paper contributes to the literature by including variables unique to our survey (such as projections and perceptions); strengthening the Canadian workplace equity, diversity and inclusion (EDI) literature; focusing on firms helmed by immigrant top executives; and extending the analysis of workplace diversity to more 'mid-range' outcomes and projections, as most studies are centered around financial variables.

Directions for Future Research

We encourage further analyses considering unique effects of firm-level diversity, particularly those that assess the link between diversity and numeric changes in employment, those that use longitudinal data, and those that incorporate employee-level data.

Table 1: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Employer's reported sales revenue change in the prior three years (rev_last3)	623	2.337079	.7683589	1	3
Employer's projected sales revenue in the next three years (rev_next3)	627	2.620415	.5504263	1	3
Employer's reported employment change in the prior three years (emp_last3)	790	2.273418	.6669281	1	3
Employer's projected employment change in the next three years (emp_next3)	785	2.373248	.5574612	1	3
Provincial economy will grow over the next 3 years (prov_econ_next3)	780	3.108974	1.123753	1	5
CEO and/or owner is an immigrant (owner_imm)	801	.1086142	.311349	0	1
Multiculturalism's effect on creativity (multicult)	750	4.018667	.9964816	1	5
Immigrants take jobs away from locals (take_jobs)	773	1.774903	1.085009	1	5
Immigrants increase export opportunities (more_export)	632	3.169304	1.245521	1	5
Immigrant workers are more productive (more_prod)	676	3.014793	1.140404	1	5
Concern over immigrant retention (leave_soon)	678	3.045723	1.150161	1	5
Immigrants are harder workers (hard_working)	680	3.117647	1.194359	1	5
Immigrant workers take lower pay (less_pay)	641	2.530421	1.321491	1	5
Language issues (language)	778	3.316195	1.135717	1	5

Cultural differences create confusion (confusion)	749	2.317757	1.158769	1	5
Immigrant workers lead to additional training costs (train_cost)	749	2.604806	1.265029	1	5
Immigrants are unfamiliar with Canadian workplaces (less_familiar)	687	2.953421	1.054291	1	5
Immigrants hold unreliable credentials (unreliable)	661	2.060514	1.03688	1	5
PEI	801	.1248439	.3307484	0	1
NL	801	.3757803	.4846263	0	1
NB	801	.2496879	.4331028	0	1
NS	801	.2496879	.4331028	0	1
Small firm (small)	800	.33375	. 4718466	0	1
Medium-sized firm (medium)	800	.54625	.4981678	0	1
Large firm (large)	800	.12000	.3251648	0	1
Firm age	791	32.40961	24.72234	0	213
Primary	801	.0299625	.1705905	0	1
Manufacturing (manufacture)	801	.0561798	.2304124	0	1
Trade	801	.2734082	.4459871	0	1
Transportation (transport)	801	.0399501	.1959643	0	1
Construction	801	.0811486	.2732337	0	
Professional services (professional)	801	.298377	.4578317	0	1
Accommodation and food services (accom_food)	801	.144819	.3521381	0	1
Other services (other_serve)	801	.0761548	.2654114	0	1
Rural	801	.3645443	.4816029	0	1

Table 2: OLS Regression Models with Heteroskedasticity-consistent Standard Errors

	Panel 1: All controls				
Variable	rev_last3 (n =364)	rev_next3 (n = 368)	emp_last3 (n = 455)	emp_next3 (n = 457)	prov_econ_next3 (n = 454)
owner_imm	0.108	0.196***	0.190**	0.085*	0.282**
multicult	0.020	0.042	0.074**	0.064	0.153**
take_jobs	-0.090**	-0.015	-0.028	0.014	-0.090
more_export	-0.038	0.043	0.018	0.042	-0.011
leave_soon	0.000	-0.029	-0.011	-0.037	0.005
hard_working	-0.072**	-0.035	-0.043	-0.040*	-0.094*
less_pay	-0.004	-0.036	0.072***	-0.018	-0.040
language	-0.026	-0.004	0.001	-0.004	-0.013
confusion	-0.002	0.062**	-0.059*	-0.003	0.046
train_cost	0.017	0.023	0.011	0.041	0.053
less_familiar	0.078	0.038	-0.027	0.021	-0.069
unreliable	0.009	-0.030	0.025	-0.007	-0.092
PEI	0.553***	0.156**	0.292***	0.157**	1.083***
NB	0.215*	0.139*	0.187**	0.218***	0.241*
NS	0.376***	0.116*	0.168**	0.018	0.486***
NL (reference)					
Medium	0.173*	0.147**	0.112	0.088	0.009
large	0.248*	0.070	0.294***	0.064	-0.439**
small (reference)					
firm_age	-0.009***	-0.006***	-0.006**	-0.008***	-0.008**
Age_squared	0.000**	0.000***	0.000	0.000***	0.000**
Manufacture	0.399*	0.109	0.264	0.473**	0.309
Trade	0.128	-0.054	0.005	0.217	0.255
transport	0.571**	0.102	0.270	0.420*	0.791***
construction	0.030	-0.259	-0.143	0.266	0.392
professional	0.147	-0.094	0.193	0.270*	0.038
accom_food	0.092	0.026	-0.084	0.225	0.073
other_serve	0.236	0.053	0.221	0.223	0.159
primary (reference)					
rural	0.184**	-0.010	0.014	-0.041	0.068
urban (reference)					
_cons	2.185***	2.414***	1.945***	1.932***	2.983***

* = marginally statistically significant at the 0.10 level
** = statistically significant at the 0.05 level

	Panel 2: No controls				
Variable	**rev_last3** (n =577)	**rev_next3** (n = 583)	**emp_last3** (n = 741)	**emp_next3** (n = 735)	**prov_econ_next3** (n = 732)
owner_imm	0.130	0.137**	0.216***	0.067	0.250*
multicult	0.045	0.052**	0.101***	0.022	0.139***
_cons	2.160***	2.412***	1.850***	0.089***	2.533***

* = marginally statistically significant at the 0.10 level
** = statistically significant at the 0.05 level
*** = statistically significant at the 0.01 level

Appendix A. The comparison of distribution of firms by industry in Atlantic Provinces between the December 2018 Business Registry and 2019 Employer Survey

Newfoundland and Labrador *(Percentages may not sum exactly to 100%, owing to rounding)*			
	Dec 2018 Business Register	**Surveys Completed**	
		(n=)	**(%)**
Industry [NAICS]			
Retail trade [44-45]	22%	81	27%
Transportation and warehousing [48-49]	4%	9	3%
Information and cultural industries [51]	1%	3	1%
Finance and insurance [52]	3%	5	2%
Real estate and rental and leasing [53]	2%	3	1%
Professional, scientific and technical services [54]	5%	15	5%
Management of companies and enterprises [55]	1%	2	1%
Administrative and support, waste management and remediation services [56]	3%	9	3%
Educational services [61]	1%	5	2%
Health care and social assistance [62]	8%	32	11%
Arts, entertainment and recreation [71]	2%	7	2%
Accommodation and food services [72]	11%	48	16%
Other services (except public administration) [81]	9%	28	9%
Public administration [91]	4%	5	2%
Agriculture, forestry, fishing and hunting [11]	2%	1	0%
Mining, quarrying, and oil and gas extraction [21]	1%	6	2%
Utilities [22]	0%	0	0%

Newfoundland and Labrador

(Percentages may not sum exactly to 100%, owing to rounding)

	Dec 2018 Business Register	Surveys Completed	
		(n=)	(%)
Construction [23]	12%	22	7%
Manufacturing [31-33]	3%	13	4%
Wholesale trade [41-42]	5%	7	2%

Prince Edward Island

(Percentages may not sum exactly to 100%, owing to rounding)

	Dec 2018 Business Register	Surveys Completed	
		(n=)	(%)
Industry [NAICS]			
Retail trade [44-45]	17%	28	28%
Transportation and warehousing [48-49]	3%	5	5%
Information and cultural industries [51]	1%	3	3%
Finance and insurance [52]	3%	2	2%
Real estate and rental and leasing [53]	2%	2	2%
Professional, scientific and technical services [54]	4%	1	1%
Management of companies and enterprises [55]	1%	2	2%
Administrative and support, waste management and remediation services [56]	3%	0	0%
Educational services [61]	1%	2	2%
Health care and social assistance [62]	7%	9	9%
Arts, entertainment and recreation [71]	3%	3	3%

Prince Edward Island

(Percentages may not sum exactly to 100%, owing to rounding)

	Dec 2018 Business Register	Surveys Completed	
		(n=)	(%)
Accommodation and food services [72]	12%	16	16%
Other services (except public administration) [81]	8%	3	3%
Public administration [91]	7%	1	1%
Agriculture, forestry, fishing and hunting [11]	9%	8	8%
Mining, quarrying, and oil and gas extraction [21]	0%	0	0%
Utilities [22]	0%	0	0%
Construction [23]	10%	4	4%
Manufacturing [31-33]	5%	7	7%
Wholesale trade [41-42]	4%	4	4%

Nova Scotia

(Percentages may not sum exactly to 100%, owing to rounding)

	Dec 2018 Business Register	Surveys Completed	
		(n=)	(%)
Industry [NAICS]			
Retail trade [44-45]	20%	39	20%
Transportation and warehousing [48-49]	3%	10	5%

Nova Scotia

(Percentages may not sum exactly to 100%, owing to rounding)

	Dec 2018 Business Register	Surveys Completed	
		(n=)	(%)
Information and cultural industries [51]	2%	5	3%
Finance and insurance [52]	4%	7	4%
Real estate and rental and leasing [53]	3%	1	1%
Professional, scientific and technical services [54]	6%	10	5%
Management of companies and enterprises [55]	1%	0	0%
Administrative and support, waste management and remediation services [56]	4%	7	4%
Educational services [61]	1%	6	3%
Health care and social assistance [62]	9%	22	11%
Arts, entertainment and recreation [71]	2%	7	4%
Accommodation and food services [72]	11%	27	14%
Other services (except public administration) [81]	7%	18	9%
Public administration [91]	1%	0	0%
Agriculture, forestry, fishing and hunting [11]	4%	4	2%
Mining, quarrying, and oil and gas extraction [21]	0%	0	0%
Utilities [22]	0%	0	0%
Construction [23]	11%	16	8%
Manufacturing [31-33]	5%	13	7%
Wholesale trade [41-42]	5%	8	4%

New Brunswick

(Percentages may not sum exactly to 100%, owing to rounding)

	Dec 2018 Business Register	Surveys Completed	
		(n=)	(%)
Industry [NAICS]			
Retail trade [44-45]	19%	44	22%
Transportation and warehousing [48-49]	4%	8	4%
Information and cultural industries [51]	2%	3	2%
Finance and insurance [52]	4%	4	2%
Real estate and rental and leasing [53]	2%	3	2%
Professional, scientific and technical services [54]	4%	11	6%
Management of companies and enterprises [55]	1%	0	0%
Administrative and support, waste management and remediation services [56]	4%	4	2%
Educational services [61]	1%	3	2%
Health care and social assistance [62]	11%	28	14%
Arts, entertainment and recreation [71]	2%	3	2%
Accommodation and food services [72]	11%	25	13%
Other services (except public administration) [81]	7%	12	6%
Public administration [91]	2%	4	2%
Agriculture, forestry, fishing and hunting [11]	6%	3	2%
Mining, quarrying, and oil and gas extraction [21]	0%	2	1%
Utilities [22]	0%	0	0%
Construction [23]	11%	23	12%

New Brunswick

(Percentages may not sum exactly to 100%, owing to rounding)

	Dec 2018 Business Register	Surveys Completed	
		(n=)	(%)
Manufacturing [31-33]	5%	12	6%
Wholesale trade [41-42]	5%	8	4%

Appendix B. Weighted OLS Regression Models (Regular Standard Errors)

Variable	rev_last3 (n =364)	rev_next3 (n = 368)	emp_last3 (n = 455)	emp_next3 (n = 457)	prov_econ_next3 (n = 454)
owner_imm	.142	0.175***	0.234**	0.083	0.194
multicult	.014	0.025	0.083**	0.041*	0.184***
take_jobs	-.079*	-0.051	-0.031	0.032	-0.112
more_export	-.017	0.061**	-0.017	0.027	-0.039
more_prod	-.024	0.003	-0.055	0.039	0.134*
leave_soon	.004	-0.057*	0.003	0.027	-0.005
hard_working	-.062	-0.068*	0.012	0.038**	-0.181***
less_pay	.002	-0.031	0.084***	0.024	-0.049
language	-.004	0.011	-0.007	0.030	-0.019
confusion	-.003	0.054*	-0.078**	0.031	-0.014
train_cost	.051	0.022	0.042	0.028**	0.101
less_familiar	.082*	0.077**	-0.045	0.032	-0.067*
unreliable	.001	-0.017	-0.007	0.034	-0.057
PEI	.529***	0.170**	0.278***	0.079	1.141***
NB	.223*	0.108	0.186**	0.073***	0.276*
NS	.387***	0.096	0.173**	0.072	0.462***
NL (reference)					
Medium	.203	0.177***	0.161**	0.063	-0.045
large	.227	0.086	0.327***	0.095	-0.621***
small (reference)					
firm_age	-.002	-0.002	-0.004***	0.001	0.000
manufacture	.429	0.044	0.183	0.186**	0.300
trade	.167	-0.092	-0.010	0.160	0.243
transport	.569**	0.115	0.158	0.220	1.044***
construction	.098	-0.309*	-0.132	0.171	0.551**
professional	.126	-0.140	0.106	0.160	0.082
accom_food	.206	-0.007	-0.123	0.171	0.247
other_serve	.309	0.075	0.187	0.189	0.102
primary (reference)					
rural	.149	-0.003	-0.001	0.063	-0.023
urban (reference)					
_cons	1.796***	2.442***	2.012***	0.246	2.710***

* = statistically significant at the 0.10 level
** = statistically significant at the 0.05 level
*** = statistically significant at the 0.01 level

Appendix C. Alternative Regressions Specifications

Appendix C Table 1: OLS Regression Models (Regular Standard Errors, productivity variable incl., squared term of firm age excl.)

Variable	rev_last3 (n =364)	rev_next3 (n = 368)	emp_last3 (n = 455)	emp_next3 (n = 457)	prov_econ_next3 (n = 454)
owner_imm	0.134	0.198**	0.205**	0.085	0.288*
Multicult	0.018	0.041	0.075**	0.061*	0.148**
take_jobs	-0.085*	-0.018	-0.026	0.013	-0.081
more_export	-0.041	0.047*	0.017	0.040*	-0.017
more_prod	0.020	0.010	-0.035	0.045	0.102
leave_soon	0.002	-0.034	-0.008	-0.043*	-0.002
hard_working	-0.083	-0.048	-0.019	-0.073**	-0.160**
less_pay	-0.015	-0.034	0.072***	-0.020	-0.050
Language	-0.019	-0.000	0.005	0.004	0.000
Confusion	0.001	0.054*	-0.057*	-0.012	0.048
train_cost	0.024	0.023	0.015	0.055**	0.071
less_familiar	0.063	0.038	-0.035	0.014	-0.082
Unreliable	0.007	-0.022	0.020	-0.011	-0.112**
PEI	0.567***	0.152*	0.304***	0.150*	1.093***
NB	0.252**	0.140*	0.205**	0.222*	0.260**
NS	0.403***	0.113*	0.184**	0.021	0.497***
NL (reference)					
Medium	0.172*	0.132**	0.119*	0.090	0.024
Large	0.212	0.041	0.300***	0.048	-0.455***
small (reference)					
firm_age	-0.003*	-0.002	-0.004***	-0.001	-0.002
Manufacture	0.306	0.037	0.247	0.407**	0.253
Trade	0.008	-0.122	-0.027	0.146	0.161
Transport	0.485	0.038	0.243	0.358*	0.750*
Construction	-0.089	-0.345*	-0.162	0.165	0.292
Professional	0.047	-0.164	0.172	0.202	-0.011
accom_food	0.015	-0.021	-0.093	0.188	0.039
other_serve	0.147	-0.012	0.206	0.161	0.101
primary (reference)					
Rural	0.179**	-0.001	0.014	-0.055	0.046
urban (reference)					
_cons	2.151***	2.412***	1.912***	1.868***	2.864***

* = statistically significant at the 0.10 level
** = statistically significant at the 0.05 level
*** = statistically significant at the 0.01 level

Appendix C Table 2: OLS Regression Models with Heteroskedasticity-consistent Standard Errors (productivity variable incl., squared term of firm age excl.)

Variable	rev_last3 (n =364)	rev_next3 (n = 368)	emp_last3 (n = 455)	emp_next3 (n = 457)	prov_econ_next3 (n = 454)
owner_imm	0.134	0.198***	0.205**	0.085	0.288*
multicult	0.018	0.041	0.075**	0.061*	0.148**
take_jobs	-0.085**	-0.018	-0.026	0.013	-0.081
more_export	-0.041	0.047*	0.017	0.040	-0.017
more_prod	0.020	0.010	-0.035	0.045	0.102
leave_soon	0.002	-0.034	-0.008	-0.043*	-0.002
hard_working	-0.083*	-0.048	-0.019	-0.073**	-0.160**
less_pay	-0.015	-0.034	0.072***	-0.020	-0.050
language	-0.019	0.000	0.005	0.004	0.000
confusion	0.001	0.054*	-0.057*	-0.012	0.048
train_cost	0.024	0.023	0.015	0.055**	0.071
less_familiar	0.063	0.038	-0.035	0.014	-0.082
unreliable	0.007	-0.022	0.020	-0.011	-0.112*
PEI	0.567***	0.152**	0.304***	0.150*	1.093***
NB	0.252**	0.140*	0.205**	0.222***	0.260**
NS	0.403***	0.113	0.184**	0.021	0.497***
NL (reference)					
Medium	0.172*	0.132**	0.119*	0.090	0.024
large	0.212	0.041	0.300***	0.048	-0.455***
small (reference)					
firm_age	-0.003*	-0.002	-0.004***	-0.001	-0.002
manufacture	0.306	0.037	0.247	0.407**	0.253
trade	0.008	-0.122	-0.027	0.146	0.161
transport	0.485**	0.038	0.243	0.358	0.750**
construction	-0.089	-0.345**	-0.162	0.165	0.292
professional	0.047	-0.164	0.172	0.202	-0.011
accom_food	0.015	-0.021	-0.093	0.188	0.039
other_serve	0.147	-0.012	0.206	0.161	0.101
primary (reference)					
rural	0.179**	-0.001	0.014	-0.055	0.046
urban (reference)					
_cons	2.151***	2.412***	1.912***	1.868***	2.864***

* = statistically significant at the 0.10 level
** = statistically significant at the 0.05 level
*** = statistically significant at the 0.01 level

References

Andrevski, G., Richard, O. C., Shaw, J. D., and Ferrier, W. J. (2014). Racial diversity and firm performance: The mediating role of competitive intensity. *Journal of Management* [Online], 40(3), pp. 820–844. Available from: Sage Journals Perpetual [Accessed April 27, 2024].

Åslund, O., Hensvik, L., and Skans, O. N. (2014). Seeking similarity: How immigrants and natives manage in the labor market. *Journal of Labor Economics* [Online], 32, pp. 405–441. Available from: https://doi.org/10.1086/674985 [accessed April 25, 2024].

Atlantic Canada Opportunities Agency (ACOA). (2020). *Atlantic Canada's economic opportunities and challenges*. Government of Canada. Retrieved from https://www.canada.ca/en/atlantic-canada-opportunities.html.

Awaworyi Churchill, S. and Valenzuela, M. R. (2019). Determinants of firm performance: Does ethnic diversity matter? *Empirical Economics* [Online], 57(6), pp. 2079–2105. Available from: EBSCOhost Business Source Complete [accessed April 27, 2024].

Bank of Canada. (2024). *The productivity problem*. Available from: https://www.bankofcanada.ca/2024/03/productivity-problem/ [Accessed November 28, 2024].

Borjas, G. J., Kauppinen, I., and Poutvaara, P. (2019). Self-selection of emigrants: Theory and evidence on stochastic dominance in observable and unobservable characteristics. *The Economic journal (London)* [Online], 129(617), pp. 143–171. Available from: Oxford University Press Journals Current [accessed April 25, 2024].

Bousmah, I. (2021). *Entrepreneurship in rural Canada: Necessity or opportunity driven?* Innovation, Science and Economic Development Canada. Available from: https://ised-isde.canada.ca/site/sme-research-statistics/sites/default/files/attachments/2022/HTML_Entrepreneurship-rural-Canada3.pdf [accessed April 25, 2024].

Cukier, W. & Stolarick, K. (2019). Immigrant Labour Market Outcomes and Skills Differences in Canada. Toronto: Higher Education Quality Council of Ontario.

Dabić, M., Vlačić, B., Paul, J., Dana, L. P., Sahasranamam, S., and Glinka, B. (2020). Immigrant entrepreneurship: A review and research agenda. *Journal of Business Research* [Online], 113, pp. 25-38. Available from: Elsevier SD Complete Freedom Collection [accessed April 25, 2024].

Fang, T., Samnani, A.-K., Novicevic, M. M., & Bing, M. N. (2013). Liability-of-foreignness effects on job success of immigrant job seekers. *Journal of World Business : JWB*, *48*(1), 98–109. https://doi.org/10.1016/j.jwb.2012.06.010.

Fang, T., Xiao, N., Zhu, J., and Hartley, J. (2022). Employer attitudes and the hiring of immigrants and international students: Evidence from a survey of employers in Atlantic Canada. *Canadian Public Policy* [Online], 48 (S1), pp. 17–37. Available from JSTOR Arts and Sciences VII [accessed May, 26 2024].

Garcia-Castro, R., Ariño, M. A., & Canela, M. A. (2010). Does Social Performance Really Lead to Financial Performance? Accounting for Endogeneity. *Journal of Business Ethics*, *92*(1), 107–126. https://doi.org/10.1007/s10551-009-0143-8

Georgakakis, D., Greve, P., and Ruigrok, W. (2021). Differences that matter: Hiring modes and demographic (dis)similarity in executive selection. *International Journal of Human Resource Management* [Online], 32(3), pp. 650–679. Available from EBSCOhost Business Source Complete [accessed April 27, 2024].

Giuliano, L., Levin, D. I., and Leonard, J. (2009). Manager race and the race of new hires. *Journal of Labor Economics* [Online], 27(4), pp. 589–631. Available from: https://www.journals.uchicago.edu/doi/10.1086/605946#:~:text=Our%20results%20suggest%20that%20manager,the%20workplace%20and%20its%20location [accessed April 25, 2024].

Green, D. A., Liu, H., Ostrovsky, Y., & Picot, G. (2023). *Are immigrants particularly entrepreneurial? Policy lessons from a selective immigration system*. University of British Columbia Working Paper. Available from: https://economics.ubc.ca/wp-content/uploads/sites/38/2023/10/immigrant-entrepreneurial-entry-hk2.pdf [Accessed November 28, 2024].

Gu, W., Hou, F., and Picot, G. (2020). Immigration and firm productivity: Evidence from the Canadian Employer-Employee Dynamics Database. *Journal of Productivity Analysis* [Online], 54(2/3), pp. 121–137. Available from EBSCOhost Business Source Complete [accessed April 27, 2024].

Herdman, A. O., & McMillan-Capehart, A. (2010). Establishing a Diversity Program is Not Enough: Exploring the Determinants of Diversity Climate. *Journal of Business and Psychology*, *25*(1), 39–53. https://doi.org/10.1007/s10869-009-9133-1prom.

Hoogendoorn, S. M. and van Praag, M. C. (2012). Ethnic diversity and team performance: A field experiment. *IZA Discussion Papers No. 6731*. Available from: https://docs.iza.org/dp6731.pdf [accessed April 27, 2024].

Hou, F., Crossman, E., & Picot, G. (2020). Two-step immigration selection: Recent trends in immigrant labour market outcomes. Statistics Canada: *Economic Insights*, no. 113. Available from https://www150.statcan.gc.ca/n1/pub/11-626-x/11-626-x2020011-eng.htm [Accessed November 27, 2024].

Hou, F. (2024). The improvement in the labour market outcomes of recent immigrants since the mid-2010s. Statistics Canada: *Economic and Social Reports*. Available from https://www150.statcan.gc.ca/n1/pub/36-28-0001/2024002/article/00004-eng.htm#fn [Accessed November 27, 2024].

Hunt, J. and Gauthier-Loiselle, M. (2010). How much does immigration boost innovation? *American Economic Journal. Macroeconomics* [Online], 2(2), pp. 31–56. Available from JSTOR Arts and Sciences VI [accessed April 28, 2024].

Hunt, V., Prince, S., Dixon-Fyle, S., and Dolan, K. (2020). *Diversity wins: How inclusion matters*. McKinsey & Company. Available at: https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Diversity%20and%20Inclusion/Diversity%20wins%20How%20inclusion%20matters/Diversity-wins-How-inclusion-matters-vF.pdf [Accessed April 18, 2024].

Kalantaridis, C. and Bika, Z. (2011). Entrepreneurial origin and the configuration of innovation in rural areas: The case of Cumbria, North West England. *Environment and Planning A: Economy and Space* [Online], 43(4), pp. 866-884. Available from: https://doi.org/10.1068/a43341 [accessed April 27, 2024].

Lam, L. and Triandafyllidou, A. (2022). Road to nowhere or to somewhere? Migrant pathways in platform work in Canada. *Environment and planning. A*. [Online], pp. 1-20. Available from: SAGE Journals Premier [accessed April 25, 2024].

Leung, K. and Wang, J. (2015). Social processes and team creativity in multicultural teams: A socio-technical framework. *Journal of Organizational Behavior* [Online], 36(7), pp.

1008–1025. Available from: EBSCOhost Business Source Complete [accessed April 27, 2024].

Li, P. S. (2001). Immigrants' propensity to self-employment: Evidence from Canada." *The International Migration Review* [Online], 35(4), pp. 1106–28. Available from ProQuest [accessed April 25, 2024].

Li, H., Awotoye, Y., and Singh, R. P. (2023). Immigrant entrepreneurs in the U.S.: Firm performance based on entrepreneurial competencies. *Economies* [Online], 11(10), pp. 242-. Available from: ProQuest Central [accessed April 18, 2024].

Lo, L. and Teixeira, C. (2015). Immigrants doing business in a mid-sized Canadian city: Challenges, opportunities, and local strategies in Kelowna, British Columbia. *Growth and Change* [Online], 46(4), pp. 631–653. Available from: https://doi.org/10.1111/grow.12103 [accessed April 25, 2024].

Lu, Y., & Hou, F. (2020). Immigration system, labor market structures, and overeducation of high-skilled immigrants in the United States and Canada. *The International Migration Review*, *54*(4), 1072–1103. https://doi.org/10.1177/0197918319901263.

Ng, E. S. W. and Tung, R. L. (1998). Ethno-cultural diversity and organizational effectiveness: A field study. *International Journal of Human Resource Management* [Online], 9(6), pp. 980–995. Available from: EBSCOhost Business Source Complete [Accessed April 18, 2024].

Ng, E. S. W. and Burke, R. J. (2005). Person-organization fit and the war for talent: Does diversity management make a difference? *International journal of human resource management* [Online], 16(7), pp. 1195–1210. Available from: EBSCOhost Business Source Complete [accessed April 18, 2024].

Oreopoulos, P. (2011). Why do skilled immigrants struggle in the labor market? A field experiment with thirteen thousand resumes. *American Economic Journal: Economic Policy* [Online], 3(4), pp. 148-171. Available from: https://www.aeaweb.org/articles?id=10.1257/pol.3.4.148 [accessed April 25, 2024].

Ostrovsky, Y. and Picot, G. (2020). Innovation in immigrant-owned firms in Canada. *Analytical Studies Branch Research Papers Series, Statistics Canada* [Online]. Available from: https://www150.statcan.gc.ca/n1/pub/11f0019m/11f0019m2020009-eng.htm [accessed April 21, 2024].

Picot, G. and Ostrovsky, Y. (2021). Immigrant entrepreneurs in Canada: Highlights from recent studies. *Economic and Social Reports, Statistics Canada* [Online], 1(9), pp. 1-6. Available from: https://www150.statcan.gc.ca/n1/pub/36-28-0001/2021009/article/00001-eng.htm [Accessed April 18, 2024].

Ponomareva, Y., Uman, T., Bodolica, V., and Wennberg, K. (2022) Cultural diversity in top management teams: Review and agenda for future research. *Journal of World Business : JWB* [Online], 57(4), pp. 101328-. Available from: Elsevier SD Complete Freedom Collection [accessed April 24, 2024].

Pottie-Sherman, Y., & Lynch, N. (2019). Gaming on the edge: Mobile labour and global talent in Atlantic Canada's video game industry. *The Canadian Geographer*, *63*(3), 425–439. https://doi.org/10.1111/cag.12522.

Quillian, L. and Midtbøen, A. H. (2021). Comparative perspectives on racial discrimination in hiring: The rise of field experiments. *Annual Review of Sociology* [Online], 47(1), pp. 391–415. Available from: Annual Reviews Sciences Collection [accessed April 25, 2024].

Richard, O. C., Barnett, T., Dwyer, S., and Chadwick, K. (2004). Cultural diversity in management, firm performance, and the moderating role of entrepreneurial orientation dimensions. *Academy of Management Journal* [Online], 47(2), pp. 255–266. Available from: EBSCOhost Business Source Complete [accessed April 27, 2024].

Robson, W. B. P., & Bafale, M. (2024). Underequipped: How weak capital investment hurts Canadian prosperity and what to do about it. *C.D. Howe Institute Commentary No. 666*. Available from: https://www.cdhowe.org/sites/default/files/2024-09/For%20advance%20release%20Commentary_666.pdf [Accessed November 28, 2024].

Serebrin, J. (2024). *Statistics Canada says population growth rate in 2023 was highest since 1957*. CBC News. Available from: https://www.cbc.ca/news/politics/population-growth-canada-2023-1.7157233 [accessed April 24, 2024].

Statistics Canada. (2017). Visible minority (visible minority), both sexes, age (total), Canada, provinces and territories, 2016 Census – 25% Sample data. Available from: https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hlt-fst/imm/Table.cfm?Lang=E&T=41&Geo=00&SP=1&vismin=2&age=1&sex=1 [Accessed November 28, 2024].

Statistics Canada. (2019). *Urban and rural areas - 'Urban' versus 'rural' variant*. Available from: https://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=113331&CVD=113332&CLV=0&MLV=2&D=1&adm=0&dis=0 [accessed April 29, 2024].

Statistics Canada. (2022a). *Map 4: The populations of the Atlantic provinces are aging quickly*. https://www150.statcan.gc.ca/n1/daily-quotidien/220427/mc-a004-eng.htm

Statistics Canada. (2022b). *Definitions and Concepts used in Business Register*. Available from: https://www.statcan.gc.ca/en/statistical-programs/document/1105_D16_T9_V1 [Accessed November 27, 2024].

Statistics Canada. (2024). *Employment for all employees by enterprise size, annual.* Available from: https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410021501 [accessed September 3, 2024].

van Huystee, M. (2016). *Interprovincial mobility: Retention rates and net inflow rates 2008-2013 landings*. Immigration, Refugees and Citizenship Canada. Available from: https://publications.gc.ca/collections/collection_2017/ircc/Ci4-171-2017-eng.pdf [accessed April 28, 2024].

Van Knippenberg, D., Van Ginkel, W. P., & Homan, A. C. (2013). Diversity mindsets and the performance of diverse teams. *Organizational Behavior and Human Decision Processes*, *121*(2), 183-193.

Van Knippenberg, D., & van Ginkel, W. P. (2022). A diversity mindset perspective on inclusive leadership. *Group & Organization Management, 47*(4), 779-797.