



A COMPARISON OF THE PERFORMANCE OF MAJORITY FEMALE-OWNED AND MAJORITY MALE-OWNED SMALL AND MEDIUM-SIZED ENTERPRISES

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ABSTRACT

In this study, for the first time, econometric techniques are applied to data from Statistics Canada's *Survey on Financing and Growth of Small and Medium Enterprises*, 2011 and 2014, as well as administrative data from Statistics Canada's Linkable File Environment, to examine the impact of majority gender ownership on the following measures of enterprise performance: sales per employee, profit per employee, employment, innovation, ratio of authorized to requested debt financing and interest rate on debt financing. These techniques permit comparing the performance of enterprises based on gender, while accounting for business sector; enterprise age, size and export activity; and region of operation, as well as some business owner characteristics.

Results from the present paper show that gender affected all measures of enterprise performance in 2011, whereas only sales per employee and employment were affected in 2014. Profit per employee was less for majority female-owned small and medium-sized enterprises (SMEs) than for majority male-owned SMEs in 2011, but there was no statistical difference between the two in 2014.

On the whole, majority female-owned SMEs were more likely to be innovative than majority male-owned SMEs in 2011, while there was no difference between the two in 2014. Interestingly, majority female-owned SMEs had a higher probability of innovating in manufacturing, accommodation and food services, and retail trade in 2014.

The ratio of authorized to requested debt financing was lower for majority female-owned SMEs than for majority male-owned SMEs and the interest rate on debt financing for majority female-owned SMEs was higher than that for majority male-owned SMEs in 2011. This suggests that financial institutions considered debt financing requests for majority female-owned SMEs to be more risky than for majority male-owned SMEs. In 2014, these differences were no longer statistically significant.

Overall, a possible conclusion from this study is that when controlling for key factors, the assessed risk of debt financing requests by majority female-owned SMEs was comparable to that of majority male-owned SMEs in 2014. Indeed, the ratio of authorized to requested debt financing and the interest rate on debt financing no longer presented statistically significant differences between the two categories of SMEs.

1. INTRODUCTION

Entrepreneurship is one of the key elements that contributes to economic growth through job creation, innovation and productivity growth. Entrepreneurs create new jobs; innovate by introducing new technologies, products and services and open up new market opportunities (Audretsch, 2002; Kritikos, 2014); and boost productivity by competing in the market.

Many studies have reported that majority female-owned enterprises lag majority male-owned enterprises in terms of sales, profits, employment, innovation, loan approvals, exports, sales growth and employment growth (Industry Canada, 2015). This lower performance is attributed to the industrial sectors within which female entrepreneurs operate, their personal characteristics and preferences, their management strategies and institutional constraints. Female entrepreneurs are more likely to operate in retail and service industries (Coleman, 2002; Fairlie and Robb, 2009). They also spend fewer hours working in their businesses and have less prior work experience (Fairlie and Robb, 2009). Moreover, they are considered to be more averse to risk (Nissan et al., 2012; Coleman and Robb, 2009) and they face financial constraints with regard to bank loans, credit and interest rates charged (Cavalluzzo et al., 2002; Muravyev et al., 2009). There are also studies, however, that show no difference in performance between majority female-owned and majority male-owned enterprises (Robb and Wolken, 2002; Orser et al., 2006).

Are female entrepreneurs in Canada at a disadvantage in terms of enterprise performance and access to financial resources? Is enterprise performance gender based in Canada? This study attempts to answer these questions by examining the impact of majority gender ownership on the following measures of enterprise performance: sales per employee, profit per employee, employment, innovation, ratio of authorized to requested debt financing¹ and interest rate on debt financing. Understanding gender impact on small and medium-sized enterprise (SME) performance is important for two reasons: (1) SMEs contribute to the dynamic of the economy in terms of employment, innovation (Watson, 2006) and productivity; and (2) identification of the determinants of SME performance is crucial to financial providers, business advisers and policy-makers to make policy and business decisions.

This paper offers various contributions to the literature. First, it addresses the scale adjustment issue of the measure of performance raised by Robb and Watson (2012). In their opinion, the lag in performance of majority female-owned enterprises compared with majority male-owned enterprises may be explained through the use of indicators of performance that are not adjusted for scale or size of firm and/or the owner's aversion to risk. Also, this study uses sales per employee and profit per employee instead of sales and profits as indicators of performance. To the best of our knowledge, there is no single paper that has studied the impact of gender on sales per employee and profit per employee

1. Debt financing can be non-residential mortgages, term loans, lines of credit or business credit cards.

in the Canadian context. Second, this research is also in line with that of Muravyev et al. (2009) as it raises the question of access to bank loans by focusing on the ratio of authorized to requested debt financing and the interest rate charged on debt financing. Third, this paper goes deeper into the analysis by studying the impact of majority gender ownership by industrial sector and by comparing the results of Statistics Canada's *Survey on Financing and Growth of Small and Medium Enterprises, 2011* and *Survey on Financing and Growth of Small and Medium Enterprises, 2014*, as well as administrative data from Statistics Canada's Linkable File Environment.

The remainder of this paper unfolds as follows: Section 2 provides a brief empirical literature review; Section 3 describes the data and the descriptive statistics; Section 4 presents the econometric model and the estimation results; and Section 5 presents the conclusions.

2. LITERATURE REVIEW

In this section, we briefly summarize the literature on gender impact on firm performance. Gender impact on business performance is mixed. One can divide the literature into two lines of research—studies that provide evidence of performance differences between majority female-owned and majority male-owned businesses (Verheul and Thurik, 2001; Watson, 2006; Muravyev et al., 2009; Coleman and Robb, 2009, 2012; Koellinger, 2008; Sanditov and Verspagen, 2011) and studies suggesting there are no performance differences between majority female-owned and majority male-owned businesses (Robb and Wolken, 2002; Orser et al., 2006; Johnsen and McMahon, 2005; Kariv, 2010; Coleman and Robb, 2012). The literature covers performance indicators such as sales, profits, employment, innovation, loan approvals, exports, sales growth and employment growth. A large number of studies reporting lower performance of majority female-owned businesses tend to be based upon descriptive analyses (Brush, 1992), which may be explained by the absence of data to conduct more analytical research. The current study is based upon a large and rich micro data set that includes both owners' characteristics and enterprises' characteristics.

A growing body of studies in the first line of research shows that the performance of majority female-owned businesses lags that of majority male-owned businesses because they are concentrated in retail sales and services (Kalleberg and Leicht, 1991; Fairlie and Robb, 2009). These sectors are characterized by small initial investments (Nissan et al., 2012) and lower growth compared with the manufacturing, construction and mining sectors. Coleman and Robb (2012), based upon the *Kauffman Firm Survey*, reveal that majority female-owned start-ups are behind majority male-owned start-ups in sales. Sabarwal and Terrell (2008), in their study of East European and Central Asian majority female-owned and majority male-owned enterprises, found that majority female-owned enterprises had significantly

lower sales revenues and lower total factor productivity than majority male-owned enterprises. However, Watson (2006) found that majority female-owned enterprises were more likely to have higher income growth than majority male-owned enterprises based upon business growth and performance surveys conducted by the Australian Bureau of Statistics. Other studies shed light on gender impact on sources and accessibility of financial resources. In their investigation on Dutch start-ups, Verheul and Thurik (2001) found that majority female-owned start-ups had smaller total amounts of capital, smaller proportions of equity and higher proportions of bank loans. Similarly, Watson (2006) showed that majority female-owned enterprises were less likely to have a higher debt-to-asset ratio than majority male-owned enterprises, suggesting that majority female-owned enterprises rely less on external funding. A study by Robb and Wolken (2002), using the Federal Reserve Board's 1998 *Survey of Small Business Finances*, found that majority female-owned businesses were more likely to borrow using credit cards than majority male-owned businesses. Using Statistics Canada's 2002 *Survey on Financing of Small and Medium Enterprises*, Orser et al. (2006) found that gender affected the likelihood of seeking equity financing, with majority female-owned enterprises being less likely to apply for external equity than majority male-owned enterprises. Coleman and Robb (2009) revealed that majority female-owned businesses were less likely to use debt and equity financing than majority male-owned businesses. They also found that women start their businesses with significantly lower levels of financial capital (debt and equity investment) than men. Furthermore, Coleman and Robb (2012) found that women were more likely to turn to owner financing, and less to external equity, than men. Based upon the World Bank's 2005 *Business Environment and Enterprise Performance Survey*, covering 34 countries, Muravyev et al. (2009) investigated whether majority female-owned businesses were affected by discrimination in terms of their access to bank loans compared with majority male-owned businesses. The authors found that majority female-owned businesses were less likely to have their bank loans approved than majority male-owned businesses. In addition, majority female-owned businesses were charged higher interest rates than majority male-owned businesses when loans were approved. Some studies suggest that gender affects the probability of being an innovative entrepreneur. For example, Koellinger (2008), using data from 30 countries from *Global Entrepreneurship Monitor* surveys, showed that women entrepreneurs have a higher probability of being innovative than men. Sanditov and Verspagen (2011), on the other hand, found that being male increased the probability of being an innovative entrepreneur.

There are also a few studies that did not find any gender-related differences in performance indicators. Robb and Wolken (2002) found that gender does not affect the probability of borrowing using trade credit. Based upon Australia's *Business Longitudinal Survey*, Johnsen and McMahon (2005) showed that gender does not affect an SME's return on owner equity, employment growth, sales growth and asset growth return on total assets. Similarly, Kariv (2010) revealed that gender has no impact on business

performance, whereas management strategies affect business performance. Coleman and Robb (2012) also found no gender impact on assets, profits and employment. Orser et al. (2006) found that gender does not affect the probability of applying for debt, lease or supplier financing, which was also stressed by Sabarwal and Terrell (2008). In addition, Sabarwal and Terrell's (2008) analysis showed no statistical difference in profits between majority female-owned and majority male-owned enterprises. Robb and Watson (2012) used a longitudinal database of new ventures within the United States to measure gender impact on four-year closure rates, return on assets and the Sharpe ratio. Their results showed no significant difference between majority female-owned and majority male-owned new ventures. The current paper re-examines both lines of research by exploring a large and rich micro data set in the Canadian context.

3. DATA AND DESCRIPTIVE STATISTICS

3.1 DATA SOURCES

This study is based on the *Survey on Financing and Growth of Small and Medium Enterprises, 2011* and *Survey on Financing and Growth of Small and Medium Enterprises, 2014*, as well as administrative data from the Linkable File Environment. The target population of the *Survey on Financing and Growth of Small and Medium Enterprises* is derived from Statistics Canada's Business Register. It excludes enterprises with no employees or 500 or more employees, enterprises with less than \$30,000 gross revenue, non-profit organizations, joint ventures, government agencies and enterprises in specific industrial sectors that are not of interest and identified by the North American Industry Classification System (NAICS).² The survey is conducted by Statistics Canada on behalf of a consortium led by Innovation, Science and Economic Development Canada. The objective of the survey is to collect general characteristics on small and medium-sized businesses and their financing activities. One of the advantages of the survey is that it provides information about the characteristics of both the SME and the majority owner or general manager. The 2011 and 2014 surveys resulted in 9,977 and 10,397 completed questionnaires respectively.

SME performance is measured by sales per employee, profit per employee, employment, innovation, ratio of authorized to requested debt financing and interest rate on debt financing. Sales and profit data are taken from the Linkable File Environment, while employment, innovation, ratio of authorized to requested debt financing and interest rate on debt financing data are taken from the *Survey on Financing and Growth of Small and Medium Enterprises*. Characteristics of both the SME and the majority owner or general manager are also taken from the *Survey on Financing and Growth of*

2. The following two-digit and four-digit NAICS industrial sector codes are excluded: 22, 52, 55, 61, 91, 5321, 5324, 6214, 6215, 6219, 6221, 6222, 6223 and 6242.

Small and Medium Enterprises. These data are used to explain the measures of performance and are presented in the econometric model. The key variable of interest is ownership, which identifies majority female-owned SMEs, majority male-owned SMEs and SMEs equally owned by males and females. All estimates reported in this study use the sample weights provided by the *Survey on Financing and Growth of Small and Medium Enterprises*. A detailed description of all variables is provided in the appendix.

3.2 DESCRIPTIVE STATISTICS ANALYSIS

Table 1 shows the distribution of SME ownership by gender. The proportion of majority female-owned SMEs is lower than that of majority male-owned and equally owned SMEs in both 2011 and 2014. This proportion remains almost the same during both periods at 15.5 percent in 2011 and 15.7 percent in 2014.

Table 1: SME ownership by gender, 2011 and 2014

Ownership	2011	2014
Majority male-owned (%)	66.3	64.6
Majority female-owned (%)	15.5	15.7
Equal ownership (%)	18.1	19.7
Number of SMEs	9,977	10,397

Sources: Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises*, 2011; and Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises*, 2014.

Six performance indicators are used to investigate the impact of majority gender ownership. Table 2 presents the distribution of the performance indicators by majority gender ownership. It reveals that average sales per employee increased for the three types of ownership from 2011 to 2014. The average sales per employee of majority female-owned SMEs was \$204,265 in 2014, up 15.9 percent from 2011.³ Majority female-owned SMEs had lower sales per employee than majority male-owned and equally owned SMEs during both periods. Similarly, the average profit per employee increased for all types of ownership from 2011 to 2014. On average, majority female-owned SMEs had lower profits per employee than majority male-owned SMEs during both periods. Profit per employee for majority female-owned SMEs increased by 27.5 percent between 2011 and 2014 compared with 16.9 percent for majority male-owned SMEs.⁴ There was a slight increase in the number of employees for all types of ownership from 2011 to 2014. Majority female-owned SMEs had fewer employees than majority male-owned and equally owned SMEs during both periods. These findings are consistent with previous research indicating that majority female-owned enterprises have lower sales and profits

3. This growth rate does not take into account the effects of inflation and represents nominal values.

4. These growth rates do not take into account the effects of inflation and represent nominal values.

and fewer employees than majority male-owned enterprises (Coleman and Robb, 2012; Sabarwal and Terrell, 2008; Bosma et al., 2004). Table 2 also shows that the proportion of SMEs that innovate increased for all types of ownership from 2011 to 2014. In 2011, majority female-owned SMEs engaged slightly more in innovative activities than majority male-owned and equally owned SMEs. In 2014, majority female-owned SMEs engaged slightly more in innovative activities than majority male-owned SMEs and less than equally owned SMEs. It is noteworthy that the proportions of majority female-owned and majority male-owned SMEs that engaged in innovative activities were approximately the same in 2014. Majority female-owned SMEs had a lower ratio of authorized to requested debt financing than majority male-owned and equally owned SMEs during the two periods. However, the ratio of authorized to requested debt financing for majority female-owned SMEs increased by 3.6 percent between 2011 and 2014, while the ratio for majority male-owned and equally owned SMEs decreased by 8.6 percent and 7.8 percent, respectively, from 2011 to 2014. The interest rate on debt financing increased for all types of ownership from 2011 to 2014. Majority female-owned SMEs had higher interest rates for debt financing than majority male-owned and equally owned SMEs during both periods. The gap between the interest rate for majority female-owned SMEs and majority male-owned SMEs narrowed in 2014. These findings are broadly consistent with the literature on financial constraints facing women entrepreneurs (Cavalluzzo et al., 2002; Muravyev et al., 2009). A detailed table of each performance metric (dependent variable) and control variables (owner characteristics and SME characteristics) is also presented in the appendix.

Table 2: Measures of performance by majority gender ownership, 2011 and 2014

Measures of Performance	2011				2014			
	Majority Male-Owned	Majority Female-Owned	Equal Ownership	Number of SMEs	Majority Male-Owned	Majority Female-Owned	Equal Ownership	Number of SMEs
Sales per employee (\$)	234,949	176,270	213,757	7,716	265,111	204,265	221,101	8,391
Profit per employee (\$)	92,369	79,817	90,674	8,259	108,009	101,760	97,822	8,938
Number of employees	11.3	7.2	8.2	9,977	12.4	8.2	10.1	10,397
Innovation (%)	34.9	36.9	36.2	9,977	38.7	39.0	40.2	10,397
Ratio of authorized to requested debt financing (%)	90.0	77.3	91.2	3,129	82.3	80.1	84.1	3,342
Interest rate on debt financing (%)	6.3	7.6	6.3	3,129	8.4	8.7	7.8	3,342

Sources: Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises*, 2011; Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises*, 2014; and Statistics Canada, Linkable File Environment.

4. ECONOMETRIC MODEL AND RESULTS

4.1 ECONOMETRIC MODEL

Multivariate analysis is used to assess whether or not there is a link between majority gender ownership and SMEs' indicators of performance. The basic econometric model used has the following form:

$$Y_i = \alpha + \beta \text{Ownership}_i + \gamma X_i + \varepsilon_i,$$

where Y_i represents one of the following indicators of performance of the SME i : sales per employee (sales/employee); profit per employee (profit/employee); employment (employment); dichotomous variable, which takes the value of one if the SME has innovated in at least one of the four categories of innovation (product innovation, process innovation, marketing innovation and organizational innovation) within the last three years and takes the value of zero otherwise (innovation); ratio of authorized to requested debt financing (financial approval rate) and interest rate on debt financing (interest rate). Ownership is a qualitative variable that identifies majority female-owned SMEs, majority male-owned SMEs, and SMEs equally owned by males and females; X_i is a vector of control variables that includes the characteristics of both the SME and the majority owner or general manager; and ε_i is an error term. Characteristics of the majority owner or general manager include age (age), level of education (education) and managerial experience (experience). Characteristics of the SME include age of the SME (age SME), size of the SME (size), a dummy variable for exporting (export), a dummy variable to control for the industrial sector's fixed effects (industry) and a dummy variable to control for the region's fixed effects (region). The model is estimated using ordinary least squares regression for continuous dependent variables (sales/employee, profit/employee, employment, financial approval rate, interest rate) and logit regression for the binary dependent variable (innovation). All computed standard errors are robust.

4.2 ECONOMETRIC RESULTS BY PERFORMANCE INDICATOR

This section presents empirical results when taking all industries into consideration for all dependent variables, as well as empirical results by industrial sector level for sales/employee, profit/employee, employment and innovation. Financial approval rate and interest rate are not covered because of the small number of observations related to those variables. Only marginal effects of the key variable of interest, i.e., ownership, are reported.

4.2.1 SALES PER EMPLOYEE

Table 3 shows the impact of majority gender ownership on sales per employee by taking all sectors into consideration and by industrial sector based upon the *Survey on Financing and Growth of Small and Medium Enterprises, 2011* and *Survey on Financing and Growth of Small and Medium Enterprises, 2014*. For all sectors combined, majority female-owned SMEs sold 20.9 percent less in 2011 and 18.4 percent less in 2014 than majority male-owned SMEs. This result is consistent with the findings of Coleman and Robb (2012) regarding lower performance of majority female-owned enterprises in terms of sales. By industrial sector, sales per employee for majority female-owned SMEs were lower in the primary sector (-49.8 percent); construction (-44.1 percent); professional, scientific and technical services (-34.6 percent); and other services (-37.0 percent) in 2011 than for majority male-owned SMEs. In 2014, sales per employee for majority female-owned SMEs were lower in the primary sector (-63.7 percent), construction (-21.2 percent), manufacturing (-14.3 percent), retail trade (-28.3 percent), wholesale trade (-25.8 percent) and other services (-37.9 percent) than for majority male-owned SMEs.

Table 3: Effect of majority gender ownership on sales per employee, 2011 and 2014

Industrial Sector	LN (sales/employee) Ordinary Least Squares Regression					
	2011			2014		
	Majority Male-Owned (omitted)		Number of SMEs	Majority Male-Owned (omitted)		Number of SMEs
	Majority Female-Owned	Equal Ownership		Majority Female-Owned	Equal Ownership	
All sectors	-0.209*** (0.047)	-0.098** (0.043)	7,716	-0.184*** (0.037)	-0.157*** (0.033)	8,391
Primary	-0.498** (0.228)	0.468 (0.376)	343	-0.637*** (0.191)	-0.239 (0.182)	327
Construction	-0.441*** (0.124)	-0.037 (0.150)	720	-0.212* (0.126)	-0.155** (0.061)	1,138
Manufacturing	-0.151 (0.117)	-0.219** (0.091)	1,070	-0.143* (0.083)	0.003 (0.088)	903
Professional, scientific and technical services	-0.346** (0.143)	-0.051 (0.091)	1,030	-0.102 (0.110)	-0.362*** (0.123)	863
Accommodation and food services	-0.126 (0.113)	-0.111 (0.113)	374	-0.012 (0.067)	-0.029 (0.062)	834
Retail trade	-0.094 (0.122)	-0.013 (0.115)	812	-0.283*** (0.059)	-0.178* (0.103)	1,134
Wholesale trade	-0.034 (0.214)	0.026 (0.109)	1,302	-0.258*** (0.100)	-0.012 (0.150)	821
Transportation and warehousing	-0.052 (0.243)	0.027 (0.118)	841	0.277 (0.226)	-0.091 (0.115)	681
Other services	-0.370*** (0.077)	0.047 (0.107)	537	-0.379*** (0.071)	0.006 (0.093)	684
Other sectors⁵	-0.065 (0.124)	-0.251 (0.131)	687	-0.136 (0.112)	-0.243*** (0.078)	1,006

Notes: Standard errors are in parentheses. Coefficients significant at 0.01***, 0.05** and 0.10.*

Sources: Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises*, 2011; Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises*, 2014; and Statistics Canada, Linkable File Environment.

4.2.2 PROFIT PER EMPLOYEE

Table 4 presents profit per employee. Overall, profit per employee for majority female-owned SMEs was \$12,372 less than for majority male-owned SMEs in 2011 and there was no statistical difference in profit per employee between majority female-owned and majority male-owned SMEs in 2014.⁶ The 2011 result is consistent with findings of many related studies in the literature. For example, Bosma et al. (2004) found that male business founders in the Netherlands performed better in terms of profits (with no scale adjustment) than female business founders. Coleman and Robb (2012) and Sabarwal and Terrell (2008),

5. The following industrial sectors (NAICS) are included: Information and Cultural Industries (51), Real Estate and Rental and Leasing (53), Administrative and Support, Waste Management and Remediation Services (56), Health Care and Social Assistance (62), and Arts, Entertainment and Recreation (71).

6. It should be noted that the results obtained using profits with no size adjustment as the dependent variable reveal that majority female-owned SMEs lagged majority male-owned SMEs in terms of profit in both 2011 and 2014.

on the other hand, found that gender has no effect on profits. Results by industrial sector indicate that profit per employee for majority female-owned SMEs was lower in construction (-\$28,133), manufacturing (-\$26,868) and other services (-\$24,430) in 2011 than for majority male-owned SMEs. In 2014, profit per employee for majority female-owned SMEs was lower in the primary sector (-\$66,666), retail trade (-\$22,371) and wholesale trade (-\$44,716) than for majority male-owned SMEs.

Table 4: Effect of majority gender ownership on profit per employee, 2011 and 2014

Industrial Sector	Profit/employee Ordinary Least Squares Regression					
	2011			2014		
	Majority Male-Owned (omitted)		Number of SMEs	Majority Male-Owned (omitted)		Number of SMEs
	Majority Female-Owned	Equal Ownership		Majority Female-Owned	Equal Ownership	
All sectors	-12,371.8** (6,205.4)	-5,299.5 (5,610.6)	8,259	-13,469.4 (8,860.0)	-15,463.0*** (5,961.1)	8,938
Primary	-23,672.7 (24,893.2)	14,473.5 (21,363.0)	646	-66,665.6*** (22,435.8)	-96,753.2*** (33,153.0)	672
Construction	-28,133.0* (14,839.0)	-4,372.3 (16,009.2)	733	41,438.3 (34,998.4)	-8,213.4 (6,918.5)	1,155
Manufacturing	-26,867.7*** (9,243.8)	-22,175.8 (16,190.1)	1,088	9,074.2 (17,042.0)	6,015.0 (9,982.2)	916
Professional, scientific and technical services	-31,435.0 (27,685.6)	-21,274.0 (19,062.3)	1,080	10,149.4 (17,127.5)	-7,707.2 (16,668.1)	900
Accommodation and food services	-3,215.1 (12,832.9)	-9,989.5 (12,076.5)	379	695.7 (6,382.7)	1,623.1 (6,652.7)	839
Retail trade	-3,941.7 (6,273.4)	-2,386.2 (5,931.5)	820	-22,371.0** (11,171.0)	-15,349.4** (6,126.1)	1,144
Wholesale trade	-15,501.5 (17,243.0)	14,582.4 (28,698.4)	1,360	-44,715.8*** (14,242.3)	44,704.1 (48,438.8)	841
Transportation and warehousing	-16,473.2 (19,801.7)	10,030.7 (21,711.0)	856	1,235.4 (30,290.6)	-20,492.2 (23,504.1)	690
Other services	-24,430.2** (11,226.7)	10,489.4 (10,378.0)	543	2,222.7 (16,294.9)	3,798.4 (11,209.6)	686
Other sectors (see Footnote 5)	-1,149.6 (18,865.9)	-12,692.4 (17,585.5)	754	-34,275.3 (28,623.3)	-35,641.8 (21,667.5)	1,095

Notes: Standard errors are in parentheses. Coefficients significant at 0.01***, 0.05** and 0.10.*

Sources: Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises*, 2011; Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises*, 2014; and Statistics Canada, Linkable File Environment.

4.2.3 EMPLOYMENT

Table 5 shows the results of the employment regression, which was based on all control variables except size because size is derived from the number of employees, which is the dependent variable. In general, majority female-owned SMEs employed 25.1 percent fewer employees in 2011 and 19.5 percent fewer employees in 2014 than majority male-owned SMEs. Bosma et al. (2004) also found

that male business founders in the Netherlands employed more individuals than female business founders. In contrast, Coleman and Robb (2012) found no gender impact on employment. Results by industrial sector show that in 2011 majority female-owned SMEs employed 47.3 percent more individuals in the primary sector, but 29.0 percent fewer in professional, scientific and technical services; 24.0 percent fewer in accommodation and food services; 50.3 percent fewer in retail trade; 36.1 percent fewer in wholesale trade and 18.0 percent fewer in other services than majority male-owned SMEs. In 2014, majority female-owned SMEs employed 20.8 percent fewer individuals in the primary sector, 22.3 percent fewer in accommodation and food services, 32.0 percent fewer in retail trade, 14.8 percent fewer in other services and 20.4 percent fewer in other sectors than majority male-owned SMEs.

Table 5: Effect of majority gender ownership on employment, 2011 and 2014

Industrial Sector	LN (employment) Ordinary Least Squares Regression					
	2011			2014		
	Majority Male-Owned (omitted)		Number of SMEs	Majority Male-Owned (omitted)		Number of SMEs
	Majority Female- Owned	Equal Ownership		Majority Female- Owned	Equal Ownership	
All sectors	-0.251*** (0.038)	-0.117*** (0.035)	9,977	-0.195*** (0.029)	-0.082*** (0.028)	10,397
Primary	0.473* (0.271)	-0.062 (0.103)	852	-0.208* (0.113)	-0.180*** (0.067)	883
Construction	-0.075 (0.163)	-0.407*** (0.064)	909	-0.069 (0.129)	-0.010 (0.080)	1,373
Manufacturing	-0.089 (0.164)	-0.130 (0.09)	1,243	-0.124 (0.147)	-0.274*** (0.083)	962
Professional, scientific and technical services	-0.290*** (0.113)	-0.278*** (0.085)	1,394	-0.101 (0.088)	0.012 (0.095)	1,079
Accommodation and food services	-0.240* (0.144)	-0.085 (0.172)	447	-0.223*** (0.077)	-0.134* (0.080)	974
Retail trade	-0.503*** (0.057)	-0.200** (0.095)	946	-0.320*** (0.081)	-0.239*** (0.062)	1,310
Wholesale trade	-0.361** (0.147)	-0.065 (0.094)	1,468	-0.159 (0.127)	-0.167* (0.094)	879
Transportation and warehousing	-0.084 (0.131)	-0.126 (0.131)	989	0.124 (0.186)	0.025 (0.128)	765
Other services	-0.180** (0.080)	-0.051 (0.102)	744	-0.148* (0.079)	-0.026 (0.100)	853
Other sectors (see Footnote 5)	-0.075 (0.107)	0.320** (0.137)	985	-0.204*** (0.069)	0.122 (0.107)	1,319

Notes: Standard errors are in parentheses. Coefficients significant at 0.01***, 0.05** and 0.10*.

Sources: Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises*, 2011; and Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises*, 2014.

4.2.4 INNOVATION

Results from the logit regression are presented in Table 6. Taking all sectors into consideration, majority female-owned SMEs had a 5.3 percentage point higher probability of being innovative than majority male-owned SMEs in 2011, while there was no statistically significant difference between them in 2014. This 2011 result supports previous findings of Koellinger (2008), based upon 30 countries from *Global Entrepreneurship Monitor* surveys. Sanditov and Verspagen's (2011) findings, on the other hand, based upon 20 European countries from *Global Entrepreneurship Monitor* surveys, found that male entrepreneurs had a higher probability of being innovative. Results by industrial sector show that in 2011 majority female-owned SMEs had an 11.2 percentage point higher probability of being innovative in other sectors than majority male-owned SMEs. In 2014, majority female-owned SMEs had a 10.2 percentage point higher probability of being innovative in manufacturing; a 10.5 percentage point lower probability of being innovative in professional, scientific and technical services; an 11.2 percentage point higher probability of being innovative in accommodation and food services; and a 12.5 percentage point higher probability of being innovative in retail trade than majority male-owned SMEs. The better performance of majority female-owned SMEs in manufacturing, accommodation and food services, and retail trade may be explained by the higher proportion of female employees in these industries. This explanation is confirmed by Pfeifer and Wagner (2014), who found that firms in German manufacturing industries with a higher share of female employees were more likely to be innovative.

Table 6: Effect of majority gender ownership on innovation, 2011 and 2014

Industrial Sector	Innovation Logit Regression					
	2011			2014		
	Majority Male-Owned (omitted)		Number of SMEs	Majority Male-Owned (omitted)		Number of SMEs
	Majority Female- Owned	Equal Ownership		Majority Female- Owned	Equal Ownership	
All sectors	0.053** (0.025)	0.009 (0.020)	9,977	0.026 (0.017)	0.029* (0.015)	10,397
Primary	-0.045 (0.071)	0.039 (0.050)	852	-0.069 (0.070)	0.143*** (0.043)	883
Construction	-0.012 (0.084)	0.050 (0.055)	909	-0.026 (0.070)	-0.003 (0.039)	1,373
Manufacturing	0.098 (0.071)	0.002 (0.057)	1,243	0.102* (0.060)	-0.005 (0.048)	962
Professional, scientific and technical services	0.094 (0.062)	-0.014 (0.062)	1,394	-0.105** (0.052)	-0.045 (0.050)	1,079
Accommodation and food services	-0.077 (0.063)	-0.054 (0.084)	447	0.112** (0.046)	-0.024 (0.038)	974
Retail trade	-0.025 (0.055)	-0.041 (0.057)	946	0.125*** (0.040)	0.139*** (0.040)	1,310
Wholesale trade	0.018 (0.083)	0.059 (0.051)	1,468	-0.041 (0.068)	-0.070 (0.052)	879
Transportation and warehousing	0.103 (0.069)	-0.032 (0.047)	989	0.067 (0.071)	-0.021 (0.049)	765
Other services	-0.043 (0.054)	-0.113** (0.055)	744	0.009 (0.047)	-0.028 (0.050)	853
Other sectors (see Footnote 5)	0.112* (0.058)	0.056 (0.057)	985	0.010 (0.039)	0.063 (0.045)	1,319

Notes: Standard errors are in parentheses. Coefficients significant at 0.01***, 0.05** and 0.10*.

Sources: Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises*, 2011; and Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises*, 2014.

4.2.5 RATIO OF AUTHORIZED TO REQUESTED DEBT FINANCING AND INTEREST RATE ON DEBT FINANCING

For the analysis of the ratio of authorized to requested debt financing and interest rate on debt financing, the sample is limited to SMEs that requested debt financing. Results are presented in Table 7.⁷ The ratio of authorized to requested debt financing for majority female-owned SMEs was 9.6 percentage points lower than that for majority male-owned SMEs in 2011, but there was no statistically significant difference between them in 2014. The 2011 result is consistent with the literature regarding decreased access to financial resources for female entrepreneurs. For example, Muravyev et al. (2009) found that majority female-owned businesses were less likely to have their bank loan approved than majority male-owned businesses.

7. It is worth mentioning that the Heckman (1979) selection model has also been used to estimate gender impact on the ratio of authorized to requested debt financing. The inverse Mills ratio was not statistically significant.

Table 7: Effect of majority gender ownership on ratio of authorized to requested debt financing, 2011 and 2014

Industrial Sector	Ratio of Authorized to Requested Debt Financing Ordinary Least Squares Regression					
	2011			2014		
	Majority Male-Owned (omitted)		Number of SMEs	Majority Male-Owned (omitted)		Number of SMEs
	Majority Female- Owned	Equal Ownership		Majority Female- Owned	Equal Ownership	
All sectors	-0.096** (0.043)	0.011 (0.024)	3,129	0.026 (0.027)	0.039* (0.020)	3,342

Notes: Standard errors are in parentheses. Coefficients significant at 0.01***, 0.05** and 0.10.*

Sources: Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises*, 2011; and Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises*, 2014.

Table 8 presents the results of the ordinary least squares regression using the interest rate on debt financing. In general, higher interest rates indicate that financial institutions, or lenders, perceive debt financing requests of applicants to be more risky. In 2011, interest rates on debt financing for majority female-owned SMEs were, on average, one percentage point higher than those for majority male-owned SMEs. This finding is similar to that observed by Muravyev et al. (2009), who found that majority female-owned businesses were charged higher interest rates on debt financing than majority male-owned businesses when a loan was approved. In 2014, there was no statistically significant difference between the interest rates on debt financing for majority female-owned and majority male-owned SMEs.

Results presented in Tables 7 and 8 suggest that, in general, lenders found debt financing requests for majority female-owned SMEs to be riskier than for majority male-owned SMEs in 2011, but of similar risk in 2014. This is supported by the fact that the ratio of authorized to requested debt financing was significantly lower for majority female-owned SMEs in 2011 than for majority male-owned SMEs and the interest rate on debt financing was significantly higher for majority female-owned SMEs than for majority male-owned SMEs. In 2014, neither the ratio of authorized to requested debt financing nor the interest rate on debt financing for majority female-owned SMEs were significantly different from those for majority male-owned SMEs. Similarly, Tables 7 and 8 suggest that requests for debt financing for equally owned SMEs were considered to be no riskier than for majority male-owned SMEs in 2011, but less risky in 2014. On the one hand, the ratio of authorized to requested debt financing and the interest rate on debt financing of equally owned SMEs are not significantly different from those of majority male-owned SMEs in 2011. In 2014, on the other hand, the ratio of authorized to requested debt financing of equally owned SMEs was significantly higher than that of majority male-owned SMEs and the interest rate on debt financing was significantly lower. It is also worth mentioning that the statistical

difference between majority female-owned and majority male-owned SMEs, with respect to profit per employee and innovation, disappears when risk assessment for financing debt requests is similar for majority female-owned and majority male-owned SMEs.

Table 8: Effect of majority gender ownership on interest rate on debt financing, 2011 and 2014

Industrial Sector	Interest Rate on Debt Financing Ordinary Least Squares Regression					
	2011			2014		
	Majority Male-Owned (omitted)		Number of SMEs	Majority Male-Owned (omitted)		Number of SMEs
	Majority Female- Owned	Equal Ownership		Majority Female- Owned	Equal Ownership	
All sectors	1.006* (0.515)	-0.013 (0.385)	3,129	-0.114 (0.415)	-0.648* (0.339)	3,342

Notes: Standard errors are in parentheses. Coefficients significant at 0.01***, 0.05** and 0.10.*

Sources: Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises, 2011*; and Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises, 2014*.

5. CONCLUSIONS

This paper complements the empirical literature on gender impact on indicators of performance by examining the differences between majority female-owned and majority male-owned SMEs with respect to the following measures of enterprise performance: sales per employee, profit per employee, employment, innovation, ratio of authorized to requested debt financing and interest rate on debt financing. It also analyses the impact of majority gender ownership by industrial sector and compares the results using data from the *Survey on Financing and Growth of Small and Medium Enterprises, 2011* and *Survey on Financing and Growth of Small and Medium Enterprises, 2014*.

Results indicate that gender affected all measures of enterprise performance in 2011, while only sales per employee and employment were affected in 2014. Majority female-owned SMEs had lower sales per employee and fewer employees than majority male-owned SMEs in both 2011 and 2014. These results are consistent with prior research on the performance of female entrepreneurs in terms of sales and employment, compared with male entrepreneurs. This study shows that profit per employee for majority female-owned SMEs was less than that for majority male-owned SMEs in 2011, but that there was no statistical difference between the two in 2014. The fact that there was no statistical difference between the two in 2014 can be explained by adjustment for size as majority female-owned SMEs do not perform as well as majority male-owned SMEs when there is no size adjustment. The study

also found that majority female-owned SMEs were more likely to be innovative than majority male-owned SMEs in 2011, while there was no difference between the two in 2014. With regard to access to financial resources, results suggested that lenders found requests for debt financing for majority female-owned SMEs to be riskier than for majority male-owned SMEs in 2011 and equally risky in 2014. This is supported by the fact that, in 2011, the ratio of authorized to requested debt financing was lower for majority female-owned SMEs than for majority male-owned SMEs and the interest rate on debt financing for majority female-owned SMEs was significantly higher than for majority male-owned SMEs. In 2014, however, there was no statistically significant difference between the two with respect to ratio of authorized to requested debt financing or interest rate on debt financing. In terms of sales per employee, profit per employee, employment and innovation, the sectoral analysis showed that the performance of majority female-owned SMEs lagged that of majority male-owned SMEs in many industrial sectors or that there was no difference between the two depending upon the period. However, it is significant that majority female-owned SMEs employed more individuals in the primary sector than majority male-owned SMEs in 2011 and had a higher probability of innovating in manufacturing, accommodation and food services, and retail trade in 2014.

A clear understanding of gender impact on SME performance is important to help entrepreneurs, financial providers, business advisers and policy-makers to make policy and business decisions. However, questions still remain. Further analyses could investigate the impact of access to financial resources on SME performance; the impact of majority gender ownership on exporting and research and development; the impact of characteristics of entrepreneurs on SME performance (e.g., maternity leave, immigrant status) and the dynamics of performance indicators in terms of growth. Each of these factors could help provide a better understanding of the impact of majority gender ownership on SME performance.

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APPENDIX

Table A1: Description of variables

Sales/employee	Sales value per employee of the SME (source Statistics Canada, Linkable File Environment).
Profit/employee	Profit per employee of the SME (source Statistics Canada, Linkable File Environment).
Employment	Number of employees of the SME.
Innovation	Dichotomous variable, which takes the value of one if the SME has innovated in at least one of the four categories of innovation (product innovation, process innovation, marketing innovation and organizational innovation) within the last three years and takes the value of zero otherwise.
Financial approval rate	Ratio of authorized to requested amount of the largest debt financing among mortgages, term loans, lines of credit and business credit cards. The ratio can take any value between zero and 100 percent, i.e., zero if the SME's request was rejected; one if the SME received 100 percent of the amount requested; and any value between zero and one if the SME received a partial amount.
Interest rate	Annual interest rate on the largest debt financing amount.
Ownership	Qualitative variable that identifies gender ownership of the SME, i.e., majority female-owned, majority male-owned, and equally owned by males and females. In this study, majority male-owned SMEs are the reference group.
Age	Age of the majority owner or general manager of the SME, measured in years.
Education	Level of education of the majority owner or general manager of the SME. Levels of education are high school and less, and post-secondary.
Experience	Number of years of experience of the majority owner or general manager in owning or managing a business.
Age SME	Age of the SME, measured in years (source Statistics Canada, Linkable File Environment).
Size	Size of the SME, measured in number of employees: 1–4, 5–19 and 20–499 employees.
Export	Dummy variable that takes the value of one if the SME exports and takes the value of zero otherwise.
Industry	Industrial sector in which the SME operates (primary; construction; manufacturing; professional, scientific and technical services; accommodation and food services; retail trade; wholesale trade; transportation and warehousing; other services and other sectors).
Region	Regions of operation (Atlantic, Quebec, Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia and Territories).

Table A2: Mean Values of Explanatory Variables of Sales per Employee Regression by Type of Ownership

Variable	2011			2014		
	Majority Male-Owned	Majority Female-Owned	Equal Ownership	Majority Male-Owned	Majority Female-Owned	Equal Ownership
Sales per employee (\$)	234,949	176,270	213,757	265,111	204,265	221,101
Owner age (years)	51.4	51.4	52.2	51.1	49.8	51.6
Owner experience (years)	22.0	18.6	21.9	21.2	18.3	20.2
Education						
High school and less (%)	32.0	32.5	29.4	30.8	25.1	29.2
Post-secondary (%)	68.0	67.5	70.6	69.2	74.9	70.8
Enterprise size (number of employees)						
1-4 (%)	45.7	48.6	48.3	46.3	49.4	49.4
5-19 (%)	37.8	40.3	43.1	36.9	39.3	38.2
20-499(%)	16.5	11.1	8.6	16.8	11.3	12.4
Enterprise age (years)	13.0	11.3	12.7	13.5	11.6	12.5
Exporter (%)	13.5	5.6	10.7	14.2	10.2	11.5
Industry						
Primary (%)	2.7	1.7	3.2	2.6	1.1	2.6
Construction (%)	17.8	5.2	13.9	19.2	6.1	15.4
Manufacturing (%)	9.1	3.5	8.9	8.2	4.9	7.6
Professional, scientific and technical services (%)	12.4	11.9	11.5	11.7	12.9	9.5
Accommodation and food services (%)	7.6	11.6	8.7	8.5	13.8	13.8
Retail trade (%)	13.6	25.1	16.9	12.3	18.8	16.3
Wholesale trade (%)	8.5	3.5	7.4	7.7	4.3	6.1
Transportation and warehousing (%)	6.2	4.1	5.0	6.3	3.2	6.4
Other services (%)	6.7	10.2	7.4	6.8	8.6	6.6
Other sectors (%) (see Footnote 5)	15.4	23.2	17.1	16.6	26.2	15.6
Region						
Atlantic (%)	6.1	7.4	6.2	6.7	6.3	6.1
Quebec (%)	23.8	21.2	10.7	25.0	20.3	11.3
Ontario (%)	34.1	32.7	36.2	34.8	38.5	38.3
Manitoba (%)	2.8	3.0	4.1	2.4	2.0	3.2
Saskatchewan (%)	2.6	3.3	3.0	2.6	3.0	3.2
Alberta (%)	13.7	15.5	17.2	14.3	11.7	18.0
British Columbia and Territories (%)	16.9	17.0	22.5	14.2	18.3	20.0
Number of SMEs	5,573	824	1,319	5,705	1,035	1,651

Sources: Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises, 2011*; Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises, 2014*; and Statistics Canada, Linkable File Environment.

Table A3: Mean Values of Explanatory Variables of Profit per Employee Regression by Type of Ownership

Variable	2011			2014		
	Majority Male-Owned	Majority Female-Owned	Equal Ownership	Majority Male-Owned	Majority Female-Owned	Equal Ownership
Profit per employee (\$)	92,369	79,817	90,674	108,009	101,760	97,822
Owner age (years)	51.6	51.2	52.4	51.3	50.3	51.7
Owner experience (years)	22.3	18.7	22.3	21.5	18.6	20.6
Education						
High school and less (%)	32.1	31.8	30.6	31.0	25.0	29.9
Post-secondary (%)	67.9	68.2	69.4	69.0	75.0	70.1
Enterprise size (number of employees)						
1-4 (%)	47.0	49.2	50.0	47.5	51.0	51.1
5-19 (%)	37.2	40.0	41.6	36.3	38.0	36.9
20-499 (%)	15.8	10.8	8.4	16.3	11.1	12.0
Enterprise age (years)	13.1	11.4	12.8	13.6	12.0	12.6
Exporter (%)	13.4	5.4	10.7	14.0	10.2	11.5
Industry						
Primary (%)	6.3	2.4	7.2	5.2	2.1	7.8
Construction (%)	16.7	5.3	13.3	18.5	5.8	14.5
Manufacturing (%)	8.5	3.3	8.4	7.9	4.6	7.0
Professional, scientific and technical services (%)	12.3	11.6	11.0	11.7	12.5	9.2
Accommodation and food services (%)	7.2	11.2	8.2	8.1	13.0	12.9
Retail trade (%)	12.7	24.4	16.0	11.7	17.9	15.4
Wholesale trade (%)	8.2	3.4	7.1	7.5	4.1	5.6
Transportation and warehousing (%)	5.9	4.0	4.7	6.0	3.1	5.9
Other services (%)	6.4	9.9	7.0	6.4	8.1	6.1
Other sectors (%) (see Footnote 5)	15.9	24.5	17.2	17.1	28.8	15.6
Region						
Atlantic (%)	6.2	8.0	6.0	6.9	6.0	6.1
Quebec (%)	23.7	21.8	11.0	24.9	20.0	11.3
Ontario (%)	33.6	31.6	35.0	34.6	39.2	37.1
Manitoba (%)	3.0	3.2	4.4	2.5	2.1	3.6
Saskatchewan (%)	3.3	3.3	4.0	2.7	2.9	4.2
Alberta (%)	13.6	15.3	17.5	14.2	11.7	17.9
British Columbia and Territories (%)	16.6	16.8	22.1	14.2	18.2	19.7
Number of SMEs	5,957	867	1,435	6,056	1,085	1,797

Sources: Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises, 2011*; Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises, 2014*; and Statistics Canada, Linkable File Environment.

Table A4: Mean Values of Explanatory Variables of Employment Regression by Type of Ownership

Variable	2011			2014		
	Majority Male-Owned	Majority Female-Owned	Equal Ownership	Majority Male-Owned	Majority Female-Owned	Equal Ownership
Number of employees	11.3	7.2	8.2	12.4	8.2	10.1
Innovation (%)	34.9	36.9	36.2	38.7	39.0	40.2
Owner age (years)	51.5	51.5	52.5	51.5	50.3	52.1
Owner experience (years)	21.9	17.9	22.2	21.6	18.2	21.0
Education						
High school and less (%)	33.7	33.2	32.1	31.7	26.1	31.6
Post-secondary (%)	66.3	66.8	67.9	68.3	73.9	68.4
Enterprise size (number of employees)						
1-4 (%)	51.4	59.0	53.5	51.9	58.1	54.5
5-19 (%)	35.1	33.7	38.7	33.9	33.5	34.8
20-499(%)	13.5	7.3	7.9	14.3	8.4	10.7
Enterprise age (years)	13.0	11.1	12.6	13.7	11.8	12.8
Exporter (%)	11.8	5.0	10.0	12.8	8.4	11.0
Industry						
Primary (%)	7.2	2.1	8.8	5.9	2.5	10.3
Construction (%)	17.9	5.0	14.1	19.5	5.3	13.8
Manufacturing (%)	7.5	2.8	7.5	7.1	3.6	6.5
Professional, scientific and technical services (%)	12.0	10.7	11.4	12.1	11.4	8.5
Accommodation and food services (%)	7.8	14.4	7.9	7.6	12.8	12.4
Retail trade (%)	11.7	21.4	14.1	11.1	18.2	14.9
Wholesale trade (%)	6.9	2.7	6.4	6.6	3.2	5.1
Transportation and warehousing (%)	5.6	2.9	4.7	5.9	2.7	5.6
Other services (%)	6.6	11.4	7.7	6.8	10.8	6.5
Other sectors (%) (see Footnote 5)	17.0	26.7	17.5	17.6	29.6	16.4
Region						
Atlantic (%)	6.8	8.9	5.8	7.4	6.6	6.1
Quebec (%)	23.3	23.8	11.3	24.8	22.3	11.1
Ontario (%)	34.4	33.3	36.2	34.9	39.1	37.7
Manitoba (%)	3.3	3.0	4.4	2.9	2.3	4.0
Saskatchewan (%)	3.4	2.9	4.6	2.9	2.9	4.8
Alberta (%)	12.2	11.5	16.6	12.8	9.7	16.4
British Columbia and Territories (%)	16.6	16.4	21.0	14.3	17.1	19.8
Number of SMEs	7,064	1,221	1,692	6,922	1,424	2,051

Sources: Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises, 2011*; Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises, 2014*; and Statistics Canada, Linkable File Environment.

Table A5: Mean Values of Explanatory Variables of Ratio of Authorized to Requested Debt Financing and Interest Rate on Debt Financing Regressions by Type of Ownership

Variable	2011			2014		
	Majority Male-Owned	Majority Female-Owned	Equal Ownership	Majority Male-Owned	Majority Female-Owned	Equal Ownership
Ratio of authorized to requested debt financing (%)	90.0	77.3	91.2	82.3	80.1	84.1
Interest rate (%)	6.3	7.6	6.3	8.4	8.7	7.8
Owner age (years)	49.8	49.7	51.1	48.7	48.1	48.9
Owner experience (years)	20.8	17.4	22.0	19.3	15.3	19.4
Education						
High school and less (%)	36.0	28.5	32.8	31.4	24.4	32.8
Post-secondary (%)	64.0	71.5	67.2	68.6	75.6	67.2
Enterprise size (number of employees)						
1–4 (%)	39.6	47.5	42.0	41.3	48.2	44.5
5–19 (%)	40.7	44.6	44.5	37.6	38.4	41.7
20–499 (%)	19.7	8.0	13.5	21.2	13.4	13.8
Enterprise age (years)	12.6	10.1	12.6	12.5	9.9	11.2
Exporter (%)	13.8	4.5	9.7	15.5	12.2	12.9
Industry						
Primary (%)	10.6	4.0	16.0	7.9	3.5	16.6
Construction (%)	19.5	5.5	16.5	23.4	9.2	14.6
Manufacturing (%)	9.8	5.4	7.3	7.6	4.7	6.2
Professional, scientific and technical services (%)	9.8	13.6	5.7	9.6	11.1	5.5
Accommodation and food services (%)	6.2	13.5	14.4	6.5	15.7	11.6
Retail trade (%)	11.7	17.7	11.3	10.1	18.3	13.9
Wholesale trade (%)	7.0	4.0	5.7	7.5	3.0	5.8
Transportation and warehousing (%)	7.0	2.1	5.6	6.7	4.1	6.5
Other services (%)	5.0	11.7	6.2	7.0	8.8	6.3
Other sectors (%) (see Footnote 5)	13.4	22.5	11.2	13.7	21.5	13.1
Region						
Atlantic (%)	6.1	9.6	7.2	6.6	5.1	5.5
Quebec (%)	27.1	28.1	11.1	28.6	29.3	11.9
Ontario (%)	31.3	29.8	35.1	32.4	30.6	38.0
Manitoba (%)	4.5	2.6	5.5	3.5	3.0	5.6
Saskatchewan (%)	4.2	3.6	6.6	3.0	4.0	6.1
Alberta (%)	12.0	12.2	15.5	13.9	8.5	15.2
British Columbia and Territories (%)	14.9	14.1	19.1	11.9	19.6	17.8
Number of SMEs	2,280	329	520	2,286	390	666

Sources: Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises*, 2011; Statistics Canada, *Survey on Financing and Growth of Small and Medium Enterprises*, 2014; and Statistics Canada, Linkable File Environment.