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by Julia Sekkel and Weimin Wang

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Women-owned small and medium-sized enterprises in Canada: Exporting story

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Abstract

Based on data from the 2017 Survey on Financing and Growth of Small and Medium Enterprises, it is found that women-owned small and medium-sized enterprises (SMEs) in Canada are as likely to export as those owned by men, and their export intensity (exports as a share of total sales) was not significantly different. This is despite women-owned enterprises being concentrated in the low end of the size distribution and in sectors that are less likely to export. The success of women-owned SMEs in export propensity relies on having the means to accept online payment, implementing organizational innovations, and innovating in the way goods and services are sold. Their success in export intensity relies on their primary decision makers being more educated and experienced. After these gender-specific effects are controlled for, women-owned SMEs are less likely to export, and they export relatively less, compared with men-owned and equally owned SMEs.

Keywords: Women-owned enterprises, export and gender gap

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Introduction

This article examines factors related to the exporting success of women-owned small and medium-sized enterprises (SMEs) in Canada.¹ The participation of women-owned businesses in exports is important for policies aiming to ensure that the benefits of international trade reach all groups.

In Canada, women-owned SMEs are underrepresented among exporters, apparently reflecting a gender gap in entrepreneurship. In 2017,² women-owned SMEs represented 15.6% of all SMEs, while 63.5% were majority-owned by men, and the remaining 20.9% were equally owned by men and women (Baur, 2019). A similar gender distribution is observed among SME exporters: 14.8% were owned by women, 66.3% by men and 18.9% equally owned. This indicates that firms owned by women are almost as likely to export as those owned by men. Furthermore, although women-owned SMEs export less intensively than men-owned and equally owned SMEs,³ these differences are not significantly different.

The empirical results of Sekkel and Wang (2023) suggest that the success of women-owned SMEs in exporting relies on whether they adopt certain business practices and on certain characteristics of their primary decision makers. Specifically, accepting online payment, implementing organizational innovations, and innovating in the ways products and services are sold played important roles in determining the success of women-owned SMEs in their probability of exporting. Also, having more years of education and having more years of management experience were associated with higher export intensity for women-owned SMEs relative to their counterparts. After these gender-specific effects are controlled for, women-owned SMEs would still be less likely to export if they were not innovative and had no access to online payments. They would also export relatively less if their managers had less than a bachelor's degree and less than five years of experience.

Export propensity: What did women-owned small and medium-sized enterprises do to catch up with those owned by men?

Women-owned firms are overrepresented among smaller SMEs, with 63% having fewer than 20 employees. Women-owned exporters are also concentrated in sectors less likely to export. For example, 32% of women-owned exporters were in retail trade (North American Industry Classification System codes 44 and 45), while 6% of men-owned and equally owned exporters were in that sector. As a result, 46% of exporters in retail trade were women-owned SMEs, much higher than the share of 14.8% of women-owned exporters for all industries.

Given that smaller-sized businesses and those concentrated in services are normally much less likely to export, this raises the following question: what business behaviours and decisions allow women-owned SMEs to become exporters at a similar rate as men-owned SMEs?

This article examines the factors for the exporting success of women-owned SMEs in Canada using the 2017 Survey on Financing and Growth of Small and Medium Enterprises, linked with the National

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1. This article is a summary of a study by Sekkel and Wang (2023) in a World Trade Organization publication.
 2. If not specified, descriptions for Canada in 2017 are derived from the 2017 Survey on Financing and Growth of Small and Medium Enterprises (SFGSME). The SFGSME is conducted every three years by Statistics Canada and provides a cross-section sample of SMEs with 1 to 499 employees and at least \$30,000 in annual revenues. The 2017 sample had 9,115 responding firms.
 3. The export intensity (the export-to-sales ratio) was 3.4% for women-owned SMEs, 4.4% for men-owned SMEs and 3.9% for equally owned SMEs (Baur, 2019).

Accounts Longitudinal Microdata File for 2016 and 2017.⁴ The 9,000 firms in this linked dataset are a representative sample of Canada's SME population. The data are used to estimate various probit regression models to identify factors linked to higher export propensity. The gender of ownership is determined by the percentage owned by women, classified in two categories: (1) men-owned and equally owned SMEs (0% to 50% women ownership) and (2) women-owned SMEs (51% to 100% women ownership).⁵

The data show that there is no gender gap in export propensity. In 2017, 11.1% of women-owned SMEs exported, compared with 12.2% of men-owned and 10.5% of equally owned SMEs, indicating that SMEs owned by women are almost as likely to export as those owned by men. The descriptive statistics are a bit unexpected since women-owned SMEs are smaller and concentrated in service industries. Various probit regressions have been done to understand why there is no gender gap in export propensity.

The probit estimation results on export propensity are presented in Table 1. Column (1) in the table shows the basic specification such that the export propensity is modelled as a function of owners' gender, firm size groups, labour productivity level, owners' education level, owners' management experience, and whether a firm is a start-up (two years old or younger), with industry and regional dummies included. The results show that, after controlling for these observed characteristics of enterprises and primary decision makers, there is no statistical evidence showing that women-owned SMEs have a different likelihood of exporting relative to men-owned and equally owned SMEs. The result seems to be aligned with the liberal feminist view, where gender of ownership itself does not affect exporting outcomes of SMEs.

Other results from Column (1) in Table 1 are consistent to findings in the literature. First, the coefficient of labour productivity is positive and statistically significant at the 1% level, suggesting that firms with higher labour productivity are associated with higher export propensity. Second, the coefficients of size groups are positive and significant and increasing in size, implying that larger firms are more likely to export. Third, start-up firms are more likely to export. This could support the notion of "born-global"—SMEs are established with the intent of being exporters, or as part of global value chains (WTO, 2016). Finally, owners' or primary decision makers' education level is also significant and positively correlated with the probability of exporting.

To examine the impact of business behaviour, online payment acceptance and various innovation activities are added into the regression model. The regression results in Column (2) of Table 1 show that each individual innovation activity is associated with higher export propensity, suggesting that innovative firms are more likely to export, regardless of the type of innovation. Having an online payment feature on the firm's website is also associated with high export propensity; this is intuitive since this feature makes cross-border purchases much easier. It is worth noting that the export propensity of women-owned SMEs remained not significantly different from that of men-owned and equally owned SMEs after further controlling for firms' innovation and business behaviour. However, the coefficients of management experience became positive and statistically significant, suggesting that accumulated human capital, potentially through stronger international orientation, increases the ability of SMEs to engage in foreign markets.

The regression model specifications in columns (1) and (2) of Table 1 assume that both gender groups react to all control variables the same way. Under this assumption, the probability of exporting for women-owned SMEs is still the same as that for men-owned and equally owned SMEs.

4. More details on sampling and methodology can be found at https://ised-isde.canada.ca/site/sme-research-statistics/sites/default/files/attachments/2022/Methodology_Report_2017_eng.pdf.

5. Men-owned and equally owned SMEs were combined in one category because there was no statistical difference between the two groups based on various empirical tests (mean comparison after regressions). Also, it is reasonable to expect that if there were any gender-specific barriers limiting SMEs' export participation, these barriers could be overcome by the presence of a male co-owner in equally owned enterprises, placing these firms in a similar group with men-owned SMEs.

Table 1
Probit for probability of exporting

	Model specification 1	Model specification 2	Model specification 3
	coefficient		
Women-owned	0.03020	-0.05960	-0.36500 †
Firm size (1 to 4 employees omitted)			
5 to 19 employees	0.14700 *	-0.04970	-0.00841
20 to 99 employees	0.33000 **	0.16100	0.21600 *
100 to 499 employees	0.59800 **	0.48500 **	0.53400 **
Women-owned interacted with			
Firm with 5 to 19 employees	...	...	-0.09860
Firm with 20 to 99 employees	...	...	-0.39000
Firm with 100 to 499 employees	...	...	-0.47200
Labour productivity	0.18600 **	0.16800 **	0.17400 **
Online payment	...	0.50000 **	0.28600 †
Women-owned interacted with online payment	...	...	0.89500 **
Innovation activities (no innovation omitted)			
Product and process	...	0.39200 **	0.38600 **
Organizational	...	0.58600 **	0.49500 **
Selling	...	0.45500 **	0.33400 **
Women-owned interacted with			
Product and process	...	...	-0.16800
Organizational	...	...	0.66900 *
Selling	...	...	0.66100 **
Education (high school omitted)			
College/CEGEP	0.09870	0.05460	0.04950
Bachelor's degree	0.34600 **	0.24100 *	0.23800 *
Master's degree or above	0.21700 *	0.27800 *	0.26200 *
Years of management experience			
5 to less than 10 years	0.25300	0.55000 **	0.57700 **
10 years or more	0.22300	0.48400 **	0.49600 **
Start-up	0.23400 †	0.37200 *	0.37500 *

... not applicable

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

† significantly different from reference category ($p < 0.10$)

Note: See Table 1 in Sekkel and Wang (2023) for full results.

Source: Authors' estimation based on data from the 2017 Survey on Financing and Growth of Small and Medium Enterprises.

In the next step, the interaction terms of the dummy of women ownership with size dummies, an online payment dummy, and innovation dummies are added to the regression model. The goal is to verify whether there are differences between the export participation of women-owned SMEs and men-owned and equally owned SMEs by size group, innovation activity and online payment availability. The

estimation results are presented in Column (3) of Table 1. Several findings are noteworthy. First and foremost, women-owned SMEs were less likely to export than men-owned and equally owned SMEs after the inclusion of these interaction terms. Second, the impact of all control variables remained the same, indicating that the model is robust. Third, the coefficients of the interaction terms between women ownership and size groups were not significant, suggesting that the export propensity gap between women-owned SMEs and other SMEs is not affected by their sizes. Fourth, women-owned SMEs with an online payment feature on their websites were more likely to be exporters than men-owned and equally owned SMEs with the same feature, with a predicted probability of exporting 18 to 20 percentage points higher.⁶ Finally, innovative women-owned SMEs were more likely than innovative men-owned and equally owned SMEs to become exporters.

The most important implication of the findings is that non-innovative women-owned SMEs and women-owned SMEs that did not conduct online sales were less likely to become exporters than their counterparts among men-owned or equally owned SMEs. This result seems to be consistent with the fact that women-owned SMEs are more concentrated in the low end of the size distribution than their counterparts, and larger firms have higher export propensity. However, women-owned SMEs behaved differently such that a higher proportion of them engaged in innovation activities (innovation in the way goods and services are sold) and provided an online payment feature on their website, relative to their counterparts. By doing so, women-owned SMEs were more likely to export, as predicted by the regression model. As a result, there is no significant difference in the export propensity between women- and men-owned SMEs at the aggregate level. In other words, female entrepreneurs need to be significantly more innovative and digitally engaged than male entrepreneurs to compete in export markets; otherwise, women-owned SMEs would be less likely to export.

Export intensity: What owner characteristics matter for women-owned small and medium-sized enterprises to catch up?

Descriptive statistics show that among exporters, the average export intensity (or export-to-sales ratio) of Canadian women-owned SMEs in 2017 was 31.6%, compared with 37.1% for men-owned and equally owned SMEs. A mean test indicated that these differences are not statistically different. Nonetheless, the interest lies not only in identifying the role of gender of ownership in export intensity but also in identifying what characteristics are related to the export outcome.

The export intensity is analyzed using a two-part model. It is found that women-owned SMEs export relatively less than men-owned and equally owned SMEs unless their managers are more educated or have five or more years of experience. The use of the two-part model allows for independence between the decision on exporting and the decision on how much to export. Specifically, the first part of the model estimates a binary choice model for the probability of exporting, and the second part estimates export intensity conditional on the exporting decision. This strategy corrects for the sample selection bias among exporters based on their observed differences in business performance relative to non-exporters.⁷

The empirical results are presented in Table 2. Three specifications are presented in the table. The first one has explainable variables of the dummy for women ownership, firm size, labour productivity, education, years of management experience, the dummy for start-up, and industry and regional dummies. The second one adds online payment availability and innovation activities, and the third one adds the interaction terms of women ownership with education and years of management experience

6. It is a marginal effect and would be available upon request.

7. The binary choice in the model accounts for the probability of observing a positive or zero outcome. Differently than the Heckman selection model, which denotes censored values by a zero outcome (tobit model), in the two-part model, the zeros are true values and may represent a deliberate business decision not to export, so it is not exactly censored.

instead. It is found from the first specification that SMEs' export intensity is higher when they have higher labour productivity, their owners have a bachelor's degree, their owners have more years of management experience, and they are start-ups. All other variables, including the dummy for women ownership, are not statistically significant, suggesting that there is no gender gap in the export intensity. The results of the second specification show that online payment availability and innovation activities have no impact on the export intensity, and adding these variables has no impact on the coefficients of all other variables except for years of management experience.

The regression result of the third specification is interesting. First, the interaction between women ownership and having a bachelor's degree is positive and significant, while having a bachelor's degree itself becomes insignificant, suggesting that the positive impact of a bachelor's degree on the export intensity comes from women-owned SMEs. Second, the interaction terms between women ownership and years of management experience are positive and significant, while years of management experience become insignificant, also suggesting that the positive impact of years of management experience on the export intensity comes from women-owned SMEs. Third and most importantly, the coefficient of women ownership becomes negative and significant, meaning that after the interaction between women ownership and a bachelor's degree and years of management experience is controlled for, women-owned SMEs export less intensively relative to men-owned or equally owned SMEs.

Overall, women-owned SMEs whose primary decision maker had a bachelor's degree and more years of management experience showed higher export intensity than men-owned and equally owned SMEs whose primary decision maker had the same qualifications. Yet these effects were not statistically significant for men-owned or equally owned SMEs. These results suggest that despite being smaller and operating in industries less likely to export, women-owned SME exporters benefit more than their peers from more education and years of management experience in increasing export intensity. Furthermore, when the indirect gender effect of education and management experience is captured, the remaining effect of women ownership on export intensity is significantly smaller than for men-owned or equally owned SMEs.

Table 2
Estimation results for export intensity

	Model specification 1	Model specification 2	Model specification 3
	coefficient		
Firm size (1 to 4 employees omitted)			
5 to 19 employees	-0.1570	-0.2450	-0.1950
20 to 99 employees	-0.0832	-0.0751	-0.1070
100 to 499 employees	-0.0672	-0.1650	-0.0748
Labour productivity	0.1370 *	0.1600 *	0.1540 *
Education (high school and college/CEGEP omitted)			
Bachelor's degree	0.3050 †	0.3880 *	0.1630
Master's degree or above	0.1390	0.2750	0.1090
Women owned interacted with			
Bachelor's degree	...	...	1.2010 *
Master's degree or above	...	...	0.0899
Years of management experience (less than 5 years omitted)			
5 to less than 10 years	0.7000 †	0.5740	0.1440
10 years or more	0.7420 †	0.5630	0.1600
Women owned interacted with			
5 to less than 10 years management experience	...	...	2.1170 **
Start-up	0.6690 **	0.5420 *	0.6460 **
Online payment	...	-0.4090	...
Innovation (no innovation omitted)			
Product	...	0.2970	...
Process	...	-0.0781	...
Organizational	...	0.3190	...
Selling	...	0.1450	...

... not applicable

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

† significantly different from reference category ($p < 0.10$)

Note: See Table 1 in Sekkel and Wang (2023) for full results.

Source: Authors' estimation based on data from the 2017 Survey on Financing and Growth of Small and Medium Enterprises.

Concluding remarks

Previous studies (Baur, 2019; Sekkel, 2020) used descriptive data on internationalization and gender of ownership of Canadian SMEs to show that women-owned firms, despite being overrepresented among smaller and service-oriented businesses, have managed to nearly close the gender gap in export propensity and export intensity, and are almost as likely to export as men-owned or equally owned SMEs; they also export similar shares of their sales. Sekkel and Wang (2023) show that accepting online payment, implementing organizational innovations, and innovating in the way goods and services are sold played important roles in determining the success of women-owned SMEs in their probability of exporting. Moreover, having more years of education and more years of management experience were associated with higher export intensity for women-owned SMEs relative to their counterparts. After these interaction terms are controlled for, women-owned SMEs were still less likely to export, and they exported relatively less.

These results have interesting policy implications since they suggest that women-owned SMEs have different business strategies for entering export markets than men-owned or equally owned SMEs; they also rely on education and management experience much more than their peers to increase their export intensity. Policies that provide support for increased access to digital technology, as well as for broader types of innovation beyond products and processes, could potentially help women-owned SMEs overcome export barriers and contribute to the extensive margin of trade. Additionally, traditional policies that promote education and give opportunities for women to gain management experience could contribute to the intensive margin of trade.

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