

EXPORT PROPENSITY AND PERFORMANCE: UNDERSTANDING THE INFLUENCE OF OWNER GENDER

Professor Barbara Orser, Deloitte Chair
School of Management, University of Ottawa, 136 Jean-Jacques Lussier Street
Ottawa, Canada, K1N 6N5, Tel: (613) 562-5800 Ext. 4570
E-mail: orser@management.uottawa.ca

Professor Martine Spence, Associate Professor
School of Management, University of Ottawa
E-mail: spence@management.uottawa.ca

Professor Allan Riding, Deloitte Chair
School of Management, University of Ottawa
E-mail: riding@management.uottawa.ca

Christine A. Carrington
Small Business Policy Branch, Industry Canada
235 Queen Street, Ottawa, Canada ON K1A 0H5
E-mail: Carrington.Christine@ic.gc.ca

ABSTRACT

This paper draws on theories of how small- and medium-sized enterprises (SMEs) internationalize and on feminist theories to develop a yet better understanding of export propensity and the impact of gender of ownership. Feminist theory is used to identify potential gender differences in managerial acumen and human capital. Theories of the process of SME internationalization are employed to rationalize the impact of these differences on organizational performance. These theoretical underpinnings yield study propositions that provide a framework for investigating performance differences and export propensity of male and female-owned firms. Empirical findings are based on a large-scale sample of Canadian SME owners. Findings are discussed with reference to public policies and program initiatives.

INTRODUCTION

International trade is one of the fastest-growing areas of the global economy and SMEs comprise the majority of the firms that sell goods and services abroad (Halabisky, Lee & Parsley, 2005). Among export-oriented SMEs an increasing number are women-owned¹ yet

¹ The National Foundation of Women Business Owners (1995: 2) reports that in 1992, 13 percent of US women-owned firms “were active in the global marketplace, either importing or exporting goods or services” and (1998, NAWBO) that in 1998, 8% of women business owners were involved in international trade. The Canadian Bankers

various studies report that compared to male counterparts women entrepreneurs are less likely to export.² The reasons for gender differences in export propensity remain unclear; therefore the objective of this study is to examine the internationalization process of the firm with particular reference to gender differences in enterprise performance and export propensity.

The relevance of this work stems from at least four roots. First, surprisingly few empirical studies have examined the process of international trade and several researchers have called for more research on this topic (Lefebvre and Lefebvre, 2000; Andersson and Wictor, 2003; Zahra, 2005). In particular, the role of gender remains virtually unexplored. It seems reasonable to expect that gaining a better understanding of the role of gender will further our understanding of the internationalization process. Second, considerable public policy related to SME exporters (these include export policies, program qualifying criteria, on-line consultations and diagnostic tools) has historically been rooted in stage theory, which posits that exporting is a consequence of incremental firm growth. However, relatively recent findings relating to international new ventures (firms that export from inception) challenge the prevalence of the stage model (Oviatt and McDougall, 1994; Harveston et al., 2001; Zahra, 2005). To the extent that our understanding about SME exporters is predicated on an incomplete or inaccurate model, trade policies and export stimulation programs may be compromised.

Third, it is difficult to generalize from much of the existing research. For example, several studies of SME exporters are based on non-representative samples. Lefebvre and Lefebvre (2000) cite Lee and Haas (1996) and the OECD (1997) to note that empirical studies about exporting and international new ventures tend to focus on high-tech and high-knowledge-based sectors and tend to exclude service-based firms. Export studies are also often based on non-representative samples drawn from government registries and programs³, commercial and industry directories,⁴ and organization memberships.⁵ Other problems with existing research

Association estimated that in 1997 and 1998, approximately 10 percent of exporters were firms owned exclusively by women. Drawing on 2001 data, Carrington (2004) reports that 7 percent of majority-women owned Canadian firms export goods and services compared to 13% of majority male-owned firms.

² Deng, Hassan and Jivan, 1995; Grondin and Schaefer, 1995; Business Development Bank, 1997; Canadian Bankers Association, 1996, 1997, 1998; Carrington, 2004.

³ Examples of frequently cited papers include Kirpalani and Macintosh (1980), Beamish and Munro (1986), Calof (1993), DFAIT (2006), Orser *et al.*, (2004), Halabisky *et al.*, (2005).

⁴ Examples include Beamish *et al.*, (1986a and b), Reuber and Fischer (1997, 1998); Baldwin and Gu (2003), and Bagghi-Sen (1998).

were articulated by Ahl (2006) in her recent review of research about women entrepreneurs when she expressed concerns that (in addition to other weaknesses) studies about gender issues tend to lack theoretical grounding, neglect structural, historical, and cultural factors, and lack explicit feminist analysis.

Finally, the importance of this study is rooted in the lack of convergence in the literature about the attributes of export-oriented SMEs. Dhanaraj and Beamish (2003: 242) cite Gemunden's (1991) assertion that more than 700 variables have been associated with export propensity and Dhanaraj and Beamish (2003) call for parsimonious, theory-based research that considers the interrelationships among managerial, organizational, and technological resources.

This study seeks to respond to these challenges. It does so by building on previous empirical work about SME exporting and gender differences in enterprise performance (Kalleberg and Leicht, 1991; Fischer et al., 1993; Fasci and Valdez, 1998; Chell and Baines, 1998; Johnsen and McMahon, 2005). This paper also attempts to respond to criticism about the lack of theory by drawing on resource-exchange, stage, productivity and feminist theories. The empirical component of the study is also distinctive in that its findings reflect a large scale representative sample of Canadian SMEs. This sample allows for control of confounding factors and cross-sector comparisons (e.g. service, goods and knowledge-based firms). The sample also reflects a large number of women-owned firms allowing examination of the variability in gender influences that may depend on the percentage of women's ownership (Goodwin, Stevens and Brenner, 2006).

This paper describes empirical tests of a model of export propensity that includes owner, firm and sectoral attributes. The analytical procedures employed also enabled the researchers to examine simultaneously the relative interactive influence of managerial, organizational and sector influences.^{6, 7} To report on the study findings, the paper is organized as follows: A

⁵ Limitations of these sample sources are evidenced in estimates about gross Canadian export activity. For example, CFIB (1997) estimate that 24 percent of SMEs sell to foreign markets, an estimate that includes tourism-related sales. Thompson Lightstone (1998) report that 15 percent of SMEs were involved in exporting activity (does not include tourism). More recently, Industry Canada has reported that approximately 2 percent of small businesses (firms with 1 to 99 employees) and 12 percent of medium-sized firms (100 to 499 employees) export (Halabisky et al., 2005).

⁶ "SME exporters" are defined as businesses with fewer than 500 employees and less than \$50 million in annual revenues that sold any of its goods or services outside of Canada during 2004. SMEs exclude non-profit and government organizations, schools, hospitals, subsidiaries, co-operatives, and financing and leasing companies.

summary of factors that motivate export and discussion about relevant theory, followed by research propositions, a summary of the research methodology and presentations of empirical findings. The paper closes with a discussion about the research findings and potential implications for future research and trade policy.

REVIEW OF LITERATURE

Previous studies have identified numerous factors that may motivate the export decision. These include internal (firm level) stimuli such as excess capacity, desire to extend seasonal sales, unique organizational resources, products, services and/or opportunities to leverage technological advantage. External stimuli may include reductions in customs barriers, declining lifespan of goods and services, increased market pressure due to the presence of multinationals, saturated or declining domestic markets, the need to diversify risk, and capitalizing on export stimulation measures (Miesenbock, 1988; Baggchi-Sen, 1999; Pope, 2002; Small Business Administration, 2004). The increasing homogenization of markets, the international nature of human capital, speed, efficiency and decreasing cost of communication and transportation also act as catalysts that increasingly enable even the smallest of firms to export. Underlying internal and market dynamics is the owner's growth intention (Morris, Mityasaki, Watters, and Coombes, 2006): the ambition held by the owner/founder(s) and his or her management team that shapes a firm's strategy (Davidsson, 1989; Wiklund et al., 2003). For example, studies indicate that not all small-business owners/managers are interested in international growth; however, growth-oriented owner/managers are more likely to develop a substantial presence in the international arena (Heinonen et al. 2004; De Clercq, 2005).

Exporting, an important means of achieving growth, is not without internal challenges (these can include costs of market entry and pressure on cash flows, lack of knowledge about customs, duties, border information) and external barriers (differences in culture, product and technical standards and language) (Beamish et al. 1986; Ernst & Young, 1996; DFAIT, 1998; Orser et al., 2004; Miesenbock, 1988; Small Business Administration, 2004). To further explain the process of internationalization among SMEs, two theoretical explanations have been advanced and are briefly reviewed here.

7 Export propensity is defined as: proportion of businesses whose owners reported that the business sold or exported its products or services outside Canada. Export intensity is defined as: ratio of revenue from exports to total sales revenue.

Theoretical Explanations of the Internationalization Process

Stage theory (Upsalla school of thought), suggests that internationalization reflects the gradual acquisition, integration and use of knowledge about foreign markets (Johanson and Vahlne, 1990). As firms grow, they accumulate resources, build economies of scale and excess capacity, and/or a level of “slack” that enables management to direct greater efforts to export when compared to very small firms (Bonaccorsi, 1992). Stage theory argues that smaller firms lack efficiencies, economies of scale and management acumen required to survive in the international marketplace. (Bates, 1989; Cromie, 1991; Kallenberg and Leicht, 1991). To internationalize, firms must follow a growth trajectory similar to the new product development process (Reynolds, Storey, and Westhead, 1994) in which penetration of new geographic territories does not occur until well after conception, commercialization, and growth (Kazanjian and Drazin, 1990: 145).

The stage theory of internationalization was formulated at a time when trade barriers dictated that only large companies could enter international markets. Historically, a variety of barriers limited smaller firms to regional markets. However, as Etemad (2004) remarks, “It is becoming increasingly difficult, if not practically impossible, for independent small firms to thrive by taking refuge in their traditionally protected markets.” Arguably, the forces of technological change and globalization have better enabled entrepreneurial firms to exploit opportunities in international markets, markets that had heretofore been almost exclusively the province of large firms. Etemad (2004) explains that the key changes include:

- shortening product and technological life cycles (Coviello & Munro, 1995; Rasmussen, Madsen, & Evangelista, 2001);
- increasing costs of R&D (Lindqvist, 1990, 1997; Litvak, 1990);
- faster technological obsolescence (Lindqvist, 1990, 1997);
- resource limitations (Etemad, 1999; McNaughton & Bell, 2000);
- shortage of financing at home (McDougall & Oviatt, 1991);
- small home markets (Lindqvist, 1997; Madsen & Servais, 1997); and,
- MNEs competing against them even in their own domestic markets.

An alternative theoretical paradigm is resource-exchange theory which suggests the firm can be viewed as a bundle of resources (Penrose, 1959; Delmar, Davidsson and Gartner, 2003). Zacharakis (1997) argues that exporting is predicated on “transaction efficiency”, in which “...organizations enter into [international] transactional relationships because they cannot

generate all necessary resources internally”. Hence, international expansion is based on accumulation of firm level resources including financial, technological and human attributes such as experience, knowledge, networks and foreign languages (Oviatt and McDougall, 1995; Eriksson et al., 1997; Reuber and Fischer, 1997; Dhanaraj and Beamish, 2003). SMEs seek to enhance their resource base and mitigate transaction costs by partnering in foreign markets and in doing so, offset market risk (Pfeffer and Salancik, 1978 as cited by Westhead *et al.*, 1994). The theory also helps to explain differences in export propensity associated with owners’ managerial or entrepreneurial acumen (Dhanaraj and Beamish, 2003).

Empirical studies have found that internationalization of SMEs is observed as common within technology, intellectual-intensive (knowledge-based) and manufacturing firms (Beamish and Munro, 1986; Cavusgil, 1984; Baldwin, 1994; Beamish and Munro, 1986b; Seringhaus, 1993; Therrien and Doloreux, 2007). Others have found that the nature of technology or innovation, industry maturation, and product standards influence export propensity (Kirpalani and MacIntosh, 1980; Beamish, Craig and McLellan, 1993; Therrien and Doloreux, 2007).

Export Propensity and Gender of Owner

Ahl (2006: 596-7) notes two broad schools of feminist theory that are pertinent: liberal feminism (“where men and women are viewed as essentially similar) and social feminism (in which men and women are viewed as “essentially different”). Johnsen and McMahon (2005: 117) quote Fischer et al., (1993) to describe these theories. Liberal feminist theory is described as:

“Rationality, viewed as the human essence, is assumed to be a purely mental capacity, and is considered to be separate from a person’s gender. Disparity in achievements between genders is attributed to the differences in social opportunities presented to men versus women. Women, being deprived of access to various forms of education and experience are argued to be less likely to realize their full potential.”

Social feminist theory (Johnsen and McMahon (2005: 117)

“... posits that men and women are subject to different socialization processes related to their observed sex , and that this will condition them to differ in many characteristics, including motivations generally considered relevant to entrepreneurship.”

It follows from liberal feminism that owners and firms that demonstrate equivalent motives (intentions), managerial acumen and resources perform at comparable levels and are equally likely to export. Unexplained gender differences may be attributable to explanations presented in social feminist theory, a theory that suggests the experience of male and female business

owners is essentially different. These differences may also be evidenced in the process of internationalization of the firm. Generally, empirical findings support a liberal feminist view.^{8 9}

Gender-related export barriers

Only two peer-reviewed studies appear to have examined gender-related barriers to export. Both sought to disaggregate export-related from general or operational barriers to growth. Among a study of 165 women exporters and 89 export planners, Orser, Riding and Townsend (2004) report that 60 percent indicated gender to have played a role in the management practices of their firms.¹⁰ Principal gender issues were cultural and experiential differences. Cultural and interpersonal concerns included the view that women business owners are not taken seriously; perceived lack of respect by (foreign) male business owners; businessmen who explicitly refuse to do business with women; bravado, physical gestures and chauvinism; clients who verify the female business owner's decision through a male member of staff; the assumption that the business is owned by men; differences in management experience and style of doing business; and different or more limited professional networks. Other gender issues reflected perceived

⁸ For example, studies by Fasci and Valdez (1998), Chell and Baines (1998), Watson and Robinson (2003) and Johnson and McMahon (2005) point out that gender differences in firm performance can be explained primarily through the association among inputs (e.g., risk propensity, total assets, owner's equity) and outputs (e.g., sales or profit). Employing a reward-to-variability ratio (profit: standard deviation of profit), Watson & Robinson (2003) reports no gender differences in performance provided performance is adjusted for risk. Employing estimates of financial leverage (total liabilities as a percentage of total funding), time to business, legal organization to outputs (financial performance (ROE, Return total assets), growth (growth in employee numbers, sales assets) Johnson and McMahon (2005) report no statistically significant gender differences in financial performance, business growth and return on owner's equity. Statistically significant differences in return on total assets were reported (females outperform males). Employment growth is influenced by number of employees and business age (younger).

⁹ Canadian studies present mixed results. Fischer (1992: 8) reports on differences between men and women with respect to age, experience, education: "Prior education defined as courses or seminars in general, marketing, finance, personnel, production, strategy, and motivation did not account for differences in firm performance. However, having controlled for these elements of managerial capital, "...none of the variables studied accounted for [performance defined as] the greater number of employees, higher sales, and greater sales per employee characteristic of men's firms". Orser (1997) employed a composite estimate of managerial capital to 'high' and 'low' growth performance firms. Results indicated that among young firms, less diversity of management experience, intention not to expand, and being female were associated with low growth. Conversely, diversity of management experience, being male, and an intention to grow were associated with high growth. Equally, Reuber and Dyke, (1993: 152) report: "Regressions undertaken to examine predictors of a range of business performance indicators suggests that women's lesser experience in working in similar forms and in helping to start-up may help to explain the small size, slower income growth and less sales per employee of their firms." Similarly, Papadaki and Chami (2002: 43) report no unexplained gender effects on firm growth performance, having controlled for firm-related factors (e.g., age, rate of growth, sector, level of innovation, regional growth strategies, location) and owner-related factors (e.g., growth motive and networks). "...Lower performance of women-owned firms was related to access to networks or economic activity the geographic markets served."

¹⁰ The original report (by Orser, Fischer, Hooper, Reuber, and Riding (1999) can be downloaded at DFAIT: <http://www.dfait-maeci.gc.ca/businesswomen/beyondborders-en.asp>.

gender discrimination by lending institutions; differences in management experience and style of doing business; and limited professional networks. The analysis indicated that “gender aspects of export management” were generalized across sector, export readiness, and all other descriptive variables including size and age of firm, export status (start-up versus emergent exporters) owner’s marital status and presence of dependents.

However, not all women exporters cited gender-related barriers to international trade. For example, among one sample of (7) ‘award winning’ women exporters, none reported that ‘being a woman created additional challenges for them either in international trade or in maintain work/life balance (Reavley, Litchy and McClelland, 2005). Orser et al., (2004) also noted that 24 percent of women exporters and export planners cited no gender challenges and 14 percent indicated gender to be an advantage (e.g., ability to speak with and understand better other businesswomen; being able to capitalize).

Gender differences were also perceived to be secondary to operational and financial challenges. Finally, it is important to remember that perceptions influence decision-making. For example, if a women business owner perceived that she will encounter gender-related barriers in export, she may be less inclined to seek international expansion. If a women business owner perceives that her firm is deemed ‘less credible’ than one owned by a male, she may forgo an international bid (ACOA, 2003).

STUDY PROPOSITIONS

The above discussion serves to illustrate that gender influences are closely intertwined within firm and owner-attributes, as well as factors associated with firm growth. It is evident firm and owner attributes influence the propensity to export. These observations present two questions. The first is: are gender differences in export propensity associated with owner and firm level attributes. The second question is: do women business owners experience unique gender-related barriers to international trade? Understanding the relative influence of each is critical to the development of export stimulation programs and policies. For example, if gender differences are primarily associated with firm and owner attributes, remedial strategies might best be focused on development of the firm (helping to make women-owned firms “export ready”). If however, gender differences are unexplained by firm and owner level attributes, market interventions

should be targeted at identifying (external) market impediments such as gender discrimination and other barriers to international trade. To examine these questions, Table 1 presents a matrix of the study propositions. A description of the research methodology, definitional criteria and descriptive findings follow.

RESEARCH METHODOLOGY

The empirical work drew on a survey conducted in 2005, regarding the financing and export experiences of a large stratified sample of Canadian small firms using 2004 as the reference year.¹¹ The sampling frame for the survey was 34,509 SMEs taken from the Business Register.¹² The sample was stratified to ensure minimum numbers of responses from particular regions, sectors, and firm size categories. The response rate for the survey as a whole was 47 percent.¹³ Several key related questions posed to respondents included: Did the business sell or export any of its goods or services outside Canada during the past 12 months?; What percentage of your revenues came from outside Canada? and What percentage of the business ownership is held by women? Within the sample, a randomized skip pattern resulted in 8,112 responses to these three key questions.

¹¹ Given space limitations, readers are encouraged to review the description of the research methodology employed in this study at SME Financing Data Initiative, Survey on Financing of Small and Medium Enterprises, 2004 website: http://www.sme-fdi.gc.ca/epic/site/sme_fdi-prf_pme.nsf/en/01561e.htm).

¹² This database is constructed using a sample extracted from the Statistics Canada business register (BR). The Statistics Canada Business Register (BR) contains the universe of enterprises in Canada, constructed from business number records which are assigned and collected by the Canada Customs and Revenue Agency. The following enterprises were excluded from the population: Enterprises with 500 or more employees, enterprises with over \$50 million in gross revenue, enterprises coded as being non-profit (for example schools, hospitals, charities), cooperatives, joint ventures, municipal/federal government, and industries for which financing is not of interest. Other exclusions such as subsidiaries could not be identified based on the frame information. Such companies were screened out at the collection phase. The final sampling frame represented 1,939,780 enterprises.

¹³ Data collection was undertaken in two phases. In part 1, for the most part qualitative type questions concerning the businesses latest financing requests were collected using a CATI instrument. Part 1 also includes some quantitative questions related to amount requested and borrowed for each type of financial instruments. For part 2, a questionnaire that collects detailed financial information on liabilities and balance sheet was mailed or/and faxed-out to all businesses that responded to part 1. Telephone follow up was used to increase response rates. The reference period for the Part 1 of the survey was the last 12 months from the date of the interview. Part 1 CATI Interviews started in September 2004 and ended in March 2005. The Part 2 questionnaires were mailed out throughout the collection period, after the respondent completed the interview for Part 1.

ANALYSIS OF DATA

Exporter and Non-Exporter Firms by Gender of Ownership

The vast majority of firms (7,135 firms, 84.7 percent) did not export at all. Another 696 firms (8.3 percent) reported exporting, but exports accounted for less than 25 percent of their total revenues. For the remainder, 596 firms (7.1 percent of the sample) exports accounted for more than 25 percent of total revenues. Application of the sample weighting scheme to these results revealed that an estimated 8.2 percent of Canadian firms exported to some extent during 2004 and that for 4.5 percent of businesses exports accounted for more than 25 percent of total revenues. Likewise, the sample comprised 4,300 firms (51.0 percent) with no women among the owners and another 1,301 firms (15.4 percent) that included women owners but where the majority ownership position was held by men. A total of 877 firms (10.4 percent) were owned outright by women and another 192 businesses (2.3 percent) were majority-owned by women. Women and men shared equal ownership of 1,757 firms (20.8 percent of the sample). Applying the sample weights to estimate the gender breakdown for the population reveals that 62.7 percent of Canadian firms are majority-owned by men, 16.6 percent are majority-owned by women, and ownership of 20.6 percent of Canadian firms is shared equally between men and women.

Table 2A provides breakdowns of attributes of business owners across gender and exporter categories. Table 2B provides breakdowns of attributes of the businesses themselves across gender and exporter groupings.¹⁴ Student t-tests and Wilcoxon tests were conducted to compare across genders and exporter categories to identify statistically significant differences. From Table 2A, it is seen that compared to owners of firms that do not export, owners of exporter firms are significantly more likely to: speak English as a mother tongue (p-value 0.072), be more experienced (p-value 0.079), be owned by an immigrant (p-value 0.006), be an informal investor (p-value 0.058), and be almost twice as likely to espouse an intention to seek the growth of his or her firm (p-value 0.000). From Table 2B, compared to domestic counterparts exporter firms are larger in terms of number of employees (p-value 0.000), revenues (p-value 0.000), profits (p-value 0.000), and total assets (p-value 0.079). Exporter firms are more likely to be in

¹⁴ In proceeding, firms that reported that exports accounted for less than 25 percent of revenues were excluded from further analysis because the extent to which such firms were frequent or consistent exporters could not be ascertained.

sectors such as manufacturing and the knowledge-based industries (p-value 0.000) and professional services (p-value = 0.001, and more than twice as likely to invest in R&D (p-value 0.000). Exporters were more likely to be located in urban areas (p-value 0.000) and to be relatively more concentrated in Quebec and British Columbia (p-value 0.000). Exporters were more likely to have sought external capital (p-value 0.000) or apply for bank lending (p-value 0.000). Exporters also appear to rely on debt financing to a greater extent than do non-exporters.

Table 2A shows that, compared with firms that are majority-owned by men, owners of firms that are majority-owned by women tend to report less experience, are younger, and more likely to be owned by a member of a visible minority. While the p-values differ, these gender patterns hold for both exporter and non-exporter firms. Table 2B shows that women-owned firms tend to be smaller, and concentrated in service sectors. Contrary to popular belief, women-owned firms did not differ to a statistically significant extent from firms owned by men in terms of investment in R&D. Among non-exporters, women owners were significantly less likely to apply for a bank loan or otherwise seek external capital. Among exporter firms, those that were majority-owned by women were, if anything, relatively more likely to seek external financing than exporter firms owned by men. Women majority-owned exporters (firms that derive more than 25% of sales from exports) differed from male counterparts across a number of firm and owner attributes, differences that generally mirrored domestic firms.

Export Propensity and Gender of Ownership

Exporting is, in itself, a performance milestone. To investigate factors associated with exporting, logistic regression models were estimated. Logistic regression was used because the outcome measure (whether or not a firm exports) is binomial and represents the outcome of a conscious decision. Logistic regression is a useful means of representing decision outcomes, makes relatively few statistical assumptions (Hosmer and Lemeshow 1998), and is robust to the statistical assumptions that are made (Stevens, 1996). In the models estimated here, the dependent variable corresponded to whether or not the firm obtained more than 25 percent of revenues from exporting (=1) or did not export at all (=0). Potential explanatory variables were those listed in Table 2.

The estimation procedure was based on that of Nitani and her colleagues (2003). According to this approach, the base model was estimated using all of the attributes listed in Table 2 as potential descriptors of exporter and non-exporter firms. Variables that were not statistically significant at a p-value of 0.10 or less were systematically removed from the equation with checks for collinearity at each step. Once a parsimonious model was estimated (left hand panel of Table 3, a categorical variable connoting the effect of gender of ownership team was added to the equation. The resulting model is described by the right-hand panel of Table 3. The base model (leftmost panel) was statistically significant at a p-value of 0.000 with goodness-of-fit measures (Cox and Snell R^2 and Nagelekerke R^2 , respectively) of 0.096 and 0.232 with an in-sample prediction accuracy of 92.7 percent. The Hosmer-Lemeshow p-value was 0.112. Overall, these test statistics indicate a more-than adequate goodness of fit. Interpretation of the results indicates that export propensity is positively associated with: firm size (number of employees; p-value=0.000); management experience (p-value=0.106); having English as mother tongue (p-value=0.000); being a recent immigrant (p-value=0.001); seeking growth (p-value=0.000); being located in an urban centre (p-value=0.001); and investing in R&D (p-value=0.000). Emphasis on manufacturers, technology- and knowledge-based firms is not warranted given (relative to the base case), professional service firms and manufacturers are almost equally likely to export (coefficient estimates of 3.427 compared to 3.250, respectively).

The results partially support the study propositions linked to resource exchange theory. The findings also document the importance of professional service exporters, a sector often overlooked in research comprising samples of manufacturers and technology-based producers and one in which majority women-owned exporters are heavily engaged (incorporating 25.6 percent of majority women-owned exporters and 10.9 percent majority male-owned exporters).

Addition of a gender-of-ownership measure improved the overall goodness-of-fit estimate. Interpretation of this result suggests that, with a p-value of 0.037, firms that were majority women-owned were 3 percent less likely to export than firms that were majority male-owned, even after allowing for the other statistically significant factors noted above. While this percentage differences is not large in absolute terms, recall that overall approximately 8 percent of Canadian SMEs export. A summary of the findings relating to the various study propositions are presented in Table 1.

DISCUSSION OF FINDINGS

Many gender differences identified in the literature (Ahl, 2006) are systemic across domestic and export-intensive firms. Having controlled for sector, firm and owner level differences, women majority-owned firms were still significantly less likely to export. Differences in export propensity were not therefore explained by systemic differences in owner and business attributes. The findings lend support to social feminist arguments that the experiences of men and women (exporters) differ and help to illustrate the relevance of feminist thought within well-received theories of SME growth and internationalization. The results provide the first large-scale evidence to support anecdotal comments about gender-related barriers to export (Orser et al., 1999, Riddle 2000). Finally, visible minority and immigrant women entrepreneurs were over-represented as exporters, even having controlled for sector, firm and other owner attributes. It is not clear if propensity of export is a function of differences in growth orientation and values (Morris and Schindehutte, 2005; Morris, Miyasaki, Watters, and Coombes, 2006); “pull factors” such as cultural, geographic and market knowledge or “push factors” such a lack of domestic opportunities (e.g., double or triple jeopardy for visible minority / immigrant women managers in corporate settings).

Linking the above observations to policy and training and export stimulation programs, the findings suggest the need to focus on both owner and firm development (helping owners/firms become “export ready”) as well as explicit market interventions to address gender-based impediments to international trade. As such, SME training and export stimulation programs should include discussion about the attributes, challenges, benefits and factors associated with firm growth and export and the potential influence of gender on firm growth and exporting. This study also provides evidence that an absence of women exporters in export stimulation programs and incentives (e.g., trade missions, cross-border and export training programs) likely reflects program failure rather than the lack of growth-oriented women exporters. SME training agencies, financial institutions including export credit agencies and other stakeholders might consider their respective role in legitimizing and supporting women exporters and in particular, addressing the perception of women business owners “being taken seriously” (Orser et al., 2004; ACOA, 2003). For example, promotion materials and case studies might recognize women exporters of micro-businesses and/or professional service firms as role models and important business leaders. This is because research, policies and program strategies that seek to identify

and address concerns of women exporters may realize a real competitive advantage, given that international trade is one of the fastest growing areas of the global economy.

With respect to future research, academics and statistical agencies that monitor international trade are encouraged to track and report on the participation rates and export intensity of women-owned firms, across all sectors (e.g., avoid over reporting on technology-based and knowledge-based industries and under reporting on services and non-knowledge-based sectors). Given unexplained gender differences in export propensity and observations about the influence of minority and immigrant status provide direction for future research.

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Table 1: Summary of Theoretical Perspectives, Study Propositions and Findings

	Factors Associated with Export Propensity	Findings	Gender Differences in Export Propensity	Findings	
			Liberal Feminist Theory		
Resource-exchange theory	<p>Owner attributes SP1: Growth-orientated owner are more likely to export compared to domestic counterparts. SP2: Owners with more years of managerial experience are more likely to export compared to domestic counterparts. SP3: Owners with more investment experience are more likely to export compared to domestic counterparts. SP4: Owners with mother tongue other than English are more likely to export compared to domestic counterparts.</p> <p>Firm attributes SP5: Firms with high rates of innovation are more likely to export compared to domestic counterparts. SP6: Firms with comparatively more employees are more likely to export compared to domestic counterparts. SP7: Firms with comparatively more financial assets are more likely to export compared to domestic counterparts.</p> <p>Sector attributes: SP8: Knowledge-based firms are more likely to export versus non-knowledge-based firms. SP9: Goods producing firms are more likely to export versus service-based firms.</p>	Supported	Owner attributes SP1a: Majority-women exporters are less growth-orientated compared to majority male-owned exporters. SP2a: Majority-women exporters bring to the firm fewer years of managerial experience compared to majority male-exporters. SP3a: Majority-women women exporters have less investment experience compared to majority male-exporters.	Not Supported	
		Supported		Supported	
		Supported		Supported	
		Not Supported		Supported	
		Supported			
		Supported		Firm attributes SP5a: Majority-women women exporters exhibit lower rates of innovation compared to majority male-exporters firms. SP6a: Majority-women owned exporters employ fewer employees compared to majority male-owned exporters. SP7a: Majority-women owned exporters retain fewer financial assets compared to majority male-owned exporters.	Not Supported
		Supported			Supported
		Partially Supported		Sector attributes: SP8a: Majority-women exporters are less likely to operate knowledge-based firms compared to majority male-owned exporters. SP9a: Majority-women owned exporters are less likely to operate goods producing firms compared to majority male-owned exporters.	Supported
		Supported			Supported
Not Supported					
Social Feminist Theory:			SP13: Even after controlling for gender differences in firm export profile, women-owned firms are less likely to export compared to male-owned firms.	Supported	

Source: Orser, Spence, Riding and Carrington (2007) Export Performance and Propensity: Understanding the Influence of Owner Gender

Table 2A Attributes of Exporters and Non-Exporters by Gender of Ownership

Ownership Category N	Non Exporter Firms					Firms that derive more than 25% of sales from exports					
	Male 4671	50-50 1533	Female 931	Total 7135	p-value M/F	Male 438	50-50 97	Female 61	Total 596	p-value M/F	p-value M/F
Table 1A: Attributes of Owners											
Language of Primary Owner					0.789					0.461	0.072
English language owner	64.6%	78.5%	61.8%	67.0%		72.4%	85.2%	50.4%	72.6%		
French language owner	22.3%	10.3%	21.4%	19.7%		17.0%	9.9%	38.5%	18.0%		
Other language owner	13.1%	11.1%	16.8%	13.3%		10.5%	4.9%	11.1%	9.4%		
Experience of Primary Owner*					0.000					0.000	0.079
< 5 years of experience	12.8%	7.6%	17.8%	12.6%		9.1%	10.4%	21.8%	10.8%		
5 to 10 years of experience	16.7%	14.5%	29.8%	18.5%		13.1%	2.0%	33.1%	13.1%		
> 10 years of experience	70.5%	77.9%	52.4%	69.0%		77.8%	87.7%	45.1%	76.1%		
Age of Primary Owner*					0.000					0.007	0.209
Age of owner < 30	3.0%	1.6%	4.6%	3.0%		2.0%	0.0%	0.1%	1.3%		
Age of owner 30-39	14.3%	12.7%	24.0%	15.6%		16.1%	4.6%	29.2%	15.2%		
Age of owner 40-49	35.9%	33.2%	32.3%	34.7%		38.0%	29.8%	44.9%	37.1%		
Age of owner 50-64	36.6%	41.3%	31.9%	36.8%		36.3%	49.6%	24.2%	37.7%		
Age of owner >64	10.2%	11.2%	7.2%	9.9%		7.6%	16.0%	1.6%	8.7%		
Other Owners' Attributes											
Owned by an immigrant	0.8%	1.9%	1.8%	1.2%	0.454	1.6%	1.3%	10.1%	2.6%	0.209	0.006
Owned by a visible minority	5.8%	6.6%	11.3%	6.9%	0.017	7.4%	3.0%	14.1%	7.3%	0.025	0.136
Informal Investor	9.7%	10.8%	8.0%	9.6%	0.000	13.3%	4.0%	0.8%	9.8%	0.040	0.058
Owner's Growth Intention	39.1%	33.0%	35.7%	37.3%	0.001	65.8%	51.9%	80.9%	64.6%	0.901	0.000

Table 2B: Attributes of Firm

Full-time employees	4.0	3.7	2.5	3.7	0.006	11.9	2.6	2.7	8.9	0.000	0.000
0 employees	48.8%	48.7%	55.1%	49.8%		46.5%	62.7%	79.0%	53.9%		
0.5-4 employees	33.9%	36.8%	34.3%	34.6%		13.9%	28.5%	9.4%	16.1%		
5-19 employees	14.0%	12.6%	8.9%	12.8%		24.7%	5.6%	9.8%	19.1%		
20-99 employees	3.0%	1.6%	1.6%	2.5%		13.6%	3.1%	1.4%	10.0%		
Sector*					0.002			2.7%		0.004	0.000
Agriculture/Primary	12.4%	24.1%	4.4%	13.6%		13.4%	27.7%	0.9%	14.4%		
Manufacturing	3.5%	3.3%	3.3%	3.4%		17.8%	7.6%	14.2%	15.4%		
Wholesale/Retail	12.6%	16.1%	13.9%	13.6%		25.9%	10.8%	4.7%	20.2%		
Professional services	10.6%	7.1%	16.2%	10.7%		10.8%	20.4%	25.6%	14.6%		
Knowledge-based Industry	5.7%	4.6%	4.4%	5.3%		12.6%	23.7%	9.7%	14.3%		
Tourism	6.7%	9.9%	11.5%	8.1%		5.0%	0.3%	15.2%	5.5%		
Other sectors	48.6%	34.9%	46.3%	45.3%		14.4%	9.6%	29.7%	15.5%		
Region*					0.139					0.982	0.000
Atlantic provinces	6.3%	5.6%	4.4%	5.8%		8.5%	4.1%	5.5%	7.2%		
Québec	22.6%	9.8%	22.4%	19.8%		24.9%	13.7%	24.6%	22.8%		
Ontario	36.4%	36.1%	35.9%	36.3%		35.5%	33.6%	34.8%	35.1%		
Prairies	21.3%	31.2%	19.2%	23.1%		14.5%	33.7%	14.2%	18.1%		
British Columbia	13.3%	17.0%	17.9%	14.8%		16.6%	14.8%	20.9%	16.8%		
Rural (RST definition)	30.2%	41.8%	23.3%	31.6%	0.059	15.8%	47.6%	20.1%	22.4%		0.000
R&D Expenditure as % of Investment*					0.338					0.434	0.000
>0% and =10%	17.7%	19.9%	20.9%	18.7%		35.5%	24.5%	30.4%	32.8%		
>10% and =20%	4.1%	5.5%	6.4%	4.8%		11.5%	11.1%	9.5%	11.2%		
>20%	4.4%	3.0%	4.4%	4.1%		12.3%	19.4%	35.9%	16.8%		
Financial Information											
Revenues	\$641,909	\$445,905	\$245,127	\$542,051	0.000	\$2,048,695	\$446,956	\$303,023	\$1,401,783	0.001	0.000
Total assets	\$602,587	\$424,303	\$267,443	\$515,303	0.003	\$1,109,732	\$521,130	\$314,243	\$857,072	0.243	0.079
Median Debt to Asset Ratio	48.2%	34.3%	23.2%	43.6%		83.2%	77.4%	57.0%	81.1%		
Applied for external financing in 2004	35.8%	43.8%	23.1%	35.5%	0.000	57.0%	34.3%	58.1%	52.9%	0.107	0.000
Loan applicant in 2004	27.0%	32.8%	19.4%	27.0%	0.000	46.3%	24.3%	48.8%	42.5%	0.082	0.002

Source: Orser, Spence, Riding and Carrington (2007) Export Performance and Propensity: Understanding the Influence of Owner Gender

Table 3: Logistic Regression Models of Export Propensity

Variable	Base Model				Expanded Model, Non-significant estimates suppressed			
	Coefficient Estimate	Wald Statistic	p-value.	Exp(B)	Coefficient Estimate	Wald Statistic	p-value	Exp(B)
Age of Owner		1.52	0.824					
Age of owner 30-39	-0.115	0.11	0.745	0.89				
Age of Owner 40-49	-0.218	1.06	0.303	0.80				
Age of owner 50-64	-0.071	0.14	0.706	0.93				
Age of owner >64	-0.111	0.37	0.543	0.89				
Experience of Primary Owner*		3.65	0.161			4.48	0.106	
5 to 10 years of experience	-0.253	2.31	0.129	0.78	-0.282	3.56	0.059	0.75
More than 10 years of experience	0.087	0.46	0.498	1.09	0.068	0.30	0.581	1.07
Language of Primary Owner		34.27	0.000			35.64	0.000	
French language owner	-0.329	5.17	0.023	0.72	-0.276	3.93	0.047	0.76
Other language owner	-0.988	29.70	0.000	0.37	-0.980	30.71	0.000	0.38
Visible minority owner	-0.228	1.64	0.201	0.80				
Immigrant owner	0.825	11.86	0.001	2.28	0.779	10.66	0.001	2.18
Informal Investor	0.037	0.08	0.781	1.04				
Growth Intention	0.482	23.01	0.000	1.62	0.455	19.77	0.000	2.18
Full-time equivalent employees	0.011	61.90	0.000	1.01	0.012	60.98	0.000	1.01
Sector		163.07	0.000			168.29	0.000	
Construction	-0.563	6.54	0.011	0.57	-0.853	11.79	0.001	0.43
Manufacturing	-3.403	31.64	0.000	0.03	-3.427	32.10	0.000	0.03
Wholesale & Retail	0.597	9.07	0.003	1.82	0.592	8.90	0.003	1.81
Finance, Insurance, Real Estate...	-0.401	3.79	0.051	0.67	-0.398	3.71	0.054	0.67
Professional Services	-3.276	10.32	0.001	0.04	-3.250	10.17	0.001	0.04
Accommodation & Food Services	-0.055	0.08	0.782	0.95	-0.065	0.11	0.741	0.94
Other Services	-4.780	20.68	0.000	0.01	-4.815	20.58	0.000	0.01
Transportation & Warehousing	-0.840	13.81	0.000	0.43	-0.842	13.72	0.000	0.43
Rural	-0.426	11.90	0.001	0.65	-0.439	11.24	0.001	0.64
Firm founded since 2001	-0.055	0.19	0.662	0.95				
Firm founded: 1999 to 2001	-0.046	0.12	0.734	0.96				
No R&D Investment	-0.977	105.62	0.000	0.38	-0.966	96.98	0.000	0.38
Gender						6.58	0.037	
Ownership shared equally					0.214	1.97	0.161	1.24
Majority women-owned					-0.091	0.25	0.620	0.91
Constant	-1.267	19.986	0.000	0.282	-1.564	32.62	0.000	0.21

Source: Orser, Spence, Riding and Carrington (2007) Export Performance and Propensity: Understanding the Influence of Owner Gender