

## **Why Are Female-Owned Businesses Smaller? An Empirical Study in Canada and the United States**

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*Female owned businesses tended to be less present in the manufacturing sector and more in the services sector. Female owners were significantly older than their male counterparts and had a longer tenure in their capacity. The smaller size of the female-owned business can be explained by several variables: in terms of entrepreneurial goals, female entrepreneurs put more emphasis on objective related to balancing business and family responsibility and less on extrinsic goals. This research also revealed that male business owners were taking their spouse's contribution for granted when it came to take care of household responsibilities, whereas female business owners were more often expected to keep their social role within the home, even on top of managing a business. Female business owners were therefore deprived of the supporting role of a spouse and had less time to spend developing their business through strategizing and promoting. This might also shape the network perspective adopted by a higher proportion of female business owners, who need to resort to other expedients in order to maintain their business afloat. It would suggest that for women, networking is not a natural way of doing business, but rather a necessity.*

### **INTRODUCTION**

In the past decades, the number of Female-Owned SMEs increased in most countries. Women are more active than men in the field, when growth rates by number of firms are compared according to gender: the proportion of female business owners has been increasing in countries such as the United States and Brazil (OECD – Entrepreneurship at a Glance, 2013). While results from the 2011 GEM study showed that 12.3% of the workforce (18 to 64 years old) had started or operated a business, which was much higher than what had been observed in 2010 (7.7%), female business start-up rates were increasing: according to the 2013 Global Entrepreneurial Monitor Women's report, there were eight female business start-ups for ten new male-owned businesses in 2013. Other statistics show that, in the United States, "women are the majority owners in 30% of all privately held firms, are generating \$2.5 trillion in revenues and employ 19.1 million individuals" (CWBR, 2005) and that "between 1997 and 2014, when

the number of businesses in the United States increased by 47%, the number of women-owned firms increased by 68% - a rate 1-1/2 times the national average.” (Weeks, 2014).

In 2007, 16% of Canadian SMEs were majority female-owned (Jung, 2010), and were representing over \$117 billion per annum of economic activity (Orser, 2011). In Quebec province, a 2012 Female Entrepreneurial Index revealed that in a four-year period the total proportion of female business owners grew from 5.5 to 9.4% of the total population, while male entrepreneur proportions in that province had a more modest progression of 9% to 11% of total population (Fondation de l'entrepreneurship, 2013).

Recent studies keep showing that female-owned firms contribute considerably to the economy as their relative importance has increased in the recent decades. Therefore, women investing in their future contribute to world economic growth and promote economic vitality. Despite this progress, research keeps presenting results where female-owned firms are generally smaller than male-owned ones and less geared towards growth (Cliff, 1998; Lerner, Brush and Hisrich, 1997; Orser and Hogarth-Scott, 2002; Anna *et al.*, 2000; Du Rietz and Henrekson, 2000; Rooney *et al.*, 2003; Minniti *et al.*, 2005; Fuller-Love, 2008; Cole and Mehran, 2009; Robichaud *et al.*, 2013).

It appears therefore important to understand the factors explaining the smaller size of female-owned firms and limiting their growth. This study has been conducted in order to better understand why female-owned businesses are smaller than those belonging to males. In this perspective, the research question was posited as thus: “What are the personal and organizational characteristics explaining why female-owned firms are smaller than those owned by males?” To answer this question, a sample of 935 entrepreneurs (670 male and 265 female) from Canada and the United States was examined.<sup>2</sup>

## Literature Review

Researchers' interest in female entrepreneurship issues dates back to the late 1970s (Hughes *et al.*, 2012). The significant increase of the proportion of female entrepreneurs over the recent decades has resulted in a growth of research in the field. This literature review summarizes a number of models and approaches, as well as theoretical frameworks; all leading to various research perspectives, or attempting to explain female entrepreneurs' behavior. It must be noted however, that this review does not pretend to be exhaustive.

A first model, by Morris *et al.*, (2006), identified six dimensions relevant to female entrepreneurs and growth: personal characteristics, entrepreneurial goals, barriers, organizational characteristics, entrepreneurial expectations (or factors relative to perceptions of success), as well as the entrepreneur's social and cultural identity. Among those barriers most often reported were the work-family conflict, inferior participation to relevant entrepreneurial networks, access to credit issues, lack of business experience, and social and cultural constraints. This model assumed that a stronger orientation of the entrepreneur towards growth would contribute to higher business growth.

Carter, Anderson and Shaw's (2001) extensive literature review on female entrepreneurship classified scholarly findings into six streams: 1) Entrepreneurial characteristics and motives, 2) Specific circumstances related to business start-up, such as motivations, resources, and constraints, 3) Management styles, 4) Financing and access to credit, 5) Network membership, and 6) Performance and growth. More recently, Hughes *et al.*, (2012) emphasized the importance of considering the variety of experiences among female entrepreneurs, in terms of life experiences, intentions, and gendered forms of behavior (Davis and Shaver, 2012; Gupta, Turban, and Pareek, 2013).

Factors contributing to the success of female entrepreneurs have also been studied, as well as the obstacles faced by business women. Lee *et al.*, (2009) proposed a model comprising a number of explanatory factors for the organizational performance of female-owned firms. These included family support, inheritance, ability to communicate, product/service competency, and managerial skills.

Several studies dealt with the barriers faced by female entrepreneurs (Women's Enterprise Centre, 2011; Daigneault, 2012; Sparling and Douglas, 2013). Despite the large number of obstacles mentioned, they can be categorized as follows: economic barriers (access to financing, cash flow issues), consumer demand barriers, human resources problems (e.g. lack of skilled workforce), and personal barriers (e.g. limited management experience and training, lack of mentoring).

Other authors (Brush *et al.*, 2009) tried to better understand female entrepreneurs' behavior by comparing them to male entrepreneurs. This approach highlighted gender differences and focused on

factors that might explain why female-owned firms were smaller than those belonging to males. In their edited volume compiling the best papers from the Second Diana International Conference on Women's Entrepreneurship Research<sup>3</sup>, they identified and discussed factors influencing growth among female-owned firms. Among the most frequently cited variables in these international empirical surveys were entrepreneurial networks, the choice of an economic sector, entrepreneurial motivations, financial issues and surrounding contexts, as well as other social, cultural, and economic variables.

To conclude, there are several explanatory recurrent factors in the literature that could contribute to the smaller size of female-owned businesses. Among these factors, the following were the most often cited: female-owned firms were generally more recent (Watson, 2003; Kelley *et al.*, 2013), women are more often involved in the retail and services sectors (Salman, 2002; U.S. Department of Commerce, 2010; Jung, 2010), and they often have a shorter business experience (Chabaud and Lebegue, 2013; U.S. Department of Commerce, 2010; Fillion *et al.*, 2004). Secondly, for family responsibility reasons, female entrepreneurs cannot devote as much time to their firm as men do (Loscoco and Robinson, 1991; Salman, 2002; Gurley-Calvez *et al.*, 2009; Bardasi *et al.*, 2011). Thirdly, some researchers found that women were less successful at developing strong networks with other entrepreneurs or potential stakeholders and financial supporters (Menzies *et al.*, 2004; Moore, 2004; McGrath Cohoon *et al.*, 2010; Bishop and Deason, 2013; Kelley *et al.*, 2013): this prevents them from developing their business as rapidly as men. A fourth factor would reside in the diverging motivations for being in business: Cadieux *et al.* (2002) as well as several others have noted that while women try to pursue both social and economic objectives at the same time, male entrepreneurs tend to favor economic motives more often (Carter, Anderson and Shaw, 2001; DeMartino and Barbato, 2003; McGrath Cohoon *et al.*, 2010; Kelley *et al.*, 2013). Finally, a lesser access to financing and credit among female entrepreneurs as compared to their male counterparts has been widely cited as a potentially adverse factor to the development of female-owned firms (Cachon and Carter, 1989; Carter and Cannon, 1992; Carter and Rosa, 1998; Marlow and Patton, 2005; Wilson *et al.*, 2007; Kwong, Jones-Evans and Thompson, 2012). According to some authors, (Coleman, 2000; Riding and Swift, 1990) female entrepreneurs might be the object of discrimination in loan granting on the part of financial institutions: in such instances, this would translate into higher interest rates and an obligation to provide a higher percentage of collateral in order to secure a loan.

Other scholarly publications tried to explain the differences observed among female-owned businesses with theories stemming from social sciences such as Economics, Sociology, and Psychology. For example, a group of entrepreneurship researchers (Fisher, Reuber and Dyke, 1993) proposed two feminist theoretical frameworks in order to include characteristics specific to female entrepreneurs: "liberal feminism" (LF) and "social feminism" (SF).

The liberal feminist perspective is based on the assumption that women can be as rational as men but are facing social and structural barriers that put them at a disadvantage when they enter the business world. This is why field research frequently observes among female entrepreneurs higher proportions of respondents who lack business training, experience, and suffer from discriminatory treatment (for example when seeking financing). Other gender differences related to traditional and non-traditionally gendered sectors, glass ceiling issues, as well as technical education issues (for example the paucity of female engineers) are also cited as part of social structural barriers facing women (Welter, Brush and de Bruin, 2014). Gender differences in such a theoretical context can be explained by the fact that women could not develop their complete potential. Logically, whence women will have access to the same opportunities enjoyed by men, they will be able to realize their full potential and gender differences will disappear.

The social feminist perspective locates the sources of gender differences within the socialization process whereby women develop gendered expectations and analytical frameworks conducting them to pursue goals and make decisions consistent with the place they perceive as being theirs within their social context. Contrarily to liberal feminism, social feminism does not consider both genders as similar, but would explain why women logically enter sectors where they can maximize their chances of success, rather than entering those where they would endure higher levels of risk, marginalization, and failure. In that respect, social feminism does not view women as inferior to men but, rather as able to develop distinctive skills concomitant with their social context. A central tenet of social feminism is that even if feminine experience and thinking has been denigrated, women's knowledge can lead to choices and

behaviors as functional as those of men. As a consequence, social feminist theory predicts that gendered entrepreneurial behavior must be expected.

In general terms, the recent evolution of research in female entrepreneurship is towards a more in depth analysis of social and geographical contexts besides the necessary examination of each respondent's psychological and personal characteristics. As the profile of female entrepreneurs evolves, the characteristics of their firms tend to change along with the contextual descriptors involved. For example, geography can play a role in terms of business location, social context (ethnicity, being an immigrant, poverty, urban vs rural location, family issues such as spousal support), and other environmental factors (availability of skilled personnel, legal environment, financing). These added layers of contextual descriptors can only render ever more interesting the study of gender differences.

The following section describes the method adopted for the empirical part of this study in the following order: definition of a small and medium sized enterprise (SME), sampling and experiment process, variables and data analyses.

## **METHODOLOGY**

### **Definition of an SME**

There is no universal definition of a small and medium sized enterprise (SME) in the literature. The Organisation for Economic Co-operation and Development's definition has been retained for the purpose of this research, whereby an SME is a firm with less than 250 employees.

Regarding the definition of a female entrepreneur, the one by Gasse and D'Amboise (1980) has been selected, i.e. "a person who contributes to the firm's capital and participates into its day-to-day activities". This definition excludes non-profit organizations and associations, government entities, and corporate subsidiaries.

### **Samples Selection and Interview Process**

In Canada, the InfoCanada databank provided lists of 3,000 firms in the Atlantic provinces and 3,000 firms in Ontario (in July, 2012, these five provinces represented 46% of the Canadian total population. 1,002 businesses were contacted by telephone in the Atlantic, and 2,544 in Ontario, of which 15.4% agreed to participate in the Atlantic (154 firms) and 8.7% in Ontario (221 firms). Firms could not be contacted due to telephone disconnections or for lack of availability of the owner. The total number of Canadian respondents is 375. Data were collected via the "Survey Monkey" software or by mail in the Atlantic, and by telephone in Ontario.

In the United States, 5,530 firms were approached (3,530 from Western Kentucky and the Northern Nashville region of Tennessee and 2,000 from Illinois). Business lists were obtained from Small Business Development Centers and Chambers of Commerce in Western Kentucky and Tennessee, while Dun and Bradstreet listings were obtained for Illinois businesses located outside the Chicago metropolitan area. Response rates were 11.2% in both regions for totals of 395 respondents in Kentucky and Tennessee, and 224 in Illinois (total of 619 respondents). Surveys were administered by mail and "Survey Monkey" following telephone contacts.

### **Variables**

The variables included in this research were part of a survey questionnaire for a study examining the following three dimensions: motivations/entrepreneurial goals, barriers/constraints encountered, and success factors. While the instrument had not been specifically designed to answer the aforementioned research question, it still contains a sufficiently large number of variables related to categories relevant to female entrepreneurship, including: personal characteristics, entrepreneurial motives/goals, contextual/sociological information (number of children at home, number of hours worked, spousal support and involvement), organizational data, financing, and entrepreneurial levels of expectation and satisfaction.

These variables have been divided into two main categories. Personal variables included the following: age, management experience, economic sector experience, education, and previous business ownership, intrinsic motivations, extrinsic motivations, family-related and independence/autonomy-

related motives, number of hours worked, being in business by necessity, marital status, children at home, spousal support, and spousal financial contribution to family income. Organizational variables included the age of the firm, access to financing, number of shareholders/partners, city/community size, whether the firm had been founded by the owner or acquired, and which economic sector it belonged to (retail, manufacturing or services).

### **Data Analyses**

Statistical analyses were performed using the SPSS package after being coded at each of the participating institutions then sent to Western Kentucky University for integration, formatting, and final verification. The first set of statistics involved descriptive statistics (frequencies) and simple inferences such as differences between means and chi-square tests by gender. At a second stage, parametric analyses and tests were conducted, including Pearson correlations, linear regression analyses and principal component factorial analyses using the orthogonal varimax method.

The instrument used to measure entrepreneurial motivations is inspired by former research where instruments were developed and validated by Robichaud (2011). The scale measuring entrepreneurial motivations or objectives included 18 statements identified through a review of the literature and validated with qualitative interviews. A five-point Likert scale ranging from 1 as “unimportant” to 5 as “extremely important” was used to rate each of the 18 variables corresponding to these statements. Factors were retained in the principal component analysis according to the Kaiser criterion (eigenvalue  $>$  or  $= 1.00$ ). Only statements with a factor weighting equal or above 0.40 were retained. The factor analysis resulted in the following:

- The factor analysis provided groupings similar to those observed by Robichaud, McGraw and Roger (2001) and by Kuratko, Hornsby and Naffziger (1997). For both genders, four factors formed the final model: family security and well-being, extrinsic goals, independence and autonomy, and intrinsic goals.

- The four factors were composed of the same statements in both genders with one exception: the statement pertaining to creating someone’s own job is part of the independence and autonomy factor for males, whereas it is part of the extrinsic factor among female respondents.

- The order of the factors differed between genders. Extrinsic goals rated first among female respondents (36.15% of explained variance), followed by independence and autonomy (9.39%), family security and well-being (8.89%), and intrinsic goals (6.07%). Among male respondents, independence and autonomy ranked as the first factor (39.94% of explained variance), followed by extrinsic goals (8.14%), intrinsic goals (7.88%) and family security and well-being (7.64%).

- The total percentage of explained variance was 60.5 for females, and 63.6 for males.

- A reliability analysis within SPSS provided Cronbach alpha coefficients between .74 and .83, indicating strong internal consistency. Nunnally and Bernstein (1994) observed that, for an instrument composed of small scales including three to four statements, an alpha above .70 is satisfactory, indicating that component variables do measure the same construct.

The next step involved a linear regression aiming at observing the dependent relation of business performance indicators with respect to each independent variable. Both sales and number of employees were retained as the dependent variables. The literature contains abundant evidence of the use of these two variables to measure business performance (Lerner, Brush and Hisrich, 1997; Cliff, 1998; Brush and Vanderwerf, 1992). A correlation analysis was performed on the two dependent variables in order to ensure they were not highly correlated, which was the case (0.20), therefore justifying their inclusion in the analyses.

Incomplete data were not included in the analysis: given that variables were nominal, it would not have been appropriate to use variable means. A correlation analysis was performed on all variables prior to proceeding with the regression analysis. Two sets of variables appeared correlated above the acceptable threshold of 0.40. The age of the firm was correlated to the age of the entrepreneur, and marital status was correlated with spousal support. Therefore, only the variables age of the firm and spousal support were retained for the regression analysis out of these four variables. For all the other variables, there were no signs of multicollinearity within the data set.

Sample sizes for both females (n=265) and males (n=670) could be considered more than sufficient to proceed with statistical analyses. However, given the large number of independent variables, two series of regressions were conducted: at a first stage, all variables were included in the equation starting with personal variables followed by organizational variables. In a second stage, only those variables significantly contributing to the explanation of the model generated through the first stage were included in the regression equation. Included were those variables with a significant beta of 0.25 or less. The following discussion is based only on the results from the second stage of the regression analysis (Tables 2 and 3).

Finally, it is to be noted that a dummy variable called “Canada” was added to the regression analysis in order to take into account the differences between the two countries.

## **RESULTS AND DISCUSSION**

### **Respondents’ Profile**

Table 1 presents the entrepreneurs’ profile by gender. Male respondents were older (66 % above 50 years of age as compared to 58 % for female respondents), more educated (69 % of males had a postsecondary education, only 60 % of the females did), were more likely to be married or have a spouse (91% versus 84%), had more children under care (89% versus 84%), and worked more hours per week (37% of the males worked 56 hours or more, while 29% of the females did).

Female respondents had created their own business more often than males (74% versus 65%), but contributed less to family income than their spouse (16% of the males contributed from 61% to 100%, as compared to 4% of the female respondents).

There was no gender differences observed for the following personal variables: being in business by necessity, previous business ownership, management experience, economic sector experience, and spousal involvement in the business. In this latter case, it is important to observe that spouses make significant contributions (rated high or very high) to the business regardless of the entrepreneur’s gender (81% of the spouses in the case of male entrepreneurs and 79% of the spouses in the case of female entrepreneurs).

Regarding organizational variables where there was a statistically significant difference, male-owned businesses were significantly more present within the manufacturing sector (21% versus 15%), they were older (41% of the male-owned firms had been in existence for more than 21 years, as compared to 25% for female-owned firms), and tended to have more owners/partners than female-owned firms (14% of male-owned firms had 3 owners or more, as compared to 6% for their female-owned counterparts).

Female-owned firms were smaller in terms of the number of employees (70% had 5 employees or less, compared to 54% of the male-owned firms) and sales (31% had sales under \$ 100,000, while 14% of male owned firms belonged to this category). Finally, no significant differences were observed between genders for the following organizational variables: city population where the firm was located, the firm’s level of debt, and for belonging to the retail and services sectors.

### **Regression Results**

Two regression analyses were performed, one for each gender. While revealing the explanatory variables of performance for female entrepreneurs, this approach also unveiled gender differences. Variables with low significance were eliminated in a first stage by keeping only those with a 0.25 significant beta criterion. This allowed the elimination of 6 to 12 variables depending on the model retained.

Independent variables were then submitted to a regression analysis as follows: personal variables were entered first (model 1), followed by organizational variables (model 2). Through the variation of the R-square, this process revealed the specific contribution of organizational variables to the explanation of the dependent variables, i.e. Sales and Number of employees.

**TABLE 1**  
**SAMPLE PROFILE BY GENDER (FEMALE : N=265, Male : N=670)**

| Personal Characteristics                   |          |        | Organizational Characteristics         |          |        |
|--|----------|--------|--|----------|--------|
|  | Female % | Male % |  | Female % | Male % |
| Age*                                       |          |        | Population of the city                 |          |        |
| 20 to 29 years                             | 1        | 1      | Under 25,000                           | 37       | 37     |
| 30 to 49 years                             | 41       | 33     | 25,000 to 100,000                      | 37       | 38     |
| 50 +                                       | 58       | 66     | Over 100,000                           | 26       | 25     |
| Education*                                 |          |        | Sales***                               |          |        |
| High School (no diploma)                   | 6        | 4      | Under \$100,000                        | 31       | 14     |
| High School (completed)                    | 34       | 27     | \$100,001 to \$500,000                 | 35       | 28     |
| College or university degree               | 60       | 69     | \$500,001 and over                     | 34       | 58     |
| Married or living with spouse**            | 84       | 91     | Number of employees***                 |          |        |
| Children at home*                          | 84       | 89     | 1-5 employees                          | 70       | 54     |
| Started for economic necessity             | 26       | 25     | 6-10 employees                         | 16       | 17     |
| Has previously owned a firm                | 30       | 33     | 11 employees and +                     | 14       | 29     |
| Past experience in current business sector |          |        | Economic sector                        |          |        |
| None                                       | 29       | 24     | Retail and wholesale                   | 28       | 27     |
| 1-5 years                                  | 18       | 22     | Other Services                         | 53       | 48     |
| 6-10 years                                 | 19       | 20     | Manufacturing*                         | 15       | 21     |
| 11+ years                                  | 34       | 34     |  |          |        |
| Past management experience                 |          |        | Business formation mode                |          |        |
| None                                       | 39       | 38     | Founded by owner**                     | 74       | 65     |
| 1-5 years                                  | 19       | 24     | Bought*                                | 24       | 33     |
| 6-10 years                                 | 19       | 15     | Inheritance or franchise               | 02       | 02     |
| 11+ years                                  | 23       | 23     |  |          |        |
| Spouse contribution to family income***    |          |        | Age of the firm***                     |          |        |
| None                                       | 38       | 46     | 1-5 years                              | 23       | 13     |
| 1% - 25%                                   | 11       | 19     | 6-10 years                             | 23       | 20     |
| 26% - 60%                                  | 35       | 31     | 11-20 years                            | 29       | 26     |
| 61% - 100%                                 | 16       | 4      | 21+ years                              | 25       | 41     |
| Spouse's support                           |          |        | Number of owners**                     |          |        |
| Very low - low                             | 8        | 6      | 1                                      | 63       | 60     |
| Medium                                     | 13       | 13     | 2                                      | 31       | 26     |
| Substantial - very substantial             | 79       | 81     | 3 +                                    | 6        | 14     |
| Weekly hours worked*                       |          |        | Difficulty in obtaining funding        |          |        |
| 0 - 20                                     | 10       | 6      | None or limited difficulty             | 47       | 48     |
| 21 - 40                                    | 27       | 22     | A certain difficulty                   | 23       | 23     |
| 41 - 55                                    | 34       | 35     | Important or very important difficulty | 30       | 29     |
| 56 +                                       | 29       | 37     |  |          |        |

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

Regression results for female entrepreneurs appear in table 2, those for males in table 3. The F statistic at the bottom of the tables shows that both regression models were statistically significant ( $p < 0.001$ ), except for the Number of employees dependent variable in the case of females, where models 1 and 2 were statistically significant at lower levels ( $p < 0.1$  and  $p < 0.01$  respectively).

Three independent variables explained performance as measured by the two dependent variables regardless of gender: Spouse contribution to family income, Number of owners, and Age of the firm. The negative relation observed with the first variable indicates that the lower the spouse contribution to family income, the higher are sales and the number of employees. Moreover, firm performance is higher when the number of owners is greater and the firm older. Similar results were reported by Robichaud, Zinger and LeBrasseur (2007).

Examining the independent variables explaining Sales and Number of employees, the Family security and well-being factor is negatively related to performance in the case of female entrepreneurs only. This means that best performing female entrepreneurs are those who are the least oriented towards satisfying this motive or goal. It suggests that women who are less preoccupied by family responsibilities are more successful in business and can spend more time with their firm. To the contrary, the Independence and autonomy variable presents a similar negative relation to performance for men, thus suggesting that pursuing such a goal makes them less successful in business.

Finally, in the case of women, a number of independent variables explained one or the other of the dependent performance variables. For example, the number of hours worked, belonging to the retail sector or to the manufacturing sector, having created or acquired the business and the size of the city or community where the firm was located obtained statistically significant scores when sales were the dependent variable. This suggests that female-owned businesses' sales increase when their owner spend more hours working. The most performing firms were those within the retail and manufacturing sectors that were purchased rather than started by the current owner. Firms located in larger cities also tended to perform better than those located in smaller centers. The necessity variable is the only other personal variable which is part of the significant explanatory model when the number of employees is the dependent variable (with the exception of the number of owners and the age of the firm as reported in the earlier part of the result section above). Results pertaining to the number of employees as the dependent variable showed that female entrepreneurs who succeed best in business were not obliged to start their business for economic reasons such as the lack of sufficient income.

For what regards men, a similar significant relation was found for the necessity and the number of hours worked variables as explanatory of performance, but this time with sales as the dependent variable. Extrinsic motivations and education also showed statistical significance in both models where sales were the dependent variable. The more men were educated and pursued monetary goals and the higher were the sales achieved by their firms. These two variables were not significant for the female sample, in the case of the education variable; it was dropped after the first round of testing.

Spousal support also appeared as important, but only for male entrepreneurs. This variable was significant for both dependent variables models, sales and number of employees. This is to be interpreted as an indication that male entrepreneurs relied more on the support of their spouses than female entrepreneurs did.

## CONCLUSION

Results of this study generally confirm those observed in the literature. For example, women were more involved than men in services (53%) and less involved in manufacturing (15%), they started (74%) and operated their business alone more often (63%), and their firm was often smaller in terms of sales and workforce. Conversely, they had as much experience in their current business sector as men (34% has over 11 years' experience) and had several years of business experience (77% of their firms had been in operation for over 6 years).

**TABLE 2**  
**REGRESSION RESULTS – FEMALE RESPONDENTS**

| Independent Variables                | Sales                |                      | Independent Variables                | Employee Numbers     |                      |
|--------------------------------------|----------------------|----------------------|--------------------------------------|----------------------|----------------------|
|                                      | Model 1 <sup>a</sup> | Model 2 <sup>a</sup> |                                      | Model 1 <sup>a</sup> | Model 2 <sup>a</sup> |
| Extrinsic goals                      | 0.142**              | 0.096                |                                      |                      |                      |
| Independence and autonomy            | -0.110               | -0.018               |                                      |                      |                      |
| Family security and well-being       | -0.160**             | -0.187***            | Family security and well-being       | -0.143*              | -0.181**             |
| Management experience                | -0.126               | -0.158**             |                                      |                      |                      |
| Business sector experience           | -0.186**             | -0.100               | Business sector experience           | -0.099               | -0.168               |
| Started for business necessity       | -0.123*              | -0.062               | Started for business necessity       | -0.161**             | -0.137*              |
| Weekly hours worked                  | 0.165**              | 0.135**              |                                      |                      |                      |
| Spouse contribution to family income | -0.230***            | -0.195***            | Spouse contribution to family income | -0.152**             | -0.116*              |
| Spouse's support                     | 0.182**              | 0.105                | Spouse's support                     | 0.013                | 0.026                |
|                                      |                      |                      | Children at home                     | 0.070                | 0.064                |
| Canada                               |                      | 0.005                | Canada                               | -0.002               | 0.001                |
| Retail sector                        |                      | 0.254****            |                                      |                      |                      |
| Manufacturing sector                 |                      | 0.219***             |                                      |                      |                      |
| Founded /bought                      |                      | 0.272****            |                                      |                      |                      |
| Population of the city               |                      | 0.111*               | Population of the city               |                      | 0.095                |
| Number of owners                     |                      | 0.238****            | Number of owners                     |                      | 0.122*               |
| Age of the firm                      |                      | 0.125*               | Age of the firm                      |                      | 0.245***             |
|                                      |                      |                      | Difficulty in obtaining funding      |                      | 0.032                |
| R <sup>2</sup>                       | 0.20                 | 0.408                | R <sup>2</sup>                       | 0.064                | 0.15                 |
| R <sup>2</sup> Variation             | -                    | 0.208                | R <sup>2</sup> Variation             | -                    | 0.086                |
| F                                    | 3.946****            | 6.492****            | F                                    | 1.791*               | 2.715***             |
| Df                                   | 10                   | 16                   | Df                                   | 7                    | 11                   |

<sup>a</sup> standardized beta coefficients reported

\*p<0.10; \*\*p<0.05; \*\*\*p<0.01; \*\*\*\*p<0.001

Regarding whether personal and organizational characteristics explain the smaller size of female-owned firms as compared to male-owned businesses, a number of elements were found to shed some light on the issue. The contribution of the spouse to family income was an important contributor to the firm's performance in terms of sales and workforce numbers. This is consistent with results obtained by St-Cyr and Gagnon (2004), where the lack of income on the part of the spouse contributed to pressure the female entrepreneur into filling the void in order to maintain an acceptable family lifestyle. It was also suggested that a spouse whose income is limited might have more time available to help with family responsibilities, thereby allowing more time to the entrepreneur for her business.

**TABLE 3**  
**REGRESSION RESULTS – MALE RESPONDENTS**

| Independent Variables                | Sales                |                      | Independent Variables                | Employee Numbers     |                      |
|--------------------------------------|----------------------|----------------------|--------------------------------------|----------------------|----------------------|
|                                      | Model 1 <sup>a</sup> | Model 2 <sup>a</sup> |                                      | Model 1 <sup>a</sup> | Model 2 <sup>a</sup> |
| Extrinsic goals                      | 0.130***             | 0.107**              |                                      |                      |                      |
| Independence and autonomy            | -0.105***            | -0.084**             | Independence and autonomy            | -0.122***            | -0.112***            |
|                                      |                      |                      | Family security and well-being       | -0.077*              | -0.078*              |
| Intrinsic goals                      | -0.059               | -0.042               | Intrinsic goals                      | -0.070               | -0.068               |
| Previously owned a firm              | -0.057               | -0.043               |                                      |                      |                      |
|                                      |                      |                      | Management experience                | 0.063                | 0.088*               |
|                                      |                      |                      | Business sector experience           | 0.107**              | 0.111**              |
| Started for business necessity       | -0.135***            | -0.089**             |                                      |                      |                      |
| Weekly hours worked                  | 0.138***             | 0.145***             |                                      |                      |                      |
| Spouse contribution to family income | -0.206****           | -0.120**             | Spouse contribution to family income | -0.128***            | -0.098**             |
| Spouse's support                     | 0.069                | 0.080*               | Spouse's support                     | 0.108**              | 0.099**              |
| Children at home                     | 0.038                | 0.031                |                                      |                      |                      |
| Education                            | 0.097**              | 0.120***             | Education                            | 0.068                | 0.067                |
| Canada                               | -0.247***            | -0.191***            | Canada                               | -0.079               | -0.022               |
| Manufacturing sector                 |                      | 0.131***             |                                      |                      |                      |
| Founded/bought                       |                      | 0.130***             |                                      |                      |                      |
| Population of the city               |                      | 0.069                |                                      |                      |                      |
| Number of owners                     |                      | 0.086**              | Number of owners                     |                      | 0.075*               |
| Age of the firm                      |                      | 0.176****            | Age of the firm                      |                      | 0.098**              |
|                                      |                      |                      | Difficulty in obtaining funding      |                      | 0.049                |
| R <sup>2</sup>                       | 0.206                | 0.262                | R <sup>2</sup>                       | 0.082                | 0.110                |
| R <sup>2</sup> Variation             | -                    | 0.056                | R <sup>2</sup> Variation             | -                    | 0.028                |
| F                                    | 11.032****           | 9.832****            | F                                    | 5.090****            | 4.268****            |
| Df                                   | 11                   | 16                   | Df                                   | 9                    | 13                   |

<sup>a</sup> standardized beta coefficients reported

\*p<0.10; \*\*p<0.05; \*\*\*p<0.01; \*\*\*\*p<0.001

Another related variable was the level of support provided by the spouse, which appeared as less important for women as compared to men. This could be due to the fact that women tend to be more socialized into balancing work and family responsibilities as compared to men in North American societies. Brush (1992) suggested that women tend to consider their firm as a network of relationships rather than a strictly economic entity, which is more often the case with males. For Brush, female entrepreneurs' networks include family, community, as well as business stakeholders, all being part of day-to-day life. As a result, work and family responsibilities must be balanced without necessarily depending on help from a spouse (Sheldon 2006). On the other hand, studies by Robichaud, Zinger and LeBasseur (2007) and Fairlie and Robb (2009) found that spousal support was important in explaining the performance of male-owned firms.

Regarding female entrepreneurial goals, firm growth was directly negatively associated to family goals (contrarily to independence and autonomy among males). The pursuit of family goals (e.g. being closer to children) prevented female entrepreneurs from spending more time with their business. Ferguson

et Durup (1997) support this finding by pointing out that family and company responsibilities are a source of additional pressure for business women. This added pressure translates into a lack of time and energy to perform all the necessary business activities (such as reflecting about financial problems and setting priorities), a lack of social life and involvement in networks, as well as family pressure to become more available. Moreover, given that the number of hours worked within the business was an important explanatory variable among female entrepreneurs inasmuch as among males (when sales were entered as the dependent variable), it can easily be understood that pursuing family goals could damage female-owned business performance.

Unexpectedly, access to financing was not a major issue for female entrepreneur respondents in this study. Discrimination against women on the part of financial institutions has been cited quite frequently by scholars as part of the evidence explaining why female-owned firms might underperform. One interpretation for the discrepancy could be the relatively high average age of female entrepreneurs in the sample, as older women would normally tend to be more creditworthy than younger ones. Another explanation that has been proposed is that female entrepreneurs do not have the same expectations and attitudes their male counterparts have, and therefore tend to behave differently: these differences may result from discrimination as well as other factors (U.S. Department of Commerce, 2010).

Regarding the relative importance of personal versus organizational variables, the latter appeared as important as personal variables in explaining performance relative to women. For the sales dependent variable, the R-square value increased from 20% to 41% when organizational variables were included in the regression: this increase shows that organizational variables explained over 50% of the total variance of the sales dependent variable. For the regressions where the number of employees was the dependent variable, the increase of the R-square was from 6.4% to 15% when organizational variables were added, thus explaining almost 60% of the variance of the dependent variable.

Regressions conducted with the male entrepreneur sample revealed a reversed situation, where personal variables explained a higher proportion of the variance: when sales were the dependent variable, personal variables explained 20% of the total variance, while organizational variables added only 6% to the R-square, for a total of 26% of explained variance. For the regressions where the number of employees was the dependent variable, the increase of the R-square was only equal to 3% when organizational variables were added.

While this research was not aimed at explaining the relative importance of personal versus organizational variables, the statistical evidence obtained suggests that diverging influences are involved between genders. It would be of interest to explore this phenomenon further within future research projects.

Finally, limitations to this research reside in the choice of variables included in the questionnaire, as well as the external validity of the results given that specific regions were sampled within the countries.

## ENDNOTES

1. The research team thanks the Certified General Accountants of Canada (CGA) for their financial support.
2. Institutions involved in this study are members of an international consortium on entrepreneurship aiming at increasing students' awareness towards entrepreneurship.
3. The DIANA project was launched in 1999. It brings together a community of researchers whose objective is to improve the understanding of the female entrepreneurship phenomenon in the United States and in the world.

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