

**Stages of Small Enterprise Development:
A Comparison of Female and Male Entrepreneurs**

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Abstract

The explosive growth in the rate of new business formation by women has spurred renewed research interest in the area of female entrepreneurship and its related economic impact. Yet, there has been a dearth of research into the influence of gender on new venture formation and development. This study draws on GEM Canada data to examine the differences between female and male entrepreneurs in the early stages of small enterprise development.

Gender differences are explored within the context of a variety of personal as well as business-related variables. The impact of the enterprise's stage of development is also examined. The analysis confirms previous findings relating to the differing characteristics of male and female entrepreneurs, and revealed mixed support for the hypothesis that business-related attributes would be the more robust discriminators for firms that are beyond the nascent stage of development. The paper provides a discussion of the implications of these empirical findings, as well as some directions for future research.

Stages of Small Enterprise Development: A Comparison of Female and Male Entrepreneurs

Introduction

The level of female participation in the labour force has been growing steadily, not only in Canada, but across the industrialized world. This trend has been accompanied by higher levels of female entrepreneurship, for instance Statistics Canada's *Labour Force Survey* (2004) reported that there were 826,000 self-employed women in Canada in 2003, accounting for about one third of all self-employed people. Over the past 10 years, the number of self-employed women has grown by 26 percent, compared with a 16 percent growth rate in male self-employment.

This explosive growth in the rate of new business formation by women has spurred renewed research interest into the dynamics and economic impact of female entrepreneurship. Yet, there has been a dearth of research into the influence of gender on new venture formation and development. Comparatively little is known about the process leading to the creation of the business (Reynolds et al. 2000) or why women are less likely than their male counterparts to initiate a new venture, but just as likely "... to sustain their efforts" (Diochon, Menzies and Gasse 2005:.70). Hence, more research is needed to both improve our understanding of the dynamics of new venture initiation and the distinct 'participation gap' in entrepreneurial activity

between females and males¹, and heighten our awareness of the circumstances and strategies that are associated with the transition from a nascent venture to a thriving young enterprise (Flamholtz 1990; Gersick 1994; Slevin and Covin 1997).

In an effort to better understand gender differences, the current paper develops a general profile of male and female entrepreneurs in Canada using three years (2002–2004) of Canadian data from the Global Entrepreneurship Monitor (GEM). Not only does this analysis address both personal characteristics and business-related factors, but also takes into account the influence of the enterprise's stage of development by conducting male/female comparisons within the context of the GEM sequence of “nascent,” “new” and “established” firms².

Literature Review

Entrepreneurship and Gender

According to a national survey of Canadian enterprises (Government of Canada, 2002), 647,000 businesses, representing 45 percent of all SME's, had at least some degree of female ownership. Of those, some 211 000 were majority-owned by women, while another 272, 000 were under equal male/female control. Interestingly, small firms that were majority-owned by

¹ Recent GEM data (Filion et al 2004) reveal that Canadian women have an entrepreneurial activity rate (TEA) that is statistically lower than that of Canadian men: 5.4 versus 10.4. These results are consistent with the GEM data of previous years.

² **Nascent entrepreneurs** are defined as those who have been actively involved in creating a business in the past 12 months, but have not paid salaries or wages for more than three months; in cases where the firm has paid salaries or wares for more than three months, but less than 42 months, it is classified as a **new business** (Reynolds, Bygrave and Autio, 2004).

women were less likely than other SME's to employ more than 20 employees and also had started up more recently than firms that were controlled by men.

Gender has been studied extensively in relation to organizational characteristics as well as business performance (Cliff, 1998; Manley and Gallivan, 1997; Du Rietz and Henrekson 2000). According to traditional measures, such as sales, number of employees, and net earnings, small businesses owned by women display more modest levels of performance than those owned by men; for instance, it has been found that female-owned firms are smaller (Kaplan, 1988; Lee-Gosselin and Grise, 1990; Robichaud and McGraw, 2003) and grow more slowly (Chaganti, 1986; Fischer, Reuber and Dyke 1993; Rooney et al. 2003) than businesses owned by males.

However, the entrepreneur's salient personal characteristics and motivations can exert a strong influence on these outcomes. Indeed, studies of entrepreneurial motivation suggest a wide range of reasons for self-employment, including a strong desire for independence and autonomy (Bayad and Nebenhaus 1994; Sexton and Bowman 1985), a need for achievement, and the expectation of establishing a reputation within the community (Brockhaus 1986; Carland et al. 1984; Dubini, 1989). In terms of the theme of this paper, much of the research into motivational differences between females and males - Chaganti (1986), Cliff (1998), Hisrich and Brush (1987), Holmquist and Sundin (1988), Kaplan (1988), Rosa, Carter, and Hamilton (1996) - indicates that while male entrepreneurs often place greater weight on economic objectives, female small business owners have a greater tendency to consider such aspects as personal enjoyment and the opportunity for self actualization (Brush 1992; Buttner and Moore 1997; Moore 1990). In other words, intrinsic factors are more apparent for women than men (Kirkwood 2003; McGregor and Tweed 2000; Robichaud, McGraw and Roger 2005).

In addition, research into such factors as personal skills and socio-demographic characteristics has revealed identifiable distinctions between male and female entrepreneurs. In a review of the related literature, Brush (1992) observed differences in work and academic experience, as well as financial and interpersonal skills. In a number of studies, it has been determined that female business owners are likely to have training and experience in fields other than business (Belcourt, Burke and Lee-Gosselin 1991; Fischer, Reuber and Dyke 1993; McGraw and Robichaud 1998; Minniti 2004). Others (Chaganti 1986; Hisrich and Brush 1984) have highlighted the fact that females have a propensity to perceive their financial skills as being inferior to those of male entrepreneurs, but at the same time, believed themselves to have superior interpersonal skills.

The aforementioned survey of Canadian SME's (Government of Canada, 2002) found that a large number of enterprises owned by women competed in the wholesale, retail and professional services industries. Compared with their male counterparts, women owners tended to have fewer years of experience in the industries in which they operated their ventures and were often situated in sectors where the financial margins are thin (Légaré and St-Cyr 2000; Belcourt, Burke and Lee-Gosselin 1991).

However, further research is still needed to pinpoint differences between male and female entrepreneurs (Mazzarol et al. 1999) and ascertain the degree to which “gender-based entrepreneurialism” truly exists (Mukhtar 1998).

Small Business Growth and Development Frameworks

There has been substantial research on the topic of small business “stages-of-growth” frameworks (Adizes 1989; Churchill and Lewis 1983; Hanks 1990; Kuratko and Hodgetts 1989;

Mount, Zinger and Forsyth 1993; Olson 1987; Scott and Bruce 1987). According to this paradigm, each major stage of development is characterized by different challenges, opportunities, resource needs, and management approaches. It is further postulated that the evolution of the small enterprise will involve a progression from an entrepreneurial approach (informal planning and structures, continuous innovation, action orientation) "...through to stages of team building, functionalism and leading on to ultimate 'professionalism' of the organization" (Gibb and Davies 1990: 21).

Organizational development models suggest that in these latter stages, the business becomes increasingly dependent on the capability of its management, which manifests itself in a variety of ways, including more formalized planning and control mechanisms and decision support systems such as customer feedback protocols. In this way, the new enterprise is better equipped to overcome what Montaya, Omura and Calantone (1993) found to be the most likely cause of failure for small firms emerging from their start-up phase: the inability to cope with the challenges encountered when moving from a one-person, entrepreneurial management style to one that calls for a more professional, team-based approach. For instance, a recent empirical study of Australian firms by Smith (2003) supports the premise that small enterprises do tend to adopt more professional management processes as they grow.

Hence, what qualifies as appropriate management practice as the venture is being launched, may well prove to be inadequate as the organization progresses; Slevin and Covin (1997) advance the notion that as time passes, a higher degree of managerial complexity will be called for, given the need for changes in "the states of organizational system elements." However, Stanworth and Curran (1976) rejected such "positivist models of growth" in favour of a stages of development perspective that is dependent on the entrepreneur's "latent social

identity” (artisan – classical entrepreneur – manager).

While the current study has not been designed in accordance with any of the extant life-cycle models, they do serve as a useful foundation for our examination of gender differences across a range of small business settings. For example, Larson and Starr’s (1993) typology of “pre-venture – infant - development stages” is intuitively appealing, but difficult to operationalize. Fortunately, the GEM distinctions between “nascent,” “new” and “established” firms provides an objective, quantitative, yardstick for subdividing start-up ventures into meaningful categories.

For instance, the GEM definition of “nascent” as delineated in footnote 2, suggests that entrepreneurs at this level are in fact operating in pre-start-up mode; the activities undertaken during this phase can play an important role in stabilizing the new venture (Carter, Gartner and Reynolds 1996; Castrogiovanni 1996, Van Auken and Neeley 2000). While it is not the intent of this study to conduct a detailed analysis of such activities, the identification of distinct male/female attributes at this stage, may be useful in informing the discussion of pre-start-up behaviours.

In order to adapt to the business environment across these phases of development, strategic decisions must be made with respect to i) products/markets, ii) technology, and iii) administrative structures and processes. In this regard, Chrisman, Bauerschmidt and Hofer (1998) argue that the startup firm is no exception: planning, performance targets, and entry strategy are among a list of 50 strategic variables that impact on new venture performance. Similarly, Sandberg and Hofer (1987) discuss the importance of planning processes, and the development of managerial skills, but also stress that the characteristics of the entrepreneur are important in determining whether or not the enterprise is successful. A specific example of the

latter can be found in Westhead and Birley's (1995) identification of a relationship between the owner-manager's ability to access key resources and employment growth.

Indeed, the entrepreneur's inherent knowledge and skills (not to mention his/her perseverance) are typically brought to bear early in the venture creation process by virtue of the processes of opportunity recognition and the assembling and organizing of resources. Anna et al. (2000) situated these activities within a self-efficacy framework that impacts on both career expectations and firm performance. Factor analysis identified four dimensions of venture efficacy: opportunity recognition, formal planning, economic management, and human or conceptual competence. In general, high expectations of personal efficacy should lead to high career goals and business success as measured by sales. Though this framework was developed and tested on a sample of established firms managed by women, it has equal application to any venture in the earlier stages of development. The only difference would be one of degree in that, for example, nascent and new firms depend strongly on opportunity recognition and established firms highlight the importance of supervision and motivation of staff (captured by the human or conceptual competence).

Davidsson and Honig (2003) studied the influences of social and human capital on both the discovery as well as the exploitation of entrepreneurial opportunities: their findings revealed that previous start-up experience was positively associated with both of these facets, while a managerial background was not a useful predictor of either behaviour. Moreover, entrepreneurial discovery was strongly linked to level of education as well as having parents and/or close friends or neighbours who are in business.

In summary, the foregoing literature review suggests that the gender/entrepreneurship interface can be investigated at a number of different levels of analysis, including the

characteristics and perceptions of the entrepreneur, and the management practices adopted by the enterprise. In addition, by differentiating amongst nascent, new and established firms, this analysis may reveal patterns that are specific to each of these small firm stages

Research Hypotheses

This study focuses on three hypotheses, which address the general issue of gender differences as well as the relative importance of business and personal attributes at the different stages of small enterprise development.

H1: Females differ from male entrepreneurs in terms of their attitudes, operating styles, and business practices.

The aforementioned gender influences would be present throughout the pre-start, gestation and development phases, but we would also posit that in the earliest stages, differences in personal characteristics and attitudes should serve as the most potent explanatory variables (H2); the corollary being that business-related and managerial attributes would be more closely associated with gender differences in the subsequent phases (H3).

As the start-up entrepreneur is envisioning the business concept and considering how to assemble the necessary resources and organize the enterprise, its nature will be somewhat nebulous. Conversely, the personality, background, and experience of the founding entrepreneur are, of course, well established and deeply rooted, and provide much of the context for decision-making. Later, once the founder is fully engaged in launching and positioning the venture, the business begins to take shape and, largely based on interaction with suppliers, lenders, regulators and customers, appropriate adjustments are made to the firm's strategy and practices.

Accordingly, the entrepreneur, whether male or female, comes to rely less and less on intuition and previous experience as the business progresses.

H2: When comparing female and male entrepreneurs, the significance of personal background and attitudinal variables will diminish in importance as the venture evolves through the stages of development from nascent to new to established.

H3: When comparing female and male entrepreneurs, business-related variables will become more prominent as discriminators for firms that have progressed beyond the nascent phase.

Method

The Global Entrepreneurship Monitor is a longitudinal, collaborative study dedicated to the measurement of global entrepreneurial activities and their contribution to economic prosperity (Reynolds, Bygrave and Autio, 2004). Since its inception in 1999, this project has expanded to include 46 participating nations, with the database for each country being updated every year. As such, this study provides a comprehensive platform for exploring new venture initiation within the context of male/female entrepreneurship.

Sampling

To ensure that participating GEM researchers have access to uniform, comparable, and reliable data, all primary research data is collected using the same methodology. In Canada, a survey involving a minimum of 2,000 respondents is conducted annually by a local private market research firm. The sample is then weighted in order to ensure a balanced representation from each province by gender (50% females), population and age. For the purpose of this paper, GEM data from 2002 and 2003 and 2004 have been grouped together. The pooling of data is desirable because entrepreneurial activity is a relatively rare event in the adult population. By

aggregating this data, we effectively boost the sample size and in turn, are able to execute more robust statistical analyses³.

Variables

Vesper's (1990) identification of the five key prerequisites of a new venture - technical know-how, a product or service idea, personal contacts, physical resources, and customer orders - represents a fairly complete context for evaluating the start-up business. Under the more focused approach proposed by Sandberg and Hofer (1987), the following three areas are presented as distinct drivers of new venture performance (whether in terms of survival or success): the personal traits of the entrepreneur, the business strategy, and the industry structure. We have used these three areas to select and categorize relevant variables from the GEM questionnaire.

Personal variables. These included gender, age, education, marital status, knowledge/skills necessary to initiate the venture, work status (for both the owner-manager and spouse/partner), home ownership, household size, occupation, income level, personal connection to an entrepreneur in the past two years, and perceptions of business opportunities.

Business-related variables (including business strategy and industry structure). The primary items within this category are: the type of firm (nascent, new or established), expected number of owners, number of jobs now and in five years, and three strategy variables: percentage of export sales, new or old technology, and new or old product/service. The

³ The process of aggregating this data introduces a possible confounding influence, as for example, a "nascent" firm during the collection of 2002 data may be classified as a "new" firm by 2004. This possibility of double inclusion was considered to be remote due to the large population from which the random sample is drawn.

respondents were also asked to identify the economic sector of their business and assess the expected level of competition.

Statistical Tests

The data analysis encompasses three years of data (2002 through 2004), taking into account three distinct stages of new business formation: nascent, new, and established. Descriptive statistics were compiled for the total sample and Chi-square analysis was utilized to compare the male and female sub-groups according to individual characteristics as well as business characteristics.

In the next stage of analysis, logistic regression analysis⁴ was conducted, with gender as the dependent variable and many of the above-noted items as explanatory variables⁵. Three models were computed for each type of firm: (1) a model including only personal variables, (2) another model using only business variables, and (3) an overall model encompassing both types of variables. Thus, a total of nine models were generated, three for each of nascent firms, new firms, and established firms.

The stepwise forward method was used because some of the sub-samples were considered too small for a simultaneous investigation of numerous potential predictors. Furthermore, the stepwise method eliminates the possibility of multi-collinearity in that the inclusion of each independent variable is based on its unique explanatory contribution.

Though the data set suffered from missing data, mean substitution for missing values was not considered appropriate because of the categorical nature of most of the variables. As a

⁴ Logistic regression may be used to identify the “predictors” of the dependent variable, or to establish a comparative profile that may be associated with the dependent variable. Here, the latter approach was adopted.

⁵ It should be noted that due to the absence of 2004 data, a number of the independent variables (marital status, work status of partner, home ownership, household size, occupation, and current number of employees) were not utilized in the regression analysis.

result, it was decided to run the regressions on the available data, and omit those variables where the missing cases exceeded 20 percent of the sample. Consequently the “number of jobs now” variable was deleted due to missing data; but “number of jobs in five years” was retained. These variables were correlated at 0.70 (*Spearman Rho*) and therefore “number of jobs in five years” serves as a strong indication of the current number of jobs. Similarly, “number of owners now” was omitted, because of missing cases, in favor of “expected number of owners in the future.” These two items were correlated at 0.997.

The final quantitative analysis involved a binomial logistic regression to test the relative probabilities of females versus males having each of the respective attributes that serve as the study’s explanatory variables.

Results

Sample Profile

The sample is comprised of adults (18-64 years old) who are actively involved in a small business (whether at the nascent, new or established stage). A descriptive analysis of the personal characteristics of the respondents is provided in Table 1. Some 61 percent were less than 45 years of age; furthermore, 71 percent held a postsecondary degree or diploma, and three-quarters of the sample are homeowners. A wide majority of the respondents (88 percent) believed that they possessed the skills necessary to start a business, but fewer (62 percent) reported that they had a personal connection to an entrepreneur in the past two years.

Table 1 here

The women in this sample account for 40 percent of the respondents; this proportion is in line with OECD data (Baygan 2000: Table A2). In terms of personal variables, significant differences were found between male and female respondents: female entrepreneurs tended to be within the 35-54 age range and were more likely to be married. Also, home ownership and larger household sizes were associated with the female entrepreneurs ($p < .01$) as was the likelihood of being in a professional occupation.

At the same time, the current data reveal that a significantly larger proportion of women felt that they did not have enough knowledge and skills to start a business: 15 percent versus 10 percent of men. Similarly, more women were pessimistic with respect to a business opportunity in the next six months: 51 percent versus 39 percent of men.

Significant gender differences were also observed in a number of other areas. For instance, women were less likely to work full time than were men (71 percent versus 88 percent, $p < 0.001$); hence it is not surprising that income was lower among women (only 40 percent reported personal income of more than \$50,000 per annum, $p < 0.001$). Yet, the women entrepreneurs in the sample were more likely than males to report “professional” as their occupation.

Table 2 outlines the business-related variables. Forty-one percent can be classified as “established” firms, having supported at least one paid employee for over 42 consecutive months. It is worth noting here that in Canada, the incidence of both nascent and new firms has exceeded the G7 average (Filion et al. 2003: Figures 5 and 7).

Fully 65 percent of the sample operates within the business services or personal services sectors and only 24 percent employ more than five people (although this proportion increases to 35 percent when the respondents are asked to estimate their future employment complement

(five years hence). In light of the relatively small size of these firms and the heavy weighting of service businesses, it is interesting that 21 percent rely on export sales for at least one-quarter of their revenues.

Table 2 here

In terms of male/female comparisons, the business characteristics of these firms were similar in terms of the following variables: current number of jobs, stage of development, commitment to export sales, expected level of competition and the newness of the technology and product/service. There was some support for the premise that women are typically content to operate their business at a manageable size, given the divergence in hiring expectations (only 31 percent of female entrepreneurs expected to have more than five employees five years hence, compared to 38 percent for the male respondents). The other two notable differences were with respect to the expected number of owners (that is, females were less likely to continue as sole owners), and the economic sector, confirming previous research (Birley 1989; Cohen 1996; Coleman 2002; Watson 2003) pointing to a greater frequency of female-owned enterprises within the consumer services sector.

Results of Regression Analysis

Table 3 provides a summary of the following regression statistics: Chi-Square(overall test of model coefficients), Nagelkerke R^2 (estimate of variance explained in the dependent variable), and percent of correct classification. As noted, eight of the nine logistic models (each

analysis was replicated across the nascent, new and established sub-samples) successfully discriminated between genders, the only exception being the attempt to differentiate between nascent-level male and female ventures on the basis of business-related attributes.

The overall logistic models for each type of firm (1C, 2C, and 3C) are consistent with Hypothesis 1: female and male entrepreneurs have significantly distinctive profiles encompassing a broad array of variables of both a personal and a business nature (regardless of the where the firm is situated in terms of its stage of developmental).

Also, the second and third hypotheses are partially supported: male and female entrepreneurs within the nascent firm category differed with respect to personal characteristics, whereas gender differences for the new firms manifested themselves in terms of business attributes.

However, the findings for the established firms (refer to Table 3, models 3A and 3 B) were not as hypothesized. For firms that have evolved to this state, we find that the personal variables were very powerful discriminators and in fact, in the overall model (3C), overshadowed the only significant business-related variable, namely newness of the product or service.

Table 3 here

Table 4 further examines these relationships by identifying the following information for the various explanatory variables: the *Beta* weight, the *Wald* test, the *Odds Ratio*, and the

ninety-five percent interval for the odds ratio. These models have both common and distinct predictors of gender. For the purpose of brevity, we restrict our comments to the overall models: 1C, 2C, and 3C. Education and income are shown to be important differentiating variables at the nascent and the established levels: female entrepreneurs are more likely to have a high level of education (odds ratio =1.88 and 1.80, respectively), and less likely to have high incomes (0.73 and 0.76). Moreover, female entrepreneurs are less likely to work full time in their business (0.18 and 0.22), a result which reinforces the aforementioned aggregate data of Table 1, at least within the new and established business settings.

With respect to “stage-specific” variables, the “perceived business opportunity” variable is only evident from the analysis of the nascent firms: female entrepreneurs in this type of firm are much less likely (0.42) to perceive an opportunity. In contrast, our analysis of the “new firm” category reveals that female entrepreneurs are more likely to operate businesses in customer services (4.45) and much less likely to be involved in the business services sector (0.24). Finally, within those firms that have reached the “established” phase, women owner-managers women are less likely to claim that they possessed the requisite skills to initiate a venture (0.32).

Table 4 here

Discussion

The less aggressive growth posture of the sampled women business owners (as indicated by their hiring intentions) reinforces previous research by Buttner and Moore (1997), which reported an association between slow growth and women-led enterprise that operated in “traditional” sectors of the economy, as was the case for the sample firms. This finding may also be indicative of a tendency on the part of the sample’s women to view rapid growth strategies as a threat to their relationships (Carter and Cannon 1992; Rooney et al. 2003).

The difference in educational backgrounds is somewhat inconsistent with earlier studies (Cohen, 1996; Fischer et al. 1993); it is also interesting that although the women in the sample are generally reporting higher education levels, this variance is not significant for the “new” firm category. While this may reflect an exodus of lower educated male owners and/or more highly educated females prior to the point at which the business qualifies as “new,” it is not clear why this would be the case.

The current study reaffirms the position that the influence of industry structure can be a significant element in the gender-based entrepreneurship discussion (as outlined in Table 3, female owner-managers of new firms are 3.5 times as likely as men to operate in the customer services area). Previous research has established, for instance, that in the retail industry, planning and research of the product and its market are considered to be critical success factors (Lussier 1996; Soldreseen, Fiorito, and He 1998; Variyam and Kraybill 1993). Conversely, in the service industry, planning, human resource management, and innovation are considered to be key factors (Van Biema and Greenwald 1997; Variyam and Kraybill 1993; Wagar 1998). To the extent that the woman entrepreneur is cognizant of these industry factors that impact her

firm, and has the skills to address the related business issues, the prospects for early stage survival and ultimately, an acceptable level of business success, will be vastly improved. Still, we find here that contrary to previous research (Anna et al. 2000), opportunity recognition is quite low, despite the relatively high likelihood of these female entrepreneurs being situated in the personal services area, where they could be expected to have a particular affinity for the forces of competition and demand. Perhaps this is indicative of a more cautious, deliberate attitude on the part of the women.

However, it is also quite possible that notwithstanding their familiarity with their respective industry, the ability of many of the women in the current sample to recognize opportunities (new ways of competing, a new location, acquiring a competitor) is blunted by the reality of operating the business on a part time basis and/or a continuing sense of inadequate management capability. The latter phenomenon (note that women's perception of inadequate knowledge and skills is particularly pronounced at the "established" stage) appears to support previous work by Watkins and Watkins (1983) as well as the recent GEM Canada *Report on Women and Entrepreneurship* (Filion et al 2004), which reported that the majority of women indicated that they are unprepared for business start-up.

The general premise that male and female owned enterprises exhibit different business characteristics (Mukhtar 1998) is apparent only within the "new" enterprise category. At the same time, personal characteristics emerge as the more robust discriminators for nascent enterprises. Also, there appears to be little overlap in the variance explained by personal and business characteristics, as noted by the finding that combining these two sets of predictors gave the strongest results for the new firms ($R^2 = 0.30$).

The current results may indicate that at the nascent phase, certain key business decisions are forthcoming and their impact is likely felt in the next phase, that is, in the “new firm”. While at the pre-start stage, the entrepreneur’s notion of the business operation may be quite fluid, these perceptions crystallize as he/she becomes fully engaged in the business creation process. In this subsequent phase, the gender effect broadens to include the business vision and strategy, and by implication, the industry context. However, this interpretation is weakened by the findings on the established firms, where personal characteristics dominate gender differences. The only business-related variable - newness of the product or service - disappeared in the overall model because of common variance with better predictors, most likely knowledge and skills, and income. One possible explanation here is that established firms include businesses that have found and maintained the appropriate fit between the business strategy and business practices on the one hand, and the task environment on the other hand. In other words, established firms are relatively homogeneous and gender effects are restricted to non-business variables.

These findings appear to lend credence to the importance of self-efficacy in entrepreneurial activity (Anna *et al.* 2000). The regression analyses have demonstrated that, compared to their male counterparts, women entrepreneurs have lower levels of self-efficacy vis-à-vis i) opportunity recognition at the “nascent” stage, and ii) knowledge and skills at the “established stage,” yet no such differences exist at the “new” stage (Diochon, Menzies and Gasse 2005). The women in this sample appear to demonstrate caution at the beginning stages, but become committed and less reflective at the intensive “new” stage. Given that the ratios of female and male led ventures are similar across the three phases (Table 2), the lower levels of self-efficacy may impact firm success (size and rate of growth), but not firm survival.

Limitations and Directions for Future Research

This exploratory study is bound by the methodology of the GEM international project. As such, a wide variety of variables are available for investigation, but there are a limited number of variables on any given subject. For example, there is only one questionnaire item dealing with the issue of competition. Moreover, a more comprehensive array of performance indicators would facilitate an analysis of whether gender-based characteristics impact directly on business performance, or alternatively, competitive market mechanisms are the more prevalent driver (Kalleberg and Leicht 1991).

While the opportunity to study gender with a national sample is of great value, and can be instrumental in building a reliable base of knowledge in the area of female entrepreneurship, future research could take the form of trans-national comparisons, with the collaboration of other GEM participants (that is, countries with political and socio-economic influences similar to those in Canada). Also, a longitudinal research design would facilitate the tracking of firms across the transitions that are endemic to small enterprise development.

A follow-up to this study should include a broader array of management-related variables. More specifically, the work of Chrisman, Bauerschmidt and Hofer (1999) extends the aforementioned Sandberg and Hofer (1987) model to also include i) the ability to secure the necessary resources as well as the ii) organizational structure, processes and systems needed to implement the venture's strategy; this could serve as a viable template for investigating these relationships using a more comprehensive set of variables. As for entry strategy, small firms tend to operate with a narrow product/market focus (sometimes only one), but the offer may be novel and therefore provide the firm with ready access to its market. From the gender

perspective, we may ask whether or not female entrepreneurs adopt a different strategy from their male counterparts in the early stages of enterprise development.

Alternatively, one could probe deeper into the domain of management practice by examining both the human resource management/leadership dimension separately from the operational efficiency and cash flow management dimension (Vesper 1994).

Conclusions

The objective of this paper has been to gain additional insights into the differences between male and female entrepreneurs – in terms of both personal and organizational characteristics - and consider the relative significance of these differences across the early stages of business development. Based on a Canadian sample of the adult population, our research confirms that gender differences are present in these firms and that these distinctions vary by phase.

A question posed by Sexton and Bowman-Upton (1990) seems particularly relevant to the current study:

To the extent that women may face impediments to launching and growing their ventures, is the problem based on gender or the type of business they tend to initiate?

Our findings indicate that, insofar as women exhibit low self-efficacy, gender is the answer. Given the heavy concentration of female entrepreneurs in the service sector, the type of business becomes the constraint. While self-efficacy can be increased through education and interaction with entrepreneurs and entrepreneurial training, the selection of an industry is, in

essence, a fixed commitment (the process of exiting one industry and starting a second enterprise to enter another is likely to be equivalent to a business failure).

It has been found here that part of the influence of gender is attributable to individual characteristics: in comparison to men, women tend to have lower incomes, prefer to work part-time, have perceptions of poor opportunities and report low self-efficacy. The other influence is tied to the business decisions that the person makes and the business context that is created by these decisions. While this study has determined that differences in personal characteristics and attitudes serve as the most potent explanatory variables of gender differences in the nascent stage of the GEM typology, it is business-related factors that dominate in the next phase, namely “new” enterprises.

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Table 1
Characteristics of Female and Male Entrepreneurs as Percentages

Characteristics	Females (n = 331)	Males (n = 506)	Total Sample (n = 837)
% of Sample	40	60	100
Age***			
• 18-24	5	8	7
• 25-34	20	24	23
• 35-44	36	29	31
• 45-54	29	24	26
• 55-64	10	15	13
Education**			
• Up to secondary	25	32	29
• Post graduate	54	52	53
• Graduate experience	21	16	18
Marital status**			
• Never married	18	25	22
• Married – common law	73	62	66
• Divorced, separated, widowed	9	13	12
Knowledge/skills for start-up***			
• No	15	10	12
• Yes	85	90	88
Work Status****			
• Full-time	71	88	81
• Part-time	29	12	19
Work Status – partner****			
• Full-time	81	56	66
• Part-time	7	22	16
• Not working	12	22	18
Income****			
• 0-\$20,000	14	9	11
• \$20,000-\$50,000	46	34	39
• \$50,000-\$100,000	30	35	33
• \$100,000+	10	22	17
Home ownership***			
• Own home	82	71	75
• Rent	18	29	25

Household size***			
• 1	7	15	12
• 2	24	30	28
• 3+	69	55	60
Perceived business opportunity in next six months***			
• No	51	39	44
• Yes	49	61	56
Personally know entrepreneur in past two years			
• No	41	36	38
• Yes	59	64	62
Occupation****			
• Professional	34	25	28
• Business executive	19	24	22
• Sales	9	8	8
• Clerical	14	7	10
• Skilled worker	12	26	21
• Unskilled worker	8	6	7
• Farmer	4	4	4

*:p<0.10 ; ** : p<0.05 ; *** : p<0.01 ; **** : p<0.001 (Chi-square test)

Table 2
Business Characteristics of Sample
(Percentages)

Characteristics	Females (n = 331)	Males (n = 506)	Total Sample (n = 837)
Percentage of Sample	40	60	100
Type of firm <ul style="list-style-type: none"> • Nascent • New firms • Established 	34 22 44	34 27 39	34 25 41
Expected number of owners*** <ul style="list-style-type: none"> • 1 • 2 • 3+ 	47 33 20	56 21 23	52 26 22
Current number of jobs <ul style="list-style-type: none"> • 0-5 • 6-19 • 20+ 	78 12 10	75 15 10	76 14 10
Number of jobs in 5 years** <ul style="list-style-type: none"> • 0-5 • 6-19 • 20+ 	69 15 16	62 18 20	65 16 19
Sales out of the country <ul style="list-style-type: none"> • 0% • 1-24% • 25%+ 	31 51 18	25 53 22	27 52 21
Technology available last year <ul style="list-style-type: none"> • No • Yes 	9 91	12 88	11 89
Product/service new to customers <ul style="list-style-type: none"> • No • Yes 	62 38	59 41	60 40
Economic sector <ul style="list-style-type: none"> • Extractive • Transforming* • Business services*** • Consumer services**** 	12 22 24 42	9 28 35 27	10 26 32 33
Expected level of competition <ul style="list-style-type: none"> • Many competitors • Some • None 	49 38 13	49 37 14	49 37 14

*:p<0.10 ; ** : p<0.05 ; *** : p<0.01 ; **** : p<0.001 (Chi-square test)

Table 3
Summary Statistics of Stepwise Logistic Analysis of Gender
as a Function of Personal and Business Variables

Regression Model	N	Chi-Square	Nagelkerke R²	Classification % Correct
Nascent Firms				
1A – Personal Variables	149	18.60***	0.16	67.8
1B – Business	197	n.s.	n.s.	n.s.
1C – All Variables	117	17.55***	0.19	69.2
New Firms				
2A – Personal Variables	141	4.99*	0.05	68.8
2B – Business	151	23.39***	0.20	72.8
2C – All Variables	117	27.80***	0.30	76.9
Established Firms				
3A – Personal Variables	218	41.27***	0.23	69.7
3B – Business	281	6.67**	0.03	67.5
3C – All Variables	206	38.37***	0.23	68.4

* p<.05 ** p<.01 ***p<.001

RL: add equal sign to p's

Table 4
Stepwise Logistic Regression Analysis of Gender
as a Function of Personal, Firm and Industry Variables

	Beta	Wald Test (z-ratio)	Odds Ratio	95% Confidence Interval for Odds Ratio	
				Lower	Upper
Nascent Firms					
Model 1A – Personal Variables					
Education	0.59	4.42	1.81	1.04	3.15
Income	-0.24	5.60	0.79	0.64	0.96
Perceived business opportunity	-0.93	6.45	0.40	0.19	0.81
Model 1B – Business Variables					
(No significant variables were found.)					
Model 1C – All Variables					
Education	0.63	3.73	1.88	0.99	3.56
Income	-0.31	7.08	0.73	0.58	0.92
Perceived business opportunity	-0.88	4.51	0.42	0.18	0.93
New Firms					
Model 2A – Personal Variables					
Work status	-1.10	4.99	0.33	0.13	0.87
Model 2B – Business Variables					
Business services	-1.23	5.12	0.29	0.10	0.85
Customer services	1.25	8.81	3.51	1.53	8.02
Model 2C – All Variables					
Work status	-1.70	6.14	0.18	0.05	0.70
Business services	-1.43	4.39	0.24	0.06	0.91
Customer services	1.49	8.73	4.45	1.65	12.00
Established Firms					
Model 3A – Personal Variables					
Education	0.63	7.50	1.88	1.20	2.96
Income	-0.29	9.90	0.75	0.63	0.90
Work status	-1.55	11.48	0.21	0.09	0.52
Knowledge/skills for start-up	-1.08	4.60	0.34	0.13	0.91
Model 3B – Business Variables					
Product/service new to customer	-0.55	6.20	0.58	0.37	0.90
Model 3C – All Variables					
Education	0.93	6.31	1.80	1.14	2.86
Income	-0.27	8.99	0.76	0.64	0.91
Work status	-1.54	10.34	0.22	0.08	0.55
Knowledge/skills for start-up	-1.13	4.58	0.32	0.12	0.91

