# Gender Perspectives on Entrepreneurship and Self-Efficacy: Evidence from an Emerging Economy

# **Boris Urban**

Graduate School of Business Wits Business School, University of Witwatersrand PO Box 98, Wits, 2050, South Africa E-mail: boris.urban@wits.ac.za, Phone: 27 11 717 3762

# Abstract

The purpose of this study was to establish to what extent women perceive self-employment as a viable career choice and what is the strength of their beliefs that they are capable of successfully performing various roles and tasks of an entrepreneur. Gender perspectives on entrepreneurship illustrate that women are less likely than men to prefer occupations that have been traditionally male-dominated because of the tendency for women to have lower self-efficacy perceptions in relation to entrepreneurial career intentions. A survey design was used to collect responses from 213 students. The results showed that women believe they have the skills needed to be an entrepreneur and have placed their preference for entrepreneurship as a career choice high on the list of options. The study contributes to the growing knowledge base on women entrepreneurship and increases our understanding of entrepreneurship as a viable career choice in terms of entrepreneurial self-efficacy.

Keywords: Gender, women; entrepreneurship; intentions; self-efficacy; South Africa

# 1. Introduction

Research supports the supposition that men and women follow different business start-up processes. Women are more likely than men to balance work and family roles, handle conflict, and to consider time and space constraints as they create new firms (Brush, 1992; Carter, Gartner, Shaver & Gatewood, 2003). Differences persist in the levels of new firm creation across genders, with international studies indicating that the number of women involved in starting a business is significantly and systematically lower than that of men (Bosma & Levie, 2009; Langowitz & Minniti, 2007). In general men are more likely to start a business than women. In no country are women more active in starting and owning a business than men (Langowitz & Minniti, 2007; Minniti, Bygrave & Autio, 2005). Experts believe that entrepreneurial activity is affected by attitudes of discriminated groups and by cultural practices which hinder entrepreneurship in South Africa (Mass & Herington, 2006). Not only is a negative individual mindset often mentioned as a hindrance to entrepreneurship, but it is also evident that entrepreneurship is not viewed as a legitimate career choice, with insufficient education and training heading the list of obstacles to entrepreneurial development (Maas & Herrington, 2006).

More than 50 percent of South African women entrepreneurs think that they are not entrepreneurial while a relatively low percentage of 9 percent think they are entrepreneurial (Maas & Herrington, 2006). Particularly important to the present study is that apart from demographic and economic variables a number of perceptual variables have been found to have a crucial influence on the entrepreneurial propensity of women, and may account for much of the difference in entrepreneurial activity between the sexes. Specifically, women tend to perceive themselves and the entrepreneurial environment in a less favourable light than men across countries, regardless of their entrepreneurial motivation. Such findings suggest that perceptual variables may be significant universal factors influencing entrepreneurial behaviour (DeTienne & Chandler, 2007; Wilson, Kickul & Marlino, 2007).

Attitudes influence behaviour by their impact on intentions. Intentions and attitudes depend on the situation and person (Scherer, Adams, Carley & Wiebe, 1989). By understanding entrepreneurial perceptions our understanding of intended behaviour increases (De Bruin, Brush & Welter, 2007). In South Africa, given the high priority of employment for government economic policies, and the pertinence of entrepreneurial activity to job creation (Autio, 2005), empirical research on women entrepreneurs and entrepreneurial intentions and self-beliefs is urgently required. Currently in South Africa most research and policy initiatives focus on necessity entrepreneurs (individuals who are self-employed as a result of no other choice), who represent the unemployed masses. Although these micro enterprises or survivalists have entrepreneurial characteristics, their ability to grow and create employment, are restricted by their scarcity of skills, business knowledge and resources (Maas & Herrington, 2006). The present study deviates from this trend by specifically focusing on women entrepreneurs who are more likely to be self-employed because they are pursuing a business opportunity, rather than out of necessity. Opportunity driven entrepreneurs are represented by only a small proportion of all entrepreneurial activity in South Africa, but are responsible for up to 80 percent of all job creation by entrepreneurs (Autio, 2005). A broad objective of this study is what we can learn about entrepreneurship generally by studying female entrepreneurs when compared with men. Bird and Brush (2002) draw our attention to gender perspectives on entrepreneurial processes, illustrating that a different viewpoint will add to our knowledge on how individuals perceive and operationalise entrepreneurship. Venture creation is gendered in and of itself, and historically, the focus is on masculine processes and behaviours.

There is some doubt as to whether current research approaches and methodologies adequately incorporate the 'reality' of women entrepreneurship. It has been suggested that research into women entrepreneurship contribute both in terms of its scholarly phenomenon and its contribution to society (Eddleston & Powell, 2007; Wilson *et al.*, 2007). By drawing on the emerging body of knowledge on women entrepreneurship, and given the lack of empirical evidence on the differences in entrepreneurial activity between the sexes, the research objectives of this paper are to determine to what extent women, when compared to men, perceive self-employment as a viable career choice, and to establish the levels of their self-efficacy beliefs in terms of successfully performing various roles and tasks of an entrepreneur.

## 2. Literature review

# 2.1 Contextualising the study

In South Africa, women make up to 52 percent of the adult population, of which 41 percent are considered to be part of the active working population. South Africa's early-stage total entrepreneurial activity (TEA) index, the primary measure used to compare rate of new business start-ups amongst countries was relatively low (5.90%) for 2009 (Bosma & Levie, 2009). The profile of people who are categorised as entrepreneurs in this index indicates that approximately 7.5 percent are male and 5.0 percent are female (Bosma & Levie, 2009). Even though the ratio between men and women entrepreneurs in South Africa is not highly disproportionate, the majority of South African women entrepreneurs operate within the crafts, hawking, personal services and retail sectors, where low technology is utilised in these undifferentiated businesses (Maas & Herrington, 2006). This suggests that some form of gender division of labour still persists in South Africa, where women are still locked into traditional female functions and they tend to concentrate on activities compatible with their domestic and reproductive roles (Mahadea, 2001). Moreover women entrepreneurs tend to have a Grade 12 or lower educational qualification which may explain the lack of exploitation of higher order entrepreneurial opportunities. In terms of education, women are also less likely to pursue technical disciplines like engineering and computer science, which would provide them with much needed skills for launching successful businesses in manufacturing and high-technology sectors (Botha, Nieman & Van Vuuren, 2007; Carter & Brush, 2004).

#### 2.2 Gender differences in entrepreneurship

The theoretical framework of social feminism helps explain gender differences in human capital, which posits that there are differences between males' and females' experiences from the earliest moments of life that result in fundamentally different ways of viewing the world (DeTienne & Chandler, 2007; Fischer, Reuber & Dykes, 1993). Fundamentally, social feminism views the genders as different but equal and proposes that differences between women and men are due to unique socialization processes (DeTienne & Chandler, 2007). It is these distinctive experiences which allow men and women to develop unique human capital which in turn impacts entrepreneurial opportunity identification (Eddleston & Powell, 2007; Venkataraman, 1997). The social feminist view is often contrasted with the liberal feminist view which contends that men and women are equal, autonomous individuals.

Based on this perspective, women have been denied critical resources (e.g., financing, networks) to establish new ventures and the elimination of these discriminatory practice will result in equal opportunities for women (DeTienne & Chandler, 2007). Bird and Brush (2002), by drawing on feminist approaches propose a model where gender has an impact on entrepreneurial processes through differences emphasised between men and women when connected to reality, time, action and interaction, and power and ethics. Notwithstanding the above mentioned feminist views, there is little analysis of how gendered processes may effect entrepreneurial behaviour, or shape the size of firms, or the tendency of men versus women entrepreneurs to focus on growing their business. Most research on female entrepreneurship is not based on feminist theories, which tends to result in gender differences being explained in terms of how women entrepreneurs deviate from a so-called 'male norm'.

What emerges from these different viewpoints is that although it has been argued that there are no psychological reasons to believe that women entrepreneurs will have fewer intentions to start a venture, liberal and social feminist theories do provide socio-cultural explanations for expecting gender differences (Cliff, 1998).

#### 2.3 Women entrepreneurship

Based on a literature review of 400 academic articles on women entrepreneurs by Carter, Anderson and Shaw (2001), indications are that several studies investigate specific gender differences in terms of business management, finance, business networks, and performance. Generally, most descriptive studies, especially those with small and convenience samples, which research personal characteristics of female entrepreneurs, find more similarities than differences to male counterparts (Gatewood, Shaver, Powers & Gartner, 2002; Mahadea, 2001). Research on gender in career choices also shows important discrepancies. For instance women are seen as experiencing more complexity in career choices because of the need to balance work and family roles (Carter *et al.*, 2003). In terms of business characteristics, women entrepreneurs tend to set up their ventures with lower start-up capital than men, and they are generally found to be smaller in size compared with those owned by men (Brush, 1992). With regard to financing, previous research shows that womenowned business start with both lower levels of overall capitalization and lower ratios of debt finance than men-owned business (Bosma & Levie, 2009; Carter & Allen, 1997; Coleman, 2000).

Results from a national survey of women entrepreneurs in Malawi, indicates that the relationship between gender and business performance is a complex one; female-owned enterprises tend to grow more rapidly in terms of employment than male-owned ones (Chirwa, 2008). Gender differences in network structures and networking behaviour are also reported, i.e., social capital may influence both the decision to start and grow a business, as well as business survival and success (Manolova, Carter, Manev & Gyoshev, 2007). Not only does research show that women's intentions for launching a new business may differ from men's (Carter & Brush, 2004), but self-efficacy, attribution, work values, decision making, and motivational theories all hold promise for explaining why gender differences lead to differential self-employment choices. Several researchers have indicated that women are less likely than men to prefer occupations that have been traditionally male-dominated because of the tendency for women to have lower self-efficacy perceptions in relation to these occupations (Baughn, Cao, Le, Lim & Neupert, 2006; Hackett, Betz, Casas & Rocha-Sinjh, 1992; Wheeler, 1983). Gender plays a significant role in business performance, insofar as it influences the self-perceptions of entrepreneurs and their abilities to realize business start-ups and business growth (Anna, Chandler, Jansen & Mero, 2000). Raising entrepreneurial efficacies will raise perceptions of venture feasibility for women entrepreneurs, thus increasing their perceptions of opportunity recognition (Wilson et al., 2007), as well as self-efficacy perceptions which are pivotal to entrepreneurial intentions (Scherer et al., 1989).

## 2.4 Entrepreneurial self-efficacy and intentions

Several academic efforts are directed towards exploring reasons entrepreneurs offer for staring a new business, indicating that new ventures start-ups are not accidental but rather entrepreneurial actions are clearly intentional (Carter *et al.*, 2003; Wilson *et al.*, 2007). Starting a business or initiating a new venture is often described as purposive and intentional career choice with the role of entrepreneurial self-efficacy (ESE) emphasised as a key antecedent (Chen, Greene & Crick, 1998). Since self-efficacy reliably predicts the scope of career options considered, occupational interests, perseverance in difficult fields, and personal effectiveness, it has been related to the pursuit of entrepreneurial activity (Markman, Balkin & Baron, 2002). Perceived self-efficacy is the strongest single predictor of career choice (Bandura, 1986) and self reported competencies predict entrepreneurial performance (Chandler & Jansen, 1992). Correlations between self-efficacy and career intent range from 0.3 to 0.6 which is better than most predictors used in entrepreneurial research, such as locus of control (Bandura, 1986, 1997).

The value of understanding ESE is particularly useful since it incorporates personality as well as environmental factors, and is thought to be a strong predictor of entrepreneurial intentions and ultimately action (Kickul, Gundry, Barbosa & Whitcanack, 2009; McGee, Peterson, Mueller & Sequeira, 2009). Investigating the effect attitudes have on intention to start a business, Douglas and Shepherd (2002) found that the intention to be an entrepreneur is stronger for those with more positive attitudes to risk and independence. Perceived feasibility is consistently correlated with self-efficacy in most intention based models (Krueger, Reilly & Carsrud, 2000). Such findings suggest that entrepreneurs must have perceptions of high self-efficacy to face challenges of modern society. Based on the research findings on self-efficacy, which has been theoretically and empirically linked to intentions, hypotheses are formulated, where entrepreneurship as a career choice is examined in terms of entrepreneurial self-efficacy for men versus women, with the role of gender proposed as a differentiating factor.

Since perceptual variables have been found to have a crucial influence on the entrepreneurial intentions, and may account for much of the difference in entrepreneurial activity between the sexes, it is proposed that:

**Hypothesis 1:** In terms of gender, entrepreneurship as a potential career choice will be significantly lower for females than for males.

**Hypothesis 2:** In terms of gender, entrepreneurial self-efficacy will be significantly lower for females than for males.

# 3. Methodology

A quantitative methodology was used to identify career preferences and entrepreneurial self-efficacy; this methodological stance is supported in previous investigations with similar focus areas (Boyd & Vozikis, 1994; Chen *et al.*, 1998; Chandler & Jansen, 1992; Earley, 1994; Krueger & Brazeal, 1994). Since responses are solicited in a manner which allows for quantitative analysis, there is nothing in the nature of the data that will prevent deeper speculations and insights to emerge. Given the psychological nature of the constructs examined in this study, precedent exists for utilizing student samples for this type of research even within management and entrepreneurship literatures. It has been suggested that research using students into intention allows for the improvement of predictive abilities, providing a fertile ground from which seeds of entrepreneurship can sprout. Research finds that student samples are very similar to actual entrepreneurs provided that it has high entrepreneurial potential (Fayolle, Gailly, Kickul, Lassas-Clerc & Whitcanack, 2005; Hemmasi & Hoelscher, 2005; Reynolds, Bygrave, Autio & Others, 2003). Graduates tend to start more ventures, grow bigger ventures, and accumulate more assets (Charney & Libecap, 2004; Peterman & Kennedy, 2003).

Since individuals embarking on entrepreneurial careers, (very close to creation of new enterprise), typically have high self-efficacy, then by evaluating these subjects entrepreneurial beliefs before the creation of new enterprise, the study is more likely to have validity in terms of intentions (Gartner, 1989; Scherer *et al.*, 1989). The population of this study is the new public higher education (HE) landscape in South Africa consisting of 23 universities, with approximately 725 000 students (Hesa, 2009). To allow for meaningful comparisons, only students in business and management study fields were surveyed, limiting the sampling frame to faculties preoccupied with these studies. These faculties have various nomenclatures at the different higher education institutions (HEI), such as Faculty of Management, Economic Management Sciences, or Economic Financial Sciences Faculty. Over 500 students at four different HEI, ranging in type from university to comprehensive university to university of technology, were surveyed, in the Johannesburg and Pretoria geographical areas, due mainly to practical and cost constraints. To ensure statistically valid sample numbers from each gender group, quota sampling was used, rendering a final sample of 213 usable responses. The use of this sampling approach allowed for matching of different gender groups.

The sample characteristics were based on an equal distribution of males (50%) and female (50%), with a mean age of 21.13 years, and where 100% percent of respondents had completed matric and were full-time undergraduate students. Additionally the majority of respondents (61.2%) indicated they had parents, friends or relatives who are or had been entrepreneurs. The measures were based on previous conceptualizations of entrepreneurial self-efficacy, particularly as measuring self-efficacy of a broader domain (Bandura, 1997), such as entrepreneurship, requires researchers to develop a conceptual framework of task requirements on the basis of which self-efficacy of a domain is aggregated from self-efficacy of various constituent sub-domains. Adapting measures developed by Chen *et al.* (1998), De Noble, Jung and Ehrilich (1999), and more recently Wilson *et al.*, (2007) entrepreneurial self-efficacy (ESE) was measured across varying entrepreneurial roles and tasks, coinciding with Chen *et al.'s* (1998) dimensions of marketing, innovation, management, risk taking, and financial control. The ESE construct has previously demonstrated and predicted the likelihood of an individual choosing entrepreneurship as a career preference. Moreover ESE refers to the strength of a person's belief that he/she is capable of successfully performing various roles and tasks of an entrepreneur.

The first part of the survey focused on career preferences. Several different occupations were measured with a five-point numerical scale ranging from 'would not prefer to be in this occupation' (scale value 5) to 'would prefer very much to be in this occupation' (scale value of 1). Numerical scales have equal intervals with anchors serving as labels for the extreme points (Cooper & Schindler, 2001). Respondents selected a number from the scale next to each career preference. Numerous career preferences were provided which included: finance, marketing, international business, management, entrepreneurial, business strategy, accounting, e-commerce, management information system. Based on the variety of items surveyed this scale provides both an absolute measure of importance and a relative measure (ranking) of the various items rated. The second part of survey focused on ESE.

Respondents were asked for their degree of current competence on each ESE dimension. Questions were measured on a 1-5 Likert scale where 1 indicates respondents strongly agree to 5 where respondents would strongly disagree. Although these scales are susceptible to the error of central tendency, there is no conclusive support for choosing a scale with less or more points (Cooper & Schindler, 2001). Consistent with previous research on individual differences in entrepreneurship, control variables measuring gender, age, level of education, and presence/absence of role models were included. The latter variable is important in the context of ESE since prospective entrepreneurs who know other entrepreneurs, are able to notice opportunities, and think that they know how to start business are ten times more likely to be active than those who do not. Additionally parental examples of career choices and daily living situations affect the likelihood of a child selecting self-employment (Carter & Brush, 2004). These instruments have previously been subjected to factor analysis, and satisfactory results were obtained in terms of factor structure (Chen et al., 1998; De Noble et al., 1999; Urban, 2006), reliability was however tested for this specific sample. Descriptive statistics were calculated and the resultant output was split by gender group. Moreover by applying tests of normality, and calculating the Kolmogorov-Smirnov and Shapiro-Wilk statistics, test scores indicated that normality was not violated. Subsequently hypothesized differences were then tested using a simple independent t-test between mean scores.

## 4. Results and Analysis

The data was initially subjected to Conventional Item and Test Analysis, where item to total correlation of each item established that items were not correlated (Tabachnick and Fidell, 2007). Internal consistency was tested and the Cronbach Alpha was calculated for each individual ESE dimension. Cronbach's Alpha has the most utility for multi-scales at the interval level of measurement (Cooper & Schindler, 2001). The Cronbach's Alpha was 0.83, 0.83, 0.80, 0.87, and 0.73 for factors 1-5 respectively. Generally a value above 0.7 is considered adequate for internal consistency (Nunnally, 1978). Based on the occupational preference scale, 53.8 percent of total respondents choose entrepreneurship as a career preference, followed in order of ranking by marketing (53.4%), management (43.7%), international business (35.9%), business strategy (26.9%), accounting (11.2%), e-commerce (10.7%), finance (9.3%), and management information systems (7.9%). An option for 'other' career preferences constituted 18.9 percent of responses.

#### **Insert table (1) about here**

Table 1 provides an overview of the range of responses, with only the extreme scores displayed in terms of – 'would not prefer to be in this occupation' (scale value 5) to 'would prefer very much to be in this occupation' (scale value of 1). Because the scale provides both an absolute measure of importance and a relative measure (ranking) of the career preferences rated, it is interesting to note that entrepreneurship not only has the highest percentage when compared to other career preferences, but that it also has a relatively low percentage (8.1%) for not being preferred as a career. To test hypothesis 1, where differences on entrepreneurship as a career choice was expected to be significantly lower for females than males, frequencies were split by gender, indicating that entrepreneurship as a career preference (56%) followed next by entrepreneurship (47%). To establish if any significant differences on career preferences exist between men and female respondents, an independent samples t- test were conducted. A statistically significant difference at the 0.05 level was obtained, supporting the first hypothesis. The measures of central tendencies and dispersion (refer to table 2) revealed that apart from the ESE dimension – financial control, the distributions tailed towards the right (positively skewed). The mean scores for all the other ESE dimensions are relatively mediocre, i.e., below the midpoint on the 1-5 Likert scale.

#### Insert table (2) about here

Group statistics were then calculated for each factor in terms of gender (refer to table 35). Mean scores were consistently higher for females on all five ESE dimensions.

#### Insert table (3) about here

To establish if any significant differences exist on these ESE dimensions between males and females an independent samples t-test for equality of means was carried out, with no significant differences detected for ESE dimension one (management), dimension four (financial control), or dimension five (risk taking). However for ESE dimension two (innovation) and dimension three (marketing) t-scores, at 207 degrees of freedom, of 3.38 and 2.24 respectively, were significant at the 0.05 level (not shown). This significant result provides partial support for hypothesis 2, where it was expected that ESE would differ across gender. To establish if any of the control variables would play a significant role in differentiating men versus female respondents, the same procedure was carried out for differences over level of education and age with no significant results obtained.

#### 5. Discussions and conclusion

The empirical results obtained provide partial support for the hypotheses, where for hypothesis 1 it was postulated that entrepreneurship as a career choice will be significantly lower for females than for males. In terms of hypothesis 2, significant gender differences are detected for only two of the five dimensions measuring ESE, providing partial support for hypothesis 2. Specifically the findings indicate that females score significantly higher than males on the innovation sub-dimension of ESE, as well as on the marketing sub-dimension of ESE. A plausible explanation for the significant differences observed on these two ESE dimensions is that both innovation and marketing involve some degree of creativity where female respondents may have an advantage. Self-efficacy has been identified as a key motivational component in individual creative action (Bandura, 1997). Previous empirical studies indicate that men tend to place a greater emphasis on economic values and quantitative non-ambiguous measures such as status and wealth, whereas women tend to assign more importance to social values and qualitative, ambiguous measures such as personal fulfilment and strong interpersonal relations (Cliff, 1998; DeTienne & Chandler, 2007).

Interlinking the empirical results of this paper with established literature allows for additional insights to emerge. The findings resonate with the premise that women tend have lower entrepreneurial career aspirations when compared to men. Prior literature has suggested that women would generally suffer from a gender effect, i.e., in terms of inferior entrepreneurial aspirations and lower expectations (Manolova *et al.*, 2007). To some degree this present study confirms these tendencies but also dispels the myth that women tend not to select entrepreneurship as a career choice and that they do not have the requisite beliefs to perform in entrepreneurial careers. While entrepreneurial career aspirations were significantly lower for women when compared to men, entrepreneurial career preferences were ranked second highest in terms of career choice. Additionally in terms of the requisite beliefs to perform in entrepreneurial careers, as measured with ESE, the mean scores were consistently higher for females on all of the ESE sub-dimensions. While gender stereotypes were not directly measured in this study, the finding that female respondents selected a career path historically dominated by men, and that their self-efficacy score is higher across all the ESE factors indicates that this female sample of potential entrepreneurs perceive themselves as capable and willing to be entrepreneurial.

The results of the study could have implications for educational initiatives where recognising that 'a one size fits all' approach to curricula may not be appropriate, and gender sensitive programming, especially related to different levels of ESE coupled with building women's entrepreneurial aspirations may be required (Wilson *et al.*, 2007). With the growth in educational programs designed to provide skills and abilities for entrepreneurship comes the opportunity to better understand what works and what does not, and to establish best programme practices. Research suggests that while venture creation resources are relatively scarce in transition economies, entrepreneurship education programs in both the East and West need more emphasis on developing skills related to venture resource gathering (Mueller & Goic, 2003). This study makes a contribution to the field of women entrepreneurship, where very few empirical studies exist in an emerging country context. The study is particularly relevant as national studies indicate that the ratio of female to male participation in entrepreneurial activity varies considerably across countries, reflecting different culture and customs regarding female participation in economic activity (Bosma & Levie, 2009).

This study has typical survey design limitations, since it was cross-sectional, results should be interpreted with caution and gender differences in unmeasured variables may have influenced the results. Another limitation concerns the statistical testing, where with this type of analysis there is always the possibility of reaching the wrong conclusion (Cooper & Schindler, 2001). As a directive for future research and action, a proposition is made: Rather than suggest that women must be more represented in entrepreneurship and in the natural sciences (become more like men), it seems more realistic to assume that there may be a unique role for both men and women in entrepreneurship. Thus, the results of this study could be interpreted as being supportive of the social feminist view in which one gender does not have to become more like another in order to succeed, but rather each individual should focus on the importance of developing one's own individual resources (ESE) (DeTienne & Chandler, 2007). Growing women in entrepreneurship to the detriment of male entrepreneurs will not provide an impetus for accelerated socio-economic growth of a South Africa.

#### References

- Anna, A. L., Chandler, G.N., Jansen, E., & Mero, N.P. (2000). Women business owners in traditional and non-traditional industries. *Journal of Business Venturing*, 15(3), 279-303.
- Autio, E. (2005). *Report on high-expectancy entrepreneurship. Global Entrepreneurship Monitor*, HEC Lausanne: Babson College: MA.

- Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Prentice-Hall: Englewood Cliffs, N.J
- Bandura, A. (1997). Self-efficacy: The exercise of control. New York: W.H. Freeman & Company.
- Baughn, C., Cao, J., Le, L., Lim, V., & Neupert, K. (2006). Normative, social and cognitive predictors of entrepreneurial interest in china, Vietnam and the Philippines. *Journal of Developmental Entrepreneurship*, *11*(1), 57-77.
- Bird, B., & Brush, C, (2002). A gendered perspective on organisational creation. *Entrepreneurship Theory* and Practice, 26(3), 41-65.
- Botha, M., Nieman, G., & Van Vuuren, J, (2007). Measuring the effectiveness of the women entrepreneurship programme on potential, start-up and established women entrepreneurs in South Africa. *South African Journal of Economic and Management Sciences*, *10*(2), 163-183.
- Bosma, N., & Levie, J. (2009). Global Entrepreneurship Monitor 2009 Global Report. Babson College: MA.
- Boyd, N. G., & Vozikis, G.S. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship Theory and Practice*, 18(4), 63-78.
- Brush, C. (1992). Research on women business owners: past trends, a new perspective and future directions. *Entrepreneurship Theory and Practice*, 16, 5-26.
- Carter, N., & Allen, K, (1997). Size-determinants of women-owned businesses: choices or barriers to resources. *Entrepreneurship and Regional Development*, 9(3), 211-220.
- Carter, N. M., & Brush, C.G. (2004). Gender: demographic characteristics of the entrepreneur. In W.B., Gartner, K.B., Shaver, N.M., Carter & P.D., Reynolds (Eds.), *Handbook of Entrepreneurial Dynamics* (pp. 12-25). California: Sage Publications.
- Carter, N. M., Anderson, S., & Shaw, E. (2001). *Women's business ownership: a review of the academic and popular and Internet literature*. Report to the Small Business Service. Glasgow: University of Strathclyde.
- Carter, N. M., Gartner, W.B., Shaver, K.G., & Gatewood, E.J. (2003). The career reasons of nascent entrepreneurs. *Journal of Business Venturing*, *18*, 13-39.
- Chandler, G.N., & Jansen, E. (1992). The founders self-assessed competence and venture performance. *Journal of Business Venturing*, 7, 223-236.
- Charney, A.H., & Libecap, G.D. (2004). Impact of entrepreneurship education. Academy of Management Learning and Education, September, 340-342.
- Chen, C.C., Greene, P.G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing*, *13*, 295-316.
- Chirwa, E.W. (2008). Effects of gender on the performance of micro and small enterprises in Malawi. *Development Southern Africa*, 25(3), 347-362.
- Cliff, J.E. (1998). Does one size fit all? Exploring the relationship between attitudes towards growth, gender, and business size. *Journal of Business Venturing*, *13*, 523-542.
- Coleman, S. (2000). Access to capital and terms of credit: a comparison of men and women-owned small businesses. *Journal of Small Business Management*, 38(3), 37-52.
- Cooper, D.R., & Schindler, P.S. (2001). Business research methods (7th edn.). Singapore: McGraw-Hill.
- De Bruin, A., Brush, C.G., & Welter, F. (2007). Advancing a framework for coherent research on women's entrepreneurship. *Entrepreneurship Theory and Practice*, *May*, 323-339.
- De Noble, A.F., Jung, D., & Ehrlich, S.B. (1999). Entrepreneurial self-efficacy: The development of a measure and its relationship to entrepreneurial action. *Frontiers of Entrepreneurship Research*, USA: Babson College: MA.
- DeTienne, D.R., & Chandler, G.N. (2007). The role of gender in opportunity identification. *Entrepreneurship Theory and Practice*, 25(4), 81-99.
- Douglas, E.J., & Shepherd, D.A. (2002). Self-Employment as a career choicer: attitudes, entrepreneurial intentions and utility maximization. *Entrepreneurship Theory and Practice, Spring*, 81-90.
- Earley, P.C. (1994). Self or group? Cultural effects of training on self-efficacy and performance. *Administrative Science Quarterly*, *39*, 89-109.
- Eddleston, K.A., & Powell, G.N. (2007). The role of gender identity in explaining sex differences in business owners' career satisfier preferences. *Journal of Business Venturing*, *4*, 1-13.
- Fayolle, A., Gailly, B., Kickul, J., Lassas-Clerc, D., & Whitcanack, N. (2005). Capturing variations in attitudes and intentions: a longitudinal study to assess the pedagogical effectiveness of entrepreneurship teaching programs. Proceedings of the 50<sup>th</sup> Annual Conference of the International Council for Small Business, Washington D.C. June, 15-20.

- Fischer, E.M., Reuber, A.R., & Dykes, L.S. (1993). A theoretical overview and extension of research on sex, gender, and entrepreneurship. *Journal of Business Venturing*, *8*, 151-168.
- Gartner, W.B. (1989). Some suggestions for research on entrepreneurial traits and characteristics. *Entrepreneurship Theory and Practice, Fall,* 27-37.
- Gatewood, E.J., Shaver, K.G., Powers, J.B., & Gartner, W.B. (2002). Entrepreneurial expectancy, task effort, and performance. *Entrepreneurship Theory and Practice, Winter*, 187-206.
- Hackett, G., Betz, N., Casas, J., & Rocha-Sinjh, I, (1992). Gender, ethnicity and social cognitive factors predicting achievement. *Journal of Counselling Psychology*, *39*, 527-538.
- Hemmasi, M., & Hoelscher, M. (2005). *Entrepreneurship research, using students as proxies for actual entrepreneurs*. Proceedings of the 50<sup>th</sup> Annual Conference of the International Council for Small Business, Washington D.C. June 15-20.
- Hesa. (2009). Pathways to a diverse and effective South African higher education system. World Wide Web (http://www.hesa.org.za.html.)
- Kickul, J., Gundry, L.K., Barbosa, S.D., & Whitcanack, L. (2009). Intuition versus analysis? Testing differential models of cognitive style on entrepreneurial self-efficacy and the new venture creation process. *Entrepreneurship Theory and Practice, March*, 439-453.
- Krueger, N.F., & Brazael, D.V. (1994). Entrepreneurial potential and potential entrepreneurs. *Entrepreneurship Theory and Practice*, 18, 91-105.
- Krueger, N.F., Reilly, M.D., & Carsrud, A.L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15, 411-432.
- Langowitz, N., & Minniti, M, (2007). The entrepreneurial propensity of women. *Entrepreneurship Theory* and Practice, 31(3), 341-365.
- Maas, G., & Herrington, M. (2006). *Global entrepreneurship monitor*. *South African report*. Graduate School of Business: UCT.
- Mahadea, D. (2001). Similarities and differences between male and female entrepreneurial attributes in manufacturing firms in the informal sector in the Transkei. *Development Southern Africa*, 18(2), 189-199.
- Manolova, T.S., Carter, N.M., Manev, S., & Gyoshev, B.S. (2007). The differential effect of men and women entrepreneurs' human capital and networking on growth expectancies in Bulgaria. *Entrepreneurship Theory and Practice*, *31*(3), 407-427.
- Markman, G.D., Balkin, D.B., & Baron, R.A. (2002). Inventors and new venture formation: the effects of general self-efficacy and regretful thinking. *Entrepreneurship Theory and Practice*, 27, 149-165.
- McGee, J.E., Peterson, M., Mueller, S.L., & Sequeira, J.M. (2009). Entrepreneurial self-efficacy: refining the measure. *Entrepreneurship Theory and Practice, May*, 1-24.
- Minniti, M., Bygrave, W.D., & Autio, E. (2005). *Global Entrepreneurship Monitor, Executive Report*. Babson College: MA.
- Mueller, S.L., & Goic, S. (2003). East-West differences in entrepreneurial self-efficacy: implications for entrepreneurship education in transition economies. *International Journal of Entrepreneurship Education*, 1(4), 613-632.
- Nunnally, J.C. (1978). Psychometric Theory (2nd edn.). New York: McGraw-Hill.
- Peterman, N.E., & Kennedy, J. (2003). Enterprise education: influencing students' perception of entrepreneurship. *Entrepreneurship Theory and Practice*, 28, 129-144.
- Reynolds, P D., Bygrave, W D., Autio, E., & Others. (2003). *Global Entrepreneurship Monitor Executive Report*. Babson College: MA.
- Scherer, F.R., Adams, J.S., Carley, S.S., & Wiebe, F.A. (1989). Role model performance effects on development of entrepreneurial career preference. *Entrepreneurship Theory and Practice*, 13, 53-71.
- Tabachnick, B.G., & Fidell, L.S. (2007). Using multivariate statistic (5th edn.). Boston: Pearson Education.
- Urban, B. (2006). Entrepreneurship education and entrepreneurial intentions: a higher education perspective. *Education as Change*, 10, 14-25.
- Venkataraman, S. (1997). The distinctive domain of entrepreneurial research. Advances in Entrepreneurship, Firm Emergence and Growth, 3, 119-138.
- Wheeler, K.G. (1983). Comparisons of self-efficacy & expectancy models of occupational preferences for college male and females. *Journal of Occupational Psychology*, *56*, 73-78.
- Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: implications for entrepreneurship education. *Entrepreneurship Theory and Practice*, *13*, 387-406.

	Most Preferred	Least Preferred	
My career preference is mostly in finance	9.3%	45.6%	
My career preference is mostly in marketing	53.4%	7.3%	
My career preference is mostly in global business	35.9%	10.6%	
My career preference is mostly in management	43.7%	5.3%	
My career preference is mostly in entrepreneurship	53.8%	8.1%	
My career preference is mostly in business strategy	26.9%	8.4%	
My career preference is mostly in accounting	11.2%	63.5%	
My career preference is mostly in e-commerce	10.7%	30.2%	
My career preference is mostly in management information systems	7.9%	28.3%	

# Table 1: Percentage Analysis of Career Preferences

Note: only the two extreme set of ratings are shown.

# Table 2: Descriptive Statistics for ESE Dimensions

Factor	Mean	S.D	Skewness	Kurtosis	
Management	2.29	0.64	0.54	0.59	
Innovation	2.07	0.73	0.96	1.24	
Marketing	2.28	0.71	0.52	0.66	
Financial	3.03	0.97	-0.01	-0.29	
Risk	2.03	0.75	1.07	1.88	

**Table 3:** Descriptives for ESE Dimensions per Gender

Factor	Gender	Mean		S.D	
Management	Male	2.22	0.70		
	Female	2.34	0.59		
Innovation	Male	1.87	0.69		
	Female	2.21	0.73		
Marketing	Male	2.15	0.73		
i i i i i i i i i i i i i i i i i i i	Female	2.37	0.68		
Financial	Male	2 91	1.01		
Financiai	Female	3.12	0.94		
Diale	Mala	1.09	0.78		
NISK		1.98	0.78		
	Female	2.06	0.73		