

Women Entrepreneurs: Moving Front and Center:  
An Overview of Research and Theory

Patricia G. Greene, University of Missouri – Kansas City  
Myra M. Hart, Harvard Business School  
Elizabeth J. Gatewood, Indiana University  
Candida G. Brush, Boston University  
Nancy M. Carter, University of St. Thomas

## INTRODUCTION

Unless your name was Knight or Schumpeter, getting a paper on entrepreneurship published in a scholarly journal was next to impossible before 1976 – the year when the *American Journal of Small Business* and the *Journal of Small Business Management* were officially launched. That is why it was so remarkable that the *Journal of Contemporary Business* selected Eleanor Schwartz's "Entrepreneurship: A New Female Frontier" for publication in 1976. While her article was not the first academic paper on entrepreneurship, it was groundbreaking in that it was the first focused on women entrepreneurs. At the time there were approximately 700,000 women-owned businesses in the United States generating \$41.5 million in revenues (U.S. Bureau of the Census, 1977). According to the Bureau of Census, in 1972 only 4.6% of all US businesses were women-owned. However, those numbers soon began to increase. A Bureau of Labor report showed that the number of self-employed women increased from 1.5 million in 1972 to 2.1 million in 1979 and climbed to 3.5 million in 1984. (Hisrich & Brush, 1986)

By 1999, the numbers were quite different. There were 9.1 million women-owned businesses, employing 27.5 million workers with reported revenues of almost \$3.6 trillion (Center for Women's Business Research 1999) From 1997 to 2002, women formed new businesses at twice the national rate (Center for Women's Business Research, 2002). By 2003 women were recognized as clearly a driving force in the U.S. economy, whether measured by the number of businesses owned, the revenues generated, or the number of people employed. Female entrepreneurs are increasingly prominent as employers, customers, suppliers, and competitors in the US and in the global community. However, the research and dissemination of information about female entrepreneurship has not kept pace with the impact these women and their enterprises have had on the economy.

To paraphrase Gertrude Stein, "An entrepreneur is an entrepreneur is an entrepreneur," and it should not matter what size, shape, color, or sex the entrepreneur might be. If so, good research on entrepreneurs should generate theory applicable to all. While research shows similarities in the personal demographics of men and women entrepreneurs, there are differences in business and industry choices, financing strategies, growth patterns, and governance structures of female-led ventures.

These differences provide compelling reasons to study female entrepreneurship – looking specifically at women founders, their ventures, and their entrepreneurial behaviors as a unique subset of entrepreneurship. Just as we have found that clinical trials conducted on an all-male population do not necessarily provide accurate information about the diagnosis or treatment of female patients, we see that scholarly research focused only on male entrepreneurial ventures leaves many questions unanswered for their female counterparts. We argue that it is important to look at female entrepreneurs who, though they share many characteristics with their male colleagues, are unique in many aspects. Observable differences in their enterprises reflect underlying differences in their motivations and goals, preparation, organization, strategic orientation, and access to resources.

Over the past 25 years, exploratory research identified several key areas of entrepreneurship in which male and female populations are similar, but research was slow to focus on areas of difference. Consequently, researchers produced descriptive publications that did little more than clarify the state of female entrepreneurship and identify the key issues to be addressed. Some research has generated and tested hypotheses, and---where significant challenges or barriers were identified---research and analyses contributed prescriptive recommendations.

Existing research considers several units of analysis- women founders, their teams, their ventures and communities. At the individual level, the research provides demographic information identifying characteristics of women entrepreneurs, their personal goals, as well as their reasons for selecting business ownership over wage and salary work. (Hagan, Rivchun & Sexton, 1989; Brush, 1992). Researchers also studied operational descriptions of how women create their businesses, which builds an understanding of their expectations for their businesses. At the business unit level, research focuses on organizational structure, financing and growth strategies, and operations. There are additional research questions about industry choices. A fundamental understanding of these issues is essential in identifying areas for research that can support and advance the growth and development of women-owned businesses and the economy (Gatewood, Carter, Brush, Greene, & Hart, 2003).

The purpose of this paper is to examine the scholarly work published on female entrepreneurship from 1976 – 2001. We describe the content of that research, identify gaps, and propose directions for future research, then conclude with recommendations for researchers and educators. The descriptions, analysis, and conclusions of this overview are based on the annotated bibliography developed by the Diana Project team in 2002<sup>1</sup>. The complete annotated bibliography provides a comprehensive review of articles about women’s entrepreneurship, as well as review of representative articles about venture capital. The bibliography was developed to stimulate and support rigorous research, which can influence systems, change attitudes, shape opinions, and instruct practice (Gatewood et al., 2003). The objectives of the annotated bibliography are:

- Develop a comprehensive summary of the literature to provide a base line understanding of the important issues and the current state of research about women’s entrepreneurship, business growth, and access to financing

---

<sup>1</sup> The Diana Project is a multi-year, research program focused on women business owners and entrepreneurs. Though it covers a wide range of topics, its primary emphasis is on financing and growth strategies for women-led enterprises in the United States.

- Identify gaps in current research to be addressed in future studies
- Stimulate new research on women’s entrepreneurship, business growth, and financing by providing a link between current issues and existing research
- Facilitate and coordinate cross-national research collaboration
- Create a living document that can be updated and expanded as research progresses.

While the published bibliography is comprised of almost 300 articles, this review includes only that subset of articles (173) that treat women’s entrepreneurship. Sources of articles for this subset are those select journals that focus on entrepreneurship and small business which were reviewed from their founding dates through 2001. The journals included *Entrepreneurship Theory & Practice*, *Journal of Business Venturing*, *Journal of Small Business Management*, *Entrepreneurship and Regional Development*, *Journal of Developmental Entrepreneurship*, *International Small Business Journal*, and *Small Business Economics*.

In addition, we searched the *Journal of Business Ethics* because of its tradition of including publications about women. We also included *Frontiers of Entrepreneurship Research*, the referred proceedings from the annual Babson College/Kauffman Entrepreneurship Research Conference. And finally, we used the “snowballing” technique, i.e., reviewing bibliographies and frequent citations to identify other articles of interest not included in the above journals. (See Table 1 for the journals’ founding dates and number of issues published since their inception.)

---Insert Table 1 Here---

## METHODOLOGY

An iterative procedure was used for the review and annotation. We sought articles about women entrepreneurs and/or their ventures, articles that compared women and men entrepreneurs and their ventures, and articles that included sex of the respondent as an analytic variable relevant to the research constructs. Each identified article was read by a research assistant and briefly abstracted. Each of the selected articles was then read by a member of the Diana research team, who created the full annotation. The lead investigator coordinating this project then reviewed the complete set of annotations. Each annotation includes a brief summary of the article and describes the methodology, research question, proposed theory, sampling frame, data, research variables, and the findings (Gatewood et al. 2003).

---Insert Exhibit 1 Here ---

Over the past 26 years, *The Journal of Small Business Management*, *Journal of Business Venturing*, and *Frontiers of Entrepreneurship Research* have published more articles related to female entrepreneurship than have the other six publications. (See Exhibit 1) (Gatewood et al., 2003). Exhibit 2 illustrates the publication trends over time and shows substantial increase in the number of articles published during the 1990s. This increase is, at least in part, a function of the increasing number of journals (and total volumes) published in succeeding years. However, while the increasing attention to the field is clear, both the absolute and the relative numbers of articles devoted to female entrepreneurship remain small. With the exception of the *Journal of Developmental Entrepreneurship*, less than 30 percent of the journal issues published contain an article about female entrepreneurship. Some have less than seven percent.

---Insert Exhibit 2 Here---

Approximately 93 percent of the articles published were empirically based. The remaining articles used a conceptual approach or were literature reviews. (Gatewood et al. 2003). The distribution of the methodologies used in the articles published—theoretical, conceptual or literature review—are shown in Exhibit 3.

---Insert Exhibit 3 Here---

We conducted a preliminary content analysis of the annotations using N6, a version of the Nudist qualitative software tool, and after comparing the results with previous literature reviews adopted ten categories to organize the existing field of research and discussion topics. They are:

- Gender (feminist theory, sex roles)
- Entrepreneurs' personal attributes
  - Human capital (education and experience)
  - Demographics (age, marital status, children)
- Motivations (aspirations and goals)
- Founding strategies (strategies and management teams)
- Initial capital resources (debt, equity, financing)
- Investment process (structure, stage)
- Networks (family and social)
- Inhibiting factors (barriers and obstacles)
- International (countries, international comparisons)
- Public Policy/Government

These topics can be aggregated by unit of analysis:

Entrepreneur

Personal attributes

Motivations

Business unit

Founding strategies, for example, industry choice

Initial capital resources

Investment process

Context

Social networks

Inhibiting factors – barriers and obstacles

International setting

Public policy issues

Research Perspective

Feminist theory, sex roles

To illustrate the development of knowledge about female entrepreneurship across time, we organized the literature review by era: (1) 1980s; and (2) 1990 – 2001. Exhibit 2 shows a marked increase in articles published during the latter time frame. Within each era we organize the literature by units of analyses and by specific category of investigation. This organization highlights the introduction of new topics of inquiry and focuses on the development of themes.

## **LAYING THE GROUNDWORK: MAJOR ISSUES RAISED IN THE 1980's**

The first notable article on women's entrepreneurship appeared in the mid-1970's. Eleanor Brantley Schwartz's (1976) pioneering article, "Entrepreneurship, A New Female Frontier" was based on interviews with 20 female entrepreneurs. She combined exploratory and descriptive research in her efforts to identify individual characteristics, motivations, and attitudes that these women had in common. She concluded that the primary motivators for the women in this sample were the "need to achieve," job satisfaction, economic payoffs and independence, the same motivators found for male entrepreneurs (Collins & Moore, 1964). However, unlike their male counterparts, women entrepreneurs reported experiencing credit discrimination during the capital formation stage. Given that the Equal Credit Act was not enacted until 1975, this was a sign of the times. Comparing her own findings to the existing body of literature on male entrepreneurs, Schwartz concluded there were few differences in the personal attributes of male and female entrepreneurs (Schwartz, 1976).

Schwartz's article on female entrepreneurship stood alone for five years. . During the 1980s, a few more researchers turned their attention to the subject. Thirty-one (31) additional articles addressing issues related to women entrepreneurs were published from 1980 - 1989. These studies were mostly descriptive, which is a necessary first step in an emerging field in which the population was not well understood. At the time, there were no national listings of women entrepreneurs, and only two national organizations from which to draw samples. The basic themes discussed in the first wave of research were characteristics of the business owner, industry/business choice, and barriers to success (with a particular emphasis on access to capital). Many of the research questions were similar and researchers often used the same questionnaires to validate and replicate findings (Hisrich & Brush, 1986). The body of knowledge was expanded through the use of new samples across states, industries and stages of business development, and replication of earlier studies in different geographic and business stages of development. New qualitative and quantitative methodologies were also introduced. Conflicting findings prompted researchers to refine both the questions and their techniques.

Just as the majority of research on men was rooted in early trait psychology and centered on personal characteristics (McClelland, 1961; Collins & Moore, 1964; Cooper, 1981), the overwhelming majority of early research about women entrepreneurs focused on individual aspects. The most frequently studied topics were human capital--- particularly education, business experience, specific skills sets---and psychological profiles including motivations and risk taking propensity. This concern with gendered differences in the characteristics of entrepreneurs grew out of a longstanding effort to develop a "trait theory" of entrepreneurship (McClelland, 1961). This effort entailed identification and cataloging of those characteristics

that separated entrepreneurs from all others with particular attention paid to psychological measures.

### **Personal Attributes**

*Human Capital.* In 1981 Hisrich, Brush, and O'Brien( sometimes working together and sometimes working separately), launched a stream of descriptive research that details the characteristics of women entrepreneurs, their businesses, performance, and barriers to enterprise growth. Hisrich and O'Brien (1981, 1982) described motivations, the nature of women entrepreneurs and their businesses, and barriers encountered. This research was extended by Hisrich and Brush (1983, 1984, 1985, 1986, 1987) and summarized by Hisrich (1989). The combined work of Hisrich, O'Brien, and Brush provided detailed descriptions of female entrepreneurs that served as a baseline for much of the later work in the field. Drawing from Schwartz's work (1976), Hisrich and O'Brien studied a sample of 21 women entrepreneurs to learn more about their common characteristics and business problems. The findings were also consistent; the authors concluded that the characteristics of male and female entrepreneurs were similar. Also similar to Schwartz's findings, funding for their businesses was an issue at start-up as most women identified access to credit as a significant barrier. Hisrich and O'Brien probed beneath the gender issues, postulating that the financial resource problems that women reported could be a function of the types of businesses they founded rather than a reflection on the characteristics of female owners. The research also flagged the importance of barriers, reporting that female entrepreneurs found it difficult to overcome society's negative beliefs about women (Hisrich & O'Brien, 1981).

In 1983 Hisrich and Brush launched what was to become the first longitudinal study of women entrepreneurs ever done in the US. Until this point, no national study had surveyed women entrepreneurs using the same types of questions and scales previously used to study men., This research covered the characteristics of the individual women, their motive for start-up, social support systems, barriers and challenges, and the characteristics, growth and performance of their businesses (Hisrich & Brush, 1984). The findings from their analysis of 463 women yielded the first composite description of the "average" women entrepreneur: first born, middle class, college graduate with a major in liberal arts, married, with children, and a supportive spouse in a professional or technical occupation. Most of the women had created their businesses in traditionally female industries (retail, hospitality, services).

This research also provided details of the financing challenges the women faced, including acquiring knowledge of finance and accounting and gaining access to start-up capital.. Women reported they had strong idea generation capabilities and well-developed people skills. Women's education was most often in the liberal arts area, rather than business or technical areas, even though women were found to be generally better educated than their male counterparts. The authors concluded that women should work to gain more education in financial areas and that they should learn more about the financial needs of their businesses, including aspects of working with money, banking requirements, loan processes; and how to talk to bankers. They also concluded that females should be encouraged to study non-traditional fields such as engineering and science in order to prepare them for a broader range of industry choices, noting that many of the non-traditional fields offered higher growth potential and greater rewards.

Hisrich and Brush went on to conduct a comparative study of female entrepreneurs and minority business owners. They reported many similarities between these two populations, particularly in terms of individual characteristics and motivations. However, they also noted differences in the areas of class status and specific aspects of motivations. Women entrepreneurs generally came from a middle- or upper- class families and were motivated by a drive for independence. Minority entrepreneurs reported middle- or lower- class family backgrounds, and their motivations were more heavily driven by economic opportunity and job satisfaction (1985).

Other studies of individual characteristics carried out in the 1980s concentrated on psychological dimensions of women entrepreneurs, or women students, and compared these women to women executives as well as to male entrepreneurs and male executives. Sexton and Kent (1981) found that women entrepreneurs had slightly lower levels of education than female executives. Sexton and Bowman (1986) expanded this research using psychological instruments to compare female and male entrepreneurship students on several dimensions including independence, need for control and risk-taking propensity. Interestingly, the authors found differences between female students studying entrepreneurship and those studying other areas of business in terms of conformity, energy level, interpersonal affect, risk-taking, social adroitness, autonomy, change, harm avoidance, and succorance. Another area of research drawn from the broader field of entrepreneurship focused on the propensity for risk-taking by entrepreneurs. Masters and Meir's replication of the Brockhaus (1980) study of entrepreneurs and managers supported Brockhaus's earlier findings of no significant difference between entrepreneurs and managers on risk taking. The authors also reported no significant difference in risk-taking propensity between male and female entrepreneurs (Masters & Meier, 1988). However, it is relevant to note that in general the instruments being used in these studies were developed and tested on male entrepreneurs, which raised the question of how any differences found should be interpreted.

*Motivation.* Researchers were also interested in discovering the reasons women had for starting new business ventures. Scott (1986), building on Hisrich and Brush's questionnaire, used two separate surveys to explore "glass ceiling" issues the desire for increased flexibility to handle family responsibilities as possible motivators for women. She reported gender differences in reasons for starting a business; men stressed the desire to be their own bosses and women reported being concerned with personal challenge and satisfaction. Another study found that motivation differed depending upon age of the woman business owner and the circumstances of founding: specifically whether the creation of the business represented job transition or a re-entry into the workforce (Kaplan, 1988).

## **Business Unit**

*Founding Strategies.* Hisrich and O'Brien (1982) drew a sample from the American Management Association database to test their hypotheses about the relationship between industry choice and access to resources. The driving question for this paper was whether women in businesses considered "traditional" (retail, personal services, food and catering) were different from those in non-traditional industrial sectors (construction, manufacturing, technology). The authors found that indeed, there were some differences. The women entrepreneurs in the more non-traditional areas were older, had more education, and were more likely to have self-employed parents. While both groups reported using their personal savings to finance their

businesses, those in the non-traditional areas were more concerned about the lack of external financing sources – possibly because their industries required larger capital investments.

*Initial Resources.* Much of the research conducted in the 1980's identified business challenges specific to women entrepreneurs and concluded with recommendations for overcoming these. Some of the difficulties reported included: obtaining start-up funds, financial management, and development of effective marketing and advertising (Pellegrino & Reece, 1982). The root causes of limited financial success were often attributed to early management practices. A pair of studies examining women's access to capital employed an experimental design methodology to determine whether women faced obstacles in obtaining bank loans. This research found that lending institutions perceived women business owners to be less successful than men, (Buttner & Rosen, 1988), but that lending officers did not perceive any differences in the quality of the plans prepared by men and women (Buttner & Rosen, 1989).

In 1987, Hisrich and Brush added a longitudinal dimension to their research by returning to their original respondents. This study examined growth and performance patterns, strategies of ventures, goals and future plans. Hisrich and Brush found that the majority of the businesses were moderately successful with revenue increases of approximately 7 percent per year, which was slightly less than the average for male-owned ventures. However, compared to the national average where 60-70 percent of the businesses were reported as closed or failed within five years, this study found that only 30-40 of women-owned businesses were likely to quit or fail. . Researchers concluded that education and experience were significant factors in predicting financial success. Other studies reported that the level of task delegation had a positive correlation with enterprise success (Cuba, Decenzo, & Anish, 1983).

Hisrich summarized work in this area in a chapter in Hagen, Rivchin, and Sexton's book, *Women-Owned Businesses* (1989), and offered five prescriptions for success. He advised female entrepreneurs to: 1) establish credible, relevant track records by obtaining management and/or technical knowledge as an employee, 2) compensate for specific educational and experience gaps through continuing education and the use of outside experts when appropriate, 3) assess family needs prior to launching the businesses, 4) establish a strong support system of family and friends, 5) approach entrepreneurship with both determination and professionalism.

## **Context**

*Social Networks.* Another important topic was introduced in the late 1980s: the social networks of women entrepreneurs (Aldrich, 1989; Aldrich, Reese, Dubini, Rosen, & Woodward, 1989). While noting the positive effects of utilizing appropriate networks on rates of business formation, survival, and growth, Aldrich et al. made important distinctions between the content and relevance of men's and women's networks. They described women's networks as organized around spheres of work, family, and social life. Women's networks were largely similar to men's networks in terms of activity and density. However, men reported that their networks included very few women while women were more likely to include men in their networks (Aldrich, 1989). In a related study, women were found to be more likely to use other women as information sources (Smeltzer & Fann, 1989).

*Inhibiting Factors.* Access to capital was identified as a major challenge to female entrepreneurship by the earlier researchers. During the 1980s, obtaining start-up capital (bank financing, informal loans and private equity) was a recurring theme. The challenges associated with accessing start-up and growth capital triggered an exploration of bank loan officer's perceptions of male and female loan applicants, and successful entrepreneurs. This study probed the affect of gendered stereotypes through the use of an experimental research design analyzing lenders' evaluation of business plans and plan presentations. The research findings supported the existence of stereotypes (lender preconceptions that women did not possess the characteristics necessary for successful entrepreneurship) (Buttner & Rosen, 1988). However, the study found no evidence that these stereotypes influenced the lenders' funding decisions (Buttner & Rosen, 1989). Brophy's work (1989) examined the financing activities and challenges throughout the life cycle of the firm. He also continued the discussion initiated by Hisrich and O'Brien in 1982, focusing on the relationship between the type of business selected and the implications for financing choice.

*International Studies.* Although the majority of the articles reviewed were published in U.S. journals, several articles focused on female entrepreneurs in other countries. The issues addressed and the findings were remarkably similar across geographic boundaries. Personal attributes and motivations were studied in both the UK and Sweden. British women business owners had educational and experiential levels similar to British male business owners (Watkins & Watkins, 1983; Birley, Moss, & Saunders, 1987), but were found to have very different cumulative educational and work experience patterns (Watkins & Watkins, 1983).

In Sweden, Holmquist and Sundin (1988) used patterned their questionnaire on Hisrich and Brush's earlier work, using it to identify characteristics of women entrepreneurs in that country. They found, many similarities among men and women entrepreneurs, but also uncovered gender-based differences. They found that women entrepreneurs were similar to men in their pursuit of economic goals, but the women also valued other goals, including customer satisfaction. and personal flexibility. Studies in the UK concluded that women there were more likely to start a business in a "traditional" industrial field. A study comparing social networks of entrepreneurs in the U.S. and Italy found similar results in each country (Aldrich et al., 1983). An overarching concern raised in all the research was whether (or not) systematic or random biases existed and worked against women business owners (Watkins & Watkins, 1983).

*Public Policy Issues.* The implications from this early research were twofold; first, the early work drew attention to the fact that there was a significant population of women entrepreneurs starting ventures in all sectors and organizing a large variety of ventures. This early research highlighted areas where women differed from their male counterparts both in terms of both personal attributes and in the start-up process itself. Education was most often in the social sciences while experience was predominantly in the services and retail areas. Research in all countries, the identified ability to gain access to credit, start-up capital or loans was the most pressing problem. This early stream of research raised the awareness of the need for training, workshops, and other mechanisms to educate women about financing and business start-up processes (Watkins & Watkins, 1983; Hisrich & Brush, 1986). In the U.S., several government initiatives were designed to support women and minority business owners. For example, the Community Reinvestment Act (CRA) put pressure on commercial banks to make larger pools of

debt capital available to women and encouraged banks to review their lending criteria. Small Business Investment Companies were also supported by government-backed leverage. These, in turn, made more equity capital available to women and minorities.

## **A Feminist Perspective**

The fundamental question driving the research on female entrepreneurs was: "Does theory that is developed from research on male-led ventures hold true for women and minority entrepreneurs?" (Stevenson, 1986). The first and perhaps most radical study was done in the UK by Geoffee and Scase in 1983. They proposed a typology of women entrepreneurs based on their motives and choices of both industry and type of business organization. Other researchers examined individual characteristics, motivations, venture types, industry selection, and specific business problems in an effort to determine if maleness or femaleness was salient in predicting success. For example, Smith, McCain, and Warren (1982) proposed patterns of entrepreneurial types based upon the manner in which the firm is operated. In a comparison of male and female entrepreneurial typologies, women were reported as being more opportunistic. However, Pellegrino and Reece (1982) found that the start-up problems and the challenges women business owners faced were common to anyone who starting a business. Studies of gendered differences in management style questioned whether the "entrepreneurial" management style was gender neutral or if there was a particularly "feminine" management style preferred by women entrepreneurs (Chaganti, 1986). For example, Neider reported that women-owned businesses were more likely to be informally structured (Neider, 1987).

Another concern introduced during the 1980s was work-family balance. Early studies examined this as an issue of concern for both male and female business owners (Honig-Haftel & Martin, 1986; Geoffee & Scase, 1983), but the topic quickly became relegated to a "woman's issue." One of the more unique research approaches examined time use patterns and the use of household help by self-employed women, suggesting that increased responsibility for family can provide some explanation for the lower profitability of women's firms (Longstreth, Stafford, & Mauldin, 1987).

By the end of the 1980s, women were starting businesses in increasing numbers but, for the most part, the chose traditionally female industry sectors and aspired to smaller than average business size.(Evans & Leighton, 1989). Researchers in the field of entrepreneurship raised many questions about gender differences, but, at the close of the decade, there were no definitive answers and the debates continued into the 1990s. Only one of the papers reviewed for this study considered gender, race, and ethnicity (Hisrich & Brush, 1985) and only a handful offered a conceptual approach to advance theory development (Stevenson, 1986; Birley, 1989; Brophy, 1989; Aldrich, 1989).

## **A DEVELOPING RESEARCH AGENDA: THEMES EMERGING IN THE 1990s**

### **Female Entrepreneurs: Personal attributes and motivations**

In 1989 Gartner challenged the heavy emphasis on the traits of the entrepreneur as »the wrong question. While research on traits and demographics of female entrepreneurs continued into the

1990s, other questions gained prominence. Studies of characteristics were only one aspect of a broader-based research program.

*Motivation.* “Why do some women choose entrepreneurship while others do not?” was one important question driving much of the research. In a paper published in the 80’s, Birley (1989) proposed the application of Cooper’s model of entrepreneurial antecedents in a conceptual paper. Brush and Hisrich (1991), using longitudinal data, tested the model empirically along three dimensions: individual characteristics, incubator experience, and environmental factors. They found experience, business skills, and personal factors were related to growth. They also found that the traditional socialization of women influenced the type of businesses started, the availability of start-up capital, and the management skills and experiences of the woman business owner. But the question still remained as to why women are motivated to start their ventures.

### **Business Unit**

Growth and performance of new business ventures are dependent upon strategic direction, access to resources, and execution of strategic and tactical decisions. In the 1990’s a number of papers addressed just such issues.

*Strategic Choice.* Carter, Williams, and Reynolds (1997) argued that strategic choice is shaped by experiences to which individuals are subjected and that females and males have fundamentally different socialization experiences. Assuming that a different socialization experience would result in the development of unique capabilities that could compensate for a deficient set of founding resources, they investigated performance differences of men and women-owned businesses.. The authors found that women-owned firms had higher odds of discontinuing, fewer resources at start-up (including industry specific experience in retail), and were launched on a smaller scale. They reported equal access to credit from formal lending institutions for men and women. Their findings supported the hypothesis that women used unique strategies to offset initial resources limitations. Another study of strategy found that women were more likely than men to develop strategies that emphasized product quality and less likely to emphasize customization or cost efficiency (Chaganti & Parasuraman, 1996). Women also used a relational strategy when working with employees and clients, focusing on creation and development of teams, mutual empowering, achievement, and perseverance. Relational theory evidenced potential as a framework for identifying and explicating women entrepreneurs’ interactive style in their own businesses (Buttner, 2001).

Self-efficacy offered another possible explanation for women’s choice of smaller retail and service (traditional) businesses rather than those in high technology, construction, and manufacturing (nontraditional). Anna, Chandler, Jansen, and Mero (2000) proposed a model combining venture efficacy, career expectations, and individual context as determinants of industry selection. Women in traditional businesses had higher venture efficacy for opportunity recognition and higher career expectations of life balance and security and placed more importance on the financial support received from others. Non-traditional owners had higher venture efficacy for planning and higher career expectations for money or wealth. Barrett (1995) reported that men were more likely to choose businesses with a female image than were women to found a business with a male image.

Several articles explored the impact of industry choice on growth, financing, and performance. One study took that looked within a particular industry to observe gender-based differences. In a study of entrepreneurial accounting firms, the authors found that male-owned practices projected a higher ratio of profits to revenues than did women-owned counterparts, but they also found that these differences were mediated by differences of intentionality. Female accountants were more likely to report establishing the practice to attain greater flexibility in work time and place. Higher profitability projections were associated with the founders' achievement and income goals (Fasci & Valdez, 1998). Women who had a positive view of their initial prospects later viewed the experience of business ownership more favorably, expressing satisfaction regardless of subsequent performance (contrary to discrepancy theory) (Cooper & Artz, 1995).

Different business outcomes had long been a point of concern. Kalleberg and Leicht (1991) conducted a study analyzing the relationship between the owner's gender and personal characteristics, choice of industry, choice of organizational structure, and the survival and success of the business. The authors found that women-led businesses were no more likely to go out of business or be less successful than those led by men and there were no gender differences in earnings growth (1991). This study stands in contrast to those showing women-owned businesses had lower sales volumes and lower incomes as a result of positioning in less profitable industries, as well as lack of access to capital, and inability to secure government contracts (Loscosso & Robinson, 1991; Loscosso, Robinson, Hall, & Allen, 1991). Another study found women business owners to have smaller annual sales and employment growth but no gender differences in return on assets (Chaganti & Parasuraman, 1996).

*Initial resources.* Several researchers examined the impact of human capital, risk preferences, and characteristics of the firm's operations on the capital structure of small firms, looking specifically at the ratio of debt to total capitalization. Male owners were found to use significantly more debt. The authors offered both supply and demand side explanations for this finding. They postulated that lenders may discriminate or that female entrepreneurs may be more risk averse (Scherr, Sugrue, & Ward, 1993). Coleman (2000) reported that lenders did indeed discriminate, but on the basis of firm size, preferring to lend to larger and more established firms, thereby limiting their involvement with women-owned firms which were generally smaller.

Female owners tended to prefer internal sources to external financing. However the owner's sex was not an issue in predicting the choice of equity versus debt financing (Chaganti, DeCarolis, & Deeds, 1995). No difference was found by gender in the use of financial management services (Cole & Wolken, 1995), but, using data from Britain, Carter and Rosa (1998) found several significant gender differences in business financing. Men used larger amounts of capital at start-up. Women were less likely to use financial instruments such as overdrafts, bank loans, and supplier credit. Coleman (2000), in a comparative study of men and women utilizing bank debt, found that access to financing did not differ by sex.

Another study found that women-led businesses that used bank loans as a primary source of start-up capital outperformed those that used alternative funding sources. The authors stressed the importance of having a relationship with a bank in place at the time of the business launch (Haynes & Helms, 2000). Indeed, women were more likely to use their banks for a source of

advice, but men were more likely to respond to that advice. In addition, 12.5 percent of the women business owners reported that they believed they had experienced gender related discrimination in their banking relationship (Read, 1994).

*Investment Process & Growth.* Growth of the firm has been an extremely important issue in the study of entrepreneurship, yet the relationship between gender and growth has rarely been studied in the field. Carter and Allen (1997) investigated whether women's businesses were smaller due to the owner's lifestyle intentions and choices or due to the level of resources controlled. They found strong support that having access to financial resources and emphasizing the financial aspects of the business had stronger effects on growth than did intention or choice. A qualitative study using a focus group methodology found that gaining start-up capital was not nearly as difficult as acquiring growth capital (Brush, 1997). Successful women entrepreneurs believed they were perceived as "riskier" loan prospects, and less credit worthy than their male counterparts, despite having a business track record of solid sales and profits.

Gundry and Welsch (2001) compared women-owned businesses that exhibited high levels of growth with low or no growth businesses in order to understand the relationship between strategic choices paths and the firms' growth orientation. High-growth women entrepreneurs differed from low-growth women entrepreneurs along the following dimensions: selection of strategies that focused on market expansion and new technologies, greater intensity of commitment to business ownership, and willingness to incur greater opportunity costs for the success of their firms. High-growth women entrepreneurs provided more organization structure; planned earlier for growth; used a team-based approach to the business; were concerned about reputation and quality; had adequate capitalization; and used a wider range of financing services for business growth (Gundry & Welsch, 2001).

Cliff (1998) however, found that personal considerations appeared to override economic consideration in the business expansion decision. Canadian female entrepreneurs were more likely to establish maximum business sizes and these sizes were smaller than those set by their male counterparts. Female entrepreneurs were just as likely to want to grow their businesses, but, they reported more concerns about the risks associated with fast growth and generally preferred to adopt a slower and steady rate.

While the body of literature concerning women and debt capital is quite robust, the first article to focus specifically on women and venture capital appeared only recently (Greene, Brush, Hart, & Saporito, 2001). Using 30 years of data from the Venture Capital Association and coding by gender, they found that women-led firms received only 2.4 percent of all equity investments in the US. Their research reported a positive and increasing trend in the late 1990's. Women-led firms received 4.1 percent of venture capital in 1998. Three explanations were proposed for why women received so little equity capital: institutional or network barriers, lack of appropriate human capital including leadership skills, background, and strategic choices of growth, product, and markets.

## Context

*Social Networks.* Though the importance of social networks was introduced during the 1980s, few studies of this issue were published in the reviewed journals during the 1990s. One article that did explore the network effects found that having a high proportion of kin and homogeneity in the network created critical disadvantages for small business owners (Renzulli, Aldrich, & Moody, 2000).

*Inhibiting Factors.* While discussion of barriers and challenges were included in much of the research during the 1980s and 1990s, Brush (1997) applied a broader perspective to her study of factors that facilitated as well as those that inhibited growth. She identified several obstacles, including: women not being taken seriously; child and dependent care responsibilities; lack of growth and expansion capital; and lack of entrepreneurial education and training. On the other hand, she found that opportunities for women entrepreneurs improved with the use of technology, and that management style, and employee policies could also be positive contributors to growth (Brush, 1997).

The consideration of access to debt capital revolved around three main questions.

1. Was credit, particularly through banks, sought by and accessible to women?
2. Was the credit available on the same terms as those offered to male entrepreneurs?
3. Were any differences in the availability of debt capital attributable to discrimination?

Several researchers undertook reviews of banking practices to determine whether or not women business owners faced discrimination in the lending process. Findings were mixed. After accounting for structural differences between male and female-owned businesses, one study found no differences in the rate of loan rejections (or any other objective measures of terms of credit) (Fabowale, Orser, & Riding, 1995). However, when comparing access to capital for men and women-owned businesses, the research indicated that women-owned businesses were smaller, newer, and less likely to use external financing as a source of capital than those owned by men. Haynes and Haynes (1999) used The National Survey of Small Business Finance to examine the women's access to institutional and non-institutional lenders in 1987 and 1993. While women-owned small businesses showed a higher probability of borrowing from family and friends, the results suggested that women-owned small businesses had gained access to line-of-credit loans from commercial banks on a par with the men-owned small business in the same period of time.

Building on the studies by Riding and Swift (1990) and Swift and Riding (1998), McKechnie, Ennew, and Read (1998) used men and women business owners who were similar in a host of structural characteristics to explore whether gendered differences existed in the terms and conditions of bank financing, the level of the service provision, and the overall quality of the banking relationship. Few differences were found except that females secured larger loans than males, yet were charged higher interest rates than males. Higher interest rates (Coleman, 2000) and higher collateral requirements (Coleman, 2000; Riding & Swift, 1990) were a recurring theme. Females reported using bank overdraft facilities and loans to a greater degree than males for both start-up and subsequent growth and development. Females also seemed to put more importance on bank managers' advice and understanding of their marketplace. There did appear

to be some evidence of discriminatory behaviors in the personal interactions between female business owners and bank managers (McKechnie, Ennew, & Read, 1998).

Other researchers investigated the possibility of discrimination as a factor in the refusal of credit for men and women entrepreneurs. Both men and women entrepreneurs were refused credit but the reasons for the refusals differed: men were more likely to be refused credit on the basis of their companies' business sector and their own lack of educational attainment. Women were more likely to be refused credit on the basis of their lack of business experience and their domestic circumstances (Carter & Rosa, 1998). Buttner and Rosen (1992) concluded that women were more likely to attribute the denial of a bank loan to gender bias than were men, but there was evidence that some of the differences were based on the gender stereotypes held by the capital providers. Women business owners were also significantly more likely to perceive disrespectful treatment by lending officers (Fabowale, Orser, & Riding, 1995).

*International Studies.* The 1990s saw a dramatic increase in research on female entrepreneurship around the world. The topics addressed internationally often mirrored those studied in the U.S., but the intensified global interest advanced the understanding of the phenomenon dramatically.

Personal Attributes. Descriptive studies of human capital and business characteristics generally anchored the research agenda in a country. Several descriptive studies were conducted of women entrepreneurs in Canada (Belcourt, 1990; Collette & Aubrey, 1990). An additional descriptive study of Quebec area female entrepreneurs provided the basis for a model of "small and stable business" as a preferred method of operation (Lee-Gosselin & Grise, 1990). A descriptive study of female business owners in Singapore reported characteristics similar to those of other studies from around the world. Women were reported as motivated by the desire to become their own bosses. They were educated, had prior work experience, and desired freedom and flexibility to meet the combined responsibilities of work and family. They owned small service and retail businesses that they had started largely with personal capital and loans from family and friends (Cooper & Goby, 1999).

A study of personal characteristics in Poland found that female entrepreneurs were more highly educated than the male entrepreneurs and had equal or better levels of business experience. The same study found no gendered differences in personality attributes, but female entrepreneurs were more likely to consider innovation as an important success factor and report a commitment to long-term capital accumulation and investment than were the males (Zapalska, 1997). In a study of technology-based companies in the U.K., Westhead and Cowling (1995) found no impact of any gender-based effects of individual or business characteristics on the firm's potential to achieve significant growth. And finally, a comparison of the entrepreneurial activities of academics in Sweden and Ireland found no gender differences (Klofsten & Jones-Evans, 2000).

Motivation. Women's motivations for starting a business were remarkably similar across countries. In Norway, an exploration of gender differences of entrepreneurs in the start-up process concluded that women emphasized independence as a reason for start-up and also perceived a high degree of social support during the process. Women in the study believed that they possessed greater entrepreneurial abilities than men (Ljunggren & Kolvereid, 1996). Personal freedom, security, and satisfaction were the primary goals in Pakistan (Shabbir &

D'Gregorio, 1996). And in an industry specific study of self-employed workers in the British book publishing industry, the authors suggested a typology of entrepreneurs based on their motivations. These included: 1) refugees, 2) trade-offs, 3) missionaries, and 4) converts. Women were more likely to be in the trade-off group, combining work and family responsibilities. Women also were more likely to be in the missionary group, voluntarily leaving employment situations seen as undesirable. Men and women were equally like to be in the converts group, that is, they entered self-employment as a temporary strategy but later showed no interest in leaving self-employment (Stanworth & Stanworth, 1997).

Strategic Choice. A descriptive profile of enterprises in Java, Indonesia showed that female-operated businesses there, as in most countries of the world, were concentrated in traditionally female industrial sectors as well as in the low-income informal sectors. Employment growth of female-owned firms was significantly lower than that of male-owned businesses. The authors concluded that women started their enterprises with different business objectives than did the men and, therefore, programs and policies need to be gender-differentiated (Singh, Reynolds, & Muhammad, 2001). Similar findings in the U.K. suggested that women were less likely to own more than one business (Rosa & Hamilton, 1994) and when women did plan to grow their company selected different expansion strategies (Rosa, Carter, & Hamilton, 1996). In Scandinavia, In Scandinavia, women also were found to be less likely than men to write a business plan and, if choosing to write a plan, more likely to postpone it to later in the start-up process. More similarities than differences were found between male and female entrepreneurs in Norway, which prompted the authors to question the need for separate and focused programs to stimulate female entrepreneurship (Alsos & Ljunggren, 1998). However, the concern was raised as to the importance of understanding similarities and differences in the context of the country (Spilling & Berg, 2000).

Performance and growth issues of women businesses owners received international attention (Rosa, Carter, & Hamilton, 1996). In Sweden, Du Reitz and Henrekson (2000) analyzed sales, profitability, employment, and orders to conclude that women-owned firms were smaller and had a smaller customer base. Only the underperformance in sales was supported. The conclusion was that women-owned businesses were only “underperforming” only because the growth preferences of women were lower than those of men. In Finland, a gender-based difference in growth probabilities of the firms was also supported. One important difference identified Kanasharju (2000) was that during economic fluctuations, particularly recession, the growth probability for firms run by males increased, but for firms run by females, growth became more limited. Firms owned by males recovered from recession more quickly than firms owned by females, but no explanation was offered as to why this occurred (Kangasharju, 2000).

Social Networks. Research in Israel demonstrated that network affiliation, human capital, and motivation theories have greater explanatory power for performance than do social learning or environmental perspectives (Lerner, Brush, & Hisrich, 1995). This study found that membership in an association or network of businesswomen had a highly significant effect on profitability. A Hong Kong based study found that reliance on the immediate network or channel for information was more important to women business-owners than it was to men business owners (Chan & Foster, 2001). Other researchers continued to build on the network

research of the 1980s by studying the size, diversity, density, and effectiveness of networks of male and female entrepreneurs in Northern Ireland. Findings supported those early studies in that there were few gendered differences in networks. The exception was that females tended to rely heavily upon a male colleague as their prime contact but revert to other women for other purposes while men relied almost entirely on other men for advice (Cromie & Birley, 1992).

Inhibiting Factors. Barriers encountered were also found to be similar around the world. In Canada, barriers reported included lack of business management training and experience, access to financial support and information networks, hostile environments, and negative affects on personal and family relationships. However, the most significant gender-based barriers were those of negative self-perceptions (Shragg, Yacuk, & Glass, 1992). In another Canadian study of the impact of gender on the relationship between bank lenders and small business borrowers, Haines, Orser, and Riding (1999) found no differences to suggest lending discrimination when controlling for business size and industrial sector. A similar study in New Zealand, using a Goldberg approach to test for discrimination found significant gender differences for university educated applicants. Education was considered a more important factor for female applicants than for males. In the same study female applicants with a high school education were more likely to be granted a loan than male applicants (Fay & Williams, 1993).

Dutch entrepreneurs reported encountering some barriers that they believed were gender specific. Female entrepreneurs in the study reported a smaller amount of start-up capital but used similar sources of capital. There were no significant gendered differences in the proportion of debt and equity capital in the businesses (Verheul & Thurik, 2001).

A more gender-specific study in the U.K considered gendered effects on the way men and women small business owners feel about their entrepreneurial experiences. Marlow (1997) outlined gender-specific feelings that women entrepreneurs might hold: thwarted in their careers, having credibility problems based upon gender, ambitions based upon a different socialization model, and the pursuit of self-employment as a solution to dual domains of work and family. The author felt that these feelings are “tainted by patriarchal expectations”.

In some instances, country context has a significant effect on entrepreneurship. For example, in South Africa, the conversation about entrepreneurship has been intermingled with societal issues of socioeconomic reparation. Entrepreneurial development was increasingly recognized as a functional tool for tackling South African’s socioeconomic challenges. Ahwireng-Obeng (1993) suggested a mainstream assistance program attentive to gender in order to negate institutional discrimination. Political issues were thought to play a role in entrepreneurial development in other countries as well. A study of male and female entrepreneurs in Great Britain, Norway, and New Zealand explored whether female entrepreneurs perceptions of the business start-up environment differed from those of their male counterparts. The most significant gender difference was perceived environmental hostility and uncertainty, with female entrepreneurs perceiving higher political uncertainty than their male counterparts.

Another study indicated that differences between male and female entrepreneurs were often country-specific, suggesting that the differences derived from the social and political contexts rather than from fundamental differences between the sexes (Kolvereid, Shane & Westhead,

1993). In Poland, the transition from a centrally planned economy to political pluralism and economic transformation was seen as a platform for increasing numbers of women entrepreneurs. In addition, a study of the establishment of the Polish Association of Women Entrepreneurs concluded that the understanding of the social and economic impact on women of a planned economy and the unique needs of female entrepreneurs in the transition to capitalism were keys to developing effective support organizations (Bliss & Garratt, 2001).

Country Comparisons. Only a few studies provided comparative analysis of female entrepreneurship in more than one country. In one review of women's entrepreneurship in 23 OECD countries, similarities appeared across countries in terms of education level, focus and type of experience (Brush, 1990). Another interesting approach to international entrepreneurship research was developed by the Society of Associated Researchers in International Entrepreneurship (SARIE) in one of their early studies exploring reasons for start-ups. While independence, recognition, learning, and roles are four robust reasons for starting a business, the researchers found a variety of significant differences by country, gender, and the country-gender interaction. The only career reason that applied across gender and countries was the ability to develop one's approach to work (Shane, Kolvereid, & Westhead, 1991). And finally, in a longitudinal study comparing the movement of young people in and out of self-employment in the US and Australia, the conclusions provided differing explanatory factors in each of the two countries. While previous earnings predicted the transition to entrepreneurship in both countries, additional education had a positive relationship with self-employment in the U.S. but not in Australia (Blanchflower & Meyer, 1992).

Roles. Cultural differences between and within countries add another dimension to the consideration of personal and professional roles. In examining the relationships between business and family roles of the female married entrepreneur in Turkey, respondents reported role conflict in their personal and professional lives. Being an entrepreneur had a negative impact on their family life but a positive affect on their social, economic, and individual lives (Ufuk & Ozgen, 2001).

In sum, the international research suggests many similarities in personal and business characteristics and venture strategy. Barriers also are similar, but the country context is a mitigating factor. One can conclude that given the impact of country, entrepreneurship theory and findings derived from research in developed countries needs to be carefully considered before being applied to developing countries (Singh, Reynolds, & Muhammad, 2001).

### **Feminist Theory and Sex roles**

Many of the issues raised in the 1980s warranted continued investigation, but the 1990s also brought a more explicit call for a feminist theory of entrepreneurship (Stevenson, 1990; Hurley, 1991). Feminist theory, a specific area of social theory, addresses issues of political, economic, and social rights. This theoretical approach also provides a rich tradition of analyzing relations of gender and of class, making it useful for researching the economic activity of women and men (Greer & Greene, Forthcoming). In addition, several researchers continued to raise important questions about the methodological bias inherent in conducting research on women entrepreneurs using research designs, scales, and interpretations based entirely on a male model

(Brush, 1992; Fischer, Reuber & Dyke, 1993). These researchers also noted biases stemming from an over-reliance on structured, quantitative research approaches and the possibility of sexual imperialism in interpretation of the results. They argued for the development of more robust data sets and the application of more sophisticated statistical techniques (Moore, 1990).

Brush (1992) reviewed the state of the field and offered an “integrative” approach that allowed for the consideration of a woman’s professional and family life. This perspective focused on a woman business owner as embedded in an environment of networked work, family, and society relationships. In addition to providing a useful framework, the article paved the way for the application of feminist theories in the field.

Fischer, Reuber, and Dyke (1993) applied both liberal and social feminist theories in their exploration of gender differences, finding few differences between male and female entrepreneurs in motivations or educational levels (despite the fact that the female entrepreneurs in the sample had less experience managing employees and also operated smaller businesses with less revenue growth). Barrett (1995) also used a feminist perspective to investigate learning experiences and needs of male and female business owners in Australia, finding that men were more likely to participate in businesses with a female image than women were to cross over and participate in “male” businesses. Men were also significantly more likely to have participated in more than one start-up whereas most women had not.

Gendered differences in learning styles also emerged. Women reported a greater variety of sources of learning as useful to them, while men found learning derived from a major setback in the current firm to be significantly more useful. Barrett raised a challenge to those in the field to develop a theoretical framework that would integrate women’s entrepreneurship and feminist theory (Barrett, 1995). And finally, in a unique approach, Gunnerud introduced a feminist geography perspective questioning gendered differences in conceptions of place and the intersection of place, gender, and entrepreneurship. She concluded that place was important in situating gender relations and entrepreneurship (Gunnerud, 1997).

Applications of feminist perspectives to entrepreneurship suggested new links between social stratification and business ownership, organizational structure, and industry choice. Researchers who took a feminist point of view noted that women had historically been excluded from the entrepreneurship literature and argued for the need to understand entrepreneurship as a gendered activity. They focused on two issues: the construction of the category of “the female entrepreneur” and exploration of the unique ways in which the connections among gender, occupation, and organizational structure affect female and male business owners (Mirchandani, 1999).

*Gender-based perceptions and stereotypes.* While not explicitly applying feminist theory, several researchers developed models based on sex-role socialization and occupational role viewpoints. While the study of values was also pursued (Gagperson, 1993), few found gender-based differences in fundamental values. There were a few notable exceptions: women valued equality more highly and men valued family security more than did women. There were, however, more marked differences found were between entrepreneurs and managers in the sample. The authors concluded that male and female entrepreneurs were more similar to each other than to their same-sex managerial counterparts (Fagenson, 1993).

One question that came to the fore in this area of research focused on whether gendered stereotypes of successful entrepreneurs caused women to perceive a mismatch between entrepreneurial venturing and feminine traits (Fagenson and Marcus, 1991). In tests to determine whether these perceptions differed if women worked in organizations headed by women rather than by men, the hypothesis that entrepreneurship might be perceived as “unfeminine” was not supported. However, both men and women assigned more weight to masculine attributes in projecting the profile of a successful entrepreneur. Other researchers asked, “Are there gender-based differences in personal values and business strategies that could have an impact on entrepreneurial activities and outcomes?” Some findings suggested that women working in male-dominated industries allowed the pressure of external factors to dictate their strategies, regardless of their personal values, while males felt free to develop strategies that mirrored their personal values (Olson & Currie, 1992). This approach was taken in a slightly different direction in a study conducted in North Ireland that used Identity Structure Analysis to examine the process of change in women’s values and beliefs as a result of business start-up. It concluded that women did not display “classic” entrepreneurial values, in particular rejecting risk taking and profit motivation (MacNabb, McCoy, Weinreich, & Northover, 1993).

Gendered differences in psychological profiles continued to be a point of interest. One study of women and men entrepreneurs and employees investigated whether psychological profiles varied along gender and/or employment lines, but found few differences (Sexton, Bowman-Upton, 1990). However, within group differences proved to be interesting in that the degree of internal locus of control was found to differ between those with moderate success and those with far greater levels of success (Nelson, 1991). Women also reported more internal/stable attributions as reasons for getting into business while men reported more external/stable attributions (Gatewood, Shaver, & Gartner, 1995).

A longitudinal study assessed the relationship between psychological characteristics and business organizing activities, using measures of achievement motivation, locus of control, risk perception, and creativity. The most significant difference between men and women entrepreneurs was found in scores on innovation and achievement/activity (Shaver, Gartner, Gatewood, & Vos, 1996). A surprising finding emerged through an adaptation of Miner’s model that allowed for the consideration of attributional styles. These results showed female entrepreneurs and managers were more likely to take risks than their male counterparts. The authors suggested that women may be more willing to accept entrepreneurial risk because they face a more hostile and prejudicial work environment (Bellu, 1993).

Gender stereotypes also appeared in research examining motivations and definitions of success. Using data from the National Foundation for Women Business Owners, Romano (1994) probed how entrepreneurs define and achieve success. The findings showed specific gender differences in definitions of success. Women reported success was having control over their own destinies, building ongoing relationships with clients, and doing something fulfilling. Men described success in terms of achieving goals (Romano, 1994). However, another study reported that women chose self-fulfillment and goal achievement as primary measures of success rather than financial profitability (Buttner & Moore, 1997). And still others found that women business owners under-performed on both survival and growth dimensions, which raised the critical question of whether initial goals for the business influenced financial outcomes (Srinivasan, Woo, and Cooper, 1994).

*Social roles.* The studies of gender and roles extended beyond the entrepreneurial venture into other areas of women's lives, beginning with issues related to career choices and running through spousal and family relationships. Early social learning experiences were related to career decisions. These foundations were explored in the context of entrepreneurial careers with the authors concluding that males have a higher preference for entrepreneurship (Mathews & Moser, 1996), largely because of their levels of self-efficacy and expectations (Scherer, Brodzinski, & Wiebe, 1990). As women have taken on additional life roles, the questions have become even more complex. Holliday and Letherby (1993) conducted a study of how women integrate the business and social lives. The authors drew heavily on sociological theory to interpret women's roles in small businesses, particularly those roles related to authority. Using an ethnographic approach, they found examples of both compassion and support for women, but also evidence of sexual harassment. The relationship between work-family connections and economic success confirmed support for gender similarity rather than for a gender difference model. However, the research uncovered vestiges of traditional gender roles consistent with a gender difference model – primarily in the context of marriage (Loscocco & Leicht, 1993). Role models, self-assurance, and marriage were positively related to the supply of female entrepreneurs while education and experience were negatively correlated with entrepreneurship but positively correlated with entrepreneurial performance (Schiller & Crewson, 1997).

The pull between family and work and the multiple other social roles that women play can be seen in how role conflict is experienced – regardless of family structure or time spent at work. This conflict was found to be more prevalent in owners with lower self-esteem or self-worth (Stoner, Hartman, & Arora, 1990). One study found the relationship between time commitment to work and time commitment to family mediated the effect of role demands (Parasuraman, Purohit, Godshal, & Beutell, 1996). As part of the consideration of these roles, the contribution of both expressive and instrumental support from the spouses was often provided anecdotally (Greene, 1993). In a study of 48 attendees at an entrepreneurship education program, Birley, Moss, and Saunders (1986) found that men received support from their spouses in their business enterprises more often than did women. Biggart's *Charismatic Capitalism* (1988) includes many incidences of women involved in direct selling activities, who were required to work around their spouses, rather than receiving support from them. In the U.K, contribution of a spouse's labor was seen as a vital resource (Baines & Wheelock, 1998). Ownership structures were found to be important with husband/wife partnerships having low growth aspirations (a finding supported by Chell & Baines, 1998) while owners with business partners other than a spouse were more likely to be growth-

oriented (Baines & Wheelock, 1998). Another study, also in the UK, explored the “integrated” approach that women used in the dual spheres of work and family and examined how that approach differed for men. The authors’ findings did not, however, support different and distinctive orientations of men and women toward their businesses.

Role flexibility potentially provided by financial and human resources available in the household, also motivated self-employment (Caputo & Dolinsky, 1998). Higher levels of husbands’ earnings from self-employment were positively correlated with their wives self-employment status. However, the same relationship did not hold true with a husband’s earnings from wages. Other positive contributions to female entrepreneurship were access to the husband’s knowledge and experience regarding start-up activities and help from the husband in providing child care (Caputo & Dolinsky, 1998).

## **Public Policy**

### *Assistance Programs*

Much of the conversation in public policy arenas has been focused on how to stimulate and support entrepreneurship. A fundamental question is, “How can government entities assist in the growth and development of women owned businesses?” A number of studies have examined assistance programs and offered suggestions for both the entrepreneurs and the programs. In a study of assistance received from outside advisors and the value of the consulting, there were no gendered differences found in either the amount or assessment of the value of the consulting (Chrisman, Carsrud, DeCastro, & Heron, 1990). Weinstein, Nicholls, and Seaton (1992) conducted an assessment of SBI marketing consulting and found no gender differences for client satisfaction or their business characteristics.

Gender-based assistance programs have provided social training programs with the empowerment of women to manage their lives within the constraints of the new economy as the desired outcome (Servon, 1996). Though some efforts have been focused on micro-enterprise training, there has been concern that such programs reinforce industrial segregation and channel women into businesses areas that are small, home-based, under-capitalized and labor-intensive. Ehlers and Main (1998) argued that micro-enterprise training programs have discounted the socio-cultural conditions women bring with them and instead have emphasized the personal growth of individuals. They maintain that these policies have resulted in maintaining women entrepreneurs’ economic vulnerability and have supported social peripheralization rather than moving women into the mainstream economic world. Other research argued that programs were needed to focus on the skills and behaviors that could facilitate growth, specifically in the financial management arena (Carter & Allen, 1997).

An evaluation of the programs themselves was also a major research concern. In an evaluation of a microenterprise training program, it was found that attendance and the effort spent in completing homework assignments were related to graduation (Cook, Belliveau, & Von Seggern, 2001). Another analysis of a microenterprise training program for low income women concluded that the training empowered participants to achieve economic self-sufficiency, helped them to build strong businesses, and contributed to the development of life management skills.

The ultimate goal of the programs was to contribute to the growth of locally owned controlled businesses that would create new jobs in the inner city neighborhoods (Dumas, 2001).

The assistance providers themselves were also studied from a gendered perspective. The study found that women were more likely to have smaller businesses and they chose to be more active at local rather than state levels (Andre, 1992). Women's integration into private sector economic development organizations in the U.S. reflected the composition of their communities and, proceeding slowly, was not impeded by any institutional barriers to their participation (Andre, 1995). A constructive environment, including a positive attitude towards women business owners from business and political leaders, was found to be critical to the development of a strong female entrepreneurial community (Burr and Strickland, 1992). Other programs targeted specific communities defined by criteria such as geographic location or race or ethnicity. For rural women, local support was reported as crucial to the business (Sullivan, Halbrecht, Wang & Scannel, 1997). Programs to encourage black women to enter entrepreneurship included government actions to underwrite commercial banks and to develop credit unions, micro-loan funds, and other programs to make start-up capital more readily available (Dolinsky & Caputo, 1994).

Using the theoretical aspects of gender-based public policy programs specifically designed to increase the number of women creating and developing new ventures, Walker and Joyner (1999) proposed a conceptual framework of four kinds of gender discrimination based upon access to capital: pure, institutional, statistical, and economic. The authors conclude that SBA sponsored programs have the potential to both decrease discrimination in their programs but also to be a source of discrimination due to resentment of targeted programs

### **Special Topics**

There are a number of studies that explore issues unique to women business owners but that don't fit neatly into any of the designated categories. Some relate to different aspects of the women entrepreneurs. Others relate to the entrepreneurial process, and some focus on the broader concepts of entrepreneurship itself, while some address methodological issues.

There are very few gendered studies that carefully consider definitional aspects or conceptualizations of entrepreneurship. However, one study combined ideas from entrepreneurship and linguistics to examine definitions of entrepreneurship and entrepreneurs. Respondents from Finland, Sweden, Norway, Ireland, Canada, and Australia viewed the concepts as equivalents (Hyrsky, 1999). Five components of the entrepreneurship concept were identified: work commitment and energy, economic values and results, innovativeness and risk-taking, ambition and achievement, and egotistic features. Three factors were used to define the concept of an entrepreneur: agent of change, self-serving individualist, and hard worker. An analysis of metaphorical expressions for the concepts generated by the participants were grouped into semantic categories consisting of machinery and other physical objects, warfare and adventure, sports and games, creativity and activity, nature, disease, food items and special features. The study concluded that entrepreneurs had more positive attitudes towards entrepreneurial traits and behaviors than did other respondents and that females tended to perceive the concepts even more positively than males

did. These results were even more powerful in the Scandinavian countries where the respondents held the most favorable views of the concepts (Hyrsky, 1999).

How a society thinks about entrepreneurship may influence the pool of potential entrepreneurs. While the nascent entrepreneur, one who is in the start-up process, is considered in some research, rarely are potential entrepreneurs studied. One project assessed knowledge and attitudes of high school students toward entrepreneurship (Kourisky & Walstad, 1998). The authors found many similarities between males and females in areas of both knowledge and opinions, with everyone showing a low level of entrepreneurship knowledge. Differences were found in that females were more aware of their knowledge deficiency in this area. And, while interested, were less interested than males in one day starting a new business. However, both females and males indicated they wanted to give back to the community (Kourisky & Walstad, 1998). This issue of social responsibility was linked to ethics as well. Using a stakeholder perspective of ethical attitudes and standards to predict entrepreneurial situational reactions regarding ethical standards, Bucar and Hisrich (2001) found few ethical differences between entrepreneurs and managers. However, female entrepreneurs and managers were slightly more ethical in certain situations than their male counterparts.

Very few studies addressed women in unique business or geographic settings. Only one paper studied women in franchising. Women were found less likely to use a franchising route to business ownership. The authors speculated that women may be less aware of or attracted to the franchising option because of their relative inexperience and historically lower exposure to franchising (Dant, Brush, & Iniesta, 1996). More studies were dedicated to the rural/urban divide. Rural women reported start-up motivations of flexibility in work hours and location, economic necessity, and the lack of job security (Sullivan, Halbrecht, Wang, & Scannell, 1997). Another study analyzed how motives for starting their businesses affected rural women entrepreneurs' management styles. Drawing on projection theory, the authors found that the women placed great importance on relationships and created and maintained company cultures with minimal interpersonal conflict among employees (Robinson, 2001). And yet another pair of researchers proposed a model of entrepreneurial marketing for rural women, using strategies of opportunity seeking, information collection, and innovation and marketing strategies. The distinguishing feature was one of local groundedness developed through informal social networks developed at the grassroots level (Mankelov & Merrilees, 2001).

One of the fundamental premises of this paper is that not enough research has been devoted to the study of women and their entrepreneurial behaviors. A similar premise prompted a study exploring the extent of the coverage of women entrepreneurs in both the popular and scholarly press (Baker, Aldrich, & Liou, 1997). The authors pointed out that the coverage of women business owners actually declined between 1982 and 1995, with more than 85% of entrepreneurship articles published in that time period making no mention of women. They concluded that: 1) the media no longer considers women's businesses to be "news"; 2) scholars are not interested in women's firms because they are predominantly small and therefore unimportant; 3) there are few documented differences between men and women owners and consequently reporters and scholars no longer search for them. However, there are dissenting voices. They indicate that 1) small but significant gender differences were found in studies of social behavior and leadership; 2) women owners possess unique entrepreneurial skills and

advantages that merit better understanding. Why haven't these voices been heard? The authors argued that androcentrism has clouded perceptions of gender differences and blinded journalists and academics in two ways. First, women's distinctive contributions have been muted as female entrepreneurs have adapted to the gendered institutions of businesses; 2) the search for distinctive contributions by women owners has been sidetracked by the assumption that traditional ways of doing business are "natural."

## **Secondary Data Analysis**

The vast majority of the papers reviewed here are empirical. Almost all report findings based on primary research in which the sample frame was determined and often created by the researcher(s). However, there are a few studies that have used large, federal data sets to provide categorical descriptions and to highlight entrepreneurial propensities. Dolinsky, Caputo, Pasumarty, and Quazi (1993) and Dolinsky and Caputo (1994) used longitudinal census data from the National Longitudinal Survey of Labor Market Experience to discover the importance of self-employment to social and economic mobility, focusing on specific effects of entrepreneurship on the improvement of the status of the lesser educated and economic disadvantaged individuals. . They also used the data set to track differences in the rates at which black and white populations choose self-employment. These authors found the racial differences to be due primarily to black women's limited propensity for entrepreneurship. In another study, the same authors explored the relationship between financial and human capital in the household and a woman's choice to become self-employed (Dolinsky & Caputo, 1998).

Devine (1994) used the Current Population Survey Census Data (CPS) to explore characteristics of self-employed women. She reported that the "average self-employed woman" is older, married, under someone else's health care policy, and has more than a high school education. Boden (1996) used the Characteristics of Business Owners (CBO) to show that gender inequality in wage and salary earnings may positively influence some women's decision to leave wage employment for self-employment. Boden and Nucci (1997) used both the CPS and the CPO for 1982-1987 to compare sex, age, education, marital status, percent income from self-employment, industry, and region. Gender was found to be a major explanatory variable for differing rates of self-employment (Boden & Nucci, 1997). The flow of people in and out of self-employment was also studied using the Revenue Canada Longitudinal data from Survey of Labor and Income Dynamics. Lin, Picot, and Compton (2000) found that while having a self-employed spouse increased the likelihood of the other spouse being self-employed, women's self-employment was more responsive than men's to the national unemployment rate.

Boden also used the CPS to further explore gender inequality in wage earnings and women's decisions to become self-employed, reporting that women's lower wage returns to observed worker characteristics had a positive and significant affect on women's decisions to move to self-employment (1999<sup>a</sup>). Women were also more likely to cite flexibility of schedule and family-related reasons for becoming self-employed while men's reasons showed little association with their parental status (1999<sup>b</sup>). And finally, Boden & Nucci (2000) used census data to examine the relationship between owner and business characteristics and business survival for the years 1982 and 1987. When considering only sole proprietorships in retail and service industries, survival rates were affected by owner experience for both males and females, but the survival

rate for male-owned businesses was higher by six percent. The authors concluded that women were disadvantaged in terms of previous managerial experiences and wage opportunities and, therefore, had less human and financial capital for business ownership.

Capital stocks and flows were also studied using the Panel Study of Income Dynamics (PSID). The data revealed that the presence of a self-employed husband enabled intra-family flows of financial and human capital and encouraged females to become self-employed (Bruce, 1999). Another analysis using PSID data showed that the number of men and women making the transition to self-employment was almost equal but that men were more likely to move upward in earnings distribution (Holtz-Eaken, Rosen, & Weathers, 2000).

Another large data set, the General Social Survey, was used to analyze differences in human and social capital of women business owners (Greene & Johnson, 1995) as well as the incidence of social networking and the differences in the level of networking between women entrepreneurs, male entrepreneurs, and female salaried managers (Katz & Williams, 1997). This study allowed for a secondary analysis of weak-tie network linkage in formal organizations and concluded that entrepreneurs' weak-tie network efforts are lower than those of managers and that female entrepreneurs engage in less weak-tie networking than salaried male managers (Katz & Williams, 1997).

National data sets have been used in several other countries.. In Britain, the Household Panel Survey was used to identify differences in the personal and demographic characteristics of men and women. Cowling & Taylor (2001) found that women entrepreneurs were better educated than their male counterparts and less likely to move in and out of entrepreneurship. However, male entrepreneurs were three times more likely to expand their ventures from single self-employed operation to a job creating venture employing others. The authors concluded that mature males with more life experience have accumulated more of the human capital necessary for business survival and growth

These varied topics and different methodologies do not fit neatly into our organizing categories, but they raise issues of particular note or concern and bring new analytic tools to the inquiry.

## **CONCLUSION AND FUTURE RESEARCH**

Researchers from around the world have been studying women's entrepreneurship for approximately 25 years. While our knowledge of the phenomena has increased dramatically, there are still many questions unanswered. The purpose of this review is to organize and synthesize the work that has already been done and to identify the questions yet to be addressed. These may be organized (condensing several of our previous categories) into three primary areas: human capital, strategic choice at both the personal and business level, and structural barriers in the environment.

**Human Capital.** Research about human capital factors in women's entrepreneurship is more than 35 years old, with nearly 50% of all studies including these dimensions. However, the vast majority of the research relies on a narrow set of theories (e.g. trait psychology, motivational theory), and measures (e.g. experience, education, and other demographics). Future studies of

the role of human capital in women's entrepreneurship should draw from leadership and career theories to examine questions of vision and aspirations for the entrepreneur's future, and introduce social learning theory to examine how entrepreneurs learn over the life cycle of their career and venture. Interesting questions for the future include:

- How do women develop entrepreneurial competencies during the new venture creation and growth process?
- What is the role of leadership vision in the growth and development of women's entrepreneurial ventures?
- Does women's socialization influence their success in acquiring resources and in particular, growth capital?
- Do women entrepreneurs manage their entrepreneurial careers in the same way as their male counterparts? What are the cycles, transitions and challenges and how do they overcome these?

**Strategic Choice.** The existing research has not yet developed a clear understanding of the aspirations and strategies of women entrepreneurs. A significant portion of the research draws from previous instruments developed for and about men and much of the research on women is not theoretically grounded. We believe that research about the strategic choices women make – from the type of business, to the sector, to the growth strategy should be explored in greater depth. In particular, research addressing women and men's product/market strategies, goals, and approaches for competing might suggest whether or not the choice of industry, sector or growth goals determines subsequent acquisition of resources, team building, growth and performance, or even personal satisfaction. Some interesting research questions might be:

- What factors influence the growth strategies for women-led ventures?
- What role does the strategic choice of sector and firm type play in the growth of women led ventures?
- What are patterns of financing for women-led ventures and how do these compare to men-led ventures?
- How do women approach resource acquisition and do their approaches influence growth and performance of their ventures?

**Structural Barriers.** Past research has concentrated on objective barriers, in particular, access to credit and financing. More recent research examines women's access to equity capital, although this work is relatively sparse. However, many other resources are needed to start and grow a venture, yet potential barriers to acquiring equipment, technology, or gaining access to distribution channels, expertise, information and other resources is often ignored. In addition, the subtle barriers inhibiting women's ability to grow and expand their ventures are examined in some research, but not studied in depth. Future research might consider whether draw from institutional or social network theory to examine whether or not institutional norms or network configurations influence women's ability to acquire resources, or grow their ventures. In particular, the extent to which barriers exist and influence successful capital acquisition and subsequent growth would shed light on reasons for the "equity funding gap". Alternatively, resource based theories might be the basis of exploring how women-led venture develop

capabilities leading to competitive advantages. Interesting questions in this area of research include:

- What are the institutional norms in the different industries, and how do these influence women's ability to acquire resources at start-up and during growth of their ventures?
- What is the role of industry beliefs, practices and norms in determining whether women are successful in acquiring equity capital?

## **IMPLICATIONS FOR EDUCATORS**

Though the extant research suggests many similarities among male and female entrepreneurs, there are sufficient differences to warrant discussion and special attention in the classroom.

Some of the most salient issues that young women need to be better informed about include:

- the need for business-relevant education and the importance business and managerial experience.
- the fact that personal decisions about timing and commitment to the business currently play a greater role in women's entrepreneurial choices than they do for men. So too, do issues of work and family balance.
- the relationship between personal considerations and women's choices of industry, growth aspirations, access to capital, and long-term financial success.

It is important to raise these issues early and to present them as choices rather than destiny. The use of teaching materials that feature women entrepreneurs in a greater variety of industries and with high growth aspirations can expand the horizons and stimulate aspirations of women students while broadening the perspectives of their male colleagues who are likely to be their future spouses, bankers, investors, and employees. Multiple ways to expand business experiences can also be considered, including programs of personal coaching and mentoring. Training programs to address specific tasks and skills can address not only increased expertise, but also enhance levels of self-confidence. A broader education can also help young women understand their unique situation regarding historical, economic, ethnic, legal and religious contexts (Oppedisano, 2003).

As the enrollment of women in business schools continue to increase, we can provide these young women with the tools and skills so important to success in entrepreneurial venturing. The payoffs will come at the individual, the firm, and the community levels.

## Reference List

- Ahwireng-Obeng, F. (1993). Gender, entrepreneurship and socioeconomic reparation in South Africa. *Review of Black Political Economy*, 22 (2), 151-165.
- Aldrich, H. (1989). Networking among women entrepreneurs. In O. Hagan, C. Rivchun, & D. Sexton (Eds), *Women-owned businesses* (pp. 103-132). New York: Praeger.
- Aldrich, H., Reese, P. R., Dubini, P., Rosen, B., & Woodward, B. (1989). Women on the verge of a breakthrough?: Networking among entrepreneurs in the United States and Italy. In R. H. Brockhaus, Sr., N. C. Churchill, J. A. Katz, B. A. Kirchhoff, K. H. Vesper, & W. E. Wetzel, Jr. (Eds.), *Frontiers of entrepreneurial research* (pp. 560-574). Boston, MA: Babson College.
- Alsos, G. A., & Ljunggren, E. (1998). Does the business start-up process differ by gender? A longitudinal study of nascent entrepreneurs. In P. D. Reynolds, W. D. Bygrave, S. Manigart, C. M. Mason, G. D. Meyer, N.M. Carter, & K. G. Shaver (Eds.), *Frontiers of entrepreneurial research* (pp. 137-151). Boston, MA: Babson College.
- Andre, R. (1992). A national profile of women's participation in networks of small business leaders. *Journal of Small Business Management*, 30 (1), 66-73.
- Andre, R. (1995). Diversity in executive networks: A national study of women's representation in private sector economic development. *Journal of Managerial Issues*, 7 (3), 306-322.
- 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.
- Baines, S., & Wheelock, J. 1998. Working for each other: Gender, the household, and micro-business survival and growth. *International Small Business Journal*, 17 (1), 16-35.
- Baker, T., Aldrich, H. E., & Liou, N. (1997). Invisible entrepreneurs: The neglect of women business owners by mass media and scholarly journals in the U.S.A. *Entrepreneurship and Regional Development*, 9, 221-238.
- Barrett, M. (1995). Feminist perspectives on learning for entrepreneurship: The view from small business. In W. D. Bygrave, B. J. Bird, S. Birley, N. C. Churchill, M. Hay, R. H. Keeley, & W. E. Wetzel, Jr. (Eds.), *Frontiers of entrepreneurial research* (pp. 323-336). Boston, MA: Babson College.
- Belcourt, M. (1990). A family portrait of Canada's most successful female entrepreneurs. *Journal of Business Ethics*, 9 (4/5), 435-438.
- Bellu, R. R. (1993). Task role motivation and attributional style as predictors of entrepreneurial performance: Female sample findings. *Entrepreneurship and Regional Development*, 5, 331-344.

- Biggart, N.1988. *Charismatic Capitalism*. University of Chicago Press.
- Bird, B.J. & Brush ,C.G. (2003) A gendered perspective on organizational creation: *Entrepreneurship Theory and Practice*, 26 (3), 41-65.
- Birley, S. (1989). Female entrepreneurs: Are they really any different? *Journal of Small Business Management*, 27 (1), 32-37.
- Birley, S., Moss, C., & Saunders, P. (1987). Do women entrepreneurs require different training? *American Journal of Small Business*, 12 (1), 27-35.
- Blanchflower, D., & Meyer, B. (1992). A longitudinal analysis of the young self-employed in Australia and the United States. *Small Business Economics*, 6 (1), 1-20.
- Bliss, R. T., & Garratt, N. L. (2001). Supporting women entrepreneurs in transitioning economies. *Journal of Small Business Management*, 39 (4), 336-344.
- Boden, R. J. (1996). Gender and self-employment selection: An empirical assessment. *Journal of Socio-Economics*, 25 (6), 671-682.
- Boden Jr., R.J. (1999<sup>a</sup>). Gender inequality in wage earnings and female self-employment selection. *Journal of Socio-Economics*, 28 (3), 351-364.
- Boden Jr., R.J. (1999<sup>b</sup>). Flexible working hours, family responsibilities, and female self-employment: Gender differences in self-employment selection. *American Journal of Economics and Sociology*, 58 (1), 71-84.
- Boden, R. J., & Nucci, A. R. (1997). Counting the self-employed using household and business sample data. *Small Business Economics*, 9 (5), 427-436.
- Boden, R. J., Jr., & Nucci, A. R. (2000). On the survival prospects of men's and women's new business ventures. *Journal of Business Venturing*, 15 (4), 347-362.
- Brockhaus, R. H. (1980). Risk-Taking propensity of entrepreneurs. *Academy of Management Journal* 23 (3): 509-520.
- Brophy, D. J. (1989). Financing women owned entrepreneurial firms. In, O. Hagan, C. Rivchun, & D. Sexton (Eds.) *Women Owned Businesses* (pp. 55-76). New York: Praeger.
- Bruce, D. (1999). Do husbands matter? Married women entering self-employment. *Small Business Economics*, 13 (4), 317-329.
- Brush, C.G. 1990. Women and enterprise creation: Barriers and opportunities. In S. Gould & J. Parzen (eds.) *Enterprising women: Local initiatives for job creation*. Paris: OECD, 37-58.

- Brush, C. G. (1992). Research on women business owners: Past trends, a new perspective and future directions. *Entrepreneurship Theory and Practice*, 16(4), 5-30.
- Brush, C. G. (1997). Women-owned businesses: Obstacles and opportunities. *Journal of Developmental Entrepreneurship*, 2 (1), 1-24.
- Brush, C. G., & Hisrich, R. D. (1991). Antecedent influences on women-owned businesses. *Journal of Managerial Psychology*, 6 (2), 9-16.
- Bucar, B., & Hisrich, R.D. (2001). Ethics of business managers vs. entrepreneurs. *Journal of Developmental Entrepreneurship*, 6 (1), 59-82.
- Burr, S. G., & Strickland, M. (1992). Creating a positive business climate for women: An approach to small business development. *Economic Development Review*, 10 (1), 63-66.
- Buttner, E. H. (1993). Female entrepreneurs: How far have they come? *Business Horizons*, 36 (2), 59-65.
- Buttner, E. H. (2001). Examining female entrepreneurs' management style: An application of a relational frame. *Journal of Business Ethics*, 29 (3), 253-270.
- Buttner, E. H., & Moore, D. P. (1997). Women's organizational exodus to entrepreneurship: Self-reported motivations and correlates with success. *Journal of Small Business Management*, 35 (1), 34-46.
- Buttner, E. H., & Rosen, B. (1988). Bank loan officers' perceptions of characteristics of men, women and successful entrepreneurs. *Journal of Business Venturing*, 3 (3), 249-258.
- Buttner, E. H., & Rosen, B. (1989). Funding new business ventures: Are decision makers biased against women entrepreneurs? *Journal of Business Venturing*, 4 (4), 249-261.
- Buttner, E. H., & Rosen B (1992). Rejection in the loan application process: Male and female entrepreneurs' perceptions and subsequent intentions. *Journal of Small Business Management*, 30 (1), 58-65.
- Caputo, R. K., & Dolinsky, A. (1998). Women's choice to pursue self-employment: The role of financial and human capital of household members. *Journal of Small Business Management*, 36 (3), 8-17.
- Carter, N. M., & Allen, K. R. (1997). Size-determinants of women-owned businesses: Choice or barriers to resources. *Entrepreneurship and Regional Development*, 9 (3), 211-220.
- Carter, N. M., Williams, M., & Reynolds P.D. (1997). Discontinuance among new firms in retail: The influence of initial resources, strategy and gender. *Journal of Business Venturing*, 12 (2), 125-145.

- Carter, S., & Rosa, P. (1998). The financing of male and female owned-business. *Entrepreneurship and Regional Development*, 10 (3), 225-241.
- Center for Women's Business Research. 2002. *New Analysis Documents Employment and Revenue Distribution of Women-Owned Firms in 2002.*, August 27. [www.womensbusinessresearch.org](http://www.womensbusinessresearch.org).
- Chaganti, R. (1986). Management in women-owned enterprises. *Journal of Small Business Management*, 24 (4), 18-29.
- Chaganti, R., DeCarolis, D., & Deeds, D. (1995). Predictors of capital structure in small ventures. *Entrepreneurship Theory and Practice*, 20 (2), 7-18.
- Chaganti, R., & Parasuraman, S. (1996). A study of the impact of gender on business performance and management patterns in small businesses. *Entrepreneurship Theory and Practice*, 21 (2), 73-75.
- Chan, S. Y & Foster, M. J. (2001). Strategy formulation in small business: The Hong Kong experience. *International Small Business Journal*, 19 (3), 56-71.
- Chell, E., & Baines, S. (1998). Does gender affect business 'performance'? A study of micro-businesses in business services in the U.K. *Entrepreneurship and Regional Development*, 10 (2), 117-135.
- Chrisman, J. J., Carsrud, A. L., DeCastro, J., & Heron, L. (1990). A comparison of assistance needs of male and female pre-venture entrepreneurs. *Journal of Business Venturing*, 5 (4), 235-248.
- 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 (6), 523-542.
- Cole, R. A., & Wolken, J. D. (1995). Financial services used by small businesses: Evidence from the 1993 National Survey of Small Business Finance. *Federal Reserve Bulletin*, 81 (7), 629-667.
- 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.
- Collerette, P., & Aubry, P. G. (1990). Socio-economic evolution of women business owners in Quebec (1987). *Journal of Business Ethics*, 9 (4/5), 417-422.
- Collins, O. F. & Moore, D. G. (1964). *The Enterprising Man*. East Lansing: Bureau of Business and Economic Research, Graduate School of Business Administration, Michigan State University.

- Cook, R. G., Belliveau, P., & VonSeggern, K. L. (2001, December). A case study of microenterprise training: Beta test findings and suggestions for improvement. *Journal of Developmental Entrepreneurship*, 6 (3), 255-267.
- Cooper, A.C. (1981). Strategic management: New ventures and small business. *Long Range Planning*, 14 (5): 39-46.
- Cooper, A. C., & Artz, K. W. (1995). Determinants of satisfaction for entrepreneurs. *Journal of Business Venturing*, 10 (6), 439-457.
- Cooper Maysami, R., & Goby, V. P. (1999). Female business owners in Singapore and elsewhere: A review of studies. *Journal of Small Business Management*, 37 (2), 96-105.
- Covin, T. J. (1994). Perceptions of family-owned firms: The impact of gender and educational level. *Journal of Small Business Management*, 32 (3), 29-39.
- Cowling, M., & Taylor, M. (2001). Entrepreneurial women and men: Two different species? *Small Business Economics*, 16 (3), 167-175.
- Cromie, S., & Birley, S. (1992). Networking by female business owners in Northern Ireland. *Journal of Business Venturing*, 7 (3), 237-251.
- Cuba, R., Decenzo D., & Anish, A. (1983). Management practices of successful female business owners. *American Journal of Small Business*, 8 (2), 40-45.
- Daily, C. M., Certo, S. T., & Dalton, D.R. (1999). Entrepreneurial ventures as an avenue to the top? Assessing the advancement of female CEOs and directors in the *Inc.* 100. *Journal of Developmental Entrepreneurship*, 4 (1), 19-32.
- Dant, R. P., Brush, C. G., & Iniesta, F.P. (1996). Participating patterns of women in franchising. *Journal of Small Business Management*, 34 (2), 14-28.
- Devine, T. J. (1994). Characteristics of self-employed women in the United States. *Monthly Labor Review*, 117 (3), 20-34.
- Dolinsky, A. L., Caputo, R. K., Pasumarty, K., & Quazi, H. (1993). The effects of education on business ownership: A longitudinal study of women. *Entrepreneurship Theory and Practice*, 18 (1), 43-53.
- Dolinsky, A. L., & Caputo, R. K. (1994). Long-term entrepreneurship patterns: A national study of black and white female entry and stayer status differences. *Journal of Small Business Management*, 32 (1), 18-26.
- Dumas, C. (2001). Evaluating the outcomes of micro-enterprise Training for low income women: A case study. *Journal of Developmental Entrepreneurship*, 6 (2), 97-128.

- Du Reitz, A., & Henrekson, M. (2000). Testing the female underperformance hypothesis. *Small Business Economics*, 14, 1-10.
- Ehlers, T. B., & Main, K. (1998). Women and false promise of micro-enterprise. *Gender and Society*, 12 (4), 424-440.
- Evans, E., & Leighton, L. (1989). The determinants of changes in U.S. self-employment, 1968-1987. *Small Business Economics*, 1, 111-119.
- Fabowale, L., & Orser, B., & Riding, A. (1995). Gender, structural factors, and credit terms between Canadian small businesses and financial institutions. *Entrepreneurship Theory and Practice*, 19 (4), 41-65.
- Fagenson, E.A. 1993. Personal Value Systems of Men and Women Entrepreneurs Versus Managers. *Journal of Business Venturing* 8:409-430.
- Fagenson, E. A., & Marcus, E. A. (1991). Perceptions of the sex-role stereotypic characteristics of entrepreneurs: Women's evaluations. *Entrepreneurship Theory and Practice*, 15 (4), 33-47.
- Fasci, M. A., & Valdez, J. (1998). A performance contrast of male- and female-owned small accounting practices. *Journal of Small Business Management*, 36 (3), 1-7.
- Fay, M., & Williams, L. (1993). Gender bias and the availability of business loans. *Journal of Business Venturing*, 8 (4), 363-376.
- Finnerty, J. F., & Krzystofik, A. T. (1985). Barriers to small business formation. *Journal of Small Business Management*, 23 (3), 50-58.
- Fischer, E. M., Reuber, A. R., & Dyke, L.S (1993). A theoretical overview and extension of research on sex, gender, and entrepreneurship. *Journal of Business Venturing*, 8 (2), 151-168.
- Gadenne, D. (1998). Critical success factors for small business: An inter-industry comparison. *International Small Business Journal*, 17 (1), 36-57.
- Gagperson, E. A. (1993). Personal value systems of men and women entrepreneurs versus managers. *Journal of Business Venturing*, 8 (5), 409-430.
- Gartner, William B. 1989. "Who is an Entrepreneur?" Is the Wrong Question." *Entrepreneurial Theory and Practice* 13 (Summer):47-68.
- Gatewood, E., G., Carter, N. M., Brush, C. G., Greene, P. G., & Hart, M. M. 2003. *Women Entrepreneurs, Their Ventures, and the Venture Capital Industry: An Annotated Bibliography*. Stockholm: ESBRI.

- Gatewood, E. J., Shaver, K. G., & Gartner, W. B. (1995). A longitudinal study of cognitive factors influencing start-up behaviors and success at venture creation. *Journal of Business Venturing*, 10 (5), 371-391.
- Geoffee, R. & Scase, R (1983) Business ownership and women's subordination: A preliminary study of female proprietors, *The Sociology Review*, 331:4, 625-648
- Green, E., & Cohen, L. (1995). Women's businesses: Are women entrepreneurs breaking new ground or simply balancing the demands of 'women's work' in a new way? *Journal of Gender Studies*, 4 (3), 297-314.
- Greene, P. 1993. The role of ethnic sponsorship of business activities in economic development: A theoretical review and empirical example. *Preparing the Entrepreneur for 2000 and Beyond*. Conference Proceedings of the Eighth Annual National Conference, United States Association for Small Business and Entrepreneurship.
- Greene, P. G., Brush, C. G., Hart, M.M., & Saporito, P. (2001). Patterns of venture capital funding: Is gender a factor? *Venture Capital: An International Journal of Entrepreneurial Finance*, 3 (1), 63-83.
- Greer, M.A. & Greene, P.G. Forthcoming. Feminist Theory and the Study of Entrepreneurship.
- Greene, P.G. & Johnson, M.A. 1995. Middleman minority theory: A theoretical consideration of self-employed women. *The National Journal of Sociology* 9 (1):59-84.
- Gundry, L.K., & Welsch, H.P. (2001). The ambitious entrepreneur: High growth strategies of women-owned enterprises. *Journal of Business Venturing*, 16 (5), 453-470.
- Gunnerud Berg, N. (1997). Gender, place and entrepreneurship. *Entrepreneurship and Regional Development*, 9 (3), 259-268.
- Hagan, O., Rivchun, C., & Sexton, D. (Eds.) 1989. *Women-Owned Businesses*. NY: Praeger.
- Haines, Jr. G.H., Orser, G. H., & Riding, A.L. (1999). Myths and Realities: An empirical study of banks and the gender of small business clients. *Canadian Journal of Administrative Sciences*, 16 (4), 291-307.
- Haynes, G. W., & Haynes, D. C. (1999). The debt structure of small businesses owned by women in 1987 and 1993. *Journal of Small Business Management*, 37 (2), 1-19.
- Haynes, P. J., & Helms, M. M. (2000). When bank loans launch new ventures: A profile of the growing female entrepreneur segment. *Bank Marketing*, 32 (5), 28-36.
- Hisrich, R. D. (1989). Women entrepreneurs: Problems and prescriptions for success in the future. In O. Hagan, C. Rivchin & D. Sexton (Eds.), *Women-owned Businesses* (pp. 3-32). New York: Praeger.

- Hisrich, R. D., & Brush, C. (1983). The woman entrepreneur: Implications of family educational, and occupational experience. In J. A. Hornaday, J. A. Timmons, & K. H. Vesper (Eds.), *Frontiers of entrepreneurial research* (pp. 255-270). Boston, MA: Babson College.
- Hisrich, R. D., & Brush, C. (1984). The woman entrepreneur: Management skills and business problems. *Journal of Small Business Management*, 22 (1), 30-37.
- Hisrich, R. D., & Brush, C. G. (1985). Women and minority entrepreneurs: A comparative analysis. In J. A. Hornaday, E. B. Shils, J. A. Timmons, & K. H. Vesper (Eds.), *Frontiers of entrepreneurial research* (pp. 566-587). Boston, MA: Babson College.
- Hisrich, R. D. and Brush, C.G. (1986). *The Woman Entrepreneur: Starting, Managing, and Financing a Successful New Business*. Lexington Books, Lexington, MA.
- Hisrich, R. D., & Brush, C. G. (1987). Women entrepreneurs: A longitudinal study. In N. C. Churchill, J.A. Hornaday, B.A. Kirchhoff, O.J. Krasner, & K.H. Vesper (Eds.), *Frontiers of entrepreneurial research* (pp. 187-199). Boston, MA: Babson College.
- Hisrich, R. D., & O'Brien, M. (1981). The woman entrepreneur from a business and sociological perspective. In K.H. Vesper (Ed.), *Frontiers of entrepreneurial research* (pp. 21-39). Boston, MA: Babson College.
- Hisrich, R. D., & O'Brien, M. (1982). The woman entrepreneur as a reflection of the type of business. In K.H. Vesper (Ed.), *Frontiers of entrepreneurial research* (pp. 54-67). Boston, MA: Babson College.
- Holmquist, C. & Sundin, E. (1988). Women as entrepreneurs in Sweden: Conclusions from A survey. *Frontiers of Entrepreneurship Research*: 626-642.
- Holmquist, C., & Sundin, E. (1990). What's special about highly educated women entrepreneurs. *Entrepreneurship and Regional Development*, 2, 181-193.
- Holliday, R., & Letherby, G. (1993). Happy families or poor relations? An exploration of familial analogies in the small firm. *International Small Business Journal*, 11 (2), 54-63.
- Holtz-Eaken, D., Rosen, H.S., & Weathers, R. (2000). Horatio Alger meets the mobility tables. *Small Business Economics*, 14 (4), 243-274.
- Honig-Haftel, S., & Martin, L (1986). Is the female entrepreneur at a disadvantage? *Thrust*, 7 (1,2), 49-65.
- Hurley, Amy E. 1991. "Incorporating Feminist Theories into Sociological Theories of Entrepreneurship." Paper presented at the Annual Meetings of the Academy of Management, Miami, FL, August.

- Hyrsky, K. 1999. Entrepreneurial metaphors and concepts: An exploratory study. *International Small Business Journal*, 18 (1), 13-34.
- Kalleberg, A. L., & Leicht, K. T. (1991). Gender and organizational performance: Determinants of small business survival and success. *Academy of Management Journal*, 34 (1), 136-161.
- Kangasharju, A. (2000). Growth of the smallest: Determinants of small firm growth during strong macroeconomic fluctuations. *International Small Business Journal*, 19 (1), 28-43.
- Kaplan, E. (1988). Women entrepreneurs: Constructing a framework to examine venture success and failure. In B. A. Kirchoff, W. A. Long, W. Ed McMullan, K. H. Vesper, & W. E. Wetzel, Jr. (Eds.), *Frontiers of entrepreneurial research* (pp. 643-653). Boston, MA: Babson College.
- Katz, J. A., & Williams, P. M. (1997). Gender, self employment and weak-tie networking through formal organizations – A secondary analysis approach. *Entrepreneurship and Regional Development*, 9 (3), 183-197.
- Klofsten, M., & Jones-Evans, D. (2000). Comparing academic entrepreneurship in Europe: The case of Sweden and Ireland. *Small Business Economics*, 14 (4), 299-309.
- Kolvereid, L., Shane, S., & Westhead, P. (1993). Is it equally difficult for female entrepreneurs to start businesses in all countries? *Journal of Small Business Management*, 31 (4), 42-51.
- Kourilsky, M. L., & Walstad, W. B. (1998). Entrepreneurship and female youth: Knowledge, attitudes, gender differences and educational practices. *Journal of Business Venturing*, 13 (1), 77-88.
- Lee-Gosselin, H., & Grise, J. (1990). Are women owner-managers challenging our definitions of entrepreneurship? An in-depth survey. *Journal of Business Ethics*, 9 (4/5), 432-433.
- Lerner, M., Brush, C. G., & Hisrich, R.D. (1995). Factors affecting performance of Israeli women entrepreneurs: An examination of alternative perspectives. In W. D. Bygrave, B. J. Bird, S. Birley, N. C. Churchill, M. Hay, R. H. Keeley, & W. E. Wetzel, Jr. (Eds.), *Frontiers of entrepreneurial research* (pp. 308-322). Boston, MA: Babson College.
- Lin, Z., Picot, G., & Compton, J. (2000). The entry and exit dynamics of self-employment in Canada. *Small Business Economics*, 15 (2), 105-125.
- Ljunggren, E., & Kolvereid, L. (1996). New business formation: Does gender make a difference? *Women in Management Review*, 11 (4), 3-12.
- Longstreth, M., Stafford, K., & Mauldin, T. (1987). Self-employed women and their families: Time use and socioeconomic characteristics. *Journal of Small Business Management*, 25 (3), 30-37.

- Loscocco, K. A., & Leicht, K. T. (1993). Gender, work-family linkages, and economic success among small business owners. *Journal of Marriage & the Family*, 55 (4), 875-887.
- Loscocco, K. A., Robinson, J., Hall, R.H., & Allen, J.K. (1991). Gender and small business success: An inquiry into women's relative disadvantage. *Social Forces*, 70 (1), 65-85.
- Loscosso, K. A., & Robinson, J. (1991). Barriers to women's small-business success in the United States. *Gender & Society*, 5, 511-532.
- MacNabb, A., McCoy, J., Weinreich, P., & Northover, M. (1993). Using identity structure analysis (ISA) to investigate female entrepreneurship. *Entrepreneurship and Regional Development*, 5 (4), 301-313.
- Mankelow, G., & Merrilees, B. (2001). Towards a model of entrepreneurial marketing for rural women: A case study approach. *Journal of Developmental Entrepreneurship*, 6 (3), 221-235.
- Marlow, S. (1997). Self employed women: New opportunities, old challenges. *Entrepreneurship and Regional Development*, 9 (3), 199-210.
- Masters, R., & Meier, R. (1988). Sex differences and risk-taking propensity of entrepreneurs. *Journal of Small Business Management*, 26 (1), 31-35.
- Mathews, C. H., & Moser, S.B. (1996). A longitudinal investigation of the impact of family background and gender on interest in small firm ownership. *Journal of Small Business Management*, 34 (2), 29-43.
- McClelland, D. (1961). *The Achieving Society*. NY: The Free Press.
- McKechnie, S.A., Ennew, C. T., & Read, L. H. (1998). The nature of the banking relationship: A comparison of the experiences of male and female small business owners. *International Small Business Journal*, 16 (3), 39-55.
- Mirchandani, K. (1999). Feminist insight on gendered work: New directions in research on women and entrepreneurship. *Gender, Work, and Organization*, 6 (4), 224-235.
- Moore, D. P. (1990). An examination of present research on the female entrepreneur: Suggested research strategies for the 1990s. *Journal of Business Ethics*, 9 (4/5), 275-281.
- Neider, L. (1987). A preliminary investigation of female entrepreneurs in Florida. *Journal of Small Business Management* 25 (3): 22-29.
- Nelson, G. (1991). Locus of control for successful female small business proprietors. *The Mid-Atlantic Journal of Business*, 27 (3), 213-224.

- Olson, S. F., & Currie, H. M. (1992). Female entrepreneurs: Personal value systems and business strategies in a male-dominated industry. *Journal of Small Business Management*, 30 (1), 49-57.
- Oppedisano, J. (2003). *The invisible wall: Implications for researching, teaching, & understanding women's multidisciplinary entrepreneurship*. Paper presented at U.S. Association of Entrepreneurship and Small Business. Hilton Head, South Carolina.
- Parasuraman, S., Purohit, Y. S., Godshalk, V. M., & Beutell, N. J. (1996). Work and family variables, entrepreneurial career success, and psychological well-being. *Journal of Vocational Behavior*, 48, 275-300.
- Pellegrino, E. T., & Reece, B. L. (1982). Perceived formative and operational problems encountered by female entrepreneurs in retail and service firms. *Journal of Small Business Management*, 20 (2), 15-25.
- Read, L. H. (1994). Raising finance from banks: A comparative study of the experiences of male and female business owners. In W.D. Bygrave, S. Birley, N. C. Churchill, E. Gatewood, F. Hoy, R. H. Keeley, & W. E. Wetzel, Jr. (Eds.), *Frontiers of entrepreneurship research* (pp. 361-372). Boston, MA: Babson College.
- Renzulli, L.A., Aldrich, H., & Moody, J. (2000). Family matters: Gender, networks, and entrepreneurial outcomes. *Social Forces*, 79 (2), 523-546.
- Riding, A. L., & Swift, C.S. (1990). Women business owners and terms of credit: Some empirical findings of the Canadian experience. *Journal of Business Venturing*, 5 (5), 327-340.
- Robinson, S. (2001). An examination of entrepreneurial motives and their influence on the way rural women small business owners manage their employees. *Journal of Developmental Entrepreneurship*, 6 (2), 151-167.
- Romano, C. (1994). It looks like men are from Mars, women are from Venus. *Management Review*, 83 (10), 7.
- Rosa, P., Carter, S., & Hamilton, D. (1996). Gender as a determinant of small business performance: Insights from a British study. *Small Business Economics*, 8 (4), 463-478.
- Rosa, P., & Hamilton, D. (1994). Gender and ownership in U.K. small firms. *Entrepreneurship Theory and Practice*, 18 (3), 11-27.
- Scherer, R. F., Brodzinski, J. D., & Wiebe, F. A. (1990). Entrepreneur career selection and gender: A socialization approach. *Journal of Small Business Management*, 28 (2), 37-44.
- Scherr, F. C., Sugrue, T. F., & Ward, J. B. (1993). Financing the small firm start-up: Determinants of debt use. *Journal of Small Business Finance*, 3 (1), 17-36.

- Schiller, B. R., & Crewson, P.E. (1997). Entrepreneurial origins: A longitudinal inquiry. *Economic Inquiry*, 35 (3), 523-531.
- Schwartz, E. (1976). Entrepreneurship: A new female frontier. *Journal of Contemporary Business*, 5 (1), 47-76.
- Scott, C. E. (1986). Why more women are becoming entrepreneurs. *Journal of Small Business Management*, 24 (4), 37-44.
- Servon, L. J. (1996). Microenterprise programs and women: Entrepreneurship as individual empowerment. *Journal of Developmental Entrepreneurship*, 1 (1), 31-55.
- Sexton, D. L., & Bowman, N. B. (1986). Validation of a personality index: Comparative psychological characteristics analysis of female entrepreneurs, managers, entrepreneurship students and business students. In R. Ronstadt, J. A. Hornaday, R. Peterson, & K.H. Vesper (Eds.), *Frontiers of entrepreneurship research* (pp. 40-51). Boston, MA: Babson College.
- Sexton, D. L., & Bowman-Upton, N. (1990). Female and male entrepreneurs: Psychological characteristics and their role in gender related discrimination. *Journal of Business Venturing*, 5 (1), 29-36.
- Sexton, D. L., & Kent, C. A. (1981). Female executives and entrepreneurs: A preliminary comparison. In K. H. Vesper (Ed.), *Frontiers of entrepreneurship research* (pp 40-55). Boston, MA: Babson College.
- Shabbir, A., & Gregorio, S.Di. (1996). An examination of the relationship between women's personal goals and structural factors influencing their decisions to start a business: The case of Pakistan. *Journal of Business Venturing*, 11 (6), 507-529.
- Shane, S., Kolvereid, L., & Westhead, P. (1991). An exploratory examination of the reasons leading to new firm formation across country and gender. *Journal of Business Venturing*, 6 (6), 431-446.
- Shaver, K. G., Gartner, W. B., Gatewood, E.J., & Vos, L.H. (1996). Psychological factors in success at getting into business. In P. D. Reynolds, S. Birley, J. E. Butler, W. D. Bygrave, P. Davidsson, W. B. Gartner, & P. P. McDougall (Eds.), *Frontiers of entrepreneurship research* (pp. 77-90). Boston, MA: Babson College.
- Shragg, P., Yacuk, L., & Glass, A. (1992). Study of barriers facing Albertan women in business. *Journal of Small Business and Entrepreneurship*, 9 (4), 40-49.
- Singh, S.P., Reynolds, R.G., & Muhammad, S. (2001, April). A gender-based performance analysis of micro and small enterprises in Java, Indonesia. *Journal of Small Business Management*, 39 (2), 174-182.

- Smeltzer, L. R., & Fann, G. L. (1989). Gender differences in external networks of small business owner/managers. *Journal of Small Business Management*, 27 (2), 25-32.
- Smith, N. R., McCain, G., & Warren, A. (1982). Women entrepreneurs really are different: A comparison of constructed ideal types of male and female entrepreneurs. In K.H. Vesper (Ed.), *Frontiers of entrepreneurship research* (pp. 68-77). Boston, MA: Babson College.
- Spilling, O. R., & Berg, N. G. (2000). Gender and small business management: The case of Norway in the 1990s. *International Small Business Journal*, 18 (2), 38-59.
- Srinivasan, R., Woo, C. Y., & Cooper, A. C. (1994). Performance determinants for male and female entrepreneurs. In W.D. Bygrave, S. Birley, N.C. Churchill, , E. Gatewood, F. Hoy, R.H. Kelley, & W. E. Wetzel, Jr. (Eds.), *Frontiers of entrepreneurship research* (pp. 43-56). Boston, MA: Babson College.
- Stanworth, C., & Stanworth, J. (1997). Reluctant entrepreneurs and their clients: The case of self-employed freelance workers in the British book publishing industry. *International Small Business Journal*, 16 (1), 58-74.
- Stevenson, L. A. (1986). Against all odds: The entrepreneurship of women. *Journal of Small Business Management*, 24 (4), 30-36.
- Stevenson, L. (1990). Some methodological problems associated with researching women entrepreneurs. *Journal of Business Ethics*, 9 (4/5), 439-446.
- Stoner, C. R., Hartman, R. I., & Arora, R. (1990). Work-home role conflict in female owners of small business: An exploratory study. *Journal of Small Business Management*, 28 (1), 30-38.
- Sullivan, P., Halbrendt, C., Wang, Q., & Scannell, E. (1997). Exploring female entrepreneurship in rural Vermont and its implications for rural America. *Economic Development Review*, 15 (3), 37-42.
- Ufuk, H., & Ozgen, O. (2001). Interaction between the business and family lives of women entrepreneurs in Turkey. *Journal of Business Ethics*, 31 (2), 95-106.
- U.S. Bureau of Census. (2001). Women Owned Business. 1997 Economic Census. U.S. Department of Commerce, 2001
- Verheul, I., & Thurik, R. (2001). Start-up capital: Does gender matter? *Small Business Economics*, 16 (4), 329-345.
- Walker, D., & Joyner, B. E. (1999). Female entrepreneurship and the market process: Gender-based public policy considerations. *Journal of Developmental Entrepreneurship*, 4 (2), 95-116.

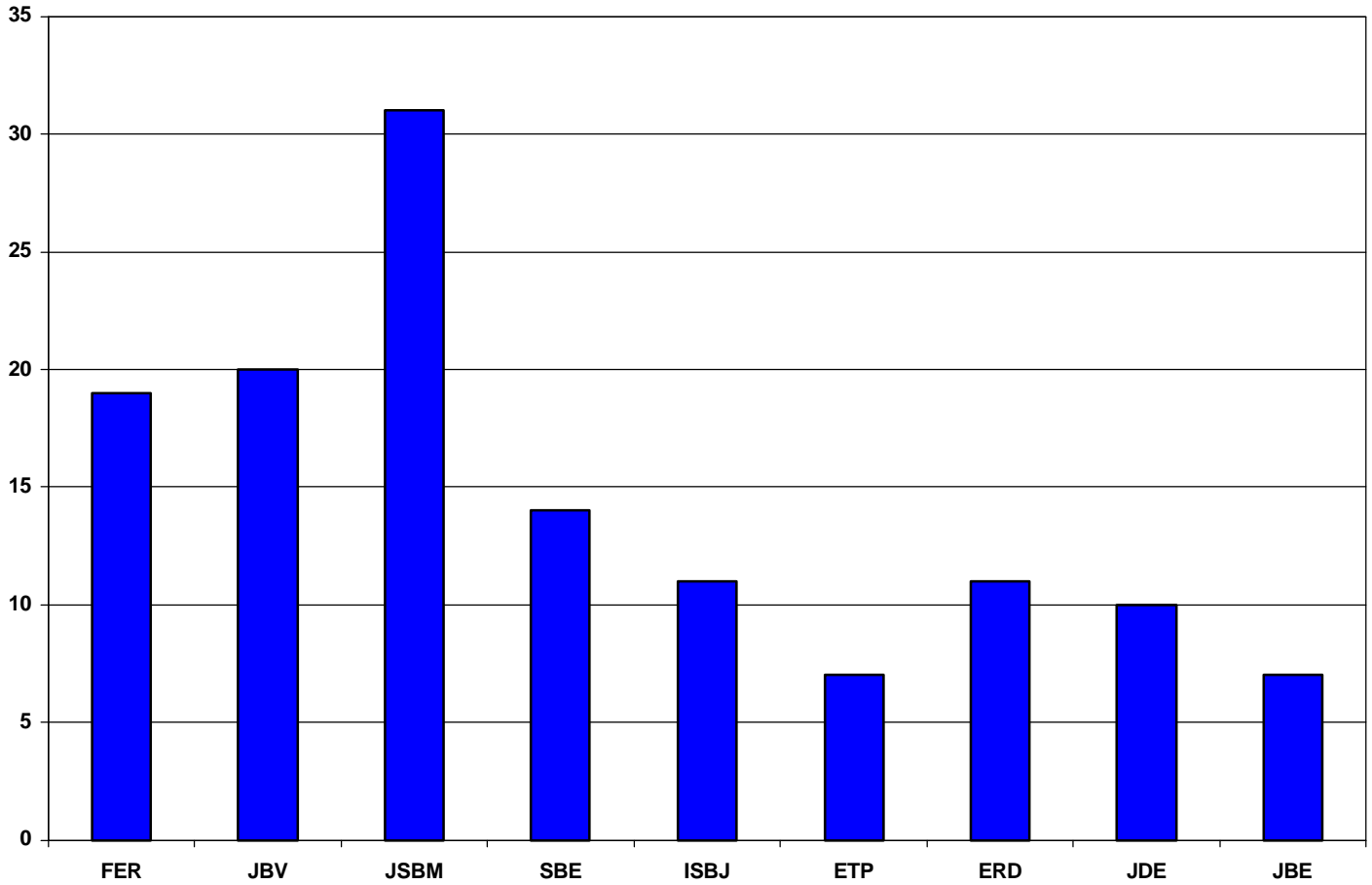
- Watkins, J. M., & Watkins, D. S. (1983). The female entrepreneur: Her background and determinants of business choice: Some British data. In J. A. Hornaday, J. A. Timmons, & K. H. Vesper (Eds.), *Frontiers of entrepreneurship research* (pp. 271-288). Boston, MA: Babson College.
- Weinstein, A., Nicholls, J.A.F., & Seaton, B. (1992). An evaluation of SBI marketing consulting: The entrepreneur's perspective. *Journal of Small Business Management*, 30 (4), 62-71.
- Westhead, P., & Cowling, M. (1995). Employment change in independent owner-managed high-technology firms in Great Britain. *Small Business Economics*, 7 (2), 111-140.
- Zapalska, A.M. (1997). A profile of women entrepreneurs and enterprises in Poland. *Journal of Small Business Management*, 35 (4), 76-82.

Table 1  
Journals, Founding Dates and Implications for Articles Published on Female Entrepreneurship

<b>Journal Name</b>	<b>Former Name</b>	<b>Founding Date</b>	<b>Number of Issues/Year</b>	<b>Total Number of Issues Reviewed</b>	<b>Number of Articles on Female Entrepreneurship</b>	<b>Percentage of Issues Containing An Article on Female Entrepreneurship</b>
Entrepreneurship Theory and Practice	<i>American Journal of Small Business (1976-1988)</i>	1976	4	<b>104</b>	<b>7</b>	<b>6.7%</b>
Journal of Small Business Management		1976	4	<b>104</b>	<b>31</b>	<b>30%</b>
International Small Business Journal	<i>European Small Business Journal (1981-1982)</i>	1981	4	<b>84</b>	<b>11</b>	<b>13%</b>
Frontiers of Entrepreneurship		1981	1	<b>20</b>	<b>18</b>	<b>NA</b>
Journal of Business Ethics		1982	6	<b>120</b>	<b>7</b>	<b>5.8%</b>
Journal of Business Venturing		1985	3-6	<b>87</b>	<b>20</b>	<b>23%</b>
Entrepreneurship and Regional Development		1989	4	<b>52</b>	<b>11</b>	<b>21.2%</b>
Small Business Economics		1989	6	<b>78</b>	<b>14</b>	<b>18%</b>
Journal of Developmental Entrepreneurship		1996	2	<b>12</b>	<b>10</b>	<b>83%</b>

## EXHIBIT 1<sup>2</sup>

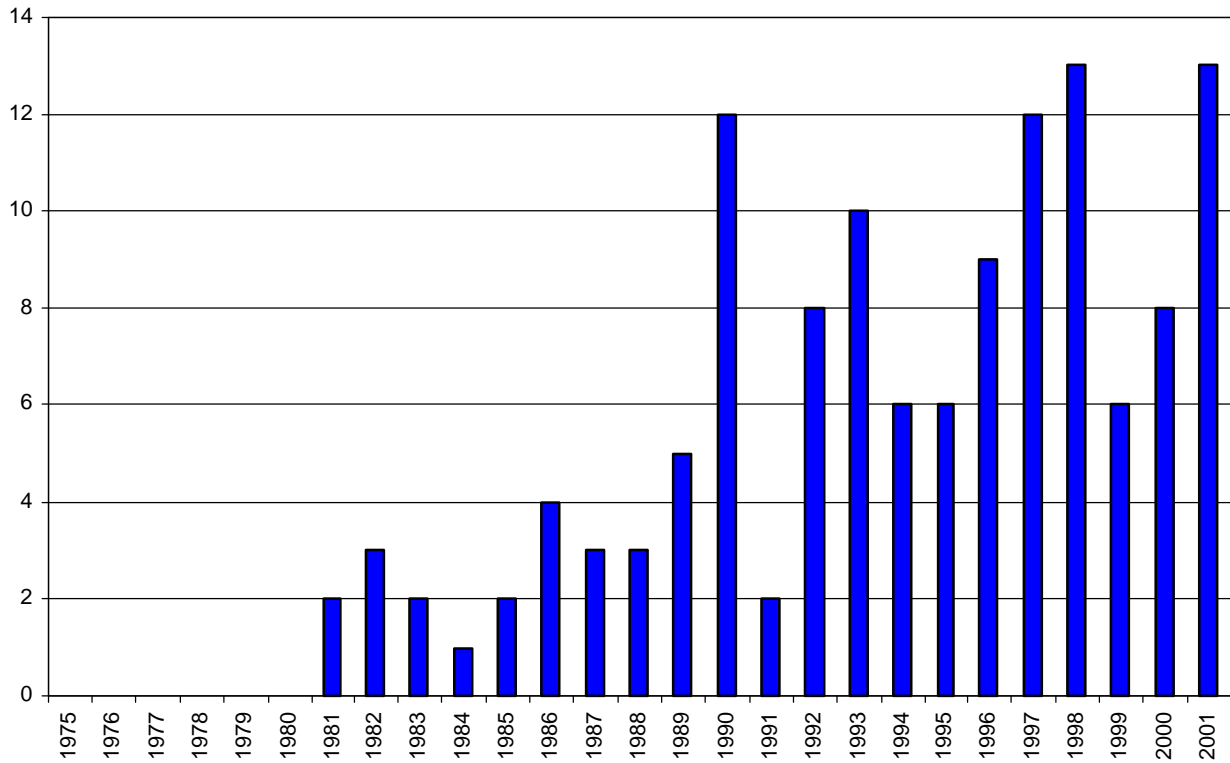
Total Annotations by Journal - Articles on Women Entrepreneurs



FER	<i>Frontiers of Entrepreneurship Research</i>
JBV	<i>Journal of Business Venturing</i>
JSBM	<i>Journal of Small Business Management</i>
SBE	<i>Small Business Economics</i>
ISBJ	<i>International Small Business Journal</i>
ETP	<i>Entrepreneurship Theory &amp; Practice</i>
ERD	<i>Entrepreneurship &amp; Regional Development</i>
JDE	<i>Journal of Developmental Entrepreneurship</i>
JBE	<i>Journal of Business Ethics</i>

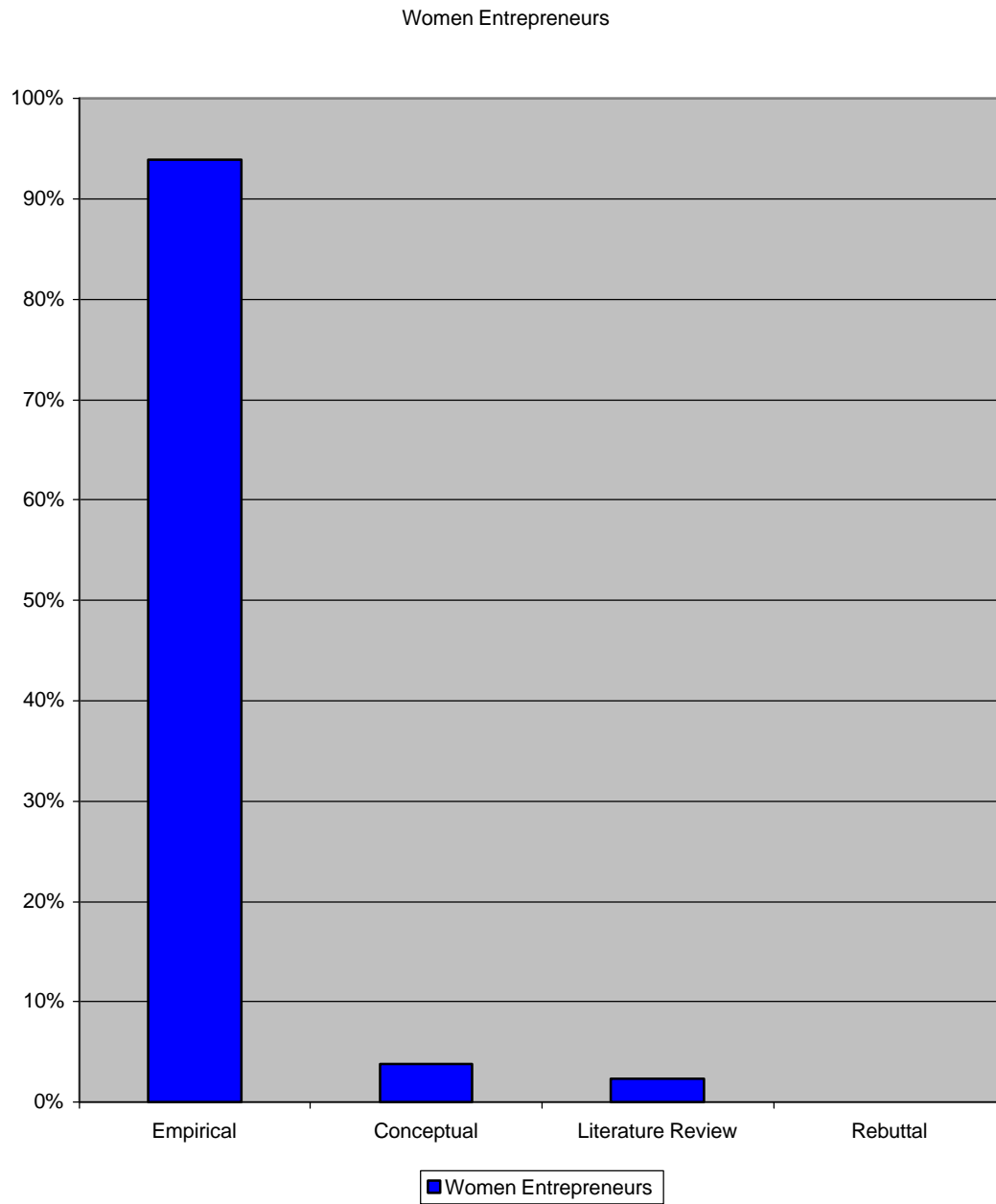
<sup>2</sup> Reflects absolute numbers of articles only without reflection of the age of publication, frequency of issues, etc.

**EXHIBIT 2**  
**ARTICLE PUBLICATION TRENDS ACROSS TIME<sup>3</sup>**



<sup>3</sup> Excludes journals identified through snow-ball technique. Does not reflect the number of journals published each year.

**EXHIBIT 3**  
**METHODOLOGIES USED TO STUDY FEMALE ENTREPRENEURSHIP<sup>4</sup>**



<sup>4</sup> Excludes journals identified through snow-ball technique.

