

Women and business ownership --
current and future trends

by

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A Thesis Submitted to the
Graduate Faculty in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE

Department: Sociology
Major: Sociology

Approved:

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Iowa State University
Ames, Iowa

1994

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CHAPTER 1: INTRODUCTION

Entrepreneurship has long occupied an eminent place in economic thought; it may be the single most important fixed factor in the growth of firms. Entrepreneurship is also an essential source of leadership for the revitalization of local and regional economies. Within the literature on this topic, however, little is known about women-owned firms. In an attempt to understand the current changes occurring in these firms and certain variables that may impact their growth, this study will examine what Bearnse and Vaughn (1980) called disequilibrium or the dynamic changes in state and regional economies that impact women-owned businesses. This disequilibrium will be investigated by examining the growth patterns of women-owned businesses by states and regions of the United States. Data sources will include information from the U.S. Bureau of the Census on women-owned businesses, population estimates for those same years, and a report from the U.S. Department of Commerce on gross state product.

Women have always worked and owned businesses. And, by and large, they have done so out of necessity. There have been times of special economic opportunity for women. In the Colonial period, for example, more than nine percent of the merchants in Boston and about two percent of those in New York were female, and this was at a time when merchants comprised the pinnacle of colonial community (Bryant, 1984). After the American Revolution, women, at least middle- and upper-class women, who had a choice, rarely ventured into the workplace (Bryant, 1984). The ideology of true womanhood held that women should keep away from commerce and politics. Lower-class women who had to earn a living continued to work in agriculture, domestic service, and factories (Bryant, 1984). There were some women in businesses in the nineteenth century, but most of these were immigrants who managed to parlay a pushcart into a storefront as opposed to the women merchants of the Colonial period.

With the advent of the twentieth century, women wanted to continue to pursue careers, but such aspirations had little impact on the economic and social realities of the time. Historically, patriarchy and capitalism have been contradictory in relation to women and the labor force. According to Bryant (1984:15):

The percentage of women in the workforce increased only by 4 percent from 1900 to just before WWII. ... It was this war that set into motion the wheels for the "unprecedented revolution." The number of employed women swelled 10 percent to 6 million - 36 percent during the war years. ... With peace, women were expected to withdraw from the workplace. ... But women hardly stopped work en masse. In fact, the number drawing paychecks grew at a remarkable rate.

Female employment has increased from approximately one-quarter of the workforce in 1940 to over one-half of the workforce today and will be two-thirds of the expected increase in the number of workers through 1995 (Fullerton, 1980; Wills et al., 1984; Hisrich and Brush, 1985). Paralleling the movement of women into the workforce is an increasing number of women deciding to start their own businesses. According to figures released by the U.S. Small Business Administration (SBA) (1990b) on the growth rate of women-owned businesses, the number of female-owned companies grew 42.6 percent (from 2,884,450 to 4,114,787) between 1982 and 1987, and the number of women-owned firms with paid employees nearly doubled (from 311,662 to 618,198). During the same period, the number of women-owned firms grew four times faster than all businesses. In addition, the 1987 Women-Owned Businesses census data, which counted all identifiable women-owned businesses, indicate that these companies account for 14 percent of business receipts. Women-owned firms' receipts increased from 98.3 billion in 1982 to 278.1 billion in 1987, or a 183 percent gain during that period. These numbers confirm that women-owned companies are the fastest growing sector in the economy.

Types of Businesses

Businesses of female entrepreneurs tend to be concentrated in certain traditionally female industries, such as retail stores, personal services, and educational services (U.S. SBA, 1984), although some progress has been made in women entering nontraditional fields such as manufacturing, finance, and construction recently. More important, even in traditionally female industries, male-operated sole proprietorships out-earned those of their female counterparts; male income was 9.0 times that of women in retailing and 3.2 times greater in personal services (Hisrich, 1986). According to 1987 SBA statistics (U.S. SBA, 1990a), three-fourths of women-owned businesses are in the service (52 percent) and retail sectors (19 percent). Researchers believe that the reason women operate service-sector businesses is a reflection of liberal arts education and past work experiences (Cuba et al., 1983; Hisrich, 1986). The SBA suggests that the lack of educational and work experience in technical and business fields traditionally dominated by males limits the opportunities for female entrepreneurs in these fields. Researchers have also observed that most female entrepreneurs avoid innovation in products and services; they prefer to compete in existing markets (U.S. SBA, 1990a; Hisrich, 1986).

Extensive references are made throughout the literature on women business owners to support the connection between the economic status of women in the labor force and the status of women as business owners. Many authors agree with Hisrich and O'Brien (1982a:21): "The disadvantaged position of women in the economy is further reflected in the category of self-employed persons." One could hope that a woman could surmount the problem of sex/pay discrimination by creating her own business, but earnings data show that self-employed women earn only 45 percent of what similarly situated men earn (Hisrich and Brush, 1986). Among annual wage and salary workers, women fare slightly better with approximately 65 percent of corresponding earnings for men (Miller, 1990). Sixty percent of

employed women earn less than \$10,000 in a year and, according to the U.S. Department of Commerce (1986), that annual income is below the poverty level for a family of four in America. The census also reported that out of 45 million women in the U.S. labor market in 1982, only about 2 million received over \$25,000 a year for their work.

The rapid rate at which women are starting businesses suggests that they find entrepreneurship an increasingly important vehicle for economic viability. The disadvantages that women face in the labor market may carry over into their business endeavors, however. Just as women are concentrated in certain employment fields, so are women's businesses concentrated in certain industries.

Theoretical Framework

A theory of entrepreneurship should develop a framework that relates new business growth to dynamic changes in local, regional, and national economies. Such changes are hypothesized to be the most important among those that characterize conditions in the economic and locational environments of potential entrepreneurs and that facilitate or impede their decisions to undertake entrepreneurial activities.

The structure of the environment in which individuals find themselves impinges directly and indirectly as a critical and complex set of influences. This is perhaps more true for the choice of entrepreneurship than for other choices, though the influences of the environmental (social, etc.) factors is significant even for supposedly private and individualistic choices or decisions (Bears, 1982:84).

Theoretically, according to Simon (1957), the larger, denser, more diversified urban environment should maintain a comparative advantage and preferential environment for entrepreneurship. A significant portion of the literature depicting cities as hubs of complex networks of business is consistent with the view that the larger the urban area the larger should be the portion of its labor force engaged in entrepreneurial pursuits (Webber, 1972).

Within this framework, the concept of stability/instability is of critical importance. Stability/instability can be defined as the extent to which a local or regional economy is undergoing major changes as it relates to the historical economic path of the area. The degree of stability or instability in the regional economy relates directly to the equilibrium/disequilibrium dichotomy. Economic development is fundamentally a disequilibrium-dynamic process, a process which is both and in part dependent on the historical path that the economy has traveled. Bearnse (1982:86) explained:

Disequilibrium tendencies in our market economy are especially manifest at present because the economy is still in the midst of a major transformation and transition. Disequilibrium in the national economy, moreover, is manifested even more sharply on the local/regional plane, as indicated by the economic vicissitudes suffered by many sub-national areas in recent years.

The significance of disequilibrium conditions to entrepreneurship hinges on market imperfections and a fundamentally dynamic model of economic development. From a dynamic standpoint, market imperfections are natural and recurring within a capitalistic economy. This recurring process creates the preconditions (e.g., new products and markets) for entrepreneurship and the expectations of change. "Opportunities are not more likely to exist in a disequilibrium-dynamic setting; they are more likely to be perceived" (Bearnse, 1982:87). Conversely, in a state of equilibrium there would be no surprises or opportunities that would arouse the interests of entrepreneurs. The supply of entrepreneurship should therefore be greater the more instability there is in a pertinent economic environment. What environment is pertinent is determined by the socioeconomic status of the business owner and on her/his access to relevant information. Perceived economic conditions and expectations of conditions in the national economy at any given time will influence most people's decisions on whether to go into business for themselves. Yet regional or local conditions, being more proximate, are likely to be a more significant set of influences on the decisions of potential entrepreneurs than conditions nationally.

The supply of entrepreneurship should increase with positive disequilibrium. There is, however, evidence that reflects upsurges in entrepreneurship in response to economic distress or decline. Eisler (1972:273), for instance, outlined a theory and offered some supporting evidence with regard to a class of small business people that he labeled "entrepreneurs against their will." These are primarily those persons who enter self-employment in services and retail as jobs in the manufacturing and corporate sectors are downsized and there are increasing barriers to entry. Gershuny and Paul (1979) and Skolka (1976) suggest a similar case from a different theoretical standpoint and extend it to the growth of the underground economy.

Regardless of the economic reasons behind entrepreneurship, it is important to recognize that the entrepreneur is not a risk-seeking speculator but is willing and able to take calculated risks. Entrepreneurs cannot be viewed as a group cut from the same mold. Different groups (e.g., minorities, women, men) in the population may respond to different conditions in different ways. The key is to try to understand how individual groups respond to conditions in their pertinent environment.

Practical and Sociological Importance

From a practical perspective, the increase in businesses owned by women in the 1980s has enhanced their visibility as important contributors to the U.S. economy; ownership of small businesses could become an increasingly important area for female economic achievement within the new global economy. There can be no adequate assessment of the general economy without taking into account the activities and concerns of women entrepreneurs. New enterprises create new jobs, help stagnating economies adjust to change, and convert economic dislocation into new forms of economic growth and

development. In this context, the contributions made by women's businesses are invaluable; the social and economic costs of failing to capitalize on this potential are profound.

From a sociological perspective, regardless of low annual revenues, the entrance of so many women into the sector of small business ownership may represent one of the most important social movements of the past few decades. Some speculate that after having spent several years in the corporate world, women have reached a "glass ceiling," an invisible barrier that seems to keep the top level corporate jobs out of their reach (Morrison et al., 1987). Or, women may simply see a better way of doing something and venture out on their own in search of autonomy, personal satisfaction, and the hopes of earning more money (Shapiro and Sokol, 1982). Perhaps more often is that after having children, women wish to spend more time with them than they had anticipated and see business ownership as a solution to this problem (The Wall Street Journal, 1986). Moreover, for feminist sociologists, it is an opportunity to chronicle and expand the current limits on dialogue as to the impacts women-owned businesses have created on social organization.

Content of the Chapters to Follow

The second chapter examines the literature review on women and business ownership. The third chapter will focus on the research method and design of the analysis. Chapter four discusses the findings and provides tables, significant numbers, and the years in which changes occurred. The final chapter will include a brief summary; further discussion will suggest what this research means for sociology, for women-owned firms, and for individual women. Finally, a new research agenda will be presented highlighting what needs to be done to assist women business owners in succeeding on their own terms.

CHAPTER 2: LITERATURE REVIEW

Despite the tremendous growth in the number of women-owned enterprises and their cumulative impact on society and the economy, there are few studies researching women business owners in general or comparing them with men who own businesses. Most of the research on business ownership has focused on males and subsequent models of success.

Academic research on women-owned firms developed during the last decade. The initial research in the late 1970s focused on the psychological and sociological characteristics of women business owners as compared with their male cohorts while other studies examined women owners of nontraditional businesses (Schrier, 1975; Schwartz, 1976; Hisrich and O'Brien, 1982b). Research over the past 10 years demonstrated that similarities exist between men and women business owners across demographic characteristics, business skills, and some psychological traits (Hagan et al., 1989). However, differences between men and women owners have been found in educational and occupational backgrounds, motivations for business ownership, business goals and growth, and the business creation process (Hisrich and Brush, 1983; Chaganti, 1986; Schrier, 1975). The methodology employed most often for research on women business owners has been cross-sectional surveys using convenience samples; data are analyzed with descriptive statistics. Frequently, such studies do not link research with theory.

The difficulty in examining the literature on types of businesses owned, gross receipts, and number of paid employees of women-owned firms is due to two major gaps, one cognitive and one data-related. First, there is a gap in the research as it relates to the meaning of female business ownership. Most studies assume that it is based on the same principles and goals of male business ownership. Such research makes male entrepreneurship the standard and then proceeds to measure women against it, rather than exploring the possibly unique aspects of women entrepreneurs. This is in effect

gandrocentric thinking; conclusions drawn from this type of cognitive process are bound to be faulty. Before one can explain the whole movement of women's business ownership, one must start by defining it the way women do. In other words, what can be learned from the experiences of women business owners? The second gap relates to the fact that measurement of this phenomenon has been hampered by the lack of current federal data.

The U.S. Small Business Administration (1990b:1) has stated:

Federal data series on women-owned businesses are generally limited in coverage, timeliness, and comparability. No single source of data on women-owned businesses covers all of these businesses, and combining data from several sources obtains only an imperfect picture of the overall women-owned business population.

Therefore, researchers attempting to study women's business ownership have few ready sources for sampling that permit hypotheses testing; the small samples used in many of the studies of women entrepreneurs present a number of major problems for causal analysis. For example, it is often impossible to determine whether business problems reported by women in these studies are related to gender, firm size, industry, type of business, geographic area in which a business was operated, or a combination of these or other factors.

Research on Women-Owned Businesses

Only a small percentage of studies in the field of entrepreneurship have focused on women and their businesses. For instance, Churchill and Hornaday (1987) who categorized 227 studies published between 1980 and 1987 by topic, found that only 13 investigated women and minorities. The largest study in the United States was the report compiled by the U.S. Interagency Task Force published in 1978. It was the first to identify and report discrimination against women entrepreneurs, not only as existing owners but in their attempts to become business owners. The task force (1978:7) concluded:

If starting a new business is considered difficult, it is considerably more difficult for a woman. A systemic history of overt discrimination starts her on a course in life that steers her from a traditional man's province, prevents her from training for careers that lead to entrepreneurship, diminishes her ambitions and aspirations for this career, and then places obstacles in her path as she tries to pursue it.

Due to the discriminatory atmosphere, the task force recommended that federal policy be clarified and that a coordinated policy be implemented for women-owned business enterprises.

Differences between women and men business owners in individual characteristics have been noted especially in background factors such as work experience and education. Several studies found that women business owners have previous work experience in teaching, retail sales, office administration, or secretarial areas (Hisrich and Brush, 1983a; Welsch and Young, 1982; Scott, 1986; Neider, 1987) rather than executive management, scientific, or technical positions more typical of men (Watkins and Watkins, 1983; Stevenson, 1986). Likewise, research on career paths has found that for women, careers are more frequently interrupted (Kaplan, 1988; Cromie and Hayes, 1988). The educational level of women business owners is comparable to men (Birley et al., 1987), but the fields of study differ widely. Most often women have pursued undergraduate studies in liberal arts rather than business, engineering, and/or technical subjects (Hisrich and Brush, 1984; Watkins and Watkins, 1983; Scott, 1986; Honig-Haftel and Martin, 1986; Neider, 1987).

Research has found that men more often become business owners out of a desire to be an entrepreneur (Scherer et al., 1990) or not work for anyone else (Swayne and Tucker, 1973), while for women the dominant impetus is a desire to create employment that allows flexibility to balance work and family (Goffee and Scase, 1983; Scott, 1986; Chaganti, 1986; Kaplan, 1988; Brush, 1990). One recent study proposes that interest in helping others is a key motivator for women to become business owners (Thompson and Hood, 1991). Few

studies have investigated differences in individual characteristics across groups of women. Research in this area has found that women do face different issues and problems depending on a woman's stage of personal life cycle (Kaplan, 1988), region or industry of location (Holmquist and Sundin, 1988; Brush and Rosen, 1990), and role perceptions in business ownership (Goffee and Scase, 1983). Thus, women business owners are more different from than similar to men in terms of individual factors such as education, occupational experience, motivations, and circumstances of business start-up.

Investigation of the characteristics of the businesses owned by women show them to be predominantly service-oriented (Schrier, 1975; Hisrich and Brush, 1984; Cuba et al., 1983), small in terms of revenues and employees (Cuba et al., 1983; Hisrich and Brush, 1983b; Scott, 1986), and less than five years old (Hisrich and Brush, 1983a; Cuba et al., 1983). Women, like men, most often choose sole proprietorships as the preferred form of business structure (Hisrich and Brush, 1983b; Cuba et al., 1983). Differences between women and men's management styles have been investigated with women's styles being labeled "feminine" (Chaganti, 1986), informal (Cuba et al., 1983), and participative (Neider, 1987).

In the area of personal business goals, women-owned enterprises differ from those of males. Women owners most often emphasize social goals such as customer satisfaction (Holmquist and Sundin, 1988; Hisrich and Brush, 1986; Chaganti, 1986) in unison with economic goals, such as profit and growth which are emphasized by male owners (Kent et al., 1982). The great disparity in gross receipts between women- and men-owned businesses may also suggest that profit and growth may not be the main goals of these enterprises. Several studies noted sales of women businesses tend to be less than \$100,000 annually with sales growth averaging 7 percent a year, whereas the average for men-owned businesses is around \$500,000 (Hisrich and Brush, 1983, 1987; Cuba et al.,

1983; Welsch and Young, 1982). These statistics may reflect that most women business owners do not fit a definition of success that is primarily based on the concepts of growth and profit. However, perhaps the most logical explanation for the small size in revenues and growth of women-owned businesses is their young age. The astounding growth in new businesses created by women has occurred in the last 10 years. Hence, many women-owned businesses are in the early stages of the business life cycle when revenues are lower, fewer employees are required to run the operation, and growth is less than in older businesses. Some researchers speculate that some women owners may deliberately maintain their businesses at a particular size out of choice, setting as primary objectives location (home-based) or control over their time rather than maximizing growth and profit (Brush and Rosen, 1990).

While financial problems also are common to male-owned businesses, this aspect of venture start-up and management are without a doubt the biggest obstacle for women. The literature supports the concept that financial barriers contribute more to the size, type, gross receipts, and number of paid employees of women-owned firms than any other factor. Financial difficulties are exacerbated for women for two reasons. First, women often lack a financial record in business, which results in problems in dealing with lending institutions (Hisrich and Brush, 1984). Further, several studies have reported that women used only personal assets at start-up and have accessed minimal outside financing (U.S. Interagency Task Force, 1978; Honig-Haftel and Martin, 1986; Hisrich and Brush, 1987; Olm et al., 1988); and women frequently capitalize their new businesses at a rate of about 50 percent less than do men owners (an average of \$11,000 versus \$22,000) (Hisrich and Brush, 1987; Brush and Rosen, 1990). Yet, consistent with men-owned firms, financial problems of women-owned businesses do vary by stage of development (Hisrich and Brush, 1987).

The second reason that women have financial difficulties is because women-owned businesses are typically very small and concentrated in the retail and service industries. Because of the types of business women start, it could be discerned that based on traditional banking policy of funding higher profit ventures, banks may find it less attractive to invest in those types of businesses (Brush and Rosen, 1990). Therefore, women may suffer disproportionately from market imperfections (e.g., high information and transaction costs and the resulting capital rationing and adverse risk behavior by banks), which serve to limit the overall small business access to private capital markets. As an adjunct to the commercial lending market as it affects women-owned firms, occupational segregation and the low annual income of most women have a cumulative effect that limits the access they have to credit and capital and therefore their mobility among different sectors of the economy. Hence, the literature suggests that the organizational characteristics of women-owned businesses are more different from than similar to men-owned businesses. While form of business and normal business problems over the life cycle of the firm are not impacted by the gender of the owner, there are disparate differences in level of gross receipts, management styles, goals, and barriers to financing. However, although most women encounter these obstacles, they are not all equally affected by them. Women in general, as well as women business owners, are not a homogeneous group.

A review of the literature on women and business ownership leads to a conclusion that it is time for researchers to use a new lens to guide research activities on this growing phenomenon. It is appropriate to place these studies of rather small samples within the context of all businesses in the United States.

Women in Business

Women currently own about 30 percent of all U.S. businesses and the U.S. SBA's (1990a) estimate that women may own 37 percent by the year 2000 could be a conservative projection. Increases and rates of change by selected industries from 1982 and 1987 economic census reports are highlighted in Table 1. In 1987, the most recent year for which census data on women-owned businesses are available, there were 4.1 million women-owned businesses. Women-owned firms grew by almost 43 percent compared with a 24.5 percent increase for men-owned businesses. Although the percentage increase was greater for women than men, the number of men-owned businesses increased by nearly 1.9 million, while the gain was 1.2 million for women. Thus, while the percentage gains favor women, the numerical gains were far greater for men.

The 1987 U.S. Department of Commerce's Women Owned Businesses report also reveals that the types of businesses women own have remained relatively stable since 1982. As of 1987, about 75 percent of all women-owned firms covered by the data were still in the services and retail trades. Interestingly, men-owned retail firms increased from 851,166 to 1,442,802 during the 1982 to 1987 period, or a 69.5 percentage increase, compared to a 9.7 percent increase for women. Neither census reports nor the literature offer any explanation for this gain for men. One possible reason is that it occurred due to business expansions in retail firms owned by men.

Women gained in nontraditional sectors, such as manufacturing (89% increase) and construction (53% increase). Between 1982 and 1987, the number of women-owned businesses in the manufacturing industry almost doubled, rising from 49,727 in 1982 to 93,960 in 1987. This increase may be explained in terms of advances in technology and communications as well as the number of women pursuing courses of study in mathematics, the sciences, and computers. In addition, while it is likely that the scale of manufacturing will

Table 1. Selected industries of women- and men-owned businesses in the United States, 1982 - 1987

	<u>Women-Owned Businesses</u>			<u>Men-Owned Businesses</u>			<u>All U.S. Businesses</u>		
	1982	1987	% Change	1982	1987	% Change	1982	1987	% Change
Totals	2,884,450	4,114,787	42.6%	7,693,687	9,580,693	24.5%	10,578,137	13,695,480	29.4%
Selected Industries:									
Construction	61,665	94,308	52.9%	1,005,273	1,556,794	54.8%	1,066,938	1,651,102	54.7%
Manufacturing	49,727	93,960	88.9%	187,677	339,001	80.6%	237,404	432,971	82.3%
Wholesale Trade	34,252	82,515	140.9%	154,682	356,687	130.5%	188,934	439,200	132.4%
Retail Trade	727,688	798,692	9.7%	851,166	1,442,802	69.5%	1,578,854	2,241,494	41.9%
Services	1,401,776	2,269,028	61.8%	2,889,057	3,668,643	26.5%	4,300,833	5,937,671	38.0%
Other*	609,342	776,284	27.0%	2,605,832	2,216,766	-14.0%	3,265,174	2,993,042	-8.0%

*Agriculture, Forestry, Fishing, Mining, Transportation and Public Utilities, Finance, Insurance, Real Estate, and other industries not classified.

Source: U.S. Department of Commerce, Bureau of the Census, Women-Owned Businesses, 1982 and 1987 and U.S. Department of Commerce, Bureau of the Census, Characteristics of Business Owners, 1982 and 1987.

be small in women-owned firms, the fact that many of them have chose to fabricate products may be an indication of their strong commitment to entrepreneurship since manufacturing enterprises usually require more resources than service businesses.

Women also made significant progress in business receipts during the 1980s (Table 2). From 1982 to 1987, women-owned business' gross receipts increased 183 percent from 98.3 billion to 278.1 billion. In 1982, women-owned businesses in the services and retail trade industries accounted for about 62 percent of the total receipts of women-owned firms; this dropped to about 52 percent in 1987. In addition, even in traditionally female industries, male-operated sole proprietorships outearned those of their female counterparts; male income was 9.0 times that of women in retailing and 3.2 times greater in personal services (Hisrich, 1986).

The industries in which women-owned businesses experienced the most rapid rate of increase in receipts between 1982 and 1987 are those in which women owners have traditionally been underrepresented, including manufacturing, construction, and wholesale trade. Between 1982 and 1987 the receipts of women-owned manufacturing businesses experienced nearly a six-fold increase rising from \$5.3 billion to \$30.9 billion. While women-owned manufacturing businesses accounted for 5.4 percent of the receipts of all women-owned businesses in 1982, by 1987 that figure had risen to 11.1 percent. The total receipts of women-owned businesses in the construction industry more than quadrupled between 1982 and 1987, rising from \$4.6 billion in 1982 to \$20.3 billion in 1987 (U.S. Small Business Administration, 1990b).

The growth of women-owned businesses in the wholesale trade industry was also quite strong. Between 1982 and 1987, the number of women-owned firms in this industry rose from 34,252 to 82,513, an increase of 140.9 percent. The total receipts of women-

Table 2. Gross receipts for women- and men-owned businesses and selected industries (in millions), 1982 - 1987

	<u>Women-Owned Businesses</u>			<u>Men-Owned Businesses</u>			<u>All U.S. Businesses</u>		
	1982	1987	% Change	1982	1987	% Change	1982	1987	% Change
Totals	98,291,513	278,138,117	183%	643,174,015	1,716,669,883	166%	741,465,528	1,994,808,000	169%
Selected Industries:									
Construction	4,564,914	20,302,124	344%	56,794,750	212,069,876	273%	61,359,664	232,372,000	278%
Manufacturing	5,302,877	30,914,089	482%	40,114,591	195,909,911	388%	45,417,408	226,824,000	399%
Wholesale Trade	9,189,524	42,804,558	366%	83,443,005	255,459,442	206%	92,632,529	298,264,000	221%
Retail Trade	35,861,430	85,417,525	138%	190,512,345	459,348,475	141%	226,373,775	544,766,000	140%
Services	26,227,751	61,123,430	132%	149,666,243	355,981,570	137%	175,943,994	417,195,000	137%
Other*	17,095,017	37,576,391	119%	122,643,081	237,900,609	93%	139,738,158	275,387,000	97%

*Agriculture, Forestry, Fishing, Mining, Transportation and Public Utilities, Finance, Insurance, Real Estate, and other industries not classified.

Source: U.S. Department of Commerce, Bureau of the Census, Women-Owned Businesses, 1982 and 1987 and U.S. Department of Commerce, Bureau of the Census, Characteristics of Business Owners, 1982 and 1987.

owned businesses in the wholesale trade industry jumped from \$9.2 billion in 1982 to \$42.8 billion in 1987, a gain of 365.8 percent.

From 1982 to 1987, receipts of women-owned businesses grew faster than receipts of businesses owned by men. Women's receipts increased at an annual rate of 8.4 percent in 1982 dollars, in contrast to a 0.2 percent decrease experienced by businesses owned by men (U.S. Department of Commerce, 1990). In 1987, women-owned businesses accounted for 13.9 percent of the receipts of all businesses. Although receipts per proprietorship declined for both women and men over the past decade, women appeared to be narrowing the sales gap. However, according to the 1987 Women-Owned Business (U.S. Department of Commerce, 1990:4) report, "The percentage of all firms owned by women is directly related to the receipt size of the firm. For example, women owned 40.9 percent of the firms with receipts less than \$5,000, but only 13.5 percent of the firms with receipts of \$1 million or more."

Once again, although the percentage gain in gross receipts was greater for women than men, the actual dollar increase was greater for men. From 1982 to 1987, women-owned businesses gross receipts increased by almost \$180 million dollars while for men the increase was slightly over \$1 billion.

Despite the percentage increases in number of firms and gross receipts for females, women-owned businesses are underrepresented in many sectors, including manufacturing, construction, mining, transportation, communications, and finance. This is a key factor in explaining the income gap faced by women in relation to their male cohorts. Within any sector, this income gap may be partially explained by the young age of many women-owned businesses. Overall, however, it is the result of the heavy concentration of women-owned businesses in low-return, traditionally female industrial sectors.

In terms of job creation, the number of women-owned firms with paid employees nearly doubled between 1982 and 1987, rising from 311,662 businesses in 1982 to 618,198 businesses in 1987 (Table 3). Receipts for these businesses grew by 243 percent. As of 1987, women-owned businesses employed over three million (3,102,685) U.S. workers, more than twice the 1,254,588 employed by women-owned firms in 1982. While only 15 percent of women-owned firms had paid employees in 1987, such firms provided 81 percent of the receipts of women-owned businesses. Women-owned firms with no paid employees showed more modest increases of 52 percent in number of firms and 64 percent in receipts (U.S. Department of Commerce, 1990).

Private research statistics on paid employees in women-owned firms confirms the federal statistics on number of paid employees. Hisrich and Brush's (1983b) study of 468 women business owners found that the number of employees in the businesses of women entrepreneurs was small; 30 percent employed no full-time employees and 55 percent had one to nine full-time employees. DeCarlo and Lyons' (1979b) women entrepreneurs employed an average of four persons and Humphreys and McClung (1981) quoted census data showing that 70.4 percent of the firms of women entrepreneurs employed four or less. Charboneau (1981:21) concluded: "Most women start small and stay small." A 1991 study released by the National Association of Women Business Owners stated that in 1992 women-owned firms would begin providing more jobs for the U.S. economy than Fortune 500 companies.

U.S. Population and Economic Shifts

The entrepreneurship literature depicts the creation of organizations as a matter of individual goals, skills, motivations, and background factors. Structural factors, such as population and the economy, may impede or enhance entrepreneurial activity, but rarely are

Table 3. Number of women-owned firms by selected industry with paid employees and gross receipts, 1982 - 1987^a

	<u>Number of Firms with Paid Employees</u>			<u>Gross Receipts of Firms</u>		
	1982	1987	% Change	1982	1987	% Change
Totals	311,662	618,198	98%	65,347,449	224,006,218	243%
Selected Industries:						
Construction	13,321	36,178	171%	3,304,870	17,832,436	439%
Manufacturing	10,239	26,989	163%	4,759,355	29,933,879	528%
Wholesale Trade	8,704	22,691	160%	8,241,442	40,324,930	389%
Retail Trade	119,453	199,302	66%	26,769,866	74,424,387	170%
Services	122,022	253,276	107%	14,179,174	38,670,269	172%
Other ^b	37,923	79,762	110%	8,092,742	22,820,317	181%

^aThese data are not available for men-owned or all U.S. businesses.

^bAgriculture, Forestry, Fishing, Mining, Transportation and Public Utilities, Finance, Insurance, Real Estate, and other industries not classified.

Source: U.S. Department of Commerce, Bureau of the Census, Women-Owned Businesses, 1982 and 1987.

they analyzed. In the current study, the disequilibrium created by these structural elements is of interest. While little research has been done investigating structural factors impacting business ownership, an integrated perspective suggests that there are some structural elements that may encourage or discourage women's business ownership.

At the present time, a new wave of attention is being focused on entrepreneurship as policymakers attempt to reassess and renew the sources of innovation and small business formation. Similar concerns are much in evidence in regional and urban areas. Impacting the decisions of local and national policymakers are the changes occurring in the population and economic arenas, especially on state and regional levels.

The U.S. population grew by almost 10 percent between 1980 and 1990, increasing to 248.7 million people. "More than half of that growth was concentrated in three states: California, Florida, and Texas. Eight other states with large population gains--Georgia, Arizona, North Carolina, Virginia, Washington, Maryland, Colorado, and Nevada--accounted for another one-quarter of all population growth" (Edmondson, 1991:9).

The 1990 census also highlights the continuing shift of population to the Sunbelt states. The proportion of U.S. population residing in the Northeast and Midwest continues to drop, while the South and West have increased their shares. Between 1980 and 1990, the South and West grew at rates of 13.4 percent and 22.3 percent, respectively, while growth in the Northeast (3.4%) and Midwest (1.4%) was much lower.

Four of the five fastest growing states are in the Sunbelt. Nevada led all states in percentage of population gained with 50.1 percent, followed by Alaska at 36.9 percent. California counted the largest number of new residents with 6.1 million. Conversely, a number of states lost population during the 1980s. Leading those with decreases was West Virginia with a decline in population of 8 percent; Iowa and North Dakota lost 4.7 percent and 2.1 percent of their populations, respectively, between 1980 and 1990.

On a local level, the 1990 census revealed that of the nation's 3,141 counties (or equivalent areas) there are now 30 counties with populations of one million or more, an increase of five since 1980. At least 458 counties now have 100,000 in population (Allan, 1991). According to Allan (1991), sunbelt counties continue to lead population growth in the United States, topped by five Florida and eight Texas counties. Conversely, 45 percent of all counties lost population during the 1980s, most of which were in the Midwest and Northeast.

Most of the population growth in the 1980s remained where it has been for much of the century--in metropolitan areas. In 1980, 35 metropolitan areas contained one million or more people. The 1990 census saw the addition of four metropolitan areas to this list to bring the total to 39. These 39 areas account for 125 million people or slightly more than one-half of the U.S. population. Population living in all metropolitan areas accounted for 192.7 million people in 1990, or 77.5 percent of the total population. During the 1980s, 90 percent of the nation's growth took place in those areas. The 1990 census revealed that 195 cities now have populations of 100,000 or more, with 29 cities reaching that level in the 1980s. Of the 29, 18 are located in California and four in Texas. In keeping with the trend, Midwestern cities led the list with population declines. However, metropolitan growth patterns were not evenly distributed across the country.

In terms of population growth and shifts, there are no studies to date that investigate the impact on women-owned businesses. Furthermore, according to Bruno and Tyebjee (1982:305), "There is no on-going record of start-ups and failures according to geographic area and industry." However, the authors (1982:308) stated:

Types of businesses vary within countries by region (urban versus rural). Ventures owned by rural women tend to be craft, textile, and agriculturally based, whereas urban businesses more often provide clerical, hotel/restaurant, or retail sales services.

A 1980 U.S. Small Business Administration study shows that businesses owned and operated by women vary from state to state (Hisrich and Brush, 1985). Women-owned businesses were more prevalent in California (27.7%), Hawaii (32.5%), Ohio (23.8%), Illinois (25.5%), and states along the east coast. Women-owned firms were less prevalent in Arkansas (15.4%), South Dakota (15.5%), Kentucky (16.8%), and North Dakota (16.8%). According to the U.S. Department of Commerce (1992b), however, businesses owned by women and white men are spread across all states in about the same proportion as the population.

From a theoretical perspective, it would seem that states and regions experiencing population increases (especially in metropolitan areas) would hold the greatest possibility for increases in all business starts, including women-owned firms. Stated as a research hypothesis, when compared with others, states with relatively large populations will have disproportionately more women-owned businesses than would be expected on the basis of their populations alone. This is based on the empirical fact that organizational births are heavily concentrated in urban areas, and states with larger populations have more and/or larger urban areas. Thompson (1965) specified several reasons why larger cities have a higher level of entrepreneurial activity, including more power to influence governmental decision-making, an economy oriented toward customers rather than sources of supply, and the sheer size to ensure a steady supply of invention. Larger cities also show a greater diversity of industries, occupations, ethnic groups, and immigrants. Diversity engenders innovation and unconventionality, which are hallmarks of entrepreneurship. It follows that the greater the population, the bigger the pool of entrepreneurs and the higher the organizational birthrate. The mere fact that there are numerous other women entrepreneurs in metropolitan areas who have succeeded at new venture initiation draws women to these areas and encourages potential women owners already in the area. Existing women business owners

provide concrete examples of entrepreneurial feasibility and encourage a higher birthrate for women-owned ventures. Their visibility also might increase the detachment of women employees from large organizations that frustrate their need for balancing family responsibilities and career. Therefore, it is hypothesized that when compared with others, states with relatively larger percentage increases in their populations will have disproportionately larger increases in the number of women-owned businesses. This hypothesis is supported by Dennis (1986) in a study of differences in comparative state business starts which suggested that population growth and decline are highly correlated with business starts. The study also indicated that states experiencing high growth in one industry tend to experience them in other industries, including manufacturing; and the rate of business starts was higher in more urbanized areas.

The net effect of these demographic events was that the potential growth of the economy rose less during the 1980s than had been previously projected (2 1/2 percent per year in the first half of the 1980s rather than the 3 to 3 1/2 percent evident in earlier decades) (Federal Reserve Bulletin, 1986). This may indicate that although economic growth and the general state of the economy are sensitive to cyclical influences, demographic changes can play a significant role over longer periods of time. In fact, demographic trends may influence the overall potential for growth in an economy as well as specific areas in which demographic pressures may effect economic conditions. Therefore, understanding the factors that contribute to the women's business ownership movement requires that the phenomenon be studied from a multifaceted perspective. Small business ownership, regardless of gender, is a function of a system that includes the overall state of the national economy, the economic development of a particular region, technical resources and business infrastructure that a region provides, and demographic shifts.

The structural factor of the economy and the means to create climates conducive for maximizing the number of business starts are important public policy issues. Even though demographic events are significant, the economy may be the strongest predictor of the growth of women-owned firms. This new entrepreneurial orientation is due to a number of economic elements. First, changes in the international economy and the decline of traditional manufacturing industries, long dominated by a few large firms, have led to serious structural changes in many regions of the industrialized world. Second, the large-scale job losses resulting from these changes could not be ameliorated through traditional economic development policies that were oriented towards attracting large plants. Moreover, a consequence of large plant closings has resulted in increasing concern about capital flight by multinational firms. At the same time, studies on the components of job creation demonstrated the importance of new and small business as key job generators. Small and new companies are now seen as critical to economic growth and, consequently, their development has become a priority.

One of the most viable economic indicators is gross state product (GSP) of the nation's individual states and regions. According to Trott et al. (1991:43), "GSP is the market value of the goods and services produced by labor and property located in a State." It is the state counterpart of the nation's gross domestic product (GDP). From 1977 to 1986, the share of GSP generated in the U.S. interior regions declined and the share generated along the Atlantic and Pacific coasts increased. Trott et al. (45) continued:

The 1977-1989 trends in regional growth continued in 1986-1989: The share of GSP generated in the interior regions declined by an additional 1.6 percentage points, and the share generated in the coastal regions increased by an offsetting amount.

These figures illustrate that state economic trends are closely aligned with population growth and decline and hypotheses regarding the economy, population shifts, and women-owned

firms are similar. Research studies support the concept that urban economies are a fertile environment where new enterprises can be started at a relatively low cost and succeed; or if they fail, they will be replaced by other new ventures (Meier, 1962). However, the degree of stability or instability in a regional economy relates directly to business starts (Bearse and Vaughn, 1980). For the purposes of this study, it is hypothesized that states with relatively large GSPs will have disproportionately more women-owned businesses than would be expected based on the GSP figure alone. Furthermore, when compared with others, states with relatively larger percentage GSP increases will have disproportionately larger increases in the number of women-owned businesses.

The recent growth of women-owned businesses has played an important role in increasing recognition that business starts are a critical element in the process of economic growth in the United States. Given that entrepreneurial activity is a major factor in furthering the growth of our national economy, encouraging women to explore the possibilities of pursuing an entrepreneurial career, coupled with the influx of women into the workforce, may have complex implications for public policies. The field of public policy shows an increasing desire to foster entrepreneurial activity, yet the lack of awareness among policymakers of the potential economic implications of women's business ownership and the importance of identifying existing barriers to the development and growth of these businesses drives the requirement for reliable data. To develop strategies to maximize the growth potential of women-owned businesses, policymakers need to know where they are located, how they are changing, and how they fit into an overall strategy for entrepreneurial growth and development.

CHAPTER 3: METHODOLOGY AND DATA ANALYSIS

Researchers traditionally have examined individuals or comparatively small groups of business owners and then made generalizations about environmental factors such as economic climate or policies that create an atmosphere favorable to business starts or business development. Studies conducted in these areas tend to be case studies that use descriptive statistics to evaluate the relative influence of different variables. The process has involved moving from the specific to a more general analysis. It has reflected the experiences of primarily white male owners that have been translated into public policy for women as well as minority business owners. This traditional approach contains inherent liabilities for the analysis of women business ownership. The most basic of these is the assumption that male owners are a representative population for subsequent extrapolations to women owners. While some researchers have become more careful in distinguishing subpopulations, many involved in policy formation continue to experience difficulty in this area.

Data Sources and Variables

The data set employed for the dependent variables are from the 1982 and 1987 *Women-Owned Businesses reports* (U.S. Department of Commerce, 1986 and 1990), which are the most comprehensive source of federal statistics on women-owned businesses collected on a quinquennial basis in conjunction with other economic censuses and the 1982 and 1987 *Characteristics of Business Owners* (U.S. Department of the Commerce, 1987a and 1992a). The latter includes all businesses in the United States and highlights minority ownership. The data were drawn from the tables of these censuses. For the years represented there are five variables by state and the District of Columbia. These are the total of women-owned firms, the gross receipts of these firms, the number of firms with paid

employees, the gross receipts of these firms with paid employees, and the number of employees. Also included are the number of men-owned and all U.S. firms and their gross receipts. The census does not provide data on the number of paid employees, the gross receipts of firms with paid employees, or the number of paid employees for all U.S. or men-owned businesses by industrial category for individual states. The five industrial categories analyzed in each of these subdivisions of women-owned firms are construction, manufacturing, wholesale trade, retail, and services. These industries were chosen for two reasons. First, retail and service businesses represent the majority of women-owned firms. Retail firms include building materials and garden supplies, general merchandise stores, food stores, automotive dealers and service stations, apparel and accessory stores, furniture and home furnishing stores, eating and drinking places, and miscellaneous retail. Service businesses include hotels and other lodging places; personal services; business services; auto repair, services and garages; miscellaneous repair services; motion pictures; amusement and recreation services; health services; legal services; social services; museums, botanical and zoological gardens, and miscellaneous services.

Second, the Small Business Administration has noted that construction, manufacturing, and wholesale trade businesses owned by women "... experienced the most rapid rate of increase in receipts between 1982 and 1987" (1990b:5). For example, the change in receipts for manufacturing was 483 percent. Summary statistics of the dependent variables (Table 4) highlight the variation among states and the District of Columbia.

The data set employed for the independent variables of population and gross state product (GSP) were drawn from Current Population Survey (U.S. Department of Commerce, 1982, 1987b) and Gross State Product by Industry, 1977-1989 (Trott et al., 1991) respectively. The independent variables, summarized in Table 5, highlight the differences in gross state product and population changes for states between 1982 and 1987. The state with the

Table 4. Summary statistics across states for dependent variables

Variable Name	Range		Mean	Standard Deviation
	Low	High		
Total Women-Owned Businesses (WOB) 1982	6,224	396,294	56,537	66,114
Construction WOB 1982	130	7,179	1,209	1,311
Manufacturing WOB 1982	82	8,824	975	1,375
Wholesale Trade WOB 1982	45	5,771	671	959
Retail Trade WOB 1982	1,437	95,012	14,267	15,448
Services WOB 1982	2,969	202,511	27,544	33,124
Total Gross Receipts of WOB 1982 (\$1,000)	195,636	12,022,899	1,926,892	2,265,740
Construction Gross Receipts of WOB 1982	8,228	458,827	82,964	97,182
Manufacturing Gross Receipts of WOB 1982	3,750	736,084	103,977	138,232
Wholesale Trade Gross Receipts of WOB 1982	4,744	1,050,411	180,225	221,333
Retail Trade Gross Receipts of WOB 1982	75,476	4,134,257	703,184	735,333
Services Gross Receipts of WOB 1982	47,510	4,096,089	515,260	701,769
Total Women-Owned Businesses 1987	9,727	559,821	85,766	98,589
Construction WOB 1987	69	8,858	1,857	1,839
Manufacturing WOB 1987	145	13,760	1,850	2,235
Wholesale Trade WOB 1987	89	11,678	1,622	2,069
Retail Trade WOB 1987	909	90,423	15,622	16,102
Services WOB 1987	3,175	328,269	43,786	54,682

Table 4. (continued)

Variable Name	Range		Mean	Standard Deviation
	Low	High		
Total Gross Receipts of WOB 1987 (\$1,000)	523,908	31,026,855	6,018,465	7,353,189
Construction Gross Receipts of WOB 1987	24,501	2,201,002	402,577	465,464
Manufacturing Gross Receipts of WOB 1987	22,877	3,478,796	608,009	754,631
Wholesale Trade Gross Receipts of WOB 1987	33,094	6,795,288	868,059	1,193,324
Retail Trade Gross Receipts of WOB 1987	149,007	8,564,237	1,725,640	1,783,063
Services Gross Receipts of WOB 1987	72,713	9,406,707	1,198,186	1,664,199
Total WOB with Paid Employees 1982	760	38,851	6,112	6,438
Construction with Paid Employees 1982	8	1,061	261	253
Manufacturing with Paid Employees 1982	14	1,574	200	274
Wholesale Trade with Paid Employees 1982	9	1,119	172	201
Retail Trade with Paid Employees 1982	208	13,138	2,340	2,322
Services with Paid Employees 1982	292	15,104	2,392	2,629
Total WOB with Paid Employees 1987	1,230	73,174	12,121	13,125
Construction with Paid Employees 1987	19	3,095	734	707
Manufacturing with Paid Employees 1987	33	3,954	525	669
Wholesale Trade with Paid Employees 1987	20	2,623	443	532
Retail Trade with Paid Employees 1987	285	21,374	3,924	3,861
Services with Paid Employees 1987	689	33,314	4,940	5,691

Table 4. (continued)

Variable Name	Range		Mean	Standard Deviation
	Low	High		
Total Gross Receipts of WOB with Paid Employees 1982 (\$1,000)	133,697	7,009,232	1,290,152	1,429,870
Construction Gross Receipts with Paid Employees 1982	2,928	262,100	57,653	61,723
Manufacturing Gross Receipts with Paid Employees 1982	2,791	294,528	75,423	73,646
Wholesale Trade Gross Receipts with Paid Employees 1982	3,727	796,269	135,891	156,162
Retail Trade Gross Receipts with Paid Employees 1982	61,255	1,663,357	448,347	383,064
Services Gross Receipts with Paid Employees 1982	26,217	1,059,544	222,782	208,902
Total Gross Receipts of WOB with Paid Employees 1987 (\$1,000)	422,874	25,172,731	4,392,278	5,160,406
Construction Gross Receipts with Paid Employees 1987	13,434	2,008,713	361,228	412,308
Manufacturing Gross Receipts with Paid Employees 1987	21,874	3,382,903	571,309	715,815
Wholesale Trade Gross Receipts with Paid Employees 1987	24,074	6,527,457	792,385	1,118,574
Retail Trade Gross Receipts with Paid Employees 1987	138,504	5,866,959	1,338,793	1,285,899
Services Gross Receipts with Paid Employees 1987	17,935	5,140,910	744,280	990,453
Total Number of Employees of WOB 1982	3,177	155,368	26,560	29,051
Construction Employees of WOB 1982	41	4,947	1,102	1,265
Manufacturing Employees of WOB 1982	50	13,058	1,832	2,563
Wholesale Trade Employees of WOB 1982	42	4,864	973	1,045
Retail Trade Employees of WOB 1982	1,040	63,612	10,483	11,054
Services Employees of WOB 1982	972	59,105	9,502	11,213

Table 4. (continued)

Variable Name	Range		Mean	Standard Deviation
	Low	High		
Total Number of Employees of WOB 1987	7,101	311,273	60,836	64,614
Construction Employees of WOB 1987	190	18,973	3,536	3,995
Manufacturing Employees of WOB 1987	233	38,373	6,879	8,526
Wholesale Trade Employees of WOB 1987	72	23,443	3,667	4,451
Retail Trade Employees of WOB 1987	2,058	106,547	21,384	20,814
Services Employees of WOB 1987	2,083	117,018	19,921	22,419
Total Men-Owned Businesses 1982	16,059	996,190	150,168	171,029
Total Men-Owned Businesses 1987	18,257	1,249,431	188,317	216,881
Total Gross Receipts Men-Owned Businesses 1982 (\$1,000)	1,183,993	79,912,112	12,624,546	16,505,663
Total Gross Receipts Men-Owned Businesses 1987 (\$1,000,000)	2,911	215,379	33,660	42,378
Total U.S. Firms 1982	22,283	1,392,484	206,725	236,855
Total U.S. Firms 1987	29,244	1,809,252	268,154	310,495
Total Gross Receipts U.S. Firms 1982 (\$1,000)	1,379,629	88,264,576	14,551,442	18,691,169
Total Gross Receipts U.S. Firms 1987 (\$1,000,000)	3,435	246,406	39,113	48,836

Source: U.S. Department of Commerce, Bureau of the Census, Women-Owned Businesses, 1982 and 1987 and Trott et al., "Gross State Product by Industry," Survey of Current Business, December 1991, pp. 43-58.

lowest GSP in 1982 was Vermont (\$5.8 billion) and the highest was California (\$374 billion); the mean was \$59,944 (Table 5). In 1987, two states South Dakota and Vermont reported less than \$10 billion in GSP; there was a difference of \$204.2 billion dollars between the highest state (California) and the second highest (New York) in GSP; the mean was \$87,813.

Data Restrictions

According to the 1987 U.S. Department of Commerce's Women-Owned Businesses report, the increase in businesses owned by women during the 1980s was startling. However, at least part of the increase can be attributed to a change in the Internal Revenue

Table 5. Summary statistics across states for independent variables

Variable Name	Range		Mean	Standard Deviation
	Low	High		
Total Gross State Product by State 1982 (\$1,000,000)	5,225	374,086	59,944	71,269
Manufacturing Gross State Product 1982	285	71,189	12,444	14,666
Construction Gross State Product 1982	227	15,246	2,762	3,117
Wholesale Trade Gross State Product 1982	308	26,348	4,294	5,505
Retail Trade Gross State Product 1982	581	38,161	5,636	6,691
Services Gross State Product 1982	775	66,589	9,135	12,122
Total Gross State Product by State 1987 (\$1,000,000)	9,777	589,311	87,813	105,931
Manufacturing Gross State Product 1987	373	105,827	17,167	20,065
Construction Gross State Product 1987	338	27,686	4,294	5,110
Wholesale Trade Gross State Product 1987	322	38,655	5,779	7,534
Retail Trade Gross State Product 1987	700	57,168	8,359	9,969
Services Gross State Product 1987	899	119,870	15,574	21,283
U.S. Population by State 1982 (1,000)	446	24,780	4,549	4,847
U.S. Population by State 1987 (1,000)	490	27,653	4,772	5,209

Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, 1982 and 1987 and Trott et al., "Gross State Product by Industry," Survey of Current Business, December 1991, pp. 43-58.

Service (IRS) regulations that gave tax advantages to business firms filing as subchapter S corporations. This resulted in artificial increases in total women-owned firms as well as women-owned subchapter S firms because other corporations are not included in the survey universe conducted by the Bureau of the Census. In A Status Report to Congress: Statistical Information on Women in Business (1990b:Executive Summary), the U.S. SBA stated:

However, the census data do not include regular corporations owned by women. The Federal Reserve Board of Governors, with SBA cooperation, conducted a large survey--the National Survey of Small Business Finances (NSSBF)--to collect information on the financial structure of small businesses. According to the NSSBF, there were 184,103 regular corporations owned by women in 1987, with total receipts of approximately \$198.8 billion.

The combined Women-Owned Businesses and the NSSBF data reveal that in 1987, there were approximately 4.3 million businesses with total receipts of \$476.9 billion. This reflects an approximate 285,000 increase in the number of firms reported in the 1987 economic census and slightly less than \$2 billion dollars in additional gross receipts.

An additional comparability factor should be noted regarding the 1982 and 1987 census data. The U.S. Department of Commerce's, Women-Owned Businesses report (1990:VI) stated:

The Women-Owned Businesses survey is a relatively recent data series, and survey methodology is still evolving. The Census Bureau tries to balance the need for time series data with the need for accurate current data and when possible, to adjust prior data in order to facilitate comparisons.

Two major changes should be recognized regarding the data. First, the 1982 survey included any firm filing a business tax return with receipts greater than zero. In 1987, a firm was included only if it had business receipts of \$500 or more. Second, in 1982, a large number of businesses were coded by the IRS into miscellaneous categories rather than into specific kinds of principle industrial activities. New procedures were implemented in 1987 to correct the coding problems but normal caution should be exercised when making comparisons with

previous data by industry. Finally, comparability between the 1982 and 1987 Characteristics of Business Owners and Women-Owned Businesses for those same years should also be viewed under the venue of a new social phenomenon accompanied by a developing methodology. Factors that affect comparability of data across censuses include industrial scope, business unit covered, receipt size, and coverage of nonemployers.

Because of undercounts, economic census data has been criticized as a research tool. However, this criticism in a study of this nature is largely irrelevant as long as the undercount is random across populations. Because most secondary data sources on business ownership undercount in a similar manner, the relational measures will not be significantly altered despite any numerical shortage.

CHAPTER 4: FINDINGS

Gains occurred in the total number of U.S. businesses, as well as those owned by both women and men from 1982 to 1987 (Table 6). For women, increases of at least 50 percent occurred in 13 states. Only two states (New Hampshire, Rhode Island) had changes of this magnitude for men.

Between 1982 and 1987, New Hampshire had the highest percentage gains in each of the three groups of businesses reported in Table 6. Among women, this increase was 75.0 percent, while for men the gain was 57.2 percent. All states reported increases in women-owned businesses; only four increased by less than 25 percent, with change in the District of Columbia (+11.9%) the lowest. Four areas (Arkansas, District of Columbia, Hawaii, Wyoming), however, had fewer businesses owned by men in 1987 than in 1982; the decline of 8.2 percent in Hawaii was the most negative.

Men-owned businesses increased at lower percentage rates than those owned by women in all states. The gap in percentage change between women- and men-owned businesses varied from fewer than 10 percentage points in four states to more than 25 points in eight others. The state with the lowest percentage gap was Mississippi (5.4%), followed by Illinois (8.4%), Montana (9.2%), and West Virginia (9.7%). There were two states with a gap of more than 40 percentage points—Maryland (45.1%) and Arkansas (40.2%).

Although women-owned firms are increasing at a higher rate than men-owned businesses, the gains do not translate into higher actual dollars earned (Table 7). In 16 states, both men- and women-owned businesses showed an increase in gross receipts of 200 percent or higher between 1982 and 1987. For women-owned firms, Massachusetts was the leader reporting a 526.6 percent increase; for men-owned firms New Hampshire reported a percentage increase of 490.4 (Table 7). However, women-owned firms' dollar increase was \$9.4 billion while it was \$38.2 billion for men.

Table 6. Women-owned, men-owned, and all U.S. businesses by state, 1982 - 1987

State	Women-Owned Businesses			Men-Owned Businesses			All U.S. Businesses		
	1982	1987	% Change	1982	1987	% Change	1982	1987	% Change
Alabama	33,576	48,018	43.0	98,953	130,101	31.5	132,529	178,119	34.4
Alaska	10,544	13,976	32.5	32,484	34,808	7.2	43,028	48,784	13.4
Arizona	39,790	60,587	52.3	100,591	131,341	30.6	140,381	191,908	36.7
Arkansas	26,603	35,469	33.3	106,660	99,297	-6.9	133,263	134,766	1.1
California	396,294	559,821	41.3	996,190	1,249,431	25.4	1,392,484	1,809,252	29.9
Colorado	64,675	89,411	38.2	146,162	173,156	18.5	210,837	262,597	24.5
Connecticut	38,237	60,924	59.3	97,970	135,613	38.4	136,207	196,537	44.3
Delaware	6,224	9,727	56.3	16,059	21,252	32.3	22,283	30,976	39.0
District of Columbia	9,821	10,987	11.9	19,583	18,257	-6.8	29,404	29,244	-0.5
Florida	136,145	221,361	62.6	359,041	514,449	43.3	495,186	735,810	48.6
Georgia	58,053	88,050	51.7	155,911	217,332	39.4	213,964	305,382	42.7
Hawaii	16,821	21,696	29.0	42,714	39,232	-8.2	59,535	60,928	2.3
Idaho	15,247	18,973	24.4	45,081	49,033	8.8	60,328	68,006	12.7
Illinois	121,295	177,057	46.0	319,832	440,015	37.6	441,127	573,973	30.1
Indiana	69,218	89,949	30.0	179,054	205,021	14.5	248,272	294,970	18.8
Iowa	40,308	53,592	33.0	104,772	120,529	15.0	145,080	174,121	20.0
Kansas	41,025	53,505	30.4	104,183	116,088	11.4	145,207	169,593	16.8
Kentucky	39,887	53,454	34.0	115,992	140,352	21.0	155,879	193,806	24.3
Louisiana	41,431	55,852	34.8	127,031	148,871	17.2	168,462	204,723	21.5
Maine	15,871	23,922	50.7	50,630	64,286	27.0	66,501	88,208	32.6
Maryland	53,801	81,891	52.2	132,748	142,180	7.1	186,549	224,071	20.1
Massachusetts	68,108	111,376	63.5	181,452	245,404	35.2	249,560	356,780	43.0
Michigan	96,865	133,958	38.3	248,028	292,698	18.0	344,893	426,656	23.7
Minnesota	63,098	88,137	39.7	158,720	192,112	21.0	221,818	280,249	26.3
Mississippi	21,724	28,976	33.4	65,057	83,269	28.0	86,781	112,245	29.3
Missouri	58,879	87,658	48.9	158,788	205,473	29.4	218,667	293,131	34.1

Table 6. (continued)

State	Women-Owned Businesses			Men-Owned Businesses			All U.S. Businesses		
	1982	1987	% Change	1982	1987	% Change	1982	1987	% Change
Montana	14,497	17,474	20.5	41,189	45,876	11.4	55,686	63,623	14.3
Nebraska	25,562	32,285	26.3	68,216	70,526	3.4	93,778	102,811	9.6
Nevada	13,040	18,831	44.4	31,538	40,953	29.9	44,578	59,784	34.1
New Hampshire	12,909	22,713	75.9	36,287	57,058	57.2	49,196	79,771	62.1
New Jersey	67,586	117,373	73.7	209,046	289,419	38.4	276,632	406,792	47.1
New Mexico	18,177	25,397	39.7	49,414	56,856	15.1	67,591	82,253	21.7
New York	189,675	284,912	50.2	488,694	645,757	32.1	678,369	930,669	37.2
North Carolina	62,801	93,532	48.9	172,580	235,851	36.7	235,381	329,373	39.9
North Dakota	9,744	25,397	30.2	27,789	30,028	8.1	37,563	42,717	13.7
Ohio	114,938	154,084	34.1	311,820	367,038	17.7	426,758	521,122	22.1
Oklahoma	53,958	63,690	18.0	153,187	159,986	4.4	207,145	223,676	8.0
Oregon	46,201	58,941	27.6	114,691	126,210	10.0	160,892	185,151	15.1
Pennsylvania	115,264	167,362	45.2	339,351	428,291	26.2	454,615	595,653	31.0
Rhode Island	8,627	14,517	68.3	24,817	38,263	54.2	33,444	52,780	57.8
South Carolina	29,339	42,604	45.2	80,160	106,586	33.0	109,499	149,190	36.2
South Dakota	10,486	13,374	27.5	31,170	34,455	10.5	41,656	47,829	14.8
Tennessee	48,659	67,488	38.7	145,070	183,807	26.7	193,729	251,255	29.7
Texas	220,221	298,138	35.4	614,048	727,479	18.5	834,269	1,025,617	22.9
Utah	21,921	29,810	36.0	68,630	70,376	2.5	90,551	100,186	10.6
Vermont	8,742	13,802	57.9	23,705	31,441	32.6	32,447	45,243	39.4
Virginia	63,304	94,416	49.1	156,290	203,125	30.0	219,594	297,541	35.5
Washington	67,612	90,285	33.5	168,303	195,939	16.4	235,915	286,224	21.3
West Virginia	17,058	22,549	32.2	45,301	55,477	22.5	62,359	78,026	25.1
Wisconsin	50,087	69,185	38.1	142,007	170,000	19.7	192,094	239,185	24.5
Wyoming	9,462	10,796	14.1	24,213	23,777	-1.8	33,675	34,573	2.7
United States	2,884,450	4,114,787	42.7	7,731,202	9,604,174	25.4	10,615,641	13,675,879	30.1

Source: U.S. Department of Commerce, Bureau of the Census, Women-Owned Businesses, 1982 and 1987 and U.S. Department of Commerce, Bureau of the Census, Characteristics of Business Owners, 1982 and 1987.

Table 7. Gross receipts of women-owned, men-owned, and all U.S. businesses, 1982 - 1987

State	Women-Owned Businesses			Men-Owned Businesses			All U.S. Businesses		
	1982	1987	% Change	1982	1987	% Change	1982	1987	% Change
Alabama	1,267,621	3,624,355	185.9	9,882,103	22,895,000	131.7	11,149,724	26,519,000	137.8
Alaska	378,943	829,326	118.9	1,916,690	4,154,000	116.7	2,295,633	4,983,000	117.1
Arizona	1,027,306	2,910,886	183.4	5,216,861	19,787,000	279.3	6,244,167	22,698,000	263.5
Arkansas	1,069,343	2,007,652	87.7	8,316,140	11,731,000	41.1	9,385,483	13,739,000	46.4
California	12,022,899	31,026,855	158.1	74,515,067	215,379,000	189.0	86,537,966	246,406,000	184.7
Colorado	1,829,435	4,260,547	132.9	8,245,259	22,757,000	176.0	10,074,694	27,018,000	168.2
Connecticut	1,401,205	5,319,710	279.7	7,118,438	29,704,000	317.3	8,519,643	35,024,000	311.1
Delaware	195,636	753,238	285.0	1,183,993	3,909,000	230.2	1,379,629	4,662,000	237.9
District of Columbia	333,941	774,019	131.8	2,104,903	5,735,000	172.5	2,438,844	6,509,000	166.9
Florida	4,788,745	16,828,094	251.4	31,090,637	82,461,000	165.2	35,879,382	99,289,000	176.7
Georgia	1,847,866	5,873,682	217.9	10,854,370	42,944,000	295.6	12,702,236	48,818,000	284.3
Hawaii	356,498	856,930	140.4	3,197,065	5,665,000	77.2	3,553,563	6,522,000	83.5
Idaho	427,487	813,043	90.2	3,233,855	5,711,000	76.6	3,661,342	6,524,000	78.2
Illinois	4,566,694	13,884,278	204.0	30,279,322	85,263,000	181.6	34,846,016	99,147,000	184.5
Indiana	3,191,676	8,913,422	179.3	16,354,612	41,759,000	155.3	19,546,288	50,672,000	159.2
Iowa	1,136,994	2,904,611	155.5	8,832,213	15,294,000	73.2	9,969,207	18,199,000	82.6
Kansas	1,234,950	2,660,785	115.5	6,377,665	14,425,000	126.2	7,612,615	17,086,000	124.4
Kentucky	1,582,634	3,265,168	106.3	7,559,200	19,467,000	157.5	9,141,834	22,732,000	148.7
Louisiana	2,200,975	2,961,708	34.6	14,188,794	18,511,000	30.5	16,389,769	21,473,000	31.0
Maine	420,461	1,634,638	288.8	2,718,155	8,772,000	222.7	3,138,616	10,407,000	231.6
Maryland	1,529,902	5,508,587	260.1	10,082,421	35,883,000	255.9	11,612,323	41,392,000	256.4
Massachusetts	1,777,802	11,139,810	526.6	17,068,542	55,224,000	223.5	18,846,344	66,364,000	252.1
Michigan	2,789,692	7,889,112	182.8	19,709,647	56,011,000	184.2	22,499,339	63,900,000	184.0
Minnesota	1,750,867	4,991,493	185.1	10,141,028	29,861,000	194.5	11,891,895	34,852,000	193.1
Mississippi	954,839	2,062,007	116.0	5,244,104	11,033,000	110.4	6,198,943	13,095,000	111.2
Missouri	1,989,406	5,349,139	168.9	11,332,238	32,549,000	187.2	13,321,644	37,898,000	184.5

Table 7. (continued)

State	Women-Owned Businesses			Meni-Owned Businesses			All U.S. Businesses		
	1982	1987	% Change	1982	1987	% Change	1982	1987	% Change
Montana	499,100	930,377	86.4	2,652,562	4,691,000	76.8	3,151,662	5,621,000	78.4
Nebraska	716,683	1,649,048	130.1	4,283,393	10,378,000	142.3	5,000,076	12,027,000	197.3
Nevada	450,174	1,413,558	214.0	2,891,456	8,519,000	194.6	3,341,630	9,933,000	470.6
New Hampshire	391,716	1,857,769	374.3	1,901,283	11,225,000	490.4	2,292,999	13,083,000	315.9
New Jersey	3,573,040	13,553,517	279.3	19,055,611	80,557,000	322.7	22,628,651	94,111,000	92.5
New Mexico	575,980	1,166,312	102.5	3,206,724	6,116,000	90.7	3,782,704	7,282,000	136.0
New York	8,352,464	29,969,920	258.8	79,912,112	178,333,000	123.2	88,264,576	208,303,000	235.3
North Carolina	1,859,606	6,813,158	266.4	11,666,918	38,544,000	230.4	13,526,524	45,357,000	52.5
North Dakota	340,081	571,701	68.1	2,366,746	3,556,000	50.2	2,706,827	4,128,000	226.0
Ohio	3,615,026	8,872,169	145.4	18,529,404	63,316,000	241.7	22,144,430	72,188,000	47.8
Oklahoma	2,123,012	2,947,868	38.9	11,132,425	16,644,000	49.5	13,255,437	19,592,000	172.7
Oregon	1,357,284	4,279,167	215.3	6,752,646	17,834,000	164.1	8,109,930	22,113,000	148.7
Pennsylvania	4,186,425	13,339,231	218.6	42,527,437	102,828,000	141.8	46,713,862	116,167,000	397.9
Rhode Island	270,337	1,340,182	395.7	1,747,887	8,708,000	398.2	2,018,224	10,048,000	187.0
South Carolina	983,220	2,949,555	200.0	5,480,795	15,602,000	184.7	6,464,015	18,552,000	105.3
South Dakota	368,044	726,047	97.3	2,132,727	4,409,000	106.7	2,500,771	5,135,000	143.8
Tennessee	1,707,491	4,226,269	147.5	12,200,148	29,687,000	143.3	13,907,639	33,913,000	102.5
Texas	8,074,340	13,384,958	65.8	48,989,683	102,175,000	108.6	57,064,023	115,560,000	101.0
Utah	644,597	1,392,426	116.0	4,276,697	8,502,000	98.8	4,921,294	9,894,000	237.7
Vermont	266,796	766,092	187.1	1,270,586	4,425,000	248.3	1,537,382	5,191,000	258.7
Virginia	1,753,387	5,951,516	239.4	9,750,996	35,309,000	262.1	11,504,383	41,261,000	209.8
Washington	1,598,681	4,689,046	193.3	10,302,793	32,183,000	212.4	11,901,474	36,872,000	78.7
West Virginia	615,651	1,114,228	81.0	3,328,203	5,934,000	78.3	3,943,854	7,048,000	206.1
Wisconsin	1,562,095	4,667,000	198.8	8,913,630	27,401,000	207.4	10,475,725	32,068,000	61.4
Wyoming	312,466	523,908	67.7	1,815,846	2,911,000	60.3	2,128,312	3,435,000	168.3
United States	98,271,513	278,138,117	182.8	645,173,945	1,716,670,000	166.1	741,465,528	1,994,808,000	169.9

Source: U.S. Department of Commerce, Bureau of the Census, Women-Owned Businesses, 1982 and 1987 and U.S. Department of Commerce, Bureau of the Census, Characteristics of Business Owners, 1982 and 1987.

This pattern reflects a regional trend, primarily in New England, that suggests a higher growth rate for entrepreneurship in general and specifically women-owned firms. By comparison, in 1987 the Pacific region (Washington, Oregon, California, Alaska, Hawaii) had the largest number of women-owned firms (744,719) of which most were concentrated in California; this region had nearly three times the number in New England (247,254). However, Pacific states have not consistently reported the highest growth rate for women-owned businesses.

For men, the highest growth rates in gross receipts have also been in the New England region, but not as exclusively as for women. New Hampshire, for instance, was the leader in percent growth of gross receipts for men-owned businesses; second- and third-ranked Rhode Island and Connecticut reported 398.2 percent and 317.3 percent increases, respectively, followed by Georgia (295.6%) and Arizona (279.3%).

Historically, women-owned firms with paid employees have represented a smaller proportion of the total number of women-owned firms than they have for men. In 1987, "... women-owned firms with paid employees accounted for 15 percent of the total number of firms and 80.5 percent of gross receipts" (U.S. Department of Commerce, 1990). Between 1982 and 1987, the number of women-owned firms with paid employees increased 98.4 percent (Table 8). In 1987, New Hampshire reported the highest increase in the number of firms with paid employees, growing from 1,383 in 1982 to 3,885 in 1987 (or 181 percent). Further, the number of employees of women-owned firms in that state increased 273 percent while gross receipts grew 521 percent. Louisiana reported the lowest percent changes in all three categories. Once again, the net increases were dominated by the New England states, although Alaska and Arizona, which represent less than 2 percent of all women-owned firms in the United States, are ranked third and fifth respectively in the number of women-owned firms with paid employees.

Table 8. Women-owned firms with paid employees, number of employees, and gross receipts by state, 1982 - 1987

State	Number of Firms with Paid Employees			Number of Employees			Gross Receipts of Firms		
	1982	1987	% Change	1982	1987	% Change	1982	1987	% Change
Alabama	4,621	9,184	98.7	17,737	43,141	143.2	841,508	3,037,188	260.9
Alaska	790	1,929	144.2	3,552	7,215	103.1	228,348	617,879	170.6
Arizona	3,779	8,947	136.8	15,385	37,881	146.2	633,534	2,192,859	246.1
Arkansas	3,699	6,415	73.4	14,318	25,392	77.3	755,959	1,607,384	112.6
California	35,851	73,164	104.1	155,368	311,273	100.3	7,009,232	21,997,497	213.8
Colorado	6,133	12,750	107.9	27,287	53,798	97.2	1,180,676	3,277,813	177.6
Connecticut	4,405	9,277	110.6	20,107	51,495	156.1	907,812	4,237,344	366.8
Delaware	821	1,782	117.1	3,177	9,617	202.7	133,697	602,687	350.8
District of Columbia	760	1,230	61.8	4,296	8,343	94.2	201,094	584,863	190.8
Florida	16,755	39,496	135.7	73,234	195,448	166.9	3,189,404	13,562,428	325.2
Georgia	6,821	14,459	112.0	24,712	67,749	174.2	1,615,443	4,654,107	188.1
Hawaii	1,248	2,404	92.6	5,538	9,548	72.4	206,581	546,087	164.3
Idaho	1,557	3,076	97.6	6,203	10,448	68.4	294,972	639,282	116.7
Illinois	13,380	25,464	90.3	62,506	149,164	138.6	3,240,264	11,607,789	258.2
Indiana	9,210	16,571	79.9	52,084	115,173	121.1	2,609,757	8,006,788	206.8
Iowa	4,784	8,600	79.8	17,691	41,037	132.0	786,432	2,486,473	216.2
Kansas	4,091	7,182	75.6	16,428	31,015	88.8	800,062	2,154,908	169.3
Kentucky	4,888	8,595	75.8	19,258	40,767	111.7	1,115,779	2,648,483	137.4
Louisiana	5,277	8,386	58.9	28,435	36,306	27.7	1,621,630	2,269,000	39.9
Maine	1,693	4,003	136.4	5,505	20,711	276.2	267,196	1,368,098	412.0
Maryland	4,797	10,288	114.5	21,391	61,829	189.0	1,015,263	4,416,225	335.0
Massachusetts	5,459	13,885	154.4	26,304	107,865	310.1	1,020,693	9,455,887	826.4
Michigan	10,507	18,565	76.7	42,768	92,533	116.4	1,873,957	6,375,374	240.2
Minnesota	6,087	12,368	103.2	28,796	65,034	125.8	1,206,004	4,072,685	237.7
Mississippi	3,597	6,109	69.8	12,407	24,279	95.7	645,737	1,695,149	162.5
Missouri	6,900	13,458	95.0	30,110	64,403	113.9	1,382,900	4,452,869	222.0

Table 8. (continued)

State	Number of Firms with Paid Employees			Number of Employees			Gross Receipts of Firms		
	1982	1987	% Change	1982	1987	% Change	1982	1987	% Change
Montana	1,825	3,256	78.4	7,320	12,538	71.3	363,201	754,356	107.7
Nebraska	2,889	5,048	74.7	11,264	21,442	90.4	506,285	1,361,036	168.8
Nevada	1,321	2,869	117.2	7,144	17,546	145.6	311,324	1,147,722	268.7
New Hampshire	1,383	3,885	180.9	5,371	20,036	273.0	248,762	1,544,697	521.0
New Jersey	8,997	19,389	115.5	40,681	124,665	206.4	2,691,238	11,470,775	326.2
New Mexico	2,283	4,182	83.2	8,953	15,592	74.2	377,788	907,012	140.1
New York	21,290	43,729	105.4	104,774	268,070	155.9	5,697,566	25,172,731	341.8
North Carolina	7,481	15,166	102.7	27,407	85,825	213.1	1,227,741	5,698,499	364.1
North Dakota	1,209	2,268	87.6	4,805	8,526	77.4	262,364	475,712	81.3
Ohio	12,180	22,007	80.7	52,440	116,798	122.7	2,547,380	7,220,878	183.5
Oklahoma	5,050	8,609	70.5	22,897	35,516	55.1	1,256,644	2,206,514	75.6
Oregon	5,111	9,529	86.4	21,555	46,222	114.4	943,009	3,657,505	287.9
Pennsylvania	13,653	25,631	87.7	61,676	147,109	138.5	2,810,334	11,067,283	293.8
Rhode Island	1,031	2,488	141.3	4,082	15,667	283.8	164,889	1,123,399	581.3
South Carolina	3,760	7,524	100.1	12,209	37,934	210.7	644,700	2,383,926	269.8
South Dakota	1,246	2,233	79.2	4,566	9,800	114.6	271,694	618,391	127.6
Tennessee	6,254	11,168	78.6	22,641	51,353	126.8	1,136,236	3,370,530	196.6
Texas	21,026	40,421	92.2	90,878	143,861	58.3	4,933,288	9,716,787	97.0
Texas	1,684	3,885	130.7	9,139	18,478	102.2	463,356	1,093,769	136.1
Utah	1,093	2,508	129.5	3,696	10,277	178.1	166,352	618,480	271.8
Virginia	6,335	13,755	117.1	28,327	72,866	157.2	1,205,072	4,783,510	296.9
Washington	6,409	13,218	106.2	24,315	56,993	134.4	1,023,850	3,733,756	264.7
West Virginia	2,297	3,668	59.7	8,565	14,567	70.1	441,375	890,779	101.8
Wisconsin	6,788	12,192	79.6	30,550	62,419	104.3	1,108,416	3,998,151	260.7
Wyoming	1,227	1,993	62.4	4,735	7,101	50.0	210,973	422,874	100.4
United States	311,732	618,208	99.0	1,354,587	3,102,665	132.9	65,797,771	224,006,218	239.5

Source: U.S. Department of Commerce, Bureau of the Census, Women-Owned Businesses, 1982 and 1987.

The states representing the highest in gross receipts for women-owned firms with paid employees in 1987 did not reflect the highest percentage changes. The top five states included all of the New England states except Vermont. Although Texas ranked second in the number of women-owned firms within its borders (298,138) in 1987, the number of these with paid employees (40,421) and total gross receipts of those firms (\$9.6 billion) were lower than would normally have been expected within this category. Texas' boom or bust (especially in the oil industry) economic tradition may reflect the stability/instability concept in a local or regional economy and the historical path that the economy has followed.

Massachusetts had a 310.1 percent increase in the number of employees of women-owned businesses followed by Rhode Island (283.8%), Maine (276.2%), North Carolina (213.1%), and South Carolina (210.7%) (Table 8). Notably, the states in the New England region represent the highest increase in number of employees. Five states reported less than a 70 percent change.

Increases in the five industrial categories examined extends insight into the growth of women-owned firms and their receipts. The first-ranked states in percentage change in the number of firms of each of the categories are spread across the nation: New Mexico in manufacturing (296.8%), New Hampshire in construction (178.3%), North Carolina in wholesale trade (324.0%), New Jersey in retail (52.0%), and Minnesota in services (109.9%) (Table 9). Across the five industrial categories represented, changes reflect higher increases in nontraditional categories for women-owned firms and only moderate increases for retail and service businesses. Within all categories, the percent changes generally are upward across states; however, 18 areas lost women-owned businesses in three of the five categories. The District of Columbia (-5.2%) lost manufacturing firms and Minnesota (-96.0%), Missouri (-82.9%), and Wyoming (-5.0%) lost construction firms while 14 states lost retail businesses. The loss in retail firms was across the country and ranged from Oregon

Table 9. Percent change in number of firms and gross receipts of selected industrial categories by state, 1982 - 1987

State	Number of firms in industrial categories				Gross receipts of industrial categories					
	Construction	Manufacturing	Wholesale Trade	Retail	Services	Construction	Manufacturing	Wholesale Trade	Retail	Services
Alabama	145.6	237.5	91.0	28.5	47.5	390.4	424.4	468.3	118.9	105.0
Alaska	29.4	35.7	235.4	4.3	53.6	92.2	127.4	219.0	151.6	74.8
Arizona	66.0	41.8	252.8	4.0	84.0	365.9	349.0	207.9	178.2	170.7
Arkansas	59.0	181.7	144.9	27.6	47.4	198.4	389.9	78.9	68.3	63.0
California	23.4	55.9	293.6	-4.8	62.1	254.3	395.7	423.1	107.2	129.7
Colorado	19.2	28.1	243.7	-9.7	-90.1	155.6	259.9	342.4	87.9	-85.3
Connecticut	114.3	87.3	8.0	26.4	76.7	754.6	555.2	436.5	237.4	176.2
Delaware	79.6	90.2	106.6	18.0	78.1	588.5	1,014.9	2,077.7	220.3	196.4
District of Columbia	-46.9	-5.2	97.8	-36.7	27.8	141.4	515.7	272.1	97.4	182.9
Florida	131.9	156.1	128.4	29.5	79.7	425.9	578.6	377.6	248.5	164.6
Georgia	171.5	159.6	130.0	14.7	61.9	564.8	589.4	324.1	163.1	151.4
Hawaii	31.9	112.9	213.2	-7.3	49.7	197.8	431.5	411.6	96.9	153.1
Idaho	25.1	31.1	170.2	-6.2	47.3	133.3	461.7	65.4	83.7	80.2
Illinois	50.3	98.3	194.7	6.4	58.6	378.7	756.8	398.5	136.0	122.5
Indiana	45.5	95.4	156.4	-1.0	51.8	210.2	297.3	186.8	178.6	138.2
Iowa	20.5	146.3	151.6	4.6	48.2	-97.9	1,326.5	350.0	98.9	98.9
Kansas	28.1	186.7	175.9	16.3	45.5	255.1	134.3	258.7	155.4	95.6
Kentucky	43.3	69.1	246.4	5.5	54.7	459.7	170.3	288.4	75.3	56.5
Louisiana	34.3	164.0	212.4	22.2	57.9	-2.7	73.7	36.5	57.2	70.9
Maine	116.8	112.0	20.8	28.1	69.2	883.2	1,388.6	308.8	196.1	207.2
Maryland	59.9	137.3	163.8	1.1	73.8	568.5	521.4	555.2	166.1	211.0
Massachusetts	123.5	90.9	17.2	31.8	78.6	1,188.6	690.7	2,274.3	669.7	229.2
Michigan	45.7	136.9	259.1	3.3	52.8	409.7	564.5	350.9	131.6	106.6
Minnesota	-96.1	56.8	257.2	-15.4	109.9	493.4	1,005.1	1,076.8	506.1	361.8
Mississippi	105.5	134.2	81.8	27.9	34.7	462.7	671.1	275.1	65.4	61.4
Missouri	-82.9	155.0	198.7	13.2	56.5	456.5	409.3	179.1	160.8	90.3

Table 9. (continued)

State	<u>Number of firms in industrial categories</u>				<u>Gross receipts of industrial categories</u>					
	Construction	Manufacturing	Wholesale Trade	Retail	Services	Construction	Manufacturing	Wholesale Trade	Retail	Services
Montana	10.3	28.3	227.2	-4.5	38.5	54.5	97.4	131.1	87.1	79.9
Nebraska	12.2	-4.8	141.0	-5.9	47.9	190.3	332.8	362.1	62.8	96.0
Nevada	48.2	44.9	257.4	-0.9	70.2	356.5	197.3	711.4	111.3	218.2
New Hampshire	178.4	101.5	11.6	44.7	88.1	777.4	1,319.7	253.7	435.4	184.5
New Jersey	83.2	68.1	32.0	52.0	93.3	629.1	614.4	244.2	228.0	225.8
New Mexico	53.6	296.8	231.1	16.9	64.0	225.7	32.1	398.7	101.7	93.9
New York	70.9	38.4	22.7	35.6	72.6	484.6	372.6	546.9	203.2	163.1
North Carolina	85.8	140.7	324.0	13.7	65.1	567.6	956.3	414.3	148.6	177.3
North Dakota	27.8	13.4	121.6	0.5	52.9	231.0	138.7	6.2	63.6	92.8
Ohio	37.7	152.0	311.3	5.3	38.8	336.1	919.6	605.3	43.2	106.8
Oklahoma	9.0	172.0	160.0	14.9	45.0	70.4	265.4	81.7	65.2	35.7
Oregon	12.6	47.7	199.0	-17.1	55.2	281.4	465.6	972.9	84.8	137.8
Pennsylvania	56.3	161.1	185.9	19.0	58.0	601.1	674.9	510.8	133.7	143.0
Rhode Island	133.3	118.1	-0.8	40.5	83.2	1,516.4	1,522.5	243.8	425.3	198.9
South Carolina	137.7	116.7	76.8	32.8	49.0	413.7	676.5	276.4	141.8	117.9
South Dakota	31.8	21.3	99.0	-0.9	49.8	425.9	411.1	-1.5	113.6	91.9
Tennessee	56.1	92.9	283.5	5.2	58.3	274.5	350.3	592.7	84.4	136.7
Texas	26.6	241.2	274.3	17.3	62.1	72.7	182.5	169.1	70.9	72.7
Utah	43.7	37.6	270.3	5.2	48.8	165.7	108.5	170.8	54.7	132.7
Vermont	136.2	141.0	22.9	31.2	75.9	555.0	146.7	264.4	152.4	208.4
Virginia	68.5	82.5	244.5	7.3	71.0	957.9	584.6	399.0	215.0	159.3
Washington	24.8	33.4	255.1	-13.1	63.1	423.2	1,160.5	347.2	99.8	139.3
West Virginia	26.9	74.5	116.5	9.9	54.0	125.4	258.9	109.6	62.8	86.0
Wisconsin	30.0	143.3	78.1	11.0	52.0	747.5	659.2	866.3	86.8	108.4
Wyoming	-5.1	18.4	105.4	-8.7	29.5	4.8	346.6	153.8	91.5	32.6
United States	2,740.7	5,176.5	8,302.1	543.9	2,903.9	20,417.2	26,897.9	21,074.5	7,824.2	6,652.7

Source: U.S. Department of Commerce, Bureau of the Census, Women-Owned Businesses, 1982 and 1987 and U.S. Department of Commerce, Bureau of the Census, Characteristics of Business Owners, 1982 and 1987.

(-17.0%) to South Dakota (-0.9%). The decreases in retail firms may partially account for the decline in the total number of retail firms (Table 1).

The New England states demonstrated the highest growth rates in women-owned firms and receipts. This region was present in the top ten states in the percentage change of number of firms in all the categories but one (wholesale trade). New Hampshire ranked first in construction (178.3%), second in retail (44.6%), and third in services (88.1%); Vermont was present in four categories, Massachusetts in three, Maine and Connecticut in two, and Rhode Island in one.

The percentage increases for gross receipts in the five industrial categories were much higher than the number of new firms. Although women-owned retail firms declined in 14 states, there was no decrease in gross receipts within that group. Minnesota, one of the states losing these firms, ranked second in increase of gross receipts in the retail category.

The gains in gross receipts for the industrial categories were spread across the United States. Massachusetts placed in the uppermost ten states in all categories and Delaware and Rhode Island were included in four out of five. New York and Florida placed in three categories.

Within the manufacturing category, Rhode Island topped others at 1522.5 percent (Table 9) while no states lost. In construction, Rhode Island again was the highest in percentage gain (1516.3%) while Iowa (-97.9%) and Louisiana (-2.6%) lost gross receipts. Massachusetts recorded a 2274.3 percent increase in the wholesale trade category and South Dakota was the only state reporting a loss (-1.5%). For retail, Massachusetts again reported the highest gain in gross receipts (669.6%) followed by Minnesota (506.1%), New Hampshire (435.3%), and Rhode Island (425.3%).

Statistical Analysis

Four hypotheses were listed, the first of which involves population and women-owned businesses. It was predicted that states with relatively large populations will have disproportionately more women-owned businesses than would be expected on the basis of their populations alone. Data across the states on the percentage of total population and the percentage of all women-owned businesses are reported in Table 10. A difference score is calculated by subtracting the percentage of total population from the percentage of all women-owned businesses. The result is positive when the proportion of women-owned businesses in a state is greater than the proportion of the nation's population that lives in that state.

Using data for 1982, of the 17 states with at least 2.0 percent of the nation's population, only four (California, Florida, Indiana, Texas) had positive difference scores. The other 13 did not have disproportionate shares of women-owned businesses to the same or a greater degree than they had disproportionate shares of the population. The 1987 results are similar; only five (California, Florida, Massachusetts, Missouri, Texas) of the 15 states each containing at least 2.0 percent of the U.S. population had proportions of women-owned businesses that were greater than their share of the nation's population.

At the other end of the population continuum, of the 19 states with less than 1.0 percent of the country's population in 1982, 15 reported positive difference scores (higher proportions of women-owned businesses than proportions of the total population). The results were the same for 1987.

Of the 14 remaining states and the District of Columbia (those with population between 1.00 and 1.99 percent of U.S. total), nine had higher proportions of women-owned firms than proportions of population in 1982. That number increased to ten in 1987.

Table 10. Percentage of total population and women-owned businesses by state, 1982 - 1987

State	1982			1987		
	% Total Population	% Women-Owned	% Difference	% Total Population	% Women-Owned	% Difference
Alabama	1.70	1.16	-0.54	1.68	1.17	-0.51
Alaska	0.19	0.37	0.17	0.22	0.34	0.12
Arizona	1.24	1.38	0.14	1.40	1.47	0.08
Arkansas	0.99	0.92	-0.07	0.98	0.86	-0.12
California	10.68	13.74	3.06	11.36	13.61	2.24
Colorado	1.32	2.24	0.92	1.35	2.17	0.82
Connecticut	1.35	1.33	-0.02	1.32	1.48	0.16
Delaware	0.26	0.22	-0.04	0.27	0.24	-0.03
District of Columbia	0.27	0.34	0.07	0.26	0.27	0.01
Florida	4.52	4.72	0.20	4.94	5.38	0.44
Georgia	2.44	2.01	-0.42	2.56	2.14	-0.42
Hawaii	0.43	0.58	0.15	0.44	0.53	0.08
Idaho	0.42	0.53	0.11	0.41	0.46	0.05
Illinois	4.95	4.21	-0.74	4.76	4.30	-0.46
Indiana	2.36	2.40	0.04	2.27	2.19	-0.09
Iowa	1.25	1.40	0.15	1.16	1.30	0.14
Kansas	1.04	1.42	0.38	1.02	1.30	0.28
Kentucky	1.59	1.38	-0.21	1.53	1.30	-0.23
Louisiana	1.89	1.44	-0.45	1.83	1.36	-0.47
Maine	0.49	0.55	0.06	0.49	0.58	0.09
Maryland	1.84	1.87	0.02	1.86	1.99	0.13
Massachusetts	2.48	2.36	-0.12	2.41	2.71	0.30
Michigan	3.93	3.36	-0.57	3.78	3.26	-0.53
Minnesota	1.78	2.19	0.41	1.74	2.14	0.40
Mississippi	1.11	0.75	-0.35	1.08	0.70	-0.37
Missouri	2.13	2.04	-0.09	2.10	2.13	0.03

Table 10. (continued)

State	1982			1987		
	% Total Population	% Women-Owned	% Difference	% Total Population	% Women-Owned	% Difference
Montana	0.35	0.50	0.16	0.33	0.42	0.09
Nebraska	0.69	0.89	0.20	0.65	0.78	0.13
Nevada	0.38	0.45	0.07	0.41	0.46	0.04
New Hampshire	0.41	0.45	0.04	0.43	0.55	0.12
New Jersey	3.20	2.34	-0.86	3.15	2.85	-0.30
New Mexico	0.59	0.63	0.04	0.61	0.62	0.00
New York	7.58	6.58	-1.00	7.33	6.92	-0.40
North Carolina	2.59	2.18	-0.42	2.63	2.27	-0.36
North Dakota	0.29	0.34	0.05	0.28	0.31	0.03
Ohio	4.64	3.98	-0.66	4.44	3.74	-0.70
Oklahoma	1.39	1.87	0.48	1.34	1.55	0.21
Oregon	1.15	1.60	0.45	1.12	1.43	0.31
Pennsylvania	5.12	4.00	-1.13	4.91	4.07	-0.84
Rhode Island	0.41	0.30	-0.11	0.41	0.35	-0.05
South Carolina	1.39	1.02	-0.37	1.41	1.04	-0.37
South Dakota	0.30	0.36	0.06	0.29	0.33	0.03
Tennessee	2.01	1.69	-0.32	1.99	1.64	-0.35
Texas	6.63	7.63	1.01	6.89	7.25	0.35
Utah	0.67	0.76	0.09	0.69	0.72	0.03
Vermont	0.22	0.30	0.08	0.22	0.34	0.11
Virginia	2.37	2.19	-0.17	2.43	2.29	-0.14
Washington	1.84	2.34	0.50	1.87	2.19	0.33
West Virginia	0.85	0.59	-0.25	0.78	0.55	-0.23
Wisconsin	2.05	1.74	-0.31	1.97	1.68	-0.29
Wyoming	0.22	0.33	0.11	0.20	0.26	0.06
United States	100.00	100.00		100.00	100.00	

Source: U.S. Department of Commerce, Bureau of the Census, Women-Owned Businesses, 1982 and 1987 and U.S. Department of Commerce, Bureau of the Census, Characteristics of Business Owners, 1982 and 1987.

The difference scores tend to be small in magnitude; and they are not arrayed as predicted. States with smaller proportions of the total population tend to have slightly higher proportions of women-owned businesses, while disproportionately large states do not have percentages of women-owned businesses above the levels of their populations. Some states deviate from these trends, of course, but the results do not support the first hypothesis.

It is evident in Table 10 and Figure 1 that states relatively high on the percentage of the total population of the United States also tend to be relatively high on the percentage of women-owned businesses; the correlation is 0.98, although some outliers affect the magnitude of this coefficient. To examine further the relationship between population and the difference score (percent women-owned businesses of total minus percent population of total), additional scattergrams were constructed and correlations calculated.

First, the difference scores were related to raw population (Figure 2, Table 11). With 51 cases, the relationship is positive but not statistically significant at the 0.05 level in 1982; a correlation of 0.27 significant at the 0.05 level was reported in 1987. Using the scattergram, outliers were identified and subsequently removed from the procedure. In 1982 and 1987, when New York and California are deleted from the correlation there is a statistically significant relationship between population and the difference score; however, the relationship is negative. Therefore, as population increases there are disproportionately fewer firms. In both years, when five states are deleted from the procedure, the coefficients increase in magnitude and are statistically significant at the 0.05 level. However, when eight states are removed from the calculation, the negative relationship decreases slightly.

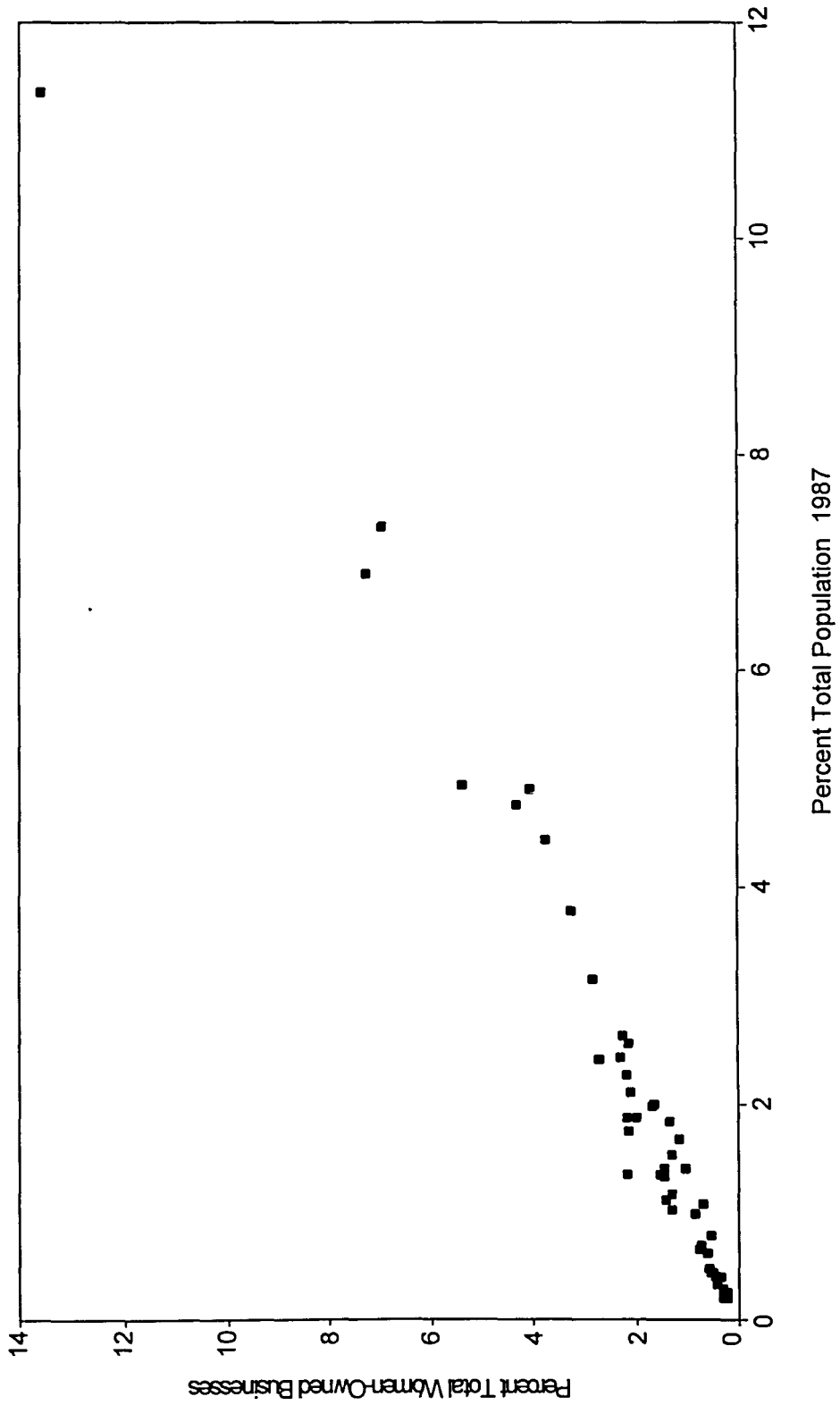


Figure 1. Percent total population and women-owned business, 1987

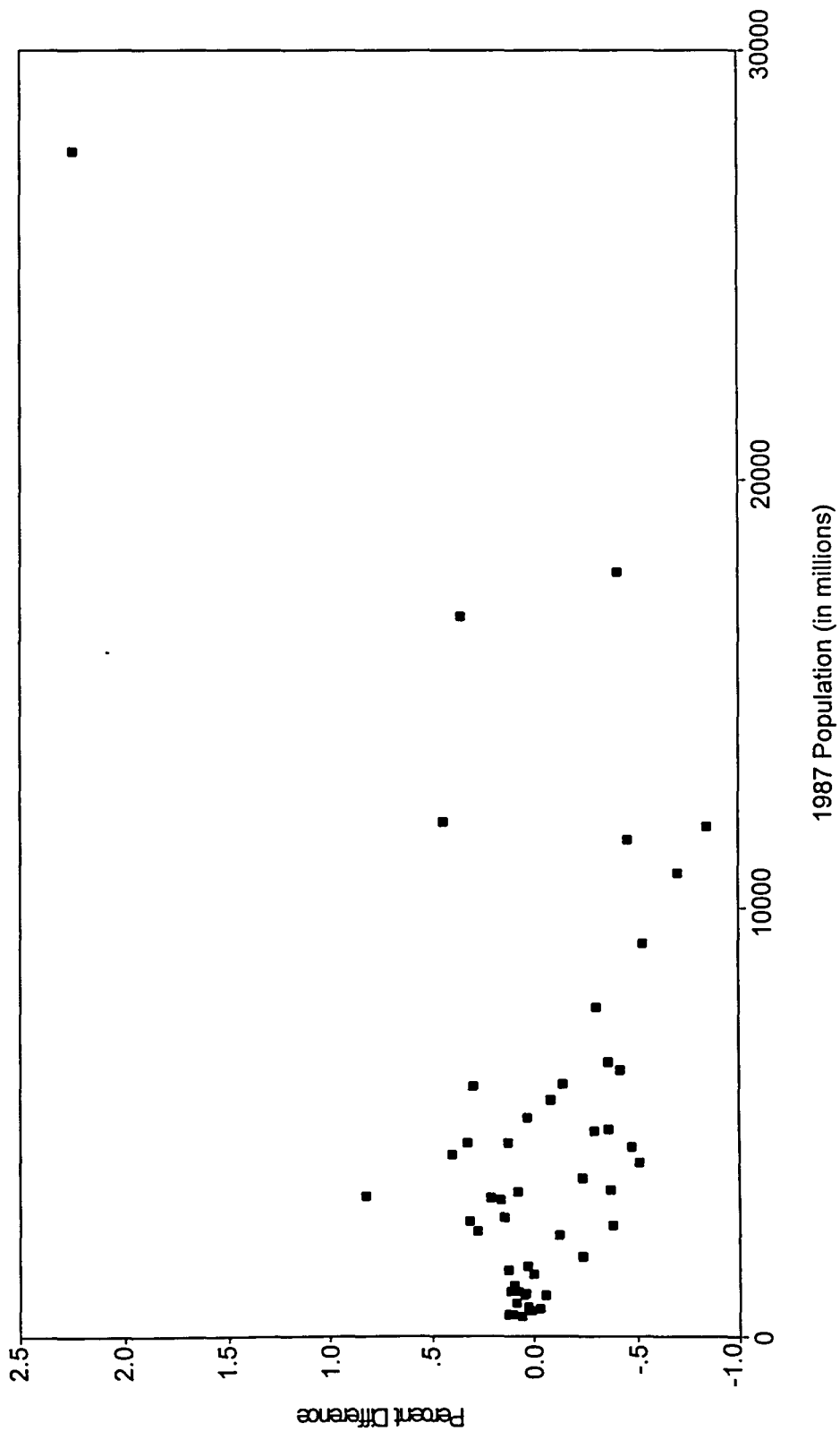


Figure 2. Percent difference of population and women-owned businesses versus population, 1987

Table 11. Correlation of population and difference scores, 1982 - 1987

Cases	1982		1987	
	r	p	r	p
All cases	0.2071	0.072	0.2687	0.028
49 cases (1)	-0.2972	0.019	-0.2871	0.023
46 cases (2)	-0.4484	0.001	-0.3024	0.021
42 cases (3)	-0.4261	0.002	-0.2996	0.025

(1) Minus California, New York (2) Minus California, New York, Texas, Illinois, Pennsylvania (3) Minus California, New York, Texas, Illinois, Pennsylvania, Ohio, Florida, and Michigan.

Table 12. Correlation of log population and difference scores, 1982 - 1987

Cases	1982		1987	
	r	p	r	p
All cases	-0.0287	0.421	0.0029	0.492
49 cases (1)	-0.3165	0.013	-0.3008	0.018
46 cases (2)	-0.3697	0.006	-0.2735	0.033
43 cases (3)	-0.3158	0.020	-0.2388	0.061

(1) Minus California, New York (2) Minus California, New York, Texas, Illinois, Pennsylvania (3) Minus California, New York, Texas, Pennsylvania, Ohio, Florida, and Michigan.

To further test this relationship, a logarithmic transformation procedure was used on the population variable. The scattergram (Figure 3) suggests that states with smaller populations have proportionately more women-owned firms while those with higher populations seem to display a mix. Again, the first hypothesis is not upheld. The correlation coefficients are significant only when California, New York, Texas, Illinois, and Pennsylvania are removed from the procedure, and then it is a negative relationship (Table 12).

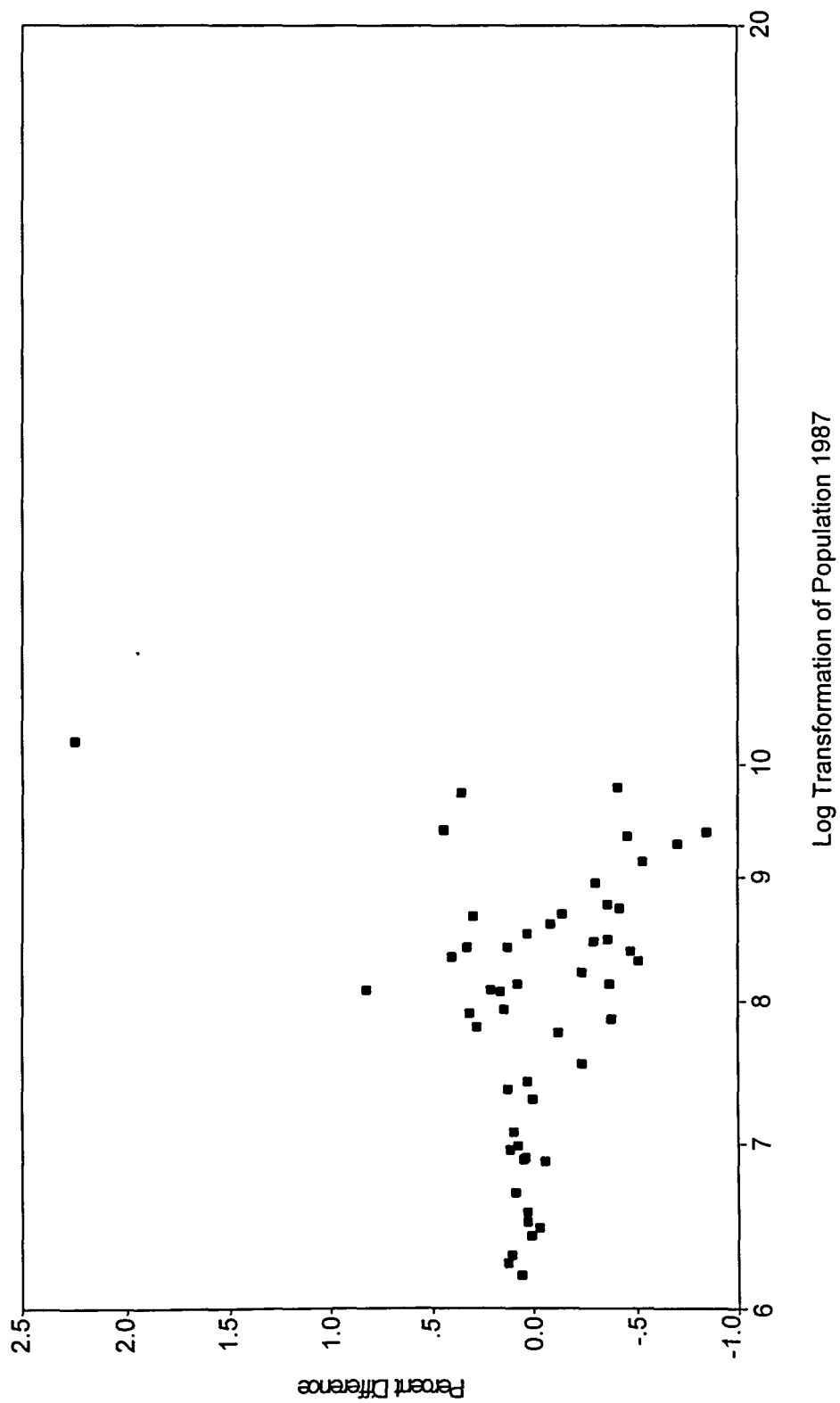


Figure 3. Log transformation of population a percent difference, 1987

The second hypothesis regarding population and women-owned firms states that, when compared with others, states with relatively large percentage increases in their populations will have disproportionately larger increases in the number of women-owned businesses. Data across the states on the percent change of total population and the percent change of women-owned businesses are reported in Table 13. A difference score is calculated by subtracting the percent change in population from the percent change of women-owned businesses. The result is positive when the percent change in women-owned businesses in a state is greater than the percent change in population. There were no states in 1982 or 1987 that reported a negative difference score.

To further investigate this relationship, disproportionately larger percentage change increases are defined as 42.7 percent or higher for women-owned firms and represents the U.S. percent change; a 6 percent change or higher in population represents the 18 states with the greatest increases in percentage change. Ten out of these 18 states showed increases in women-owned firms above 42.7 percent with New Hampshire recording 75.9 percent. The state with the highest percent change in population (17.9 percent) was Arizona which reported a 52.3 percent change in women-owned firms.

There were 19 states with population percent changes less than 2.0 between 1982 and 1987; four (Illinois, Massachusetts, New York, Pennsylvania) reported percent changes in women-owned firms higher than 42.7 percent. States that reported losses in population also showed increases in women-owned firms; for instance, Iowa reported a -2.8 percent change in population and a 33.0 percent change in women-owned businesses. Of the 14 remaining states (those with population percent changes between 2.0 and 5.9 percent), seven (Alabama, Connecticut, Maine, Missouri, New Jersey, Rhode Island, Vermont) reported percent changes in women-owned firms above 42.7 percent.

Table 13. Percentage difference in the change of population and women-owned businesses by state, 1982 - 1987

State	% Change in Population	% Change in Women-Owned Businesses	% Difference
Alabama	3.5	43.0	39.46
Alaska	17.5	32.5	15.06
Arizona	17.9	52.3	34.42
Arkansas	3.5	33.3	29.86
California	11.6	41.3	29.67
Colorado	7.2	38.2	31.05
Connecticut	2.7	59.3	56.68
Delaware	7.6	56.3	48.64
District of Columbia	-1.0	11.9	12.83
Florida	14.8	62.6	47.83
Georgia	10.1	51.7	41.54
Hawaii	8.4	29.0	20.56
Idaho	2.2	24.4	22.19
Illinois	0.9	46.0	45.08
Indiana	0.8	30.0	29.11
Iowa	-2.8	33.0	35.78
Kansas	2.7	30.4	27.72
Kentucky	0.8	34.0	33.26
Louisiana	1.5	34.8	33.35
Maine	4.3	50.7	46.42
Maryland	6.2	52.2	46.03
Massachusetts	1.9	63.5	61.61
Michigan	0.9	38.3	37.35
Minnesota	2.7	39.7	37.00
Mississippi	2.2	33.4	31.16
Missouri	3.3	48.9	45.58

Table 13. (continued)

State	% Change in Population	% Change in Women-Owned Businesses	% Difference
Montana	0.5	20.5	20.04
Nebraska	0.3	26.3	26.05
Nevada	14.7	44.4	29.70
New Hampshire	11.4	75.9	64.55
New Jersey	3.3	73.7	70.39
New Mexico	9.4	39.7	30.36
New York	1.5	50.2	48.74
North Carolina	6.5	48.9	42.44
North Dakota	-0.1	30.2	30.37
Ohio	0.4	34.1	33.65
Oklahoma	0.8	18.0	17.23
Oregon	1.9	27.6	25.63
Pennsylvania	0.5	45.2	44.70
Rhode Island	3.5	68.3	64.81
South Carolina	6.4	45.2	38.82
South Dakota	2.0	27.5	25.53
Tennessee	4.0	38.7	34.67
Texas	9.1	35.4	26.26
Utah	7.8	36.0	28.23
Vermont	5.0	57.9	52.89
Virginia	7.7	49.1	41.40
Washington	6.2	33.5	27.36
West Virginia	-3.3	32.2	35.45
Wisconsin	1.3	38.1	36.87
Wyoming	-3.9	14.1	18.02
United States	4.9	42.7	45.60

Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, 1982 and 1987 and U.S. Department of Commerce, Bureau of the Census, Women-Owned Businesses, 1982 and 1987.

The analysis of the data in Table 13 suggests a weak confirmation of the second population hypothesis. New Jersey recorded a 3.3 percent change in population yet demonstrated the second highest growth for women-owned firms (73.7 percent), indicating that variables other than population are effecting the growth of women-owned firms.

A correlation of 0.41 occurs between percent change in population and percent change in women-owned firms using all 51 cases (Table 14, Figure 4). Additional scattergrams were constructed and correlations calculated. The correlation coefficients remain relatively constant with elimination of cases, indicating that outliers have less effect here than in previous tests; all tests were statistically significant at the 0.05 level.

The third and fourth hypotheses substitute Gross State Product (GSP) for population. It was predicted that states with relatively large GSPs will have disproportionately more women-owned businesses than would be expected based on the GSP figure alone. Data across the states on the percentage of total GSP and the percentage of all women-owned

Table 14. Correlation of percent change in population and percent change in women-owned businesses, 1982 - 1987

Cases	1982-1987 Percent Change	
	r	p
All cases	0.4086	0.001
50 cases (1)	0.3974	0.002
48 cases (2)	0.4333	0.001
43 cases (3)	0.3975	0.004
42 cases (4)	0.4332	0.002

(1) Minus Arizona (2) Minus Arizona, Alaska, Florida (3) Minus Arizona, Alaska, Florida, Nevada, California, New Hampshire, Georgia, New Mexico (4) Minus Arizona, Alaska, Florida, Nevada, California, New Hampshire, Georgia, New Mexico, and Texas.

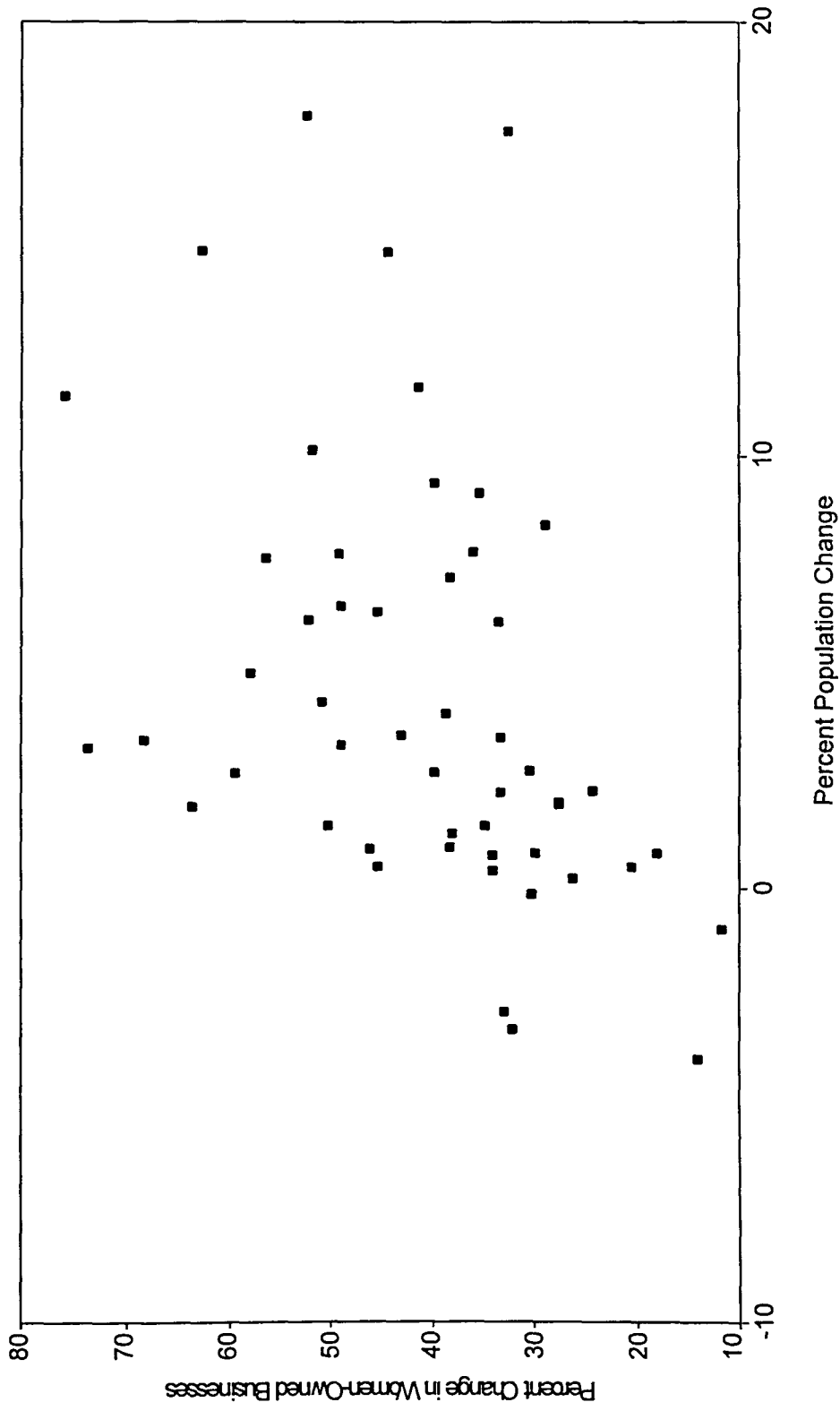


Figure 4. Percent change in population and women-owned businesses, 1982-1987

businesses are reported in Table 15. A difference score is calculated by subtracting the percentage of total GSP from the percentage of all women-owned businesses. The result is positive when the proportion of women-owned businesses in a state is greater than the proportion of the nation's GSP in that state.

Using data for 1982, of the 15 states with at least 2.0 percent of the nation's GSP, only three (California, Florida, Indiana) had positive difference scores. The other 12 did not have disproportionate shares of women-owned businesses to the same or a greater degree than had disproportionate shares of GSP. The 1987 results are similar; only four (California, Florida, Indiana, Texas) of the 14 states each containing at least 2.0 percent of the total GSP had proportions of women-owned businesses that were greater than their share of the nation's GSP.

At the opposite end of the GSP scale, of the 21 states with less than 1.0 percent of the country's GSP in 1982, 13 reported positive difference scores (higher proportions of women-owned businesses than proportions of the total GSP). In 1987, 22 states had less than 1.0 percent of the country's GSP and 15 reported positive difference scores.

Of the 15 remaining states (those with GSP between 1.00 and 1.99 percent of the U.S. total), 11 had higher proportions of women-owned firms than proportions of GSP in 1982. In 1987, nine of the 15 states in this percent category had a positive difference score.

As occurred with population, the difference scores tend to be small in magnitude; and they are not arrayed as predicted. States with smaller proportions of total GSP tend to have slightly higher proportions of women-owned businesses, while disproportionately large states do not have percentages of women-owned businesses above the levels of their GSP. Some states differ from these trends, but the results do not support the third hypothesis.

States relatively high on the percentage of the total GSP of the United States also tend to be relatively high on the percentage of women-owned businesses; the correlation is

Table 15. Percentage of total GSP and women-owned businesses by state, 1982 - 1987

State	1982			1987		
	% Total GSP	% Women-Owned	% Difference	% Total GSP	% Women-Owned	% Difference
Alabama	1.31	1.16	-0.14	1.33	1.17	-0.16
Alaska	0.60	0.37	-0.23	0.38	0.34	-0.04
Arizona	1.08	1.38	0.30	1.22	1.47	0.26
Arkansas	0.76	0.92	0.16	0.73	0.86	0.13
California	12.05	13.74	1.69	13.14	13.61	0.46
Colorado	1.46	2.24	0.78	1.33	2.17	0.84
Connecticut	1.51	1.33	-0.18	1.75	1.48	-0.27
Delaware	0.27	0.22	-0.05	0.29	0.24	-0.05
District of Columbia	0.69	0.34	-0.35	0.75	0.27	-0.48
Florida	3.78	4.72	0.94	4.35	5.38	1.03
Georgia	2.15	2.01	-0.14	2.52	2.14	-0.38
Hawaii	0.46	0.58	0.12	0.46	0.53	0.06
Idaho	0.33	0.53	0.19	0.30	0.46	0.16
Illinois	5.14	4.21	-0.93	4.95	4.30	-0.65
Indiana	2.08	2.40	0.32	2.03	2.19	0.15
Iowa	1.22	1.40	0.18	1.00	1.30	0.31
Kansas	1.08	1.42	0.34	0.98	1.30	0.32
Kentucky	1.37	1.38	0.02	1.28	1.30	0.02
Louisiana	2.51	1.44	-1.08	1.61	1.36	-0.25
Maine	0.39	0.55	0.16	0.44	0.58	0.14
Maryland	0.17	1.87	1.70	1.89	1.99	0.10
Massachusetts	2.48	2.36	-0.12	2.86	2.71	-0.15
Michigan	3.49	3.36	-0.13	3.59	3.26	-0.33
Minnesota	1.80	2.19	0.38	1.80	2.14	0.34
Mississippi	0.82	0.75	-0.07	0.74	0.70	-0.04
Missouri	1.98	2.04	0.06	1.99	2.13	0.14

Table 15. (continued)

State	1982			1987		
	% Total GSP	% Women-Owned	% Difference	% Total GSP	% Women-Owned	% Difference
Montana	0.36	0.50	0.15	0.26	0.42	0.16
Nebraska	0.69	0.89	0.20	0.59	0.78	0.19
Nevada	0.45	0.45	0.01	0.48	0.46	-0.02
New Hampshire	0.37	0.45	0.08	0.49	0.55	0.07
New Jersey	3.43	2.34	-1.09	3.90	2.85	-1.04
New Mexico	0.64	0.63	-0.01	0.49	0.62	0.13
New York	8.21	6.58	-1.64	8.59	6.92	-1.66
North Carolina	2.23	2.18	-0.05	2.50	2.27	-0.23
North Dakota	0.33	0.34	0.00	0.23	0.31	0.08
Ohio	4.31	3.98	-0.33	4.16	3.74	-0.41
Oklahoma	1.56	1.87	0.31	1.06	1.55	0.49
Oregon	1.00	1.60	0.60	0.97	1.43	0.46
Pennsylvania	4.53	4.00	-0.54	4.43	4.07	-0.36
Rhode Island	0.34	0.30	-0.04	0.37	0.35	-0.02
South Carolina	1.03	1.02	-0.01	1.11	1.04	-0.07
South Dakota	0.25	0.36	0.11	0.22	0.33	0.11
Tennessee	1.67	1.69	0.02	1.80	1.64	-0.16
Texas	8.20	7.63	-0.56	6.76	7.25	0.49
Utah	0.58	0.76	0.18	0.55	0.72	0.18
Vermont	0.19	0.30	0.11	0.22	0.34	0.12
Virginia	2.26	2.19	-0.07	2.58	2.29	-0.29
Washington	1.84	2.34	0.51	1.82	2.19	0.38
West Virginia	0.69	0.59	-0.10	0.56	0.55	-0.01
Wisconsin	1.91	1.74	-0.18	1.83	1.68	-0.15
Wyoming	0.43	0.33	-0.10	0.24	0.26	0.03
United States	100.00	100.00		100.00	100.00	

Source: U.S. Department of Commerce, Bureau of the Census, Women-Owned Businesses, 1982 and 1987 and Trott et al., "Gross State Product by Industry," Survey of Current Business, December 1991, pp. 43-58.

0.98, although again some outliers affect the magnitude of this coefficient (Table 15, Figure 5). A further analysis of Table 15 indicates that where there is a higher percentage of women-owned firms and lower GSPs, women-owned businesses do not significantly contribute to raising a state's revenues. In six areas (Alaska, California, District of Columbia, Michigan, Nebraska, Tennessee), there was a decrease in women-owned firms and an increase in GSP. Two states (Minnesota and Hawaii) reported no change in GSP between 1982 and 1987 but the number of women-owned firms decreased. Finally, two states (Illinois and Pennsylvania) reported that the number of women-owned firms increased and GSP decreased.

To examine further the relationship between GSP and the difference score (percent women-owned businesses of total minus percent GSP total), additional scattergrams were constructed and correlations calculated. First, the difference scores were related to raw GSP (Table 16, Figure 6). Using 51 cases, the correlation coefficient is insignificant in 1982; however, when California is removed, the correlation becomes moderately strong ($r = 0.51$) and remains statistically significant until eight states are deleted from the procedure. The

Table 16. Correlation of GSP and difference scores, 1982 - 1987

Cases	1982		1987	
	r	p	r	p
All cases	0.0895	0.266	0.2310	0.051
50 cases (1)	0.5093	0.006	0.4617	0.001
48 cases (2)	0.3087	0.016	0.3661	0.005
43 cases (3)	0.2186	0.080	0.4575	0.001

(1) Minus California (2) Minus California, New York, Texas (3) Minus California, New York, Texas, Illinois, Pennsylvania, Ohio, Florida, and Michigan.

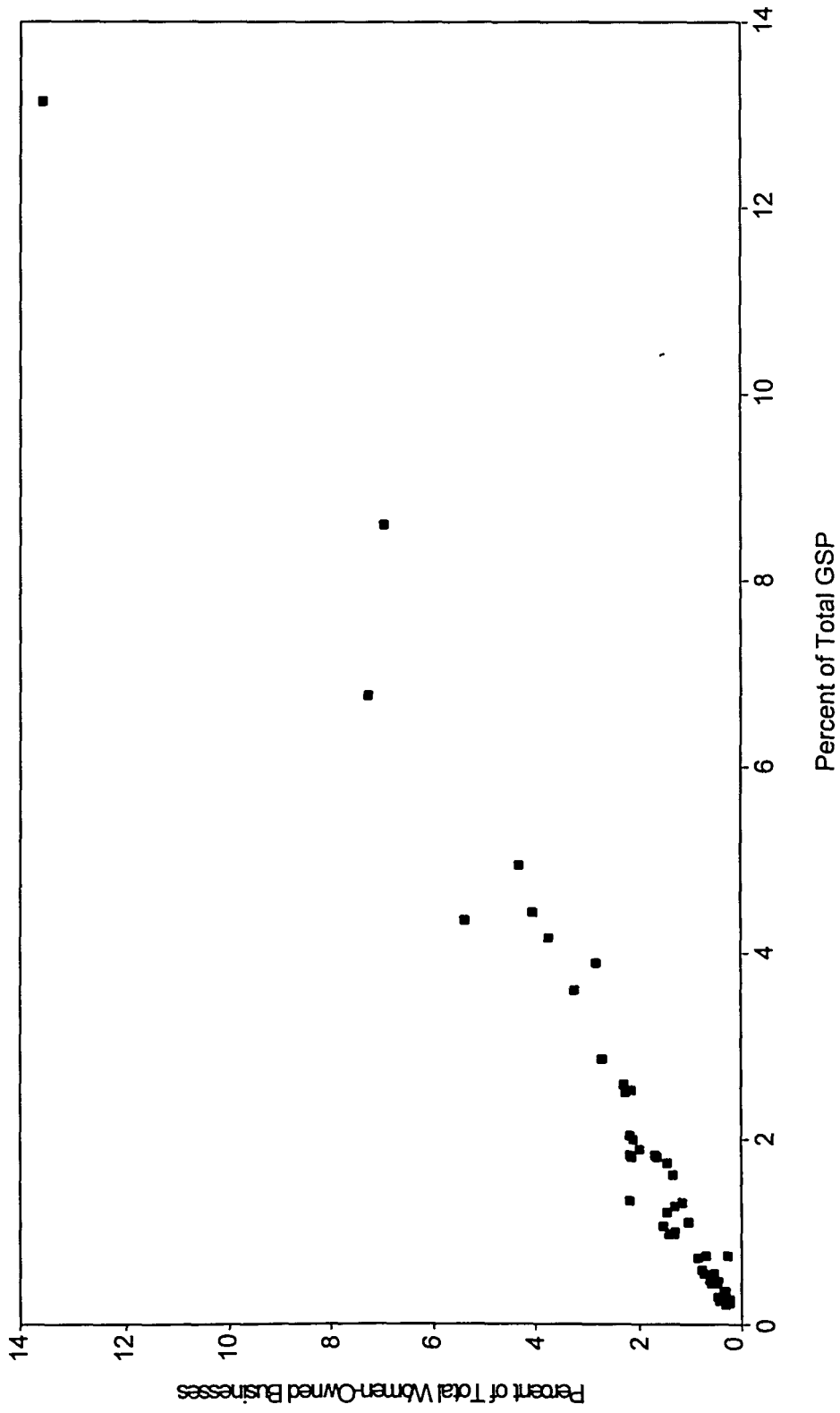


Figure 5. Percent of GSP and women-owned businesses, 1987

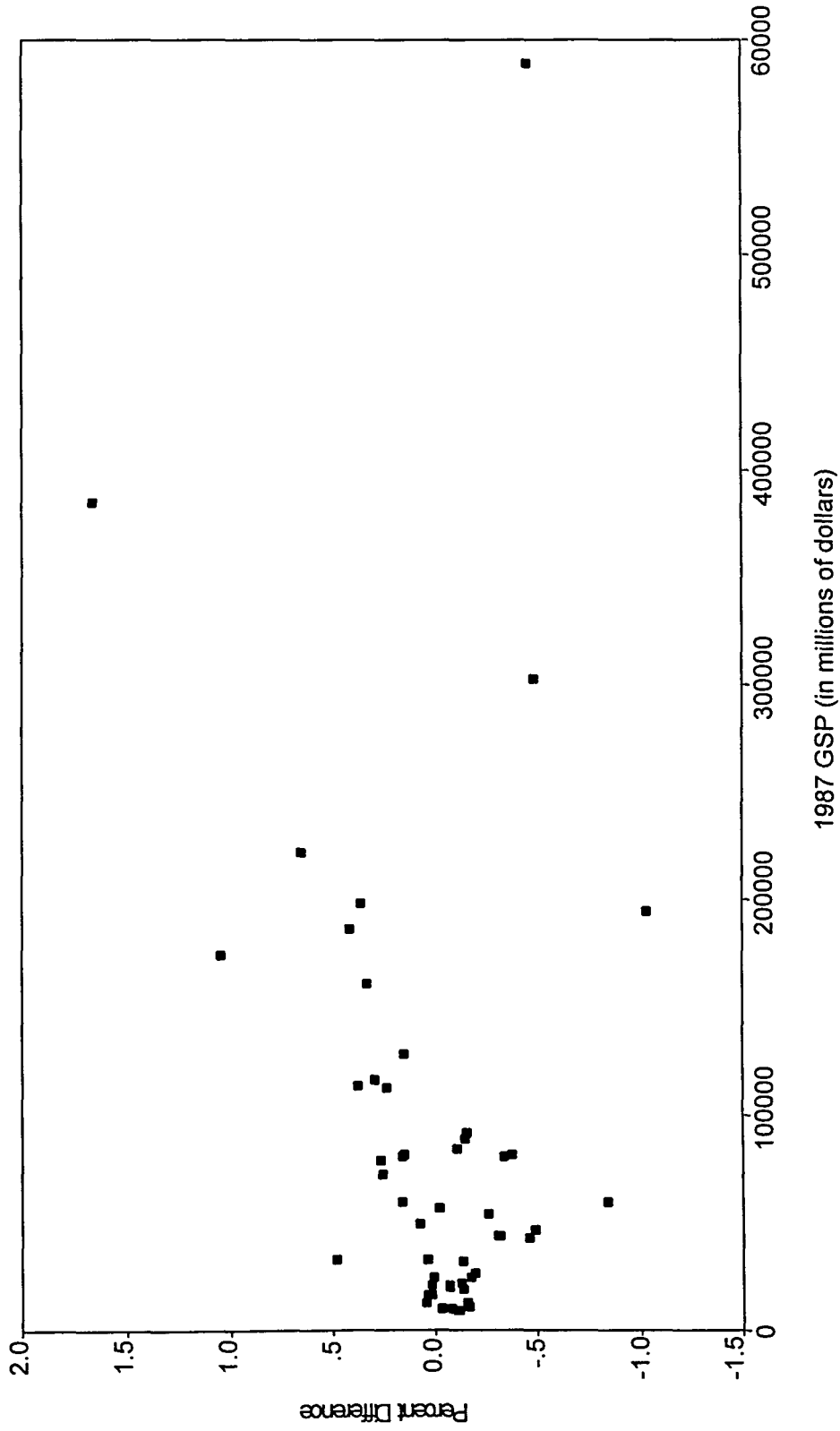


Figure 6. Percent difference of GSP and women-owned business versus GSP, 1987

correlation was statistically insignificant with 51 cases in 1987; however, the highest correlation occurred when California was deleted ($r = 0.46$). States with lower GSPs have more women-owned businesses and in several cases, as GSP increases, there are fewer (not more) women owners than was hypothesized.

A logarithmic transformation of the GSP variable was constructed and the scattergram (Figure 7) shows the log GSP and percent difference. The scattergram provides evidence that states with smaller GSPs have more positive difference scores (or more women-owned firms) than was hypothesized. Correlation coefficients provide additional proof that there is a moderate correlation in 1982 only when California is removed (Table 17). Using 51, 48, or 43 cases produces results that are not significant at the 0.05 level. In 1987, there is a significant relationship with 51 cases, and then it increases slightly when California is deleted.

The second GSP hypothesis states that when compared with others, states with relatively larger percentage GSP increases will have disproportionately larger increases in the number of women-owned businesses. Data across the states on percent change of total

Table 17. Correlation of log GSP and difference scores, 1982 - 1987

Cases	1982		1987	
	r	p	r	p
All cases	0.1394	0.165	0.2582	0.034
50 cases (1)	0.3296	0.010	0.3336	0.009
48 cases (2)	0.1759	0.116	0.2789	0.027
43 cases (3)	0.0818	0.301	0.2798	0.035

(1) Minus California (2) Minus California, New York, Texas (3) Minus California, New York, Texas, Illinois, Pennsylvania, Ohio, Florida, and Michigan.

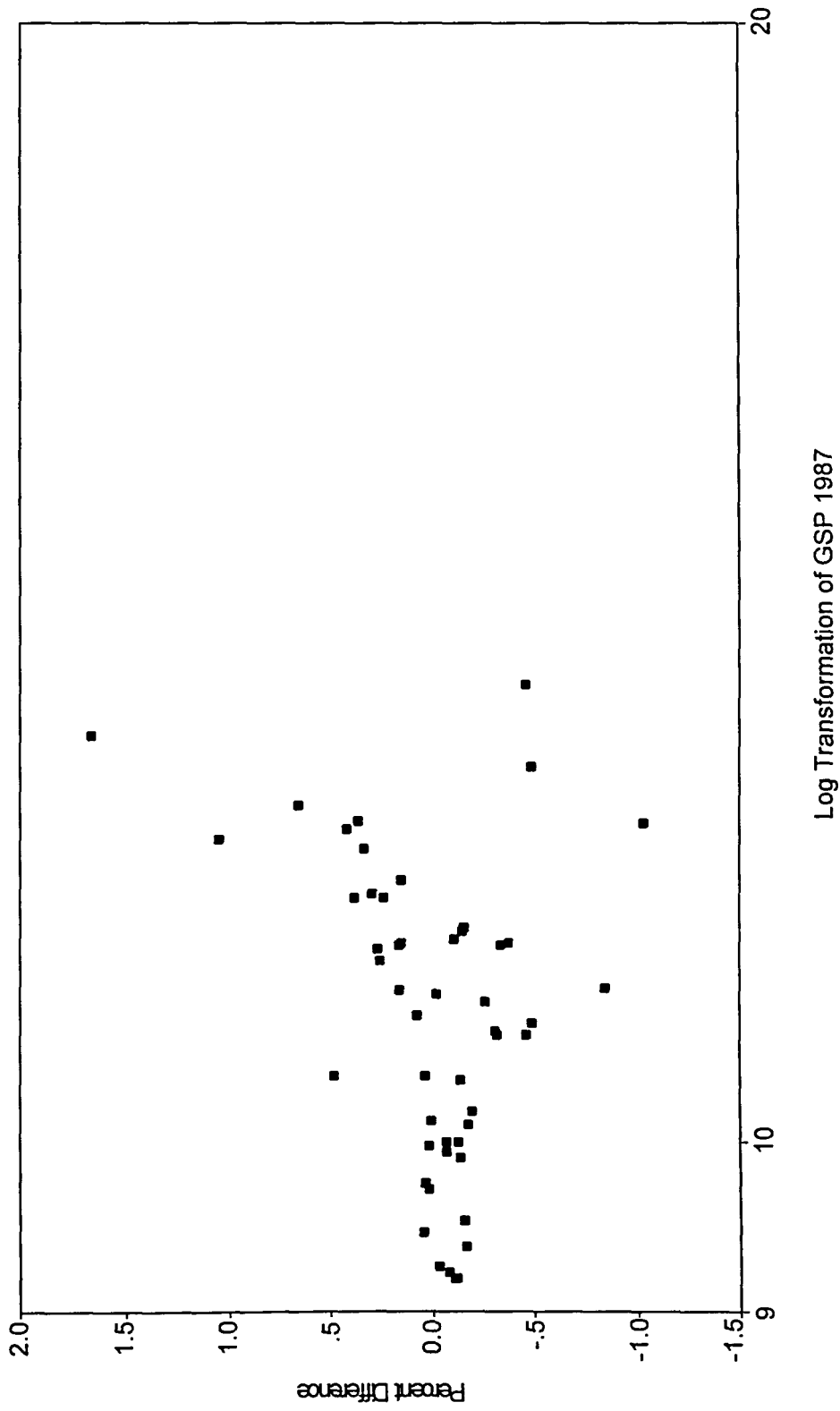


Figure 7. Log transformation of GSP and percent difference, 1987

GSP and the percent change in women-owned businesses are reported in Table 18. A difference score is calculated by subtracting the percent change in GSP from the percent change in women-owned businesses. The result is positive when the percent change in women-owned businesses in a state is greater than the percent change in GSP.

Using the data from Table 18, 20 states had positive difference scores (higher proportions of women-owned businesses than proportions of GSP). The other 31 did not have disproportionate shares of women-owned businesses to the same or a greater degree than they had disproportionate shares of GSP. Disproportionately larger increases for women-owned firms are defined as 42.7 percent or higher which represents the U.S. percent change difference. For GSP, 50 percent or higher represents the 20 states with the greatest percent change. Seventeen of these 20 states recorded increases in women-owned businesses above 42.7 percent. New Hampshire reported the highest in both categories (Table 18).

Twenty-one states has percent changes in GSP between 20 and 49.99. Of these 21, only four (Alabama, Illinois, Missouri, Pennsylvania) reported percent changes in women-owned firms at or above 42.7 percent. Of the 10 remaining states (those with GSP percent changes less than 19.99 percent) between 1982 and 1987, none had a percent change for women-owned firms equal to or higher than 42.7 percent. However, there were five states (Alaska, Louisiana, North Dakota, Oklahoma, Wyoming) showing a negative percent change in GSP that recorded increases in women-owned firms ranging from 14.1 to 34.8 percent.

The analysis of the data in Table 18 provides evidence of a relationship between GSP and women-owned firms as was similar to population. Figure 8 further demonstrates the relationship. There were anomalies to this relationship as demonstrated by the District of Columbia, which recorded a 56.5 percent increase in GSP and the lowest increase in

Table 18. Percentage difference in the change of GSP and women-owned businesses by state, 1982 - 1987

State	% Change in GSP	% Change in Women-Owned Businesses	% Difference
Alabama	46.7	43.0	-3.65
Alaska	-8.7	32.5	41.28
Arizona	62.4	52.3	-10.13
Arkansas	37.9	33.3	-4.61
California	57.5	41.3	-16.27
Colorado	31.6	38.2	6.65
Connecticut	67.3	59.3	-7.97
Delaware	54.5	56.3	1.73
District of Columbia	56.5	11.9	-44.66
Florida	66.3	62.6	-3.70
Georgia	69.3	51.7	-17.65
Hawaii	43.9	29.0	-14.91
Idaho	31.1	24.4	-6.62
Illinois	39.3	46.0	6.70
Indiana	41.5	30.0	-11.59
Iowa	18.1	33.0	14.83
Kansas	31.0	30.4	-0.60
Kentucky	35.5	34.0	-1.49
Louisiana	-7.5	34.8	42.32
Maine	65.1	50.7	-14.37
Maryland	62.0	52.2	-9.82
Massachusetts	66.7	63.5	-3.14
Michigan	48.6	38.3	-10.35
Minnesota	44.4	39.7	-4.71
Mississippi	30.5	33.4	2.87
Missouri	45.3	48.9	3.55

Table 18. (continued)

State	% Change in GSP	% Change in Women-Owned Businesses	% Difference
Montana	6.4	20.5	14.12
Nebraska	24.5	26.3	1.79
Nevada	55.3	44.4	-10.86
New Hampshire	89.3	75.9	-13.39
New Jersey	64.2	73.7	9.49
New Mexico	11.1	39.7	28.61
New York	51.0	50.2	-0.77
North Carolina	62.3	48.9	-13.37
North Dakota	-1.7	30.2	31.92
Ohio	39.2	34.1	-5.15
Oklahoma	-2.4	18.0	20.48
Oregon	39.9	27.6	-12.31
Pennsylvania	41.1	45.2	4.12
Rhode Island	55.8	68.3	12.47
South Carolina	54.9	45.2	-9.67
South Dakota	24.2	27.5	3.36
Tennessee	55.2	38.7	-16.49
Texas	19.0	35.4	16.36
Utah	36.7	36.0	-0.66
Vermont	67.9	57.9	-10.02
Virginia	65.0	49.1	-15.82
Washington	42.9	33.5	-9.37
West Virginia	16.4	32.2	15.81
Wisconsin	38.0	38.1	0.13
Wyoming	-20.2	14.1	34.29
United States	44.0	42.7	1.30

Source: U.S. Department of Commerce, Bureau of the Census, Women-Owned Businesses, 1982 and 1987 and Trott et al., "Gross State Product by Industry," Survey of Current Business, December 1991, pp. 43-58.

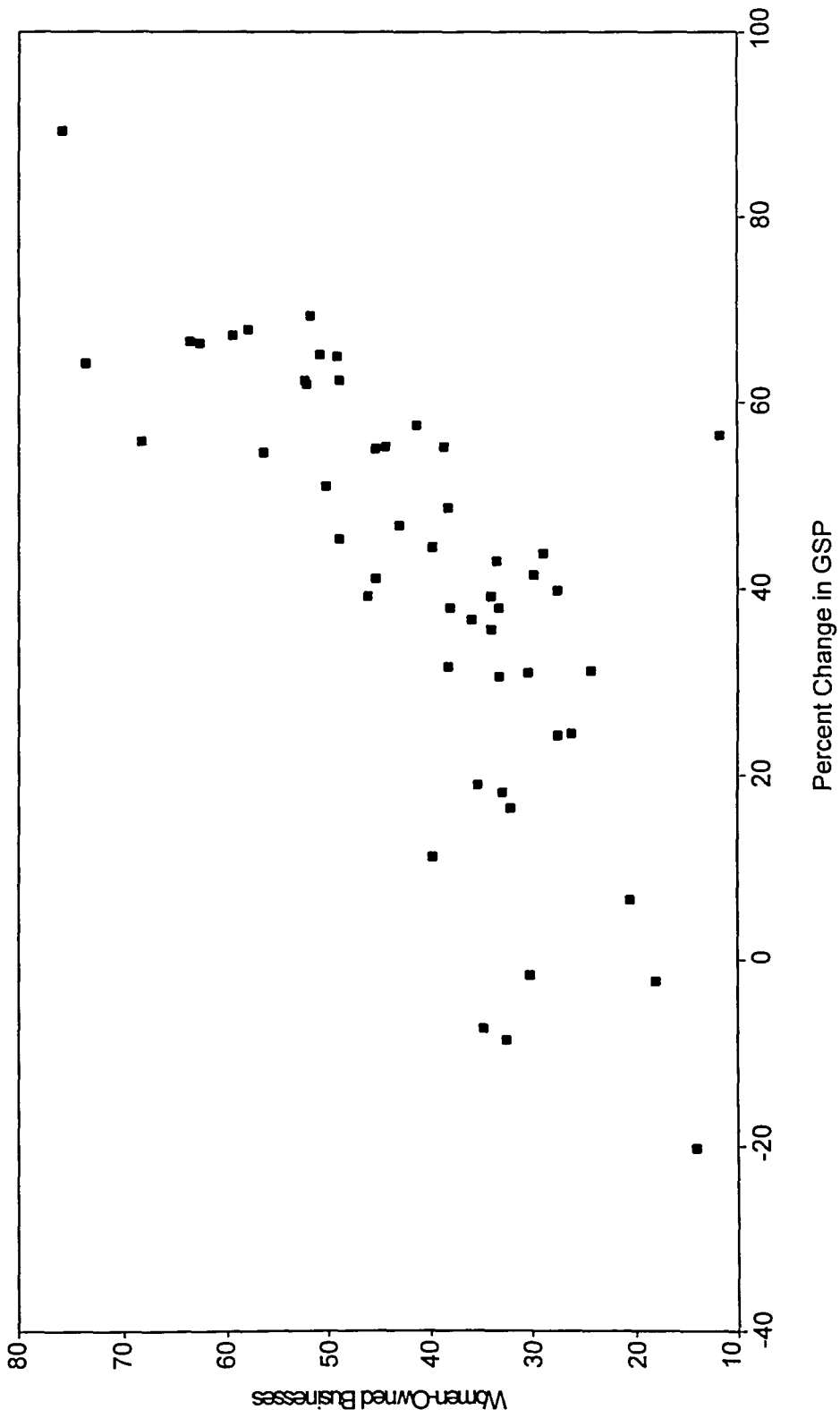


Figure 8. Percent change in GSP and women-owned businesses, 1982-1987

women-owned firms (11.9 percent). By contrast, New Hampshire reported the highest increase in GSP (89.3 percent) and for women-owned businesses.

Correlation coefficients were determined for the variables and states with the highest percent changes in GSP were eliminated to further observe the strength of the relationship; correlation is 0.73 (Table 19). The correlation coefficients were statistically significant at the 0.05 level and, in contrast to the population hypothesis, the strength of the relationship became less as more states were eliminated.

Table 19. Correlation of percent change and GSP and women-owned businesses, 1982 - 1987

Cases	1982-1987 Percent Change	
	r	p
All cases	0.7300	0.001
50 cases (1)	0.7000	0.001
48 cases (2)	0.6828	0.001
43 cases (3)	0.6139	0.001
42 cases (4)	0.5949	0.001

(1) Minus New Hampshire (2) Minus New Hampshire, Georgia, Vermont (3) Minus New Hampshire, Georgia, Vermont, Connecticut, Massachusetts, Florida, Maine, Virginia (4) Minus New Hampshire, Georgia, Vermont, Connecticut, Massachusetts, Florida, Maine, Virginia, and New Jersey.

CHAPTER 5: CONCLUSIONS AND FUTURE RESEARCH

The study was designed to begin a process of incorporating women-owned businesses into the national picture of self-employment and entrepreneurship. The research questions asked whether state/regional economies and population affect female businesses. The hypotheses tested assumed that states with higher populations/GSP or percent changes in these two variables would have disproportionately more women-owned firms than would be expected on the basis of these higher numbers alone.

Summary statistics highlighted the dramatic growth of women-owned businesses, their gross receipts, and number of firms with paid employees. Nonetheless, these trends need to be viewed with skepticism as percentage gains in women-owned businesses do not translate into higher incomes nor do they exceed those of men in actual dollars earned. A further concern with these data is job creation. According to Birley et al. (1987), women tend to use more labor of all three types—full-time, part-time, and casual—than do men owners. Also, while women use more female labor than men, they employ as many men in their businesses as do male owners. One of the reasons that women tend to hire more female employees is a function of the types of businesses started. When the firms offer services typically provided by women, such as a beauty salon, a boutique, or secretarial service, women owners hire women employees. Therefore, the quality of jobs being created and annual salaries/benefits they represent are areas requiring rigorous investigation, especially since many of these jobs are being created in generally lower skill levels (little opportunity for continued job-related education) and relatively poor wage industries of retail trade and services.

In this study, the findings point to proportionately fewer women-owned firms in states with higher populations or GSPs than would be expected and a low correlation when examining the percentage change for these variables. States with lower populations and

GSPs have higher numbers of women-owned firms than was predicted; therefore, the hypotheses are not upheld. The population hypotheses were based on previous studies that examined entrepreneurial growth in states and regions experiencing population increase. These studies found that the greater the population, the bigger the pool of entrepreneurs and the higher the organizational birthrate; hence, larger urban cities have a higher level of entrepreneurial activity. The hypotheses for population in this work were not upheld and suggest that large urban areas may not have a comparative advantage in providing fertile sites for the generation of women-owned firms. The GSP hypotheses closely mirrored those of population by demonstrating weak correlations. There are proportionately more women-owned firms in states with low GSPs. Furthermore, even states in which change in GSP is relatively low, there are incidences of gains in women-owned businesses. Women-owned firms are not contributing significantly to state's economies.

These findings may reflect the preponderance of women in traditional, low-income businesses. Furthermore, in regards to choosing business ownership, the vast majority of the four million women who own businesses in this country are in the economic position to choose from many options. While male business owners come from a variety of socioeconomic circumstances and backgrounds (from middle- to upper-class situations to financially deprived backgrounds), the vast majority of women business owners live in financially secure situations with high total household incomes (The Wall Street Journal, 1986). The majority of women owners are highly educated, and their families tend to be educated and financially secure (Hisrich and Brush, 1987). This factor suggests that when deciding to become a business owner, class is not a factor for men but for women it is a significant element. The statistics on annual revenues provide evidence that female business enterprise is not yet a route to financial independence. Perhaps a more important

question concerns the millions of women who are not in the financial position to make choices such as business ownership.

Variables to study to attempt to account for the major differences in women- and men-owned firms include barriers and constraints such as discrimination, balancing work and family, organizational issues such as business goals and performance, process activities such as planning and management style, cultural values and norms, training, and certain conditions in the urban or regional socioeconomic environment. The first step in exploring these variables might be research to examine the dimensions of personal success as perceived by women business owners. In addition, these dimensions should be tested on other groups, such as women managers, nonworking women, and male business owners.

There were regional differences in this research, the most apparent being the New England states in which large increases occurred in GSP and women-owned firms. Further, the New England region has generated more business starts than would be expected by population alone and supports the concept that the economy may be a stronger predictor of the growth of women-owned firms. This may indicate that there are other variables—for example, local and state economic development policies—that are creating consequences for this national phenomenon. The disequilibrium framework discussed earlier may assist in explaining the New England region's significant contribution to the growth of women-owned firms and receipts. It seems reasonable to surmise, based on the economic downturn that was present throughout the United States during the 1980s and the slow growth of the early 1990s (in particular east coast states), that perceived conditions were created that influenced potential entrepreneurs. Furthermore, the increases in women-owned firms and receipts may be a reaction to economic distress prevalent within the regional labor market. Historically, women often have employed underground economic means (e.g., daycare, housekeeping, sewing) in order to sustain their households. The existence of reasonably attractive

nonentrepreneurial employment can be one of the greatest disincentives to self-employment and further indicates that the barriers women face in the labor market may be the single causal factor to their growing numbers as business owners.

Although uncertainty will accompany instability or disequilibrium, one must ask how much or in what form, and there is very little in the literature to help provide answers. Potential entrepreneurs' perceptions of their environment are important. The potential entrepreneur must be able to perceive a pattern; if the national or local economy is so *disrupted that patterns cannot be discerned, conditions for self-employment are hardly favorable*. Women entrepreneurs may perceive and respond to these uncertain conditions differently than their male cohorts; until there is better theory and research to guide us on the matter of uncertainty, answers will remain only speculative. The key is to understand how women respond to conditions in their pertinent environments, which is often determined by the socioeconomic status of the business owner and her access to relevant information.

Research Limitations

A limitation of census data is that they aggregate individuals with widely varying commitments to entrepreneurial activities as a source of livelihood. There is great variance in hours worked, weeks worked, and reported earnings from either incorporated or nonincorporated forms of self-employment. The continued refinement of the Women-Owned Businesses and The Characteristics of Business Owners reports will enhance the use of these secondary data sources. Finally, there are several rich and, as yet, largely unexplored sources of secondary data, such as the Labor Force Survey (U.S. Department of Commerce) and the General Household Survey (U.S. Department of Commerce), which could be utilized to further our knowledge of women's business ownership.

A triangulated research methodology would have provided a more indepth look at women business owners. There are good reasons why researchers should use personal interviews and other qualitative techniques for gender-based research. Scholars have consistently demonstrated that it is exceptionally difficult to extract experiences of gender discrimination via the use of quantitative techniques. However, researchers must improve the qualitative methods used which can be achieved by learning from the methodological debates, particularly in sociology, and by increasing sample sizes and ensuring that the *research in the field can withstand the most rigorous external scrutiny. Perhaps a more sophisticated statistical analysis could have provided a better understanding of how population and GSP may affect women-owned businesses.* Finally, there are always limitations on examining data covering short periods of time (five years in the current study). The 1992 Women-Owned Businesses report, which will be issued in 1996, should provide new insights that will begin to correct the limited view of researchers.

Research Implications

Despite the increasing interest in women's business ownership, certain aspects of the research techniques used and the current research agenda may impede further significant progress, especially for female business owners. There are two major problems that confront researchers in this area. First, current research has depended upon small sample sizes, often involving fewer than 50 cases. Historical and longitudinal studies are rare. The second problem is that, with few exceptions, researchers have tended to study the phenomenon of women's business ownership without reference to a broader theoretical framework.

Many of the studies conducted in the United States and Britain have employed similar techniques, similar sample sizes, taken a similar focus, and perhaps as a consequence, yielded similar results. Thus, existing research, although useful as exploratory, has not been

systematic. However, the increasing interest in this subject from within the academic community as well as from the media eventually will attract new research funding. This increased funding, particularly from government and quasi-government sources, will focus needed attention on the gender dimension of business ownership. In the future, more sophisticated sampling techniques will be required if studies are to have the same influence as that generated by earlier work in this area.

The second problem has been the propensity of researchers to study women's business ownership without a broader theoretical framework or appropriate academic context. Researchers have noted that this has been an unfortunate feature of much small business research. Nevertheless, there have been signs that the broader field of small business research is maturing and the theoretical issues are emerging; however, the more specific area of women's business ownership needs to be developed in the same way.

The lack of an academic or theoretical context can be attributed to the fact women's business ownership specifically as well as small business ownership in general does not fit neatly into a single academic discipline. As such, such studies must cross traditional research lines; this problem can be resolved only when researchers of women's business ownership begin to build a theoretical core from a number of disciplinary sources that must reflect an integrated approach. Women owners view their businesses as a cooperative network of relationships and there is a considerable crossover between personal and business dimensions of life. Disciplines such as sociology and social psychology can play an important role in this development process. For example, although the linkages between research into self-employment and the overall labor market have been made by various researchers, the linkages between female self-employment and women's place in the labor market have not always been clearly established. Scholars investigating women's business ownership must not only be able to draw from an array of disciplinary sources, they must also

place their findings within a broader context. In doing so, a greater understanding of women's economic self-sufficiency will be developed and be reflected in public policy.

An important aspect of this type of research and findings is in the area of economic development or government policymaking with respect to women business owners. Owning a business is rarely an option for the large percentage of women who must achieve financial autonomy. This leads to the concept of women's economic development which must be directed on behalf of all women, especially poor women, working women, and women of color. Women's economic development must become a major component within the concept and practice of community economic development. This kind of economic development is guided by two concerns—first, the realization that there are not enough jobs for everyone who wants to work and, second, middle-level jobs in our economy are being replaced by a large number of low paying jobs and a small number of high paying jobs. Women face a crucial challenge in economic self-determination if they are to reverse the continuing decline of their economic status. Women must gain recognition as a key constituency in the process of economic development.

The next few decades may be a turning point for women. One of the major issues facing the economic future of the country is reconciling the conflicting needs of women, work, and families. Because of the unique combination of technological and demographic changes, women may be in the strongest position ever to start demanding that their needs be met, that childrearing and household management be recognized as valuable work, and that their own definitions of success be affirmed and validated in all areas of life and work. But, perhaps the first step is for women themselves to affirm the cognitive and behavioral differences between men and women and in the process validate their own values, beliefs, and choices.

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