

Where are Wisconsin's Women Business Leaders?

Tessa Conroy and Steven Deller

Department of Agricultural and Applied Economics and Center for Community and Economic Development University of Wisconsin-Madison/Extension

Patterns of Economic Growth and Development Policy Brief Series No. 2





Table of Contents

Key Points	2
Introduction	
Business Ownership and Performance	5
The Role of Gender	······
Policy Implications	10
Conclusion	I2

We appreciate Courtney Berner and Maureen Stickel for their helpful comments as we developed this policy brief. All errors are the responsibility of the authors.

Key Points

- Women-owned and managed businesses have grown substantially in economic importance during the last 20 years yet still represent a relatively small share of establishments, sales, and employment.
- Communities may not be taking full advantage of their women-owned businesses as a source of economic growth and development.
- Access to capital, education, networks, and work-life balance appear to be key issues for women business owners.
- Policies and strategies that support start-up and growth opportunities for women-owned businesses include:
 - Organizing networks both inclusive of and specifically for women business owners. Connecting women with bankers, venture capitalists, and others in small business finance may be especially productive.
 - Continuing to encourage women in STEM in order to increase their business prospects across all sectors of the economy, including high-performing industries where women are especially underrepresented.
 - Facilitating work-life balance for men and women by ensuring available and quality childcare as well as promoting workplace policies such as paid family leave and flexible work schedules.

Where are Wisconsin's Women Business Leaders?

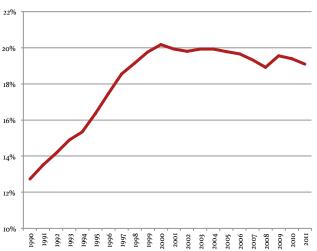
Introduction

The surge of women entrepreneurs in recent decades, alongside the increasing number of women in management positions, has changed the gender composition of business leaders in the U.S. Women-led businesses have grown in number, market presence, and economic importance. Nationally, the number of women-owned firms increased by 50% between 2002 and 2007 based on data from the U.S. Census Survey of Business Owners (U.S. Department of Commerce 2010). In Wisconsin, the number of women-owned or managed businesses more than tripled between 1990 and 2011. As of 2011, women owned or managed over 80,000 businesses, employed over 550,000 workers, and earned \$45 B in sales.

Despite recent growth, women remain underrepresented among business owners. Women comprise roughly half of the labor force and earn the majority of college degrees, but own less than one-third of businesses in the U.S. Women appear to be even further behind in Wisconsin, owning or managing just 19% of establishments based on estimates from the National Establishment Times Series (NETS) as shown in Figure 1 (see Conroy and Deller (2015) for more details). Women-owned businesses in Wisconsin are also smaller than peer businesses as measured by sales and employment. On average, womenowned businesses earn sales or revenue half to two-thirds of their counterparts and have roughly one less employee per establishment.

While it may be that women-owned businesses are smaller and fewer at least

Figure 1: Woman-owned or Managed Establishments in Wisconsin, as a Share of Total



partly by choice, there is evidence that women face barriers to entry and growth. If women do face undue obstacles that prevent their businesses from reaching optimal performance, the cost is born not just by women but by the whole economy. Underutilizing women entrepreneurs ultimately results in fewer jobs, lost income, and fewer products and services on the market. As stated in a report from the Ewing Marion Kauffman Foundation, "Women capable of starting growth companies may well be our greatest underutilized economic resource" (Mitchell 2011, p. 2).

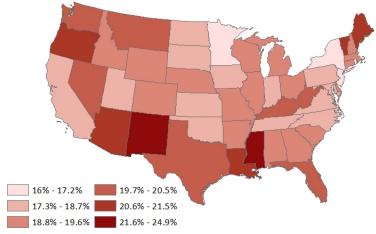
Supporting women business-leaders could prove to be part of a successful economic development strategy given how valuable women are to their organizations and communities. As reported by their peers, women are more effective than men in leadership positions (Paustian-Underhaul et al. 2014). Having a woman chief financial officer (CFO) and a gender-diverse board of executive coincides with more honest financial decision-making (Gilbloom 2015).

Businesses with women on their boards tend to outperform peer companies with all male boards as measured by share price performance (Credit Suisse Research Institute 2012) and return on sales (Catalyst 2011). Further, companies with more gender diversity have more customers, increased sales revenue, and greater profits (Herring 2009).

In addition to having a valuable role within organizations, women business owners can also play a valuable role within their communities. Between 1997 and 2007, privately held women-owned businesses added 500,000 jobs whereas other privately held businesses lost over 2 million jobs combined (U.S. Dept. of Commerce 2010). Even during an economic downturn women-owned firms are important, as they are less likely than firms owned by men to lay off workers (Matsa and Miller 2014). The growth of women-owned businesses and their employment performance during a period when other private businesses were losing jobs demonstrates the value of women-owned business for their communities in terms of job retention.

Wisconsin can potentially encourage its would-be women entrepreneurs through thoughtful policies. At a minimum, policies aimed at equitably enhancing entrepreneurship should be informed of gender differences. In this policy brief, we outline some of those differences and consider potential policy options. A recent publication by Conroy and Deller (2015) describes women-owned business in Wisconsin. Here we consider the motivation behind a woman's decision to start a new business and the factors that may lead to different outcomes for womenowned businesses. The analysis draws on extant research that identifies the owner,

Figure 2: Share of Women-Owned or Managed Establishments, 20II Source: Authors' calculations using the National Establishment Time Series.



firm, and regional characteristics that explain differences in business outcomes, as well as the constraints that women may face as entrepreneurs and business owners. In the final section we consider several relevant policy options.

Business Ownership and Performance

By some measures women have made great strides in the labor force, but there is still space for more progress. To demonstrate this point, women made up more than a third of U.S. managers as of 2007 (Dezsö and Ross 2012) but just 4.8% of CEOs in Fortune 500 companies as of 2015 (Catalyst 2015). Women comprise roughly half of the labor force, but remain a minority in science and engineering fields (National Girls Collaborative Project, based on 2014 data). Women now earn the majority of advanced degrees (Perry 2013), yet men secure patents at more than twice the rate of women in the life sciences (Ding et al. 2006). Women are recognized as capable leaders in peer evaluations, but less so in self-evaluations (Paustian-Underhaul et al. 2014).

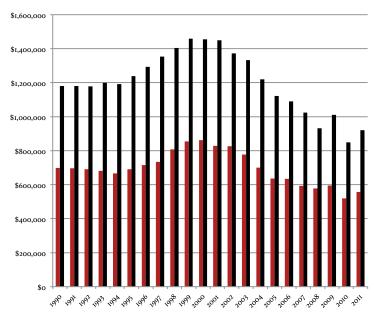
Women own more businesses than ever before, but women-owned businesses are still outnumbered and outperformed by businesses with other forms of leadership (i.e. male-owned or co-ed partnership) as measured by sales and employment. Women made great strides to close the gender gap in business ownership and performance in the 1990s, outpacing the growth of other establishments across many metrics. Since 2000, however, it appears that the growth of women-owned businesses has stalled. In this section, we consider how women-owned businesses differ from other businesses in number, growth, performance, and industry.

Number

In Wisconsin, there were approximately 80,000 women-owned or managed (WOM) businesses in 2011, but they were outnumbered by other forms of leadership nearly 4:1. In the 1990s in Wisconsin, it

Figure 3: Average Sales In Wisconsin Establishments

- ■Non Woman-Owned Establishments
- Non Woman-Owned Establishments



appeared that women-owned businesses would eventually reach balanced numbers growing by 110% between 1990 and 2000, while the number of all other businesses grew by just 21%. In the following decade, however, the growth of WOM businesses slowed and the gender gap persisted. Between 2000 and 2010, the number of WOM businesses grew 59% and the number of all other businesses grew by 66%, resulting in little change in the gender gap during the most recent decade.

Performance

In Wisconsin, average sales earned by women-owned businesses have consistently been a fraction of sales earned in non-WOM establishments. On average, WOM establishments in Wisconsin earned just over \$500,000 in sales and non-WOM establishments earned \$900,000. The gender difference in average sales in Wisconsin mimics the national trend. Across the country, average sales/receipts in women-owned businesses are only one-

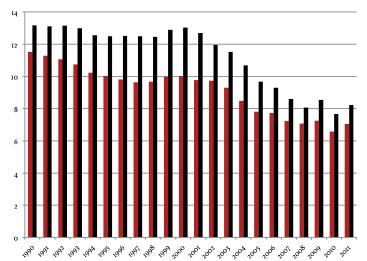
fourth of that for men-owned businesses (U.S. Department of Commerce 2010).

Sales growth in women-owned businesses outpaced that of non-WOM businesses in the 1990s, narrowing the gender gap. For women-owned businesses within Wisconsin, sales increased nearly 160% of between 1990 and 2000 when sales earned by non-WOM establishments increased just 48%. Women-owned sales growth in Wisconsin, however, is still relatively low. The American Express OPEN State of Women-Owned Businesses Report ranks states by women-owned firm and sales growth from 1997 to 2011. Wisconsin ranked 39th in sales growth, relatively low alongside neighboring states. Minnesota ranked 35th in sales growth and Iowa ranked 51st.

Just as women-owned businesses earn less, they also employ fewer workers. In 2011, women-owned or managed establishments in Wisconsin employed seven people on average, including the owner or managers whereas non women-owned businesses

Figure 4: Average Employment Per Establishment in Wisconsin

- ■Woman-Owned or Managed Establishments
- ■Non Woman-Owned or Managed Establishments



employed just over eight people. In general, average business size has been decreasing, particularly for non-WOM establishments, causing the gender gap within the state to narrow during the last decade. The employment growth trend for women-owned or managed establishments in Wisconsin is similar to that of establishments and sales, growing rapidly in the 1990s and slowing in the 2000s. Employment in women-owned businesses increased 82% from 1990 to 2000 but just 4% between 2000 and 2010. Non-woman owned or managed establishments grew much slower, just 19% between 1990 and 2000. From 2000 to 2010, employment in non-woman owned establishments actually decreased by 3%.

Industry The differences in sales and employment performance are largely explained by the industrial concentration of men and women—men tend to be in capital-intensive industries that feature large firms whereas women tend to be in industries where businesses have few employees and lower revenue (Coleman and Robb 2012). Nationally, women tend to own businesses in service sectors such as health care, education, and retail whereas men tend to own businesses in manufacturing and construction (U.S. Department of Commerce 2010). Conroy and Deller (2015) show that the same is true for Wisconsin: women are concentrated in Healthcare, Education, and other services. Simply by implication of their chosen industry, women business owners may earn lower sales and employ fewer workers. Yet even within these sectors that already feature lower average sales and employment, women-owned businesses are still smaller than their counterparts (U.S. Department of Commerce 2010).

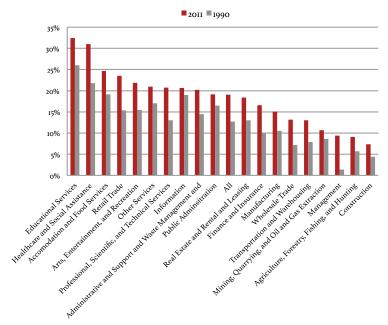
The Role of Gender

The socio-economic characteristics of men and women business owners are quite similar (U.S. Department of Commerce 2010). Compared to nonself-employed, self-employed men and women are older, more likely to be married, and less likely to have children at home (Ibid.). Rather than characteristic differences between men and women, differences in their behavior may be key to understanding the different outcomes of their businesses (Conroy and Weiler, Forthcoming). Men and women differ in their motivations, educational choices, as well as their financing and management strategies. Closer consideration of these owner behaviors could lead to policy alternatives for those communities intending to equitably enhance entrepreneurship.

First, though women business owners are not clearly more or less educated than selfemployed men, they make different choices when selecting college majors and other post-secondary education. As the industrial concentrations of women-owned business implies (Figure 2), women are more likely to have education and professional experience that prepares them for work in the education health care. retail, and several other service industries (U.S. Department of Commerce 2010). Businesses in these industries tend to be smaller in terms of sales and employment; hence education choices are likely linked to performance.

Women, in some cases, have different motivations and expectations for their businesses. Men are more likely than women to report that they started a business to have a primary source of income, whereas women more likely say

Figure 5: Share of Woman-Owned Establishments in Wisconsin, by Sector



they started their business as a secondary source of income. (Fairlie 2009). Women are twice as likely as men to report that they started a business to meet family responsibilities (Ibid.). When asked about their reasons for starting businesses, women are more likely to cite reasons related to work-life balance (Boden 1999). Given that women are not always motivated by pecuniary goals and instead have strong family-related motivations for their business, it is not surprising that some women have lower expectation for sales and employment growth in their businesses.

More successful firms tend to have owners who work more hours (Coleman and Robb 2009). Due to the demands of unpaid work in their households, it is also likely that women have fewer hours available to work in their businesses. Indeed, on average self-employed women do work fewer hours than self-employed men in addition to earning less per hour, perhaps reflecting the fact that women still spend more time

providing childcare, eldercare, spousal care, and household care than their male counterparts (Curley-Galvez et al. 2009, U.S. Department of Commerce 2010). Further, Conroy and Weiler (forthcoming) find that places with more children per adult have a lower propensity for both women-owned business and men-owned business.

Data, however, contradict the notion that women are "lifestyle business owners" (American Express 2011). The State of Women-Owned Business Report by American Express shows that womenowned businesses keep pace with average employment and revenue growth in maleowned firms up to the 100-employee or \$1 M sales threshold, but then women-owned firms often stop growing whereas maleowned business continue on their growth path. This suggests a critical point where women-owned businesses might be meeting a constraint that impedes performance (American Express, 2011). This result combined with the family obligations women identify in other studies suggest that broad generalizations about women owned businesses can lead to incorrect perceptions and distort policy options. Some women business owners seem to be driven by profit and growth while others prioritize childcare and household income stability.

Networks

Networks are fundamental to the entrepreneurial process to the extent that they provide valuable information and facilitate startup and growth.

Entrepreneurs with more information about the success (and failure) of past ventures have an advantage over other less informed entrepreneurs (Bunten et al. 2015). Potentially, they have knowledge about suppliers, market niches, access to capital, and prime locations, for example, all of which benefit their venture. Entrepreneurs thus benefit from the experience of their role models such as self-employed parents or peers in their professional network. Such social networks, both personal and professional, can be critical at each stage of business development, but particularly in identifying opportunities and procuring necessary resources (Stuart and Sorenson, 2005).

Restricted access to important information networks may represent a significant barrier for women in both the competitive and entrepreneurial labor market (Weiler and Bernasek 2001) as women are likely less networked than their counterparts. Simply by the numbers, there are fewer women business leaders and hence a limited number of role models for the next generation of woman entrepreneurs. The legacy of male dominated professional associations may also limit women's access to such networks. Fewer role models, fewer women-owned businesses, as well as smaller and fewer professional networks, result in less market information available to incoming women entrepreneurs. The market is thus especially uncertain for women, which exacerbates the disadvantage of their less-networked position (Minniti 2005).

The relatively weak networks for women may have broader consequences. If women are less networked, they derive a smaller benefit from what economists call agglomeration. As a result, women may choose to locate further from agglomerated areas leading to the spatial segregation of men- and women-owned businesses (Rosenthal and Strange 2012). Indeed women-owned businesses are segregated, often to the degree of black-white residential segregation (Ibid.).

Capital

There is evidence that women-owned firms suffer from undercapitalization at all stages leading to underperformance in comparison to their male counterparts (Carter 2001). The systematic disadvantage facing women with respect to financing may be preventing them from realizing their full entrepreneurial potential. Firms that start with more capital tend to have higher asset levels, revenues, and employment (Fairlie 2009). Women are far less likely to use external financing (e.g., banks) and those that do tend to use less. The chronically weak capital position of women-owned firms at start-up and throughout later growth stages helps explain why their outcomes are systematically lower than male firms (U.S. Department of Commerce 2010).

Financing strategies depend on the size, industry, and growth pattern of firms. As previously described, women-owned firms are smaller on average. Typically, small firms are less likely to use bank loans for start-up capital and are too small to attract external equity capital (Coleman 2012). These firms are commonly capitalized through internal sources. Indeed, women are more likely than men to use personal or family savings, wealth, and credit for start-up capital or simply start up without financing (SBA). Entrepreneurs that bootstrap with high-risk or costly financing

Agglomeration economies are said to exist when a critical mass of business or economic activities co-locate and by co-locating each activity benefits. This could be stronger access to specialized labor or input suppliers. One could think of these as positive externalities of co-location. In the simplest sense, firms located in urban areas have better access to specialized services than firms located in more isolated areas.

such as personal credit cards tend to be more vulnerable to unpredictable cash flows and less likely to invest in an expansion or research and development ultimately resulting in a less competitive venture.

In addition to size, the industry in which entrepreneurs start their businesses is tied to their financing strategy. The industries with more women-owned businesses tend to consist of small firms with few assets that could be used as collateral for loans (Coleman and Robb 2012). They also have limited growth potential making them less attractive candidates for equity financing (Ibid.). However, men-owned firms, which are concentrated in manufacturing, construction, and transportation, tend to be larger and more growth-oriented. They are more likely have assets such as vehicles, equipment, and buildings that can be used as collateral for loans and the growth potential that attracts external equity financing.

Women's accrual of financial capital may be especially limited, at least in part, by implication of their gender (Carter 2001). Women generally earn less and accumulate less savings putting them at a disadvantage to finance their businesses through personal wealth (Marlow 2005). Compounded with the fact that women business owners are concentrated in low capital industries, they may not have collateral required to secure a loan (Carter 2001, Cavalluzzo 2005). Their financial situations may also be made worse by information disadvantages and potentially discriminatory lending practices.

Women-owned firms may be more informationally opaque than men-owned firms making them less attractive loan candidates. Women may be less likely to establish credibility through a personal bank account or credit history (Marlow 2005). Women-owned businesses also tend to be concentrated in the industries that generally require less financing. Consequently, lenders have far less information about the market and performance of comparable businesses. If it is the case that women-owned firms are at an information disadvantage, then lenders may see their business prospects as more uncertain, making them appear as risky candidates for financing.

Relationship lending, wherein lenders rely on "soft information" that comes from near and personal access to the business owner and their venture can be an important mechanism to overcome information asymmetry. Yet due to their weaker social and professional networks women may have limited access to relationship lending. Rosenthal and Strange (2012) point out that if women are less networked, the effect is exaggerated if it impairs relationships with lenders and limits access to credit. As evidence of these network disadvantages, they find that women locate in areas with less overall business activity, less activity in their own industry, and less banking activity. It is then probable that credit constraints are an obstacle for women entrepreneurs.

Policy Implications

Already there are a range of entrepreneurship and small business development and support programs offered across Wisconsin. These include programs offered by the Small Business Administration, Small Business Development Centers through the University of Wisconsin-Extension, a range of programs offered by the Wisconsin Technical College System and several programs offered by the State of Wisconsin including but not limited to the Wisconsin Economic Development Corporation. The challenge is addressing issues specific to women entrepreneurs, business owners, and managers within existing educational and counseling programs. If programs are designed with the philosophy that one size fits all, then important economic development opportunities are missed. Women business owner support networks, such as the Wisconsin Women's Business **Initiative Corporation** (https://www.wwbic.com/) and the Women's Council Wisconsin (http://womenscouncil.wi.gov/), can help provide services specifically aimed at the

needs of women owned businesses.

Cultural shifts will also continue to shape women's situation in the labor market. As women gain traction in leadership positions and caretaking roles become more balanced, there may be ripple effects in women-owned business. For example, we might see more women who start a business as a primary (instead of secondary) source of income and more men who cite reasons related to work-life balance as their motivation for starting their own business. Such a shift in preferences would likely narrow the gender gap in business performance.

Despite currently changing norms there are still steps communities can take to

While the policy options discussed in this brief are supported by the extant literature, the research foundation is still expanding. Quantitative analysis of entrepreneurship-enhancing policies by gender is a growing field of study. Ongoing research efforts will continue to inform our understanding of men and women entrepreneurs both nationally and in Wisconsin as well as identify the most appropriate policy measures.

support their women business leaders. Economic development strategies could play a role in networking, mentoring, and educating women business owners. Women business owners can increase their visibility and enhance their reputation by connecting with bankers, venture capitalists, input suppliers, customers, and other business owners (Hadary 2010). One way to address the network disadvantages that women face could be to facilitate mentorship programs, start-up incubators, and professional organizations or events specifically aimed towards women entrepreneurs. The idea is not to separate or isolate women entrepreneurs and business owners from their male counterparts, but to allow opportunities for shared learning. This strategy may actually leverage a comparative strength for women in building and maintaining relationships. As women become more integrated into the local business community and their access to knowledge improves, so too might the performance of their businesses.

Relationships and networks could be especially important in relation to finance. As noted, access to capital is one of the factors that does seem to play a role in the business performance differentials by gender. Supporting a network between women business owners and bankers and

venture capitalists could prove particularly effective. Hadary (2010) argues that women business owners are more likely to receive funding when they work with other women and that placing more women in positions to allocate capital could help with financing women-owned business. There is some evidence that women are more risk averse than men when making financial decisions, and that women self-ration credit (Jianakopolis and Bernasek 1998, Mijid and Bernasek 2013). To the extent that financial education and stronger networks increase and improve the information available to women, and thereby reduce risk, we might expect women to pursue external finance more often.

Educational training overlaps strongly with industry, and ultimately, with occupational choice. The trends in women's education attainment coupled the industrial concentrations of women-owned businesses suggest that policies intended to foster entrepreneurship should consider education. Expanding the opportunities and support for women in diverse fields of study could, by extension, facilitate the diversification of women-owned business. As an example, men and women business owners are similar in their overall level of educational attainment, but women may then be choosing fields of study that are less conducive to high-growth business ownership. If these choices are a legacy of historical gender norms and gendered socialization beginning early in life, it would be reasonable to further encourage women in STEM and other traditionally male-dominated fields. Women will then have better access to educational training that can lead career opportunities, as employees and entrepreneurs, in high earning industries.

Work-life policies such as family leave and access to childcare generally support the advancement of women in the workplace (Curley-Galvez et al. 2009). Such policies also facilitate women's success in business ownership. Without access to childcare families may decide that one parent/caretaker must wholly or partly give up their career in order to meet the demands of raising children. Often it is the female member of the household who makes the choice between a career and having children. Having reliable and affordable childcare services available, allows adults with children to choose to continue to pursue their career ambitions—either within an organization or as entrepreneurs.

In summary, some actions for communities to consider include:

- Assuring the availability of affordable and reliable childcare in the community.
- 2) Implementing early childhood development programs.
- 3) Inviting and encouraging women to join existing professional networks, such as those coordinated through the local Chamber of Commerce, that connect women with other business leaders.
- 4) Forming a local women's business leaders association specifically to increase the visibility of women entrepreneurs and foster professional relationships among them.
- Facilitating mentorship between existing business owners and women entrepreneurs in the early stages of business development.
- 6) Hosting networking events where women business leaders can connect with those in the finance sector.

- 7) Training bankers and financiers to screen specifically for promising women-owned businesses and identify their finance needs.
- 8) Providing educational programing on the availability of start-up financing such as loans provided or guaranteed by the government.
- 9) Supporting women in STEM at all education levels through programming for girls and additional training for educators in methods that encourage girls in math and science.

Conclusion

Development policies aimed at enhancing business ownership, will consider how the characteristics, choices, and constraints on women business owners relate to the disparity in ownership and performance. There is some evidence that the small share and modest performance of womenowned businesses is a reflection of women having different personal and professional goals. Yet if the rarity of womenentrepreneurs and smaller size of their businesses is not entirely a result of gendered preferences, women may represent a source of unrealized economic gains. Differences in education and access to capital do seem to partly explain the differences in performance between male and women-owned businesses, suggesting that the gender disparities are partly a result of obstacles for women entrepreneurs. Potentially, these constraints on women entrepreneurs can be alleviated through policy, and lead to more businesses with greater growth potential.

Even if women owned businesses are inherently smaller, women-owned businesses may provide benefits to their communities that can't be measured by employment and income. By broadening our definition of success, we might see unconventional ways in which womenowned (and other) businesses make an impact. Women may in fact be uniquely innovative in ways that appeal to those people that drive a large part of consumer spending, namely, other women. Womenowned businesses may be concentrated in non-profit and charitable organizations, which almost necessarily implies their businesses have primary goals entirely apart from profit maximization. The socially minded services and activities of such businesses undoubtedly contribute to community development. Further, if growing strong families is one aspect of community development, then supporting entrepreneurs, men and women alike, who

balance their business with unpaid work at home, may be an attractive policy goal.

While women's business ownership does prompt a discussion of gender-equity, it can be framed more broadly as an economic issue (Mitchell 2011). When new companies start and thrive, their communities reap the benefits particularly in the form of job creation (Haltiwanger et al. 2013). If it is the case that women entrepreneurs are an underutilized economic resource, policies that encourage women owned business could also be part of an effective strategy for community and economic development.

References and Additional Materials

- "The American Express OPEN State of Women-Owned Businesses Report." (2011): 1-50.
- Boden, Richard J. "Flexible Working Hours, Family Responsibilities, and Female Self-Employment Selection." 1999 58.1 (1999): 71–83.
- Bosse, Douglas A, and L Taylor Porcher. "The Second Glass Ceiling Impedes Women Entrepreneurs." *The Journal of Applied Management and Entrepreneurship* 17.1 (2012): 52–68.
- Bunten, Devin et al. "Entrepreneurship, Information, and Growth." Journal of Regional Science (2015).
- Carter, S. L., S. Anderson, and E. Shaw. "Women's Business Ownership: A Review of the Academic, Popular and Internet Literature." 2001.
- Catalyst. Women CEOs of the S&P 500. New York: Catalyst, 2015.
- Cavalluzzo, Ken, and John Wolken. "Small Business Loan Turndowns, Personal Wealth, and Discrimination." *The Journal of Business* 78.May 2013 (2005): 2153–2178.
- Coleman, Susan, and Alicia M. Robb. A Rising Tide: Financing Strategies for Women-Owned Firms. Stanford: Stanford Economics and Finance, 2012.
- Conroy, Tessa, and Stephan Weiler. "Where Are the Women Entrepreneurs? Business Ownership Growth by Gender Across the American Urban Landscape." *Economic Inquiry (Forthcoming)*
- Dezsö, Cristian, and David Gaddis Ross. "Does Female Representation in Top Management Improve Firm Performance? A Panel Data Investigation." Strategic Management Journal 33 (2012): 1072–1089.
- Ding, Waverly W, Fiona Murray, and Toby E Stuart. "Gender Differences in Patenting in the Academic Life Sciences." Science (New York, N.Y.) 313.7 (2006): 665–667.
- Gurley-Calvez, Tami, Amelia Biehl, and Katherine Harper. "Time-Use Patterns and Women Entrepreneurs." *The American Economic Review* 99.2 (2015): 139–144.
- Gilblom, Kelly. "More Female Executives Means Less Tax Evasion , Study Finds." *Bloomberg Business* 2015. http://www.bloomberg.com/news/articles/2015-02-12/more-female-executives-means-less-tax-evasion-study-finds
- Hadary, Sharon G. "Why Are Women-Owned Firms Smaller Than Men-Owned Ones?" *The Wall Street Journal*. 2010. Web. 1 Apr. 2015. http://www.wsj.com/articles/SB10001424052748704688604575125543191609632
- Haltiwanger, John, Ron S Jarmin, and Javier Miranda. "Who Creates Jobs? Small versus Large versus Young." *The Review of Economics and Statistics* XCV.2 (2013): 347–361.
- Jianakoplos, Nancy Ammon, and Alexandra Bernasek. "Are Women More Risk Averse?" Economic Inquiry 36.4 (1995): 620-630.
- Marlow, Susan, and Dean Patton. "All Credit to Men? Entrepreneurship, Finance, and Gender." Entrepreneurship Theory and Practice (2005).
- Mijid, Naranchimeg, and Alexandra Bernasek. "Gender and the Credit Rationing of Small Business." *The Social Science Journal* 50 (2013): 55–65.
- Minniti, Maria. "Entrepreneurship and Network Externalities." Journal of Economic Behavior & Organization 57.1 (2005): 1-27.
- Mitchell, Lesa. "Overcoming the Gender Gap: Women Entrepreneurs as Economic Drivers." Ewing Marion Kauffman Foundation September (2011): 1-13.
- National Girls Collaborative Project. State of Girls and Women in STEM. Seattle: National Girls Collaborative Project. Accessed April 1, 2015. http://www.ngcproject.org/statistics
- Perry, Mark J. "Women Earned Majority of Doctoral Degrees in 2012 for 4th Straight Year and Outnumber Men in Grad School 141 to 100." AEIdeas. N.p., 2013.
- Rosa, P, and Sara Carter. "The Financing of Male- and Female- Owned Businesses." *Entrepreneurship Regional Development* 10.3 (1998): 225–242.
- Rosenthal, Stuart S, and William C Strange. "Female Entrepreneurship, Agglomeration, and a New Spatial Mismatch." *The Review of Economics and Statistics*. 94:3 (2012): 764–788.
- Stuart, Toby E, and Olav Sorenson. "Social Networks and Entrepreneurship." The Handbook of Entrepreneurship. 2005. 211–227.
- U.S. Department of Commerce. "Women-Owned Businesses in the 21st Century." 2010: 1-115.
- Weiler, Stephan, and Alexandra Bernasek. "Dodging the Glass Ceiling? Networks and the New Wave of Women Entrepreneurs." The Social Science Journal 38.1 (2001): 85–103.