Although both women and men increased their use of outsider debt in seeking additional capital for their business after start-up, men continued to use outsider debt at a higher rate (63.0% vs. 56.4%). According to the study by Robb and Coleman (2009), outsider debt and owner-provided equity combined provided 79% of the total amount of initial start-up financing for the firms that still existed in 2007 (Robb and Coleman, 2009). The amounts provided by these initial financing sources were about one-third lower for women-owned firms compared to men-owned firms ($46,000 vs. $67,000).

Table 6 provides additional information on financing sources for business start-up and subsequent capital for business expansion and improvements, by gender of owner and by size of business. Table 6 distinguishes between larger businesses with high sales levels (*i.e.*, $500,000 or more in sales annually) and smaller businesses with low sales levels (*i.e.*, less than $500,000 in sales annually). The information in Table 6 was compiled using the 2002 SBO data.[10] While a high share of all business owners indicated they used personal or family savings to start or acquire their business, a substantially lower share of women-owned than men-owned businesses used a bank loan (5.8% vs. 12.7%). This same pattern occurs in the use of financing sources to expand or improve businesses. Women-owned businesses were less likely than men to use a bank loan (4.0% vs. 10.7%).

Table 5
Percent of Firms by Sources of Startup and Subsequent Capital for Surviving Firms

	Owner Equity	Insider Equity	Outsider Equity	Owner Debt	Insider Debt	Outsider Debt
Startup Capital (2004)						
Women-Owned	83.7%	6.1%	5.0%	50.8%	11.3%	46.7%
Men-Owned	81.1%	6.7%	7.3%	47.7%	11.6%	55.1%
Subsequent Capital (2004-2008)						
Women-Owned	34.5%	2.7%	2.2%	36.1%	8.0%	56.4%
Men-Owned	32.2%	2.9%	2.4%	36.0%	7.6%	63.0%

Source: The Kauffman Firm Survey, 2004-2008.

Note: ***Insider equity*** includes spouse and parent equity. ***Outsider equity*** includes angel, venture capital, government and other company investments. ***Owner debt*** includes personal credit card use of the owners. ***Insider debt*** includes personal or business loans to the owner from family, employees, other owners, or other insider personal and business loans or funding. ***Outsider debt*** includes personal or business bank loans, business credit cards, credit lines, other business or non-bank loans, government business loans or other outside debt or loans.

An analysis of the use of outside sources of financing from banks and the government by level of sales provides some notable results. Women-owned businesses that were in the high sales category received business loans from banks in substantially higher proportions than those in the lower sales categories. The percentage of high sales women-owned businesses receiving bank loans was only slightly less than among high sales men-owned businesses. About 25% of women-owned businesses with currently high sales obtained bank loans to start or improve their businesses, compared to about 30% for the same class of men-owned businesses, possibly indicating that high sales businesses regardless of gender were

[10] The SBO business sample includes both businesses that started in 2002 and businesses that were in operation prior to 2002. Table 6 only includes data from those privately-held businesses whose ownership was classifiable by gender.

deemed by banks to be good investments. Among low sales firms, women-owned businesses were far less likely to rely on banks for outside financing. Only about 5% of women-owned businesses with lower sales obtained bank loans for financing their businesses, whereas about 10% of men-owned businesses did so.

Table 6
Sources of Capital Used by the Owners to Start and Expand Their Business by Gender, 2002

	Personal/ Family Savings	Other Personal/ Family Assets	Personal/ Business Credit Card	Business Loan from Government	Government Guaranteed Bank Loan	Business Loan From Bank	Outside Investor	None Needed
Start or Acquire the Business								
All Firms								
Women-Owned Firms	48.2%	7.0%	9.2%	0.7%	0.5%	5.8%	1.6%	37.2%
Men-Owned Firms	56.2%	8.8%	8.3%	0.8%	0.7%	12.7%	2.7%	26.3%
Equally-Owned Firms	68.2%	15.2%	11.4%	1.5%	1.3%	17.6%	2.9%	12.4%
Total Firms	54.6%	9.0%	8.8%	0.9%	0.7%	11.4%	2.7%	27.7%
Low Sales Firms (less than $500,000)								
Women-Owned Firms	47.5%	6.7%	9.2%	0.6%	0.4%	5.1%	1.5%	38.3%
Men-Owned Firms	55.1%	8.2%	8.5%	0.7%	0.5%	10.5%	2.4%	28.6%
Equally-Owned Firms	68.0%	14.7%	11.6%	1.4%	1.1%	16.2%	2.7%	13.1%
Total Firms	53.9%	8.5%	9.0%	0.8%	0.5%	9.6%	2.3%	29.6%
High Sales Firms ($500,000 or more)								
Women-Owned Firms	67.4%	16.4%	9.1%	2.3%	2.8%	24.1%	4.6%	8.9%
Men-Owned Firms	64.2%	13.8%	6.9%	1.7%	2.0%	29.1%	5.6%	9.2%
Equally-Owned Firms	71.0%	19.0%	9.4%	2.4%	3.6%	30.2%	4.8%	5.0%
Total Firms	60.6%	13.7%	6.8%	1.9%	2.1%	27.6%	6.5%	10.8%
Finance Expansion or Capital Improvements								
All Firms								
Women-Owned Firms	23.0%	4.0%	11.2%	0.4%	0.2%	4.0%	0.8%	64.4%
Men-Owned Firms	25.7%	4.9%	11.1%	0.5%	0.3%	10.7%	1.3%	58.2%
Equally-Owned Firms	34.4%	8.3%	15.0%	0.8%	0.4%	13.4%	1.2%	47.1%
Total Firms	25.5%	5.0%	11.4%	0.5%	0.3%	9.2%	1.2%	58.5%
Low Sales Firms (less than $500,000)								
Women-Owned Firms	23.0%	3.9%	11.2%	0.4%	0.2%	3.2%	0.8%	65.0%
Men-Owned Firms	26.3%	4.8%	11.3%	0.4%	0.2%	8.2%	1.2%	59.4%
Equally-Owned Firms	35.3%	8.4%	15.3%	0.8%	0.3%	11.6%	1.1%	47.4%
Total Firms	26.1%	4.9%	11.6%	0.5%	0.2%	7.1%	1.1%	59.6%
High Sales Firms ($500,000 or more)								
Women-Owned Firms	23.2%	6.7%	12.2%	1.2%	1.0%	26.2%	1.4%	49.1%
Men-Owned Firms	20.8%	5.5%	9.1%	1.1%	0.9%	30.0%	2.0%	49.1%
Equally-Owned Firms	26.3%	7.9%	13.0%	1.2%	1.0%	30.7%	1.5%	44.1%
Total Firms	20.0%	5.5%	9.1%	1.1%	0.9%	28.4%	2.3%	49.2%

Source: ESA calculations using data from the U.S. Census Bureau, Survey of Business Owners, 2002.

Note: Row percents may not sum to 100% because business owners could use more than one financing source. Only includes respondent firms with $1,000 or more in sales/receipts; excludes publicly-held and other firms not classifiable by gender.

Table 6 also shows that government sources of financing were used to finance business start-ups more often than business expansion or capital improvements in all categories. However, women- and equally-owned businesses relied more on these sources of financing than men-owned businesses. Women-owned businesses received nearly $2 billion in loans backed by the Small Business

Administration in FY 2009. All businesses in the high sales category were also more likely to use government financing for start-ups or business improvement than those in the lower sales category.

It would be interesting to know more about specific sources of financing to women-owned firms, such as the type of government loan programs that these firms are most likely to access or whether women who use government loan programs were unsuccessful in seeking private sector financing. Similarly, it would be interesting to know how female business owners use venture capital. Unfortunately, this level of detail is not available in our data.

Finally, women were found to be more likely than men to indicate that they did not need any financing to start their business. This is consistent with the fact that women tend to start smaller-sized businesses. An even higher share of all businesses indicated they did not need any financing for business growth and capital improvements. A higher share of businesses in the high sales compared to the low sales class did not need financing to expand their business; this may indicate that these larger firms are tapping into profits to finance business improvements.

The results in Tables 5 and 6 simply show the overall differences in financing choices between women- and men-owned firms, without controlling for any other differences between them. In research produced for the Minority Business Development Administration, U.S. Department of Commerce, Fairlie and Robb (2010) investigated disparities in capital access between minority and non-minority firms. They applied statistical models to test whether certain firm and owner characteristics are significant in explaining differences in level and type of financing. In these models, they also included gender as well as minority ownership, so the results allow us to assess differences in capital use between women and men.

Fairlie and Robb used the KFS data, which track a panel of firms that began in 2004 and were still in existence in 2007, to look at both start-up and subsequent capital use. In their model, they controlled for a number of characteristics such as age, education, hours worked, type of firm (*i.e.*, team ownership, limited liability corporation, corporation, partnership or home-based), intellectual property ownership, start-up and industry experience, and credit scores. They found that women obtained significantly less capital than men at start-up and for subsequent expansion. This is true even after all of these other factors are held constant, and it suggests that women- and men-owned firms diverge in their capital usage from the very beginning.[11] These differences in initial financing, of course, lead to very different patterns of growth. Such differences for newly-established firms cannot be clearly interpreted without further evidence. The differences may reflect the different types of businesses that women start and the different preferences among women for the size and scope of these businesses, but they may also reflect discrimination in capital markets against women-owned firms.

To better understand the limited use and amount of financing by women-owned businesses, it is important to understand the many considerations that can affect their ability or choice to obtain credit. These factors include type of industry or business, previous business experience, owner

[11] In contrast, an alternative data source, The Survey of Small Business Finances (SSBF), was used by Fairlie and Robb to look at equity and loan amounts for a broad set of existing firms. When controlling for several factors such as sales, firm and owner credit worthiness, age, education, experience and region, the results were not significantly different between women and men.

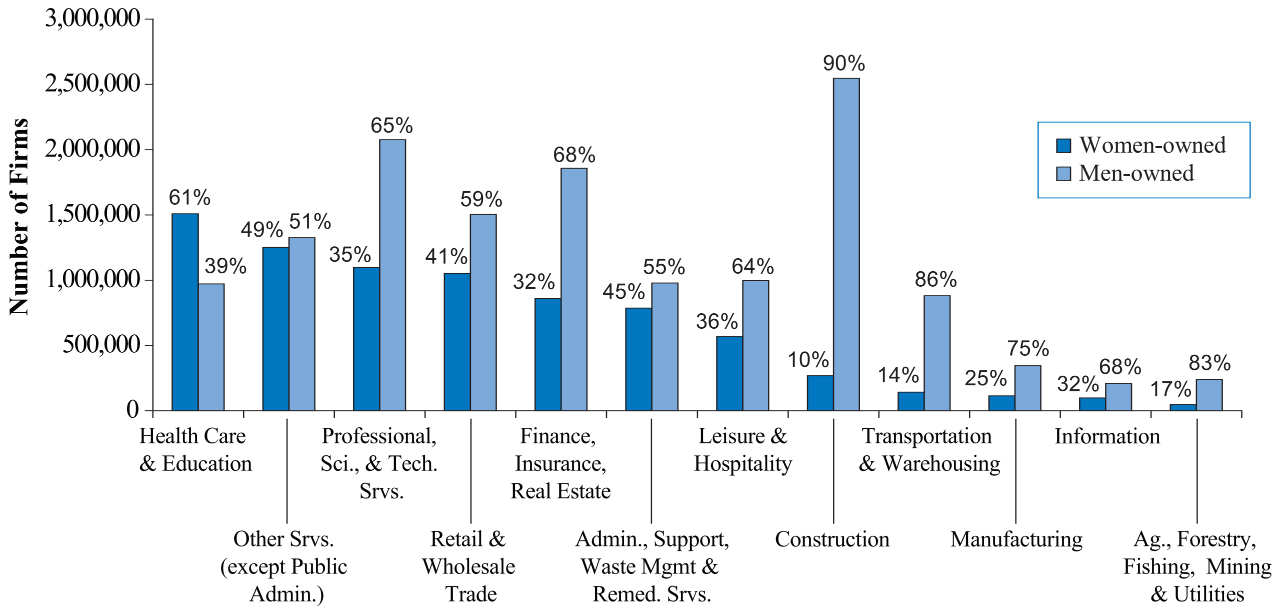
expectations about growth and desire to achieve a work-life balance. We focus on these factors in the rest of this section. It is important to note that discrimination or expectations of discrimination could also be factors that explain these differences, but a comprehensive measure of discrimination-related factors is not readily available and beyond the scope of this report.

Type of Business/Profession

The type of business and profession of the owner often differs between women- and men-owned businesses. Women-owned businesses are concentrated in industry sectors that are dominated by firms that are smaller in size and in sales. Average sales and payroll within industries where women own businesses are typically lower than those where men own businesses. Furthermore, women-owned firms have lower total sales/receipts than men-owned firms in every industry sector, as shown previously in Figure 5. Women are more likely to own businesses in the services sector, such as in health care, education, personal or retail services, and men are more likely to own businesses in manufacturing or construction. The industries in which women choose to operate their businesses reflect, in part, the differences between women and men in fields of study and professional experience.

Figure 6 displays the industry distribution of firms by gender and shows the industry sectors with the highest concentrations of women- and men-owned firms. Healthcare and Education Services is the only sector that has a higher concentration of women-owned than men-owned firms, 61% compared to 39%. The industries within this sector that drive this result are Education Services, Social Assistance, and Nursing and Residential Care Facilities. Close to half of the Other Services category are women-owned firms. This result is driven by the Personal and Laundry Services industry. Other industries with a high proportion of women-owned firms are Retail and Wholesale Trade; Professional, Scientific and Technical Services; Administrative and Support Services; and Finance, Insurance and Real Estate. Some of the subsectors within these larger industry categories that are dominated by women-owned firms in terms of numbers of firms are Apparel Manufacturing; Health and Personal Care Stores; Miscellaneous Store Retailers; Non-store Retailers (likely internet retailers requiring little capital for start-up and operation); and Specialized Design Services. A relatively low percentage of women-owned businesses are in the Construction; Manufacturing; Agriculture; or Mining and Utilities sectors. Women-owned firms are also less likely to be found in industries with strong union activity, and more likely to be in lower paying industries (Blanchflower, 2009).

Figure 6
Industry Distribution of Privately-Owned Firms by Gender of Owner, 2007



Source: U.S. Census Bureau, Survey of Business Owners, 2007.

Note: Excludes equally-owned firms. This graphic combines data across industry sectors. Adding SBO data across industries will will introduce double-counting where firms operate in multiple industries. However, the impact of double-counting is small for non-public firms.

Business and employee income, on average, are relatively low in industries where women-owned businesses are primarily located. Analysis of the 2007 SBO data provides some evidence of this. For example, in the Healthcare and Education Services industry where the number of privately-held women-owned firms is large, annual sales/receipts per firm were $203,800 and payroll per employee was $35,400. This industry would include services such as nursing, social work, teaching (non-public), and daycare providers. Alternatively, in the Construction industry where the vast majority of privately-held firms are owned by men, annual sales/receipts per firm and payroll per employee were substantially higher, $448,000 and $43,700, respectively.

It would be particularly interesting to compare women- and men-owned businesses within the same industry area, for instance, looking at the differences in women- and men-owned firms within the health care sector or within the real estate industry. While we are not able to do this type of close comparison within an industry, it would be an excellent topic for future research.

In terms of occupations, a lower percentage of self-employed women are in managerial occupations compared to self-employed men (Fairlie and Robb, 2008a; Lowrey, 2006; and Hackler *et al.*, 2008). Occupation and industry are closely linked, and occupation overlaps strongly with educational credentials. Women make very different choices when selecting college majors and when selecting occupations. Not surprisingly, as the industry location of women-owned businesses indicates, women are more likely to have training and experience that prepares them for work in the education or health care sector, in retail trade, or in a host of other service sectors. For example, there are substantially more women than men holding postsecondary degrees in education, health professions and related sciences, psychology, and public administration and social services (U.S. Department of Education, 2009).

Performance Expectations and Risk

While financing choices and capital availability are key reasons for size and growth differences, there are a number of other explanations that are more difficult to measure directly. Women business owners appear to have different performance expectations for their businesses than men. Kepler and Shane (2007) find that women expect lower levels of business growth in terms of sales and employment, perhaps because their businesses are smaller and they are located in different industries. One reason could be that women business owners spend more time in other activities, such as childcare or household activities (Gurley-Calvez *et al.*, 2009).[12]

Additionally, research has found that female business owners, and women in general, are more risk averse than men, especially when taking on financial risk (Kepler and Shane, 2007; Croson and Gneezy, 2009). Fairlie and Robb (2008a) also noted that female business owners are less likely to engage in risky business ventures and tend to minimize risk in their business operations. This is consistent with a growing body of research that suggests women are more risk averse than men along a number of dimensions (Powell and Ansic, 1997). In some circumstances, this behavior may reduce the long-term growth prospects of their business.

Education and Experience

Human capital, measured as educational attainment or work experience, is often a key determinant of business performance. Male business owners are more likely to have only a high school education or less, and also more likely to have graduate level education (Fairlie and Robb, 2008a; Coleman, 2004). In a small sample of new business owners, Kepler and Shane (2007) found that educational attainment was similar between male and female business owners. While educational backgrounds and professional experience explain some of the differences in firm outcomes, differences in educational attainment are quite small relative to the large differences in size and sales between women- and men-owned businesses.

Table 7 looks at the characteristics of self-employed persons from the most recent CPS ASEC in 2007, 2008 and 2009.[13] The first two columns compare self-employed women to working women who are not self-employed; the third and fourth columns compare self-employed men to working men who are not self-employed. The final column shows average characteristics among all workers. As discussed earlier, the characteristics of self-employed women are not the same as the characteristics of female business owners, since many self-employed women may be in joint ownership arrangements with their

[12] We cannot evaluate the extent to which these different expectations and behaviors are the product of marketplace barriers that discourage women and alter their behavior.

[13] To reduce variation due to smaller sample sizes, the data in Table 7 combines samples from the 2007, 2008 and 2009 surveys.

husbands or with other partners.[14] The top row of Table 7 indicates that self-employed women constitute 3.0% of the employed labor force, while men are almost twice as likely to be self-employed and constitute 6.9% of all employed workers.

The education panel in Table 7 indicates that both self-employed women and men are more likely to have a college degree than are the non-self-employed. Among women, 36.0% of the self-employed have a bachelor's degree or more, while only 33.0% of non-self-employed workers hold at least a bachelor's degree. Among men, 37.9% of the self-employed are college graduates, compared with only 31.4% of the non-self-employed. Consistent with Kepler and Shane (2007), Table 7 shows that the education levels for self-employed women and men are not strikingly different.

Past business experience is an important form of human capital for new business owners. Prior business experience and family history of business ownership have been found to increase the likelihood of becoming a business owner and to contribute to business survival and growth (Fairlie and Robb, 2008b). Compared to female owners, male business owners typically have had more prior experience with start-ups and have been in management roles in their previous work. In the sample studied by Kepler and Shane (2007), women entrepreneurs were more likely than men to have parents who have been self-employed. There is very little research on whether perceptions, past labor market experiences, and family history might affect women and men differently in their decision to start a business.

Finally, there are differences in how women and men access information about business opportunities (Kepler and Shane, 2007). Women entrepreneurs were less likely to report that they used research to identify business opportunities, and were less likely to participate in social or business networks that would broaden their sources of information, business opportunities, investors, or mentors.

The Family and Personal Characteristics of Self-Employed Workers

Women and men cite different reasons for starting a business. Men are more likely than women to start a business based on financial considerations, whereas women state that they are more interested in careers that help them achieve a work-life balance and that can provide personal satisfaction and recognition (Fairlie and Robb, 2008a). The phrase "work-life balance" may not fully reflect the fact that women continue to spend more of their time providing childcare, eldercare, spousal care and household care than their male counterparts. Thus, women may have less available time to devote to their businesses than men. Using data from the American Time Use Survey, Gurley-Calvez, *et al.*, (2009) find that self-employed women on average spend more time on childcare and household activities than self-employed men and non-self-employed women. The authors point out that these findings support the notion that some women may choose self-employment because of family factors. Gurley-Calvez, *et al.*, also note that self-employed women with professional degrees make time choices that are more similar to self-employed men.

The data in Table 7 indicate that the age structure, marital status, and family size of self-employed women are relatively similar to self-employed men. Not surprisingly, both self-employed women and

[14] In addition, business owners need not be actively employed in their businesses. It is possible to be a business owner but to work zero hours. The self-employed as defined in this report work at least 15 hours a week in their businesses and at least 50 weeks per year.

men are somewhat older than non-self-employed workers. Very few women or men under the age of 30 report themselves as self-employed.

Table 7
Characteristics of Self-Employed and Non-Self-Employed Workers by Gender, 2007

	Self-Employed Women	Non-Self-Employed Women	Self-Employed Men	Non-Self-Employed Men	Total Employed
Percent of Total Employment	3.0	41.9	6.9	48.2	100
Education Level					
Less than high school	6.7	7.1	9.2	11.0	9.1
High school / GED	25.8	28.0	28.5	30.5	29.1
Some college	31.5	31.9	24.4	27.1	29.1
Bachelor's degree or more	36.0	33.0	37.9	31.4	32.7
Total	100	100	100	100	100
Age					
Under 30	6.5	21.8	7.4	22.6	20.7
30-44	32.8	34.2	31.6	36.7	35.2
45-64	53.1	40.8	52.2	37.5	40.4
65 and over	7.6	3.2	8.7	3.2	3.7
Total	100	100	100	100	100
Marital Status					
Married	69.9	54.6	74.7	61.8	59.9
Not married	30.1	45.4	25.3	38.2	40.1
Total	100	100	100	100	100
Marital Status by Age of Children					
Married					
With children under 6 yrs	4.8	5.5	6.6	8.5	7.0
With children over 6 yrs, under 18	25.5	20.0	28.6	24.7	23.1
No children	39.6	29.1	39.4	28.5	29.8
Not married					
With children under 6 yrs	0.8	2.4	0.7	1.1	1.6
With children over 6 yrs, under 18	6.7	10.9	2.1	4.3	7.0
No children	22.6	32.1	22.6	32.9	31.5
Total	100	100	100	100	100
Average hours worked per week	40.1	38.9	46.2	42.9	41.4
Average annual earnings	$38,172	$38,670	$69,652	$55,233	$48,769
Average hourly earnings	$18.88	$18.71	$29.98	$24.30	$22.18

Source: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement, 2007-2009.

These differences in age are correlated with differences in marriage since younger people are less likely to be married. A much higher share of the self-employed are married, nearly 70% of self-employed women and nearly 75% of self-employed men are married, compared with 55% and 62% respectively for the non-self-employed.

We find that there are relatively few differences in the ages and presence of children in the household between self-employed men and women. Table 7 indicates that the majority of self-employed women, 62.2%, do not have any children under 18 living at home (63.6% of these women are married, and 36.4% are unmarried.) This is very similar to the 62.1% of self-employed men with no children at home. Self-employed women are not very likely to have children under age six (only 5.6% of them have young children), and only 7.3% of self-employed men have young children. Again, this appears to reflect the older age structure of self-employed workers.[15]

Hours Worked and Earnings

More successful firms tend to have owners who work more hours (Coleman and Robb, 2009). Self-employed women have been found to work fewer hours than self-employed men (Gurley-Calvez, *et al.*, 2009). As discussed above, many women provide more support for family and household responsibilities than men, and thus, have fewer available hours than men to work at their businesses. This could explain some differences between women-owned and men-owned businesses.

Table 7 indicates that the average hours worked per week by self-employed women are substantially lower than those of self-employed men. Self-employed women work on average 40.1 hours per week, compared with 46.2 hours for self-employed men. However, both of these groups work more than their non-self-employed counterparts.

While we have focused on the characteristics of women- and men-owned businesses in much of the earlier discussion in this report, it is interesting to ask how differences in these characteristics may relate to compensation for the owners. In general, we would expect female business owners to make less money than their male counterparts. This is because their businesses are typically much smaller, they are located in industries and occupations that tend to pay lower wages, and self-employed women owners put fewer hours into their business is smaller. On the other hand, the characteristics of self-employed men and women are quite similar, as shown in Table 7.

The final two rows in Table 7 demonstrate the differences in earnings between self-employed women and men. Self-employed women report earning only about $38,172 per year, while self-employed men report $69,652. This implies a female/male earnings ratio of 55% among the self-employed. This compares to a 70% female/male earnings ratio among non-self-employed women and men.

However, when we account for the number of weeks and the average hours worked per week that individuals reported, the difference in female/male earnings ratios between the self-employed and the wage and salary workers becomes smaller. Based on hourly earnings, self-employed women made 63% as much as self-employed men; among the non-self-employed the female/male hourly earnings ratio was 77%.

On a per hour basis, self-employed women made only slightly more than women who received a wage or salary ($18.88 compared with $18.71). The earnings differential among men is much more significant—self-employed men earned $29.98 per hour compared with $24.30 earned by non-self-employed men. This underscores the lower financial returns that women receive from self-employment.

[15] It is not inconsistent to say that women business owners are older, but that they also spend more time in childcare. Table 7 indicates that more than one-third of self-employed women have children under age 18.