

Income and Net Worth of Veteran Business Owners over the Business Cycle, 1989–2010

by

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Executive Summary

Veterans constitute a vital part of the nation's population and business sector. Their economic success is a national priority and a key objective of government efforts to expand small business and entrepreneurship opportunities to those currently in and those re-entering the civilian economy. Recent efforts to help veterans have faced a challenging economic environment. The 1990's were marked by the largest ever peacetime expansion in the U.S. economy, while the U.S. economy experienced its most substantial contraction since the Great Depression from 2007 to 2009. This rapid expansion and contraction has raised a key question for decision makers and policy officials concerned with assisting veteran business owners and entrepreneurs: What has been the impact of these expansions and contractions on the financial well-being of veteran households with small businesses?

This study includes both descriptive and analytic approaches to assessing the financial well-being of veterans and non-veterans. It utilizes data from the Surveys of Consumer Finance (SCF) from 1989 through 2010, the period covering several economic cycles including the Great Recession, to evaluate changes in net worth and income for veterans and non-veterans. Based on previous research, the following hypotheses related to veteran financial well-being are proposed:

- (1) Veteran households are more likely to be high income or high net worth than non-veteran households;
- (2) Veteran households owning a small business are more likely to be high income or high net worth than veteran households without any small business ownership; and,
- (3) Veteran households owning a small business are more likely to be high income or high net worth than non-veteran households owning a small business.

Veteran households have become a substantially smaller percentage of all households (and households owning small businesses) over the past two decades. The percentage of veteran households declined substantially from 30.7% in 1989 to 19.5% in 2010. The number of veteran

households with small business owners and managers declined by over 28%, or 1.1 million households from 1989 to 2010.

Veteran household heads with small businesses were somewhat older than non-veteran household heads with small businesses in 1989 and 2010. Because of the older veteran population, the distribution of income was substantially different; veteran small business households received a higher percentage of their income from Social Security and pensions (25.2% versus 7.6%) and received a lower percentage of their income from wages and salaries (40% versus 48.5%) and business, farm, and rental income (27.8% versus 36.6%) than non-veteran households with a small business. Veteran and non-veteran households with a small business had a similar distribution of assets, although veteran and non-veteran households with a small business realized a substantial decrease over the 21 year period in the percentage of net worth held in business assets (decreasing from 30.6% to 24.4% for veteran households and 34.7% to 26.2% for non-veteran households).

Several characteristics of the population of these small business owners proved to be important factors in assessing high income and net worth in the regression analysis. Higher income and net worth owners and managers were typically, older, male, with higher educational attainment, were married, and owners of public stock and residential real estate. In addition, these higher income and net worth households owned larger, incorporated, and non-agricultural small businesses.

Utilizing regression analyses to control for personal, demographic and household characteristics for all veterans and non-veterans households over the two-decade period, veteran households had a lower income and net worth than non-veteran households. The percentage of households with high income increased from nearly 20% in 1989 to over 26% in 2010 for non-veteran households, while declining from 36% to under 32% for veteran households from 1989 to 2010. The percentage of households with high wealth followed a somewhat different pattern with non-veterans realizing over a two-fold increase from 2.4% to 6.2%, while veteran were realizing a slight increase from 6.2% to 7.6% over the period.

Utilizing similar regression analyses to compare veteran households with and without small businesses, veteran households with small businesses had higher income and net worth than their non-veteran counterparts. These regression results were supported by the univariate results. The percentage with high income declined from 1989 to 2010 by 8% for veteran households with small business, while increasing over 12% for all veteran households. Even with these substantial declines for veteran households, veteran households with a small business still retained nearly a two-fold higher probability of being high income than all veteran households. The percentage having high wealth increased by 67% for veteran households with a small business, while increasing at a slower rate, 23% for all veteran households. Remarkably, veteran households with a small business still retained a substantially higher probability of being high net worth than all veteran households in 2010.

One of the most important comparisons in this study examines veteran and non-veteran small business owners. Utilizing similar regression analyses, veteran and non-veteran households with small businesses experienced very similar changes income and net worth from 1989 to 2010. Veteran small business households realized an 8% decline in the percentage having high income, while non-veteran small business households realized a 12% increase; although these changes from 1989 to 2010 were not statistically significant for either veterans or non-veterans in the univariate or regression analyses. A similar analysis prior to the Great Recession would have shown a significant increase in the probability of being high income for non-veterans, but no change for veterans. Veteran and non-veteran small business households realized very similar (and significant) increases (over 60%) in the percentage having high net worth from 1989 to 2010. Although, the regression analysis suggests that veteran small business households had significantly lower net worth than non-veteran small business households.

How did veteran and non-veteran households fare during recent expansions and contractions in the U.S. economy? This examination of business cycles was especially interesting because of the significant changes in income and net worth from 2007 to 2010 during the Great Recession. Mean income and net worth increased significantly from 1989 through 2007 for veteran and non-veterans; however by 2010 mean income and net worth had retreated to 1989 levels. Veteran small business households realized significant decreases in mean income from

1989 to 2010; although, these same households realized a significant increase in mean net worth through 2004; however, this increase was erased by 2010. By the end of the Great Recession veteran and non-veteran small business households had realized very similar impacts on income and net worth with gains in income and net worth essentially erased during the Great Recession.

Even though veteran and non-veteran small business owners had similar results through the business cycles, perhaps the study's most important result was that veteran small business owners fared better financially than veterans not owning a small business. This evidence suggests that small business households are likely to earn more income and accumulate more wealth than other veteran households. This result lends support to policy incentives to support the growth and development of small businesses owned by veterans.

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Introduction

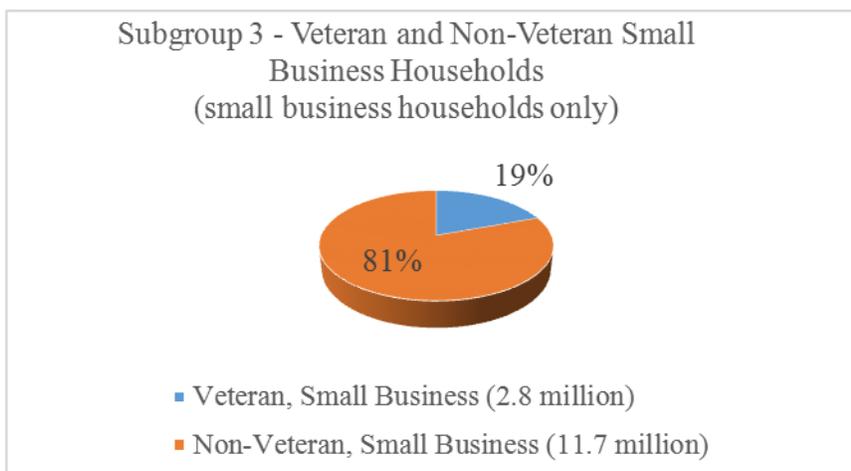
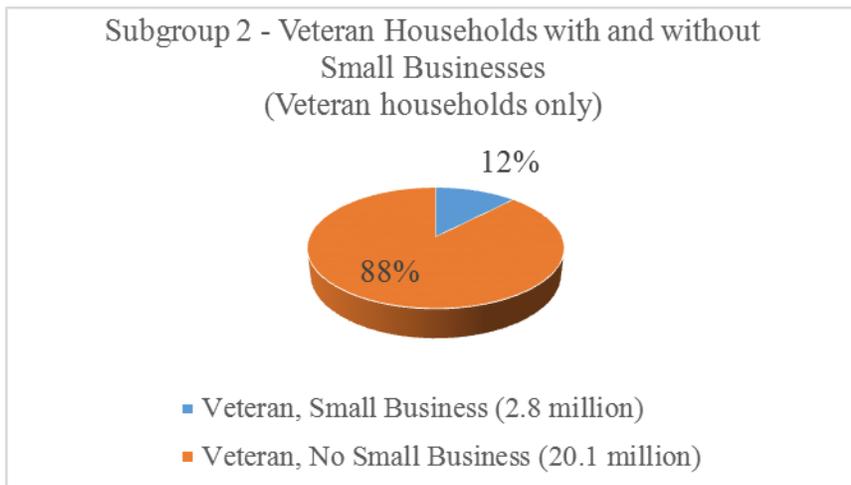
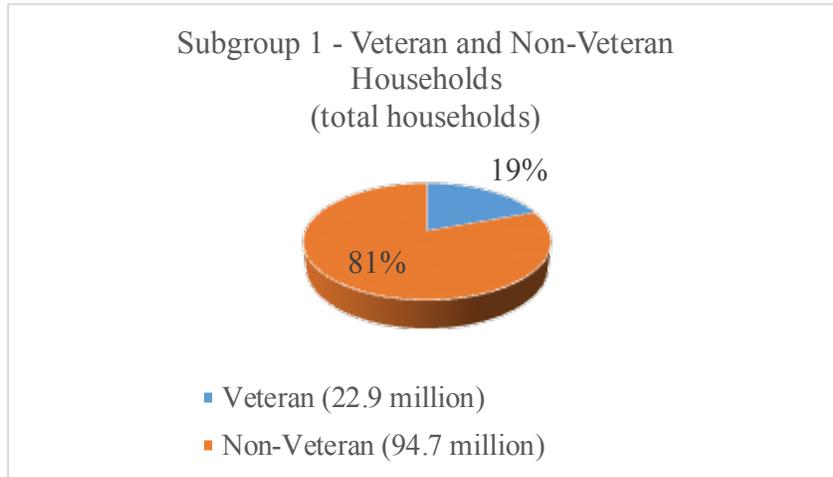
Veterans constitute a vital part of the nation's population and business sector. Their economic success is a national priority and a key objective of government efforts to expand small business and entrepreneurship opportunities to those currently in and those re-entering the civilian economy. Recent efforts to help veterans have faced a challenging economic environment. The 1990's were marked by the largest ever peacetime expansion in the U.S. economy, while the U.S. economy experienced its most substantial contraction since the Great Depression from 2007 to 2009. This recent rapid economic expansion and contraction has raised a key question for decision makers and policy officials concerned with assisting veteran entrepreneurship and business development: What has been the impact of these expansions and contractions on the financial well-being of veteran households with small businesses?

The focus of this study is on the changing financial health of veterans during recent economic cycles. Veterans are an important group. In 2007, veterans held majority ownership interests in 2.45 million businesses, representing 9% of all U.S. businesses in that year (Sobota, 2012). This study will examine, descriptively and analytically, the impact of expansions and contractions in the U.S. economy from 1989 to 2010 on veteran households with small businesses by focusing on comparisons between three sets of households: 1) all—comparing those with veterans and non-veterans, 2) veteran households only—comparing those with and without small businesses in the regression analyses only, and 3) small business-owning households—comparing those with and without veteran owners (see Figure 1).

The general economic expansion of the 1990s had an uneven impact on the net worth of households, dramatically increasing the net worth of some, leaving others with more modest increases, and decreasing the net worth of others. The Great Recession in the late 2000's dramatically decreased the net worth of many households while leaving some relatively unscathed. While there has been ample discussion of the growth and decline of businesses in the U.S. during the economic cycles of the past 30 years, there is very limited knowledge about the experience of owners (at both an individual and household level) of privately-held businesses in

the U.S. This study examines changes from 1989 to 2010, a period of covering several economic cycles, for both all veteran and non-veteran households and for those owning small businesses.

Figure 1: Subgroups Analyzed in the Study



This study will utilize data from the Federal Reserve’s Surveys of Consumer Finance (SCF) from 1989 through 2010 to evaluate changes in net worth and income for veterans and non-veterans. The study will examine: 1) the percentage of high income households (annual income greater than \$75,900 in 2010 dollars) and the percentage of households with high net worth (net worth greater than \$1.518 million in 2010 dollars; as well as, 2) changes in mean income and net worth of households.

The study begins with a literature review, followed by a statement of hypotheses to be tested. Next, empirical issues with data and modeling are addressed. The results of our analyses are then presented, followed by a discussion and policy implications of this study. The descriptive results include comparisons of percentages and means measuring the economic well-being for the three subgroups. These results, however, do not isolate the effect of specific household or business characteristics that effect financial well-being. Regression analyses will be used to control for these characteristics.

Literature Review

Changes in Income and Net Worth for All Households, 1989 to 2010

The financial situation of U.S. families¹ changed substantially during the economic swings between 1989 and 2010. This section of the literature review examines relevant research assessing the changes in income and net worth of U.S. families. Special attention is given to families who own one or more small businesses. A considerable literature exists on the financial condition (income and net worth) of families, but there is much more limited literature dealing with families who own businesses.

The Federal Reserve Board assesses changes in U.S. family finances every three years based on its Survey of Consumer Finances (SCF). The median and mean income and net worth information (in 2010 dollars) from these reports is summarized in Appendix B, Table B1.²

¹ The sampling frame for this analysis is U.S. households, which are referred to as families in this study.

² The reporting of both mean and median financial estimates is important because of the skewed distribution of both income and net worth data. For instance, a comparison of the relative changes in mean and median net worth indicates whether the share of aggregate net worth held by the poorest or wealthiest households has increased or

Between 1989 and 1992, real household and family net worth decreased (Kennickell and Starr-McCluer, 1994). Several important changes occurred during this period of time. Interest rates declined and families tended to move their asset portfolios away from time deposits and toward mutual funds; families owned more tax deferred retirement accounts; and income and net worth grew substantially for non-white and Hispanic families.³

Between 1992 and 1995, real family income increased slightly, although not sufficiently to offset the declines realized from 1989 to 1992 (Kennickell and Starr-McCluer, 1997). By 1995, median income and net worth were nearly the same as in 1989; however, mean income and net worth had not fully recovered. The period from 1992 through 1995 was characterized by continued expansion of the U.S. economy. By 1998, real family income had surpassed its 1989 level, with especially strong growth occurring between 1995 and 1998. This period was marked by an increase in the holding of stock equity and a booming stock market (Kennickell et al., 2000). In 1998 the economy was in its seventh year of an economic expansion. Civilian unemployment was around 4.5%, and the annual inflation rate which averaged 2.2%, as measured by the consumer price index, had been low for the previous 3 years. Mean and median family income continued to grow from 1998 through 2001, with the fastest growth occurring among higher income households (Aizcorbe et al, 2003).

Between 1998 and 2001, the economy continued to expand, with median income and net worth increasing by over 3% annually (Aizcorbe, et al, 2003). Median net worth grew faster than the median income, especially for higher net worth households. Direct and indirect corporate ownership continued to grow, even though the value of these equity holdings had begun to decline in the second half of 2000. Nearly 12% of households owned a business, with nearly 91% of these owners assuming an active role in the business. The proportion of households owning a business has been relatively stable since the late 1980s, however substantial growth in ownership occurred among higher income and net worth households (Aizcorbe, et al, 2003).

decreased. An increase in the mean that is higher than a corresponding increase in the median often suggests an increase in the net worth shares of families at the top end of the distribution.

³ The SCF racial categories differ from Census categories. The 1989 SCF asks respondents to choose the category that best describes them (white, black or African-American, Hispanic or Latino, Asian, American Indian or Alaskan Native, Hawaiian Native or Pacific Islander or another race); hence, respondents of Hispanic ethnicity are not able to first choose Hispanic then choose any race.

The long expansion which began in 1995 stalled between 2001 and 2004. Relatively strong and broad gains in family income slowed with only a modest rise in median income and lower mean income (Bucks, et al, 2006). Median family net worth grew by only 1.5%, while mean family net worth increased by 6.3%. The 2001 to 2004 period was marked by three important shifts: 1) a strong appreciation in house values and an increase in home ownership; 2) a decline in direct and indirect stock ownership; and 3) a substantial increase in family debt-to-asset ratios with much of the debt secured by real estate.

Results from the 2007 Survey of Consumer Finances indicate that median real family before tax income was unchanged from 2004 to 2007, at the same time both median and mean net worth increased (Bucks et al., 2009). The increase in the share of total assets was attributed to unrealized capital gains, which were gains held only on paper because the asset had not been sold. The share of unrealized capital gains in total assets rose from 5.1% to nearly 36% from 2004 to 2007. They were especially important from 2004 to 2007 because the economy entered a substantial downturn in 2007 and many investors never realized these capital gains.

The 2010 Survey of Consumer Finances documents the substantial decline between 2007 and 2010 in real family income and net worth (before taxes) (Bricker et al., 2012). While median real family income declined by less than 8%, net worth plunged by over 38% over the three year period. The most likely reason for this was a collapse of house prices. House values are a very important source of collateral for small business owners needing financing. The expected result was the decline in small business loans from 2007 to 2010.

Veteran Entrepreneurship and Small Business Development

From 1992 to 2001 there were substantially fewer veteran-owned small business households, and these small business households did not fare well compared to their non-veteran counterparts. A study of veterans by Haynes and Ou (2002) showed that not only had the number of veteran households declined from 1992 to 2001 (reflecting the aging of the veteran population and a long-term decline in the total number of veterans), but the percentage of small business owners in the population of veteran households had declined. In addition, the percentage of households that had high income had actually declined for these veteran small

business households. The percentage of households with high net worth had increased at a much slower rate for veteran small business households than for their non-veteran counterparts.

A recent study by Haynes (2007) found that the pool of veteran small business owners continues to age and shrink. These older veteran owners had lower earnings (reflected in lower income) but had higher accumulated net worth. Veteran small business owner households were more likely than their non-veteran counterparts to be classified as high-net worth households, reflecting the fact that veteran small business owners are older than non-veteran owners. Overall, veteran and non-veteran small business households fared about the same from 1989 to 2004. Neither group was more likely to have had high income or high net worth in 2004 than in 1989.

In a recent study sponsored by SBA's Office of Advocacy examining self-employment in the veteran and service-disabled veteran population (Open Blue Solutions, 2007), veterans with a service-connected disability were less likely to be self-employed than other veterans. One-half to two-thirds of the difference in self-employment rates was due to service-disabled veterans not working at all.

Veteran business owners represented 9% of all U.S. businesses in 2007 (Sobota, 2012), and these veterans were more likely than non-veterans to be self-employed. Using the U.S. Census Bureau's Survey of Income and Program Participation in 2008 and 2012, Lichtenstein (2013) found that veteran business owners comprised a smaller percentage of all business owners in 2012 than 2008; although younger veterans appeared to have a higher probability of starting businesses. Remarkably, Waldman Associates (2004) found that 22% of veterans in U.S. households were at least considering the purchase or founding of a new business. Hope, Oh, and Mackin (2011) found that veterans were at least 45% more likely than others to be self-employed.

With the enactment of the Veterans Entrepreneurship and Small Business Development Act of 1999, Public Law 106-50, research on the financial and economic well-being of veteran-owned businesses and their owners has become increasingly important. This study will address how veteran business owners have fared financially from 1989 to 2010.

Hypotheses

This study examines the financial success, measured by income and net worth, of households headed by a veteran. The study analyzes changes between 1989 and 2010 in income and net worth by focusing on comparisons among three set of households: 1) total households—comparing veterans and non-veterans, 2) veteran households only—comparing those with and without small businesses, and 3) small business-owning households—comparing veterans and non-veterans. The three main hypotheses, tested by assessing changes income and net worth over the business cycles from 1989 through 2010, are:

- (1) Veteran households are more likely to be high income or high net worth than non-veteran households;
- (2) Veteran households owning a small business are more likely to be high income or high net worth than veteran households without any small business ownership; and,
- (3) Veteran households owning a small business are more likely to be high income or high net worth than non-veteran households owning a small business.

Empirical Concerns

Data

This study utilizes the 1989 through 2010 Surveys of Consumer Finances (SCF) conducted for the Federal Reserve Board. These survey data were collected by the National Opinion Research Center at the University of Chicago. The surveys are designed to supply detailed and reliable information on balance sheets, use of financial services, pensions, labor force participation, cash income, and demographic characteristics of U.S. households.⁴

⁴ The SCF utilizes a dual frame sample to provide adequate coverage of the population. One frame is a multistage area probability sample, which provides adequate coverage of widely held assets and liabilities. The second frame is

This study is primarily interested in examining small business owning families, especially those households headed by a military veteran. However, the entire sample is used to measure differences between families that own businesses and those that do not.

The variables included are military status of the owner, business ownership status of the household, household income and household net worth (including assets and debt held by members of the household). Business ownership status was determined by whether an individual owned at least one business. Business owners are separated into two categories: 1) those with any business ownership (large or small or self-employed), and 2) those owning and managing at least one small business. Self-employed households in this study are those households where the respondent or spouse indicates they are self-employed, but they are not business owners or managers. These type of self-employed households are called non-business self-employed; therefore, any reference to self-employed in this study is referring to non-business self-employed. Small businesses with only one employee (i.e., the owner) are classified as small businesses in this study, rather than self-employed.

Household income is computed by summing the following sources of income: wages and salaries, interest, dividends, asset sales, rents, unemployment, child support, welfare, social security, and other sources. The net worth of the household was determined by generating a balance sheet, using a program supplied by the Federal Reserve Board, to estimate the net worth of each household.⁵

a list design employed to over-sample relatively higher net worth households. Response rates for the area probability and list samples in 1989 and 2010 were approximately 70 and 34%, respectively. Research conducted by the Federal Reserve Bank suggests that non-response is positively correlated with net worth. The SCF survey asks respondents about the previous year, hence the SCF for 2010 actually gathers information about the finances of the family and business in 2009. The descriptive and regression analyses will utilize the five implicates available in all eight datasets.

⁵ Total net worth was computed by subtracting total liabilities from total financial and non-financial assets. Financial assets were computed by summing the value of transaction accounts, certificates of deposit, directly held mutual funds, stocks, bonds, individual retirement accounts, saving bonds, cash value of life insurance, other managed assets, and other financial assets. Non-financial assets were computed by summing the value of vehicles, primary residence, other residential real estate, equity in nonresidential real estate, business interests, and other non-financial assets. Liabilities were tabulated by summing the value of housing debt, other lines of credit, debt for other residential property, credit cards, installment loans, and other debts.

Control variables include personal and demographic characteristics of the household head and business owner, as well as characteristics of the business. Personal and demographic characteristics include age, race (white, black, Hispanic, and other), gender, education (no high school diploma, high school diploma, some college, and college degree or greater), and marital status (married, previously married, or never married). In addition, financial characteristics of the household (public stock ownership, residential real estate ownership, occupation, and number of earners in the household) are included. Business characteristics include employee size of firm, age of the firm, legal organization, industrial classification, and founding strategy.

The sampling frame for this analysis is U.S. households, which are referred to as families in this study.⁶ Personal and demographic characteristics are those of the respondent interviewed, typically the household head. If the respondent or someone in the household owns and manages a business, this study is referring to the largest business identified. No business information is available for businesses owned but not managed by the respondent. Small businesses are those businesses with fewer than 500 employees that are owned and managed by a household head or spouse/partner.

Business Cycle and Inflation Considerations

Business cycle information employed in this study originates from two sources: the National Bureau of Economic Research (NBER), which reports U.S. business cycle expansions and contractions; and the U.S. Department of Commerce's Bureau of Economic Analysis (BEA), which reports gross output by industry.⁷ Annual changes in the value added to gross output are reported by the BEA, for 1985 through 2010. These changes follow expansions and contractions reported in the US Business Cycles Expansions and Contractions by the NBER. The economy

⁶ This study utilizes all five implicates of the 8 SCFs between 1989 and 2010. Multiple imputation techniques are employed in the SCF. The "repeated-imputation inference" (RII) approach was employed to utilize all five implicates in the descriptive analyses employed in this study (Montalto & Sung, 1996). The SAS algorithm MIanalyze is used to implement the RII approach using the five implicates.

⁷ Based on NBER's U.S. Business Cycles Expansions and Contractions, the economy expanded from November 1982 through July 1990, contracted between July 1990 and March 1991, expanded between March 1991 and March 2001, contracted between March 2001 and November 2001, expanded between November 2001 and December 2007, and contracted between December 2007 and June 2009.

has experienced a total of six expansions and contractions between 1986 and 2009. Changes in the value added to gross domestic output by industrial group used in this study are summarized in Appendix B Table B2.

The most substantial change occurred during the contraction in the economy from December 2007 and June 2009, generally termed the Great Recession. The economy grew between 1989 and 2007, with growth rates varying between 2.8% between 1990 and 1991 and 6.8% between 2004 and 2005. However, growth in the economy began to slow substantially in 2007 and contracted from 2008 to 2009.⁸

The expansions and contractions in the economy are considered for each year the SCF data were available. The three year period prior to the collection of the SCF data was assessed to determine if the economy expanded or contracted during that period of time. Based on this assessment, a slight contraction occurred between 1988 and 1991, a modest expansion occurred between 1995 and 2000, a slight contraction occurred between 2000 and 2003, a substantial expansion occurred between 2003 and 2006, and a severe contraction occurred between 2006 and 2009 SCF data collections.

In addition, all monetary amounts in the study will be reported in 2010 dollars utilizing consumer price indices used by the Federal Reserve Board from 1989 to 2010. These inflation adjustments are summarized for each in Appendix B Table B3. Measures of high income and high net worth are based on a high income threshold of \$50,000 (\$75,900 in 2010 dollars) and a high net worth threshold of \$1 million (\$1,518,000 in 2010 dollars) in 1992 dollars. These thresholds adjusted for inflation will be employed in this study. The inflation adjustments are the same as those used by the Federal Reserve Board in their summary articles.

⁸ This study uses “value added” to gross domestic product as reported by the Bureau of Economic Analysis from 1985 through 2009 to examine expansions and contractions from year to year. The data collection years for the SCF do not match perfectly with the expansions and contractions in the economy.

Models

Income and Net Worth 1989 to 2010—Business Cycle Expansions and Contractions

1) Total Households: Veterans and Non-Veterans

The regression models compare the financial progress of veteran households with non-veteran households from 1989 to 2010. The set of analytical models assesses the difference in income and net worth for both veterans and non-veteran households by business ownership status over business cycles from 1989 to 2010. The business cycle could be modeled in several ways to capture expansions and contractions in the economy.⁹ This model will use the log difference in real gross output by two-digit industrial classification codes between three years before the data collection (t-3) and the year of the data collection (t) to examine changes in the business cycle. In this model the year of data collection will be used. For instance, 1992 SCF reports data collected in 1991 for income (however, all other data is collected in the current year; for instance, 1992); therefore, the lagged difference will be computed between 1988 and 1991. These changes in the value-added to GDP are added to each observation based on the business' industrial classification. Log differences are used in this study to measure the percentage change in real gross output between survey years (for instance, between 1988 and 1991). Log transformations make the data more normally distributed and reduce the size of the variance.

A difference-in-difference regression model is used in this study to examine the difference between veteran and non-veteran households in each of the survey years.¹⁰ The main effects are examined by two variables, VH (veteran households) and LDGO_z(year). For instance, if the dependent variable was whether the household had high income or not (defined as a dummy variable, where 1=high income and 0=non-high income), a positive and statistically significant sign on the VH regression coefficient would indicate that veteran households had a

⁹ In the previous analyses, utilizing dummy variables for each year of the data provides one method of examining changes in income and net worth, where each year is labeled as either an expansion or contraction year. This type of analysis assumes that all business types respond to the expansion and contraction in a similar way, hence all of the heterogeneity across businesses is lost. A more rigorous way to address the business cycle is to utilize gross output by industry as reported by the Bureau of Economic Analysis.

¹⁰ Please see the definition of difference-in-difference models in the glossary for additional information.

higher probability of being high income than non-veteran households. A positive and statistically significant sign on the $LDGO_z$ (say, $LDGO_{2004} > 0$) regression coefficient would indicate that respondents had a higher probability of being high income in 2004 than in 1989, the reference year. The interaction effect is the difference-in-difference estimator in this model. The interaction effect multiplies the VH variable times the year variables ($LDGO_z$). If a respondent was a veteran in 2004, then the respondent's interaction term for veterans in responding in 2004 would be 1 ($VH=1$ multiplied by $LDGO_{2004}=1$). If this interaction effect is positive and significant that would indicate that veteran households had a higher probability of being high income than non-veteran households in 2004.

The difference-in-difference model includes specifications for income and net worth. In this study, income and net worth will be measured by whether or not a household has high income or high net worth using dummy variables in a logit regression model and log transformations of income and net worth analyzed in linear regression models. The following regression specifications are used for this first set of regressions, which assesses the impact of the business cycle on veteran households by comparing veteran households with non-veteran households.

$INCOME = f(VH, LDGO_z, VH*LDGO_z; \text{age, age}^2, \text{race, gender, education, marital status, stock ownership, real estate ownership, professional practice occupation, number of income earners})$

$NET\ WORTH = f(VH, LDGO_z, VH*LDGO_z; \text{age, age}^2, \text{race, gender, education, marital status, stock ownership, real estate ownership, professional practice occupation, number of income earners});$

where the dependent variables are defined as. . .

$INCOME =$ high income (dummy variable: 1 = greater than \$75,900 in 2010 dollars; 0 = less than \$75,900 in 2010 dollars, or continuous variable: log income);

NET WORTH = high net worth (dummy variable: 1 = greater than \$1.518 million in 2010 dollars; 0 = less than \$1.518 million in 2010 dollars, or continuous variable: log net worth)

where the independent variables are defined as:

VH = veteran household, dummy variable;

LDGO_z = log difference in value added of gross domestic production for z = 1986-1989, 1989-1992, 1992-1995, 1995-1998, 1998-2001, 2001-2004, 2004-2007, and 2007-2010;

age = mean age;

race = race of the household head (categorical variables for White, Black, Hispanic, and other);

gender = gender of household head (dummy variables for male and female);

education = education level (categorical variables for some high school, high school graduate, some college, college graduate);

marital status = marital status (dummy variables for married or otherwise);

stock ownership = owns publicly traded stock (yes = 1, no = 0);

real estate ownership = owns real estate (yes = 1, no = 0);

professional practice occupation = professional practice (yes = 1, no = 0); and,

number of income earners = number of income earners in the primary economic unit (household).

2) **Veteran Households Only: With and Without Small Business Ownership**

A second set of regressions compares the progress of veteran small business households with veteran non-small business households. The dependent and relevant independent variables are the same as those defined in the first set of regressions. The sample, however, will include only veterans and the models will be specified as follows:

INCOME = f(VSB, LDGO_z, VSB*LDGO_z; age, age², race, gender, education, marital status, stock ownership, real estate ownership, professional practice occupation, number of income earners)

NET WORTH = f(VSB, LDGO_z VSB*LDGO_z; age, age², race, gender, education, marital status, stock ownership, real estate ownership, professional practice occupation, number of income earners)
 where . . .

VSB = veteran small business household, veterans small business owner and manager = 1 and veteran non-small business owner and manager = 0; and all other variables are the same as above.

3) Small Business Owning Households: Veterans and Non-Veterans

A third set of regressions compares the progress of veteran small business households with non-veteran small business households.¹¹ The dependent and relevant independent variables are the same as defined in the first set of regressions. In addition, independent variables related to the characteristics of the business include firm age, legal organization, standard industrial classification, and founding status. The sample will include only small business owners and the models will be specified as follows:

INCOME = f(VH, LDGO_z VH*LDGO_z; age, age², race, gender, education, marital status, stock ownership, real estate ownership, professional practice occupation, number of income earners, firm size, firm age, firm age², legal organization, standard industrial classification, and founding status)

NET WORTH = f(VH, LDGO_z VH*LDGO_z; age, age², race, gender, education, marital status, stock ownership, real estate ownership, professional practice occupation, number of income earners, firm size, firm age, firm age², legal organization, standard industrial classification, and founding status);

where . . .

¹¹ Self-employed workers are not included in this analysis. When including households with a self-employed worker in the definition of business owners, several variables are not utilized because they are not reported for self-employed businesses. Those variables include employee size of firm, firm age, legal organization, standard industrial classification and founding status.

firm size = number of employees;
firm age = age of the largest firm;
legal organization = categorical variables (1 = partnership, 2 = sole proprietorship, 3 = sub-chapter s corporation, 4 = other corporation, LLC, LLP);
standard industrial classification = categorical variables (1 = agriculture, 2 = construction and manufacturing, 3 = wholesale and retail trade, 4 = services and other)
founding status = categorical variables (1 = bought or invested, 2 = started, 3 = inherited).
all other variables are the same as above.

Results

Descriptive Characteristics of the Sample

1) Total Households: Veteran and Non-Veteran

Demographic Characteristics

There were 93.1 million (28.6 million veteran households and 64.5 million non-veteran households) and 117.6 million (22.9 million veteran households and 94.7 non-veteran households) households represented in the SCF in 1989 and 2010, respectively (Table 1). As a result of an aging veteran population, the percentage of veteran households declined from 30.7% to 19.5% of all households from 1989 to 2010. Table 1 suggests that business owning and self-employed households were a smaller percentage of all veteran households in 2010 than in 1989 (22.4% in 1989 and 17.3% in 2010). Just over 13.7% of veteran household heads were small business owners in 1989, declining to 12.2% of veteran household heads in 2010. The number of veteran households with small business owners declined by over 28%, or 1.1 million households, from 1989 to 2010. In contrast, the number of non-veteran households with small businesses increased by 72%, or 4.9 million households, from 1989 to 2010, and the percentage of non-veteran households with small businesses increased from 10.5% in 1989 to 12.4% in 2010.

The veteran population has become much older than the non-veteran population as larger veteran cohorts serving during World War II, Korea and Vietnam have been replaced by smaller veteran cohorts serving during wars in Iraq and Afghanistan. In 1989, the mean age of veteran household heads (53 years old) was 7 years older than that of non-veteran household heads (46 years old); however, by 2010 the mean age gap between veteran (60 years old) and non-veteran household heads (48 years old) had increased to over 12 years. The differences in the working age population (18-64 years of age) between veteran and non-veteran households was very stark in 2010, where 82.8% of non-veterans and 57% of veterans were of working age. An aging veteran population means that transfer payments, such as social security and pensions, replace employment income. In addition, services, such Medicaid, Medicare and Department of Veterans' Affairs services, become increasingly important to these individuals. The net result is a veteran population producing less, as measured by income and employment, and utilizing more transfer payments and services for retirees.

The composition of the population by gender and race¹² remained relatively constant for both groups from 1989 to 2010. The percentage of black veteran household heads increased significantly from 6.5% to 10.1%. The percentage of Hispanic household heads increased significantly from 8.9% to 12.4% among non-veteran household heads. The veteran household head population was 82.7% white, 10.1% Black, 4.1% Hispanic, and 3.2% other race in 2010. Males comprised 96.8% of veteran household heads and 67.1% of non-veteran household heads in 2010, respectively. The percentage of male household heads in the non-veteran population increased from 60.4% in 1989 to over 67% in 2010.

Both veteran and non-veteran household heads were better educated in 2010 than 1989. In 1989, 49.4% of veterans and 41.1% of non-veterans had more than a high school diploma; however, by 2010 58.5% of veterans and 55.2% of non-veterans had more than high school diploma.

¹² The SCF racial categories differ from Census Bureau categories. The SCF asks respondents to choose the category that best describes them (white, black or African-American, Hispanic or Latino, Asian, American Indian or Alaskan Native, Hawaiian Native or Pacific Islander or another race); hence, respondents of Hispanic ethnicity are not able to first choose Hispanic then choose any race.

Table 1: Characteristics of Veteran and Non-Veteran Households in 1989 and 2010

Family Characteristics ¹	2010				1989			
	Veteran		Non-Veteran		Veteran		Non-Veteran	
	Number (million)	%	Number (million)	%	Number (million)	%	Number (million)	%
All	22.9	100.0	94.7	100.0	28.6	100.0	64.5	100.0
<i>Business Involvement</i>								
No business ownership	19.0	82.7	78.0	82.3	22.2	77.6	54.0	83.7
Business ownership	3.1	13.4	12.5	13.2	4.7	16.4	7.7	12.0
Self-employed	0.9	3.9	4.2	4.5	1.7	6.0	2.8	4.3
Small business owner	2.8	12.2	11.7	12.4	3.9	13.7	6.8	10.5
<i>Age of household head</i>								
Less than 35	1.9	8.2	22.8	24.0	3.2	11.1	22.8	35.4
35-44	2.4	10.5	19.0	20.0	6.2	21.8	13.9	21.5
45-54	3.5	15.2	21.4	22.6	5.9	20.8	8.1	12.6
55-64	5.3	23.1	15.3	16.2	6.5	22.9	6.3	9.8
65-74	4.4	19.2	9.1	9.6	5.1	17.9	6.7	10.4
75 and over	5.5	23.8	7.2	7.6	1.6	5.6	6.6	10.3
Mean age	60		48		53		46	
<i>Race of household head</i>								
White	18.9	82.7	64.3	67.9	23.7	83.0	45.9	71.2
Black	2.3	10.1	14.0	14.7	1.9	6.5	10.0	15.5
Hispanic	0.9	4.1	11.7	12.4	1.6	5.8	5.7	8.9
Other	0.7	3.2	4.7	5.0	1.3	4.7	2.9	4.5

Table 1: Characteristics of Veteran and Non-Veteran Households in 1989 and 2010 (continued)

Family Characteristics ¹	2010				1989			
	Veteran		Non-Veteran		Veteran		Non-Veteran	
	Number (million)	%	Number (million)	%	Number (million)	%	Number (million)	%
<i>Gender of household head</i>								
Male	22.2	96.8	63.6	67.1	27.9	97.8	38.9	60.4
Female	0.7	3.2	31.1	32.9	0.6	2.2	25.5	39.6
<i>Education of household head</i>								
No high school diploma	1.7	7.2	12.4	13.1	5.0	17.5	17.6	27.2
High school diploma only	7.8	34.2	30.0	31.7	9.4	33.1	20.4	31.7
Some college	5.0	22.0	16.8	17.7	4.8	16.9	9.7	15.1
College degree or more	8.4	36.5	35.5	37.5	9.3	32.5	16.7	26.0
<i>Marital Status</i>								
Married	16.4	71.4	42.8	45.2	22.5	78.7	28.9	44.9
Not married	6.5	28.6	51.9	54.8	6.1	21.3	35.5	55.1
<i>Income of household (dollars)</i>								
Less than 10,000	0.6	2.6	5.9	6.2	1.3	4.5	6.9	10.8
10,000-24,999	3.1	13.7	20.9	22.1	3.9	13.6	17.0	26.3
25,000-49,999	6.9	30.0	25.7	27.2	6.9	24.0	17.1	26.5
50,000-99,999	7.7	33.4	25.5	27.0	10.2	35.8	16.4	25.5
100,000 or more	4.7	20.3	16.6	17.6	6.3	22.0	7.1	11.0
Median household income (2010\$)	53,000		43,000		55,671		35,427	

Table 1: Characteristics of Veteran and Non-Veteran Households in 1989 and 2010 (continued)

Family Characteristics ¹	2010				1989			
	Veteran		Non-Veteran		Veteran		Non-Veteran	
	Number	%	Number	%	Number	%	Number	%
	(million)		(million)		(million)		(million)	
<i>Net worth of household (dollars)</i>								
Less than 50,000	6.4	28.0	44.1	46.6	7.4	26.0	31.5	48.8
50,000-99,999	2.5	11.0	10.7	11.3	3.2	11.3	8.5	13.3
100,000-249,999	4.7	20.4	15.3	16.1	7.1	25.0	12.0	18.6
250,000-499,999	4.2	18.2	9.8	10.3	4.8	16.9	6.5	10.0
500,000-999,999	2.5	10.9	6.2	6.6	3.2	11.3	3.4	5.2
1,000,000-2,499,999	1.7	7.2	5.5	5.8	1.9	6.6	1.8	2.8
2,500,000-4,999,999	0.5	2.2	1.6	1.7	0.4	1.5	0.6	0.9
5,000,000-9,999,999	0.3	1.2	0.9	0.9	0.3	0.9	0.1	0.2
10,000,000 or more	0.2	0.8	0.5	0.5	0.1	0.5	0.1	0.1
Median household net worth (2010\$)	167,000		61,490		173,862		53,377	
<i>Structure of income (shares of total income)</i>								
Wages and salaries	10.7	46.5	60.7	64.1	17.6	61.8	40.0	62.1
Business, farm, and rental	1.2	5.1	6.6	6.9	2.0	7.0	3.3	5.2
Interest and dividends	0.7	2.9	1.4	1.5	1.6	5.5	2.4	3.8
Capital gains	0.2	0.9	0.6	0.6	0.4	1.4	0.6	1.0
Social security and pensions	9.4	41.0	16.0	16.9	6.2	21.7	11.4	17.7
Transfer payments	0.9	4.1	9.4	10.0	0.7	2.6	6.6	10.2
Other income	0.0	0.1	0.2	0.2	0.1	0.3	0.2	0.2

Table 1: Characteristics of Veteran and Non-Veteran Households in 1989 and 2010 (continued)

Family Characteristics ¹	2010				1989			
	Veteran		Non-Veteran		Veteran		Non-Veteran	
	Number (million)	%	Number (million)	%	Number (million)	%	Number (million)	%
<i>Structure of wealth (shares of total assets)</i>								
Stocks	0.4	1.8	1.0	1.1	0.6	2.3	0.9	1.4
Bonds	0.1	0.3	0.2	0.2	0.3	1.1	0.3	0.5
Other financial assets	6.5	28.4	25.9	27.4	7.5	26.3	16.1	25.0
Vehicles	3.5	15.5	19.8	20.9	4.3	15.0	12.7	19.7
Houses	9.7	42.4	36.8	38.9	11.6	40.5	23.3	36.2
Other residential real estate	0.8	3.7	2.8	3.0	1.3	4.5	1.8	2.8
Business	0.8	3.4	3.2	3.4	1.3	4.6	2.6	4.0
Other non-financial assets	0.8	3.4	2.1	2.2	1.1	3.9	2.4	3.7
Other assets	0.3	1.2	2.7	2.9	0.5	1.9	4.4	6.9
Observations	1,230		5,252		1,232		1,911	

¹Numbers highlighted in red are statistically significant differences from the base year (1989) at the 5% level.
Source: Surveys of Consumer Finance, Federal Reserve Board of Governors, 1989 - 2010.

Veteran household heads were significantly more likely to be married than non-veteran household heads in both 1989 and 2010. However, the percentage of married veteran household heads declined from 78.7% in 1989 to 71.4% in 2010.

Income and Net Worth

Veteran households had substantially higher real median income and net worth than non-veteran households. Real median income increased substantially for non-veteran households (\$35,427 in 1989 to \$43,000 in 2010) and decreased for veteran households (\$55,671 in 1989 to \$53,000 in 2010). Real median net worth increased substantially for non-veteran households (\$53,377 in 1989 to \$61,490 in 2010) and decreased for veteran households (\$173,862 in 1989 to \$167,000 in 2010) from 1989 to 2010.

The share of income derived from wages and salaries; business, farm, and rental income; interest and dividends; social security and pensions; and transfer payments changed substantially for both veteran and non-veteran households. With the aging veteran population, the share of income derived from wages and salaries declined from 61.8% in 1989 to less than 47% in 2010, while the share of income derived from social security and pensions rose from 21.7% to 41%. In addition, veteran households realized slight increases in the share of income from transfer payments, and slight decreases in the share of income from business, farm, and rental income and interest and dividend income. Non-veteran households realized a slight increase in the share of income from business, farm, and rental income (5.2% in 1989 to 6.9% in 2010) and a slight decrease in interest, dividend, and capital gains income.

Over 80% of net worth was held in houses (42.4%), other financial assets apart from stocks and bonds (28.4%), and vehicles (15.5%) for veterans in 2010. These shares of net worth remained relatively constant for veteran households; however non-veteran households realized significant increases in the share of net worth in other financial assets and houses, and significant decreases in share of net worth in bonds, other non-financial assets, and other assets.

2) Veteran Households Only: With and Without Small Business Ownership

Demographic Characteristics

Table 2 reports the same characteristics as Table 1; however, Table 2 compares veteran households with and without small business owners living in the household. The number of veteran households with small businesses declined from 3.9 million to 2.8 million (28%) from 1989 to 2010. The number of veteran households without small businesses declined from 24.6 million to 20.1 million (18%) from 1989 to 2010. Veteran household heads with small businesses were about the same age as those without small businesses, although mean age increased by over 11 years for small business household heads and 7 years for household heads without a small business between 1989 and 2010. Veteran household heads with a small business were less likely to be black or Hispanic than veteran household heads without a small business. Over 96% of veteran households with and without small businesses in 1989 and 2010 had male household heads.

Even among veterans who are small business owners in 2010, veteran small business owners are substantially older than non-veteran small business owners (Chart 1). Over 87% of the non-veteran small business owners were less than 65 years of age, while only 60% of the veteran small business owners were less than 65 years of age. The aging population means that not only are veteran small business owners more likely to utilize their retirement resources, but they are considering how to transition their small business to the next generation, or sell or close the business.

Figure 2: Veteran and Non-Veteran Small Business Owners by Age Category

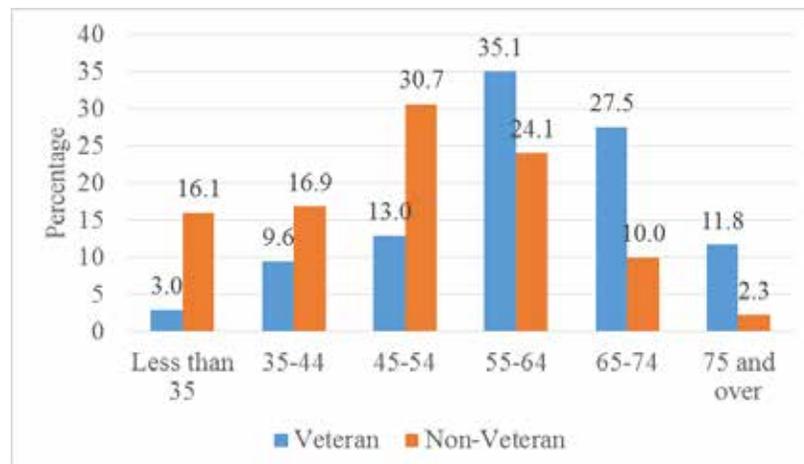


Table 2: Characteristics of Veteran and Non-Veteran Households with Small Businesses in 1989 and 2010

Family Characteristics ¹	2010				1989			
	Small Business		No Small Business		Small Business		No Small Business	
	Number (million)	%	Number (million)	%	Number (million)	%	Number (million)	%
All	2.8	100.0	20.1	100.0	3.9	100.0	24.6	100.0
<i>Business Involvement</i>								
No business ownership	0.0	0.0	19.0	94.2	0.0	0.0	22.2	89.9
Business ownership	2.8	100.0	0.3	1.3	3.9	100.0	0.8	3.2
Self-employed	0.0	0.0	0.9	4.4	0.0	0.0	1.7	7.0
Small business owner	2.8	100.0	0.0	0.0	3.9	100.0	0.0	0.0
<i>Age of household head</i>								
Less than 35	0.1	3.0	1.8	9.0	0.3	6.7	2.9	11.8
35-44	0.3	9.6	2.1	10.6	1.2	30.6	5.0	20.4
45-54	0.4	13.0	3.1	15.5	1.1	28.7	4.8	19.5
55-64	1.0	35.1	4.3	21.4	0.9	23.0	5.6	22.9
65-74	0.8	27.5	3.6	18.0	0.4	10.9	4.7	19.0
75 and over	0.3	11.8	5.1	25.5	0.0	0.0	1.6	6.4
Mean age	61		60		50		53	
<i>Race of household head</i>								
White	2.5	89.9	16.4	81.7	3.5	90.8	20.2	81.8
Black	0.1	3.9	2.2	10.9	0.2	4.9	1.7	6.8
Hispanic	0.1	2.3	0.9	4.4	0.0	0.0	1.6	6.7
Other	0.1	3.9	0.6	3.0	0.2	4.4	1.2	4.8

Table 2: Characteristics of Veteran and Non-Veteran Households with Small Businesses in 1989 and 2010 (continued)

Family Characteristics ¹	2010				1989			
	Small Business		No Small Business		Small Business		No Small Business	
	Number (million)	%	Number (million)	%	Number (million)	%	Number (million)	%
<i>Gender of household head</i>								
Male	2.8	98.5	19.4	96.5	3.9	100.0	24.0	97.5
Female	0.0	1.5	0.7	3.5	0.0	0.0	0.6	2.5
<i>Education of household head</i>								
No high school diploma	0.2	6.6	1.5	7.3	0.2	4.8	4.8	19.5
High school diploma only	0.6	21.1	7.3	36.1	1.4	34.6	8.1	32.8
Some college	0.6	22.0	4.4	22.0	0.7	18.9	4.1	16.6
College degree or more	1.4	50.4	7.0	34.6	1.6	41.6	7.6	31.0
<i>Marital Status</i>								
Married	2.5	87.7	13.9	69.2	3.6	92.2	18.9	76.5
Not married	0.3	12.3	6.2	30.8	0.3	7.8	5.8	23.5
<i>Income of household (dollars)</i>								
Less than 10,000	0.1	3.2	0.5	2.5	0.0	0.3	1.3	5.2
10,000-24,999	0.1	4.4	3.0	15.0	0.2	4.6	3.7	15.0
25,000-49,999	0.4	14.6	6.5	32.1	0.6	16.3	6.2	25.3
50,000-99,999	1.0	36.7	6.6	33.0	1.5	39.6	8.7	35.2
100,000 or more	1.1	41.0	3.5	17.4	1.5	39.3	4.8	19.3
Median household income (2010\$)	83,000		53,000		86,037		52,297	

Table 2: Characteristics of Veteran and Non-Veteran Households with Small Businesses in 1989 and 2010 (continued)

Family Characteristics ¹	2010				1989			
	Small Business		No Small Business		Small Business		No Small Business	
	Number	%	Number	%	Number	%	Number	%
	(million)		(million)		(million)		(million)	
<i>Net worth of household (dollars)</i>								
Less than 50,000	0.2	6.3	6.2	31.0	0.3	7.5	7.1	28.9
50,000-99,999	0.1	3.2	2.4	12.1	0.3	6.5	3.0	12.1
100,000-249,999	0.5	18.5	4.2	20.7	0.6	16.6	6.5	26.4
250,000-499,999	0.5	16.3	3.7	18.4	0.8	20.1	4.0	16.4
500,000-999,999	0.5	17.5	2.0	10.0	0.8	20.7	2.4	9.8
1,000,000-2,499,999	0.6	20.1	1.1	5.4	0.7	16.8	1.2	5.0
2,500,000-4,999,999	0.3	9.8	0.2	1.2	0.2	5.4	0.2	0.9
5,000,000-9,999,999	0.1	4.5	0.2	0.8	0.2	4.4	0.1	0.4
10,000,000 or more	0.1	3.8	0.1	0.4	0.1	1.8	0.1	0.2
Median household net worth (2010\$)	662,800		141,600		544,479		137,119	
<i>Structure of income (shares of total income)</i>								
Wages and salaries	1.1	40.0	9.5	47.4	2.3	58.8	15.3	62.2
Business, farm, and rental	0.8	27.8	0.4	2.0	1.2	29.5	0.8	3.4
Interest and dividends	0.1	5.1	0.5	2.6	0.2	5.5	1.4	5.5
Capital gains	0.1	2.4	0.1	0.7	0.1	1.6	0.3	1.4
Social security and pensions	0.7	25.2	8.7	43.2	0.2	4.7	6.0	24.4
Transfer payments	0.1	2.0	0.9	4.4	0.0	0.5	0.7	2.9
Other income	0.0	0.6	0.0	0.0	0.0	0.0	0.1	0.3

Table 2: Characteristics of Veteran and Non-Veteran Households with Small Businesses in 1989 and 2010 (continued)

Family Characteristics ¹	2010				1989			
	Small Business		No Small Business		Small Business		No Small Business	
	Number (million)	%	Number (million)	%	Number (million)	%	Number (million)	%
<i>Structure of wealth (shares of total assets)</i>								
Stocks	0.1	2.2	0.3	1.7	0.1	1.5	0.6	2.4
Bonds	0.0	0.4	0.1	0.3	0.0	0.6	0.3	1.1
Other financial assets	0.7	24.3	5.8	29.0	0.8	21.2	6.7	27.2
Vehicles	0.2	7.1	3.3	16.6	0.3	7.5	4.0	16.1
Houses	0.9	31.0	8.9	44.0	1.2	29.6	10.4	42.2
Other residential real estate	0.2	5.9	0.7	3.4	0.2	4.7	1.1	4.5
Business	0.7	24.4	0.1	0.5	1.2	30.6	0.1	0.5
Other non-financial assets	0.1	4.7	0.6	3.2	0.2	4.3	0.9	3.8
Other assets	0.0	0.0	0.3	1.3	0.0	0.0	0.5	2.2
Observations	268		962		377		856	

¹Numbers highlighted in red are statistically significant differences from the base year (1989) at the 5% level.
Source: Survey of Consumer Finances, Federal Reserve Board, 1989 – 2010.

Educational attainment improved for veteran household heads with and without a small business from 1989 to 2010. Veteran small business household heads had significantly higher levels of education than veteran household heads without a small business in 1989 and 2010. The percentage of small business household heads with more than a high school degree increased from 60.5% in 1989 to over 72% in 2010, and the percentage of household heads without a small business with more than a high school diploma increased from 47.6% to 56.6% from 1989 to 2010. And finally, veteran small business household heads are more likely to be married than veteran household heads without a small business.

Income and Assets

Real median income was higher for veteran small business households than other veteran households in 1989 and 2010; however, both types of households realized insignificant changes in real median income between 1989 and 2010. Veteran small businesses households saw real median income decline from over \$86,037 to \$83,000, while other veteran households saw real median income increase slightly from \$52,297 to \$53,000. Veteran small business households and veteran households without a small business realized increases in real median net worth from 1989 to 2010.

The share of income derived from wages and salaries; business, farm, and rental income; interest and dividends; Social Security and pensions; and transfer payments changed substantially for both veteran households with and without small businesses. With the aging veteran population, the share of income derived from wages and salaries declined from 58.8% in 1989 to 40% in 2010, while the share of income derived from social security and pensions rose from 4.7% to over 25% from 1989 to 2010 for veteran small business households. In addition, veteran small business households realized slight increases in the share of income from transfer payments from 1989 to 2010. Non-business-owning veteran households realized similar changes, with the share of income from wages and salaries declining from 62.2% in 1989 to 47.4% in 2010, and the share of income from social security and pensions increasing from 24.4% in 1989 to 43.2% in 2010. This group also realized a slight decrease in the share of income from business, farm, and rental income, as well as in interest and dividend income, but a slight increase in transfer payment income. In 2010, the most substantial income share differences were

in wages and salaries; business, farm, and rental income; and social security and pensions. Small business-owning veteran households derived a higher percentage of their income from their business than other households (27.8% versus 2%), and less from salary and wages (40% versus 47.4%) and Social Security and pensions (25.2% versus 43.2%).

Veteran small business households hold about the same percentage of their assets in financial assets as veteran households without a small business; however, they held a significantly smaller percentage of total assets in vehicles and housing as they have a significantly higher percentage of total assets held in their businesses. Veteran small business households held a significantly lower percentage of total assets in their business in 2010 than 1989 (30.6% in 1989 and 24.4% in 2010). Over 85% of the net worth of veteran small business households was held in houses (31%), other financial assets apart from stocks and bonds (24.3%), vehicles (7.1%) and business assets (24.4%) in 2010. These shares of net worth remained relatively constant for veteran small business households from 1989 to 2010.

Characteristics of Small Businesses

Table 3 examines characteristics of the small businesses owned by veterans and non-veterans from 1989 to 2010. Veteran and non-veteran small businesses were very similar in 1989 and 2010. In 2010, over 75% of veteran and non-veteran small business had fewer than 5 employees and had less than \$500,000 in gross sales; over 40% of the businesses were less than 10 years old; over 75% of the small businesses were organized as either sole proprietorships or partnerships; over 50% of the small businesses were engaged in services or other (other than agriculture; construction and manufacturing; and wholesale and retail trade); and over 70% of the small businesses were started by the current owner.

There were relatively minor changes in the characteristics of these businesses from 1989 to 2010. For non-veteran small businesses, the percentage of very small businesses, those with fewer than 2 employees and less than \$100,000 in gross sales, increased; businesses were somewhat older, with a lower percentage of the youngest firms and higher percentage of the oldest firms; firms were more likely to be organized as subchapter S corporations and less likely to be organized as other types of corporations; firms were less likely to be engaged in agriculture and equally likely to be engaged in services and other industries; and firms were less likely to be

bought for investments and more likely to have been started by the current owner. For veteran small businesses, the size of the businesses, number of employees, and gross sales were unchanged; the percentage of firms 20 years of age or more increased significantly from nearly 19.9% in 1989 to over 41% in 2010; firms were less likely to be organized as a sole proprietorship; and firms were less likely to be engaged in wholesale or retail sales and more likely to be engaged in service or other industries.

Table 3: Characteristics of Small Businesses Owned in Veteran and Non-Veteran Households in 1989 and 2010

Family Characteristics ¹	2010				1989			
	Veteran		Non-Veteran		Veteran		Non-Veteran	
	Number (million)	%	Number (million)	%	Number (million)	%	Number (million)	%
Small business owner	2.8	100.0	11.7	100.0	3.9	100.0	6.8	100.0
<i>Employees, number</i>								
1 or fewer	0.9	31.7	4.9	42.2	1.0	26.2	1.8	26.2
2 to 4	1.2	44.0	4.2	36.0	1.7	28.7	3.1	45.2
5 to 9	0.4	13.6	1.1	9.7	0.7	10.1	1.1	15.7
10 to 24	0.1	4.5	0.9	7.7	0.2	8.2	0.6	8.3
25 or more	0.2	6.2	0.5	4.5	0.2	3.8	0.3	4.6
<i>Gross sales (2010\$)</i>								
Less than \$100,000	1.6	58.6	7.5	64.2	1.9	49.3	3.7	55.2
\$100,000 to \$499,999	0.5	19.3	2.2	18.6	1.3	34.2	1.9	28.4
\$500,000 to \$999,999	0.2	8.9	0.6	4.9	0.2	5.3	0.2	3.4
\$1 million to \$4.9 million	0.2	8.8	0.9	7.7	0.3	6.7	0.6	8.2
\$5 million or more	0.1	4.4	0.5	4.5	0.2	4.6	0.3	4.8
<i>Business age</i>								
Less than 5 years old	0.6	22.6	3.6	31.1	1.2	31.0	2.8	41.7
5 to 9 years old	0.5	19.4	2.6	22.5	0.8	20.5	1.6	23.2
10 to 14 years old	0.2	8.5	1.7	14.8	0.6	14.4	1.0	14.1
15 to 19 years old	0.2	8.1	1.1	9.1	0.6	14.2	0.5	6.8
20 years old or more	1.2	41.4	2.6	22.5	0.8	19.9	1.0	14.2

Table 3: Characteristics of Small Businesses Owned in Veteran and Non-Veteran Households in 1989 and 2010 (continued)

Family Characteristics ¹	2010				1989			
	Veteran		Non-Veteran		Veteran		Non-Veteran	
	Number (million)	%	Number (million)	%	Number (million)	%	Number (million)	%
<i>Legal organization</i>								
Partnership	0.9	32.9	3.3	27.9	0.9	22.1	1.9	28.1
Sole proprietorship	1.2	43.8	6.3	53.8	2.2	57.2	3.5	51.4
Sub-chapter S corporation	0.4	14.4	1.5	12.8	0.5	12.0	0.5	7.3
Other corporation, LLP, LLC	0.2	8.9	0.6	5.5	0.3	8.7	0.9	13.1
<i>Industrial sector</i>								
Agriculture	0.3	11.3	1.5	13.0	0.7	18.4	1.5	21.9
Construction and manufacturing	0.5	16.3	2.3	19.3	0.6	16.4	1.6	23.9
Wholesale and retail	0.4	14.2	1.6	14.0	1.0	24.5	1.3	19.1
Service and other	1.6	58.2	6.3	53.7	1.6	40.7	2.4	35.2
<i>Founding status</i>								
Bought or invested	0.6	20.0	1.7	14.3	1.1	27.1	1.6	23.2
Started	2.0	70.8	9.0	77.3	2.5	64.0	4.4	64.8
Inherited	0.3	9.2	1.0	8.5	0.3	8.9	0.8	12.0
Observations	268		1,102		377		387	

¹Numbers highlighted in red are statistically significant differences from the base year (1989) at the 5% level.
Source: Survey of Consumer Finances, Federal Reserve Board, 1989 – 2010.

Income and Net Worth

Total Households: Veteran and Non-Veteran

Percentage High Income

Table 4 examines the percentage of high-income veteran and non-veteran households (greater than \$75,900 annual income in 2010 dollars). All statistical comparisons use 1989 as the reference year and denote statistically significant differences in red highlighted type. This analysis simply compares the high income shares in each year (1992 through 2010) with the high income shares in 1989.

Table 4: Percentage of Households Having High Income: Veteran and Non-Veteran

Characteristics ¹	1989	1992	1995	1998	2001	2004	2007	2010	Changes 1989 - 2010
	(percentage)								
All respondents, Non-Veterans	19.8	18.0	19.8	24.3	29.0	28.2	28.9	26.3	33.0
All respondents, Veterans	36.0	30.9	29.5	34.9	36.6	37.7	35.5	31.6	-12.4
Business owners, Non-Veterans	37.6	40.9	33.7	43.6	54.3	51.6	54.7	44.1	17.4
Business owners, Veterans	52.4	47.0	44.6	49.9	50.9	48.8	59.4	50.5	-3.6
Small business, Non-Veterans	43.1	43.8	40.4	47.3	61.8	57.8	58.2	48.4	12.4
Small business, Veterans	60.0	51.7	50.8	52.9	50.1	52.1	60.2	55.1	-8.2

¹Numbers highlighted in red are statistically significant differences from the base year (1989) at the 5% level. Source: Survey of Consumer Finances, Federal Reserve Board, 1989 – 2010.

The percentage of all veteran households classified high income remained virtually unchanged from 1989; while the percentage of non-veteran households classified as high-income significantly increased by 33% (19.8% in 1989 to over 26% in 2010).

The share of high income non-veteran households owning any business significantly increased ; however, similar veteran households realized essentially no change from 1989 to 2010. The share of high income non-veteran small business owners increased from 43.1% in 1989 to 58.2% in 2007; however, those gains were erased from 2007 to 2010. The share of high income veteran small business owner households significantly decreased (from 60% in 1989 to 50.1% in 2001), then remained steady from 1989 to 2010.

Percentage High Net Worth

Table 5 examines the percentage of veteran and non-veteran households that have high net worth (greater than \$1,518,000 net worth in 2010 dollars). The percentage classified as high net worth remained unchanged from 1989 to 2010 for all veteran households (increasing slightly from 6.2% in 1989 to 7.6% in 2010); while the percentage classified as high net worth increased significantly from 2.4% to 6.2% for non-veteran households. The difference of having high net worth for veterans and non-veterans narrowed substantially from 3.8 percentage points in 1989 to only 1.4 percentage points in 2010.

Non-veteran and veteran households owning any business realized significant increases in the percentage having high net worth. Non-veteran households increased their percentage having high income by over 79%, while veteran households increased their percentage having high net worth by over 52% from 1989 to 2010. Veteran and non-veteran small business owners realized an increase of over 65% in the percentage having high net worth. In 2010, 30.5% of veteran small business owners had high net worth, while only 23.4% of non-veteran small business owners had high net worth. In this descriptive analysis, veteran and non-veteran small business owners realized significant increases in net worth from 1989 to 2010; and these increases in net worth were not erased during the “Great Recession.”

Mean Income: 1989-2010

Table 6 examines changes in real mean income from 1989 to 2010. While real mean income is reported in 2010 dollars, the statistical comparison of means from 1989 to 2010 uses log means with 1989 as the reference group. Log transformations make income distributions more normally distributed with smaller variances. Mean income was statistically unchanged for veteran households as a group, although non-veteran households realized a significant increase in mean income of nearly 35% (rising from \$57,000 in 1989 to over \$76,700 in 2010).

Non-veteran small business owners realized significant increases in mean income from 1989 to 2007 (increasing from \$144,300 in 1989 to over \$191,400 in 2007); however these gains

Table 5: Percentage of Households Having High Net Worth: Veteran and Non-Veteran

Characteristics ¹	1989	1992	1995	1998	2001	2004	2007	2010	Changes 1989 - 2010
	(percentages)								
All respondents, Non-Veteran	2.4	2.0	1.9	2.9	4.2	4.5	5.6	6.2	158.5
All respondents, Veterans	6.2	5.5	5.0	5.6	8.6	8.5	7.7	7.6	21.9
Business owners, Non-Veterans	11.5	8.7	7.3	11.5	18.1	14.7	21.5	20.6	79.1
Business owners, Veterans	16.9	17.3	17.0	16.3	22.4	24.6	24.2	25.9	52.7
Small business, Non-Veteran	14.2	9.4	8.5	12.8	21.1	18.3	24.1	23.4	64.4
Small business, Veterans	18.3	19.2	20.3	17.9	23.5	27.7	24.2	30.5	66.9

¹Numbers highlighted in red are statistically significant differences from the base year (1989) at the 5% level.
Source: Surveys of Consumer Finance, Federal Reserve Board of Governors, 1989 - 2010.

Table 6: Mean Household Income: Veteran and Non-Veteran

Characteristics ¹	1989	1992	1995	1998	2001	2004	2007	2010	Changes 1989 - 2010
	(2010 dollars x \$1,000)								
	(%)								
All respondents, Non-Veterans	57.0	52.4	55.0	64.0	77.9	75.7	84.2	76.7	34.6
All respondents, Veterans	87.3	74.3	78.9	86.5	95.7	90.9	91.0	78.4	-10.2
Business owners, Non-Veterans	119.8	103.3	97.4	124.7	165.4	149.4	193.3	149.5	24.8
Business owners, Veterans	150.9	119.1	134.4	157.9	172.9	164.3	181.1	145.4	-3.6
Small business, Non-Veteran	144.3	108.5	105.5	133.7	176.6	157.9	191.4	157.7	9.3
Small business, Veterans	170.7	124.3	141.4	169.3	168.8	174.0	178.3	152.6	-10.6

¹Numbers highlighted in red are statistically significant differences from the base year (1989) at the 5% level.
Source: Surveys of Consumer Finance, Federal Reserve Board of Governors, 1989 - 2010.

were erased between 2007 and 2010. Veteran small business owners realized a significant decrease in mean income from 1989 to 2010, decreasing from \$170,700 to less than \$153,000 in 2010.

Mean Net Worth: 1989-2010

Table 7 examines changes in mean net worth from 1989 to 2010. Although real mean net worth is reported in 2010 dollars, the statistical comparison of means from 1989 to 2010 uses log means with 1989 as the reference group. Mean net worth increased significantly for both non-veteran and veteran households, with non-veteran households realizing nearly a 100% increase

and veteran households realizing nearly a 24% increase. The percentage difference in mean net worth for veterans and non-veterans narrowed substantially from 1989 to 2010. Mean net worth for veterans was 56% higher than mean net worth for non-veterans in 1989; however, mean net worth for veterans was only 29% higher than mean net worth for non-veterans in 2010.

Table 7: Mean Household Net Worth: Veteran and Non-Veteran

Characteristics ¹	1989	1992	1995	1998	2001	2004	2007	2010	Changes 1989 - 2010
	<i>(2010 dollars x\$1,000)</i>								(%)
All respondents, Non-Veteran	231	214	230	313	386	445	528	459	99.1
All respondents, Veterans	520	437	482	564	790	763	785	643	23.7
Business owner, Non-Veteran	738	693	682	1,003	1,254	1,307	1,806	1,488	101.7
Business owner, Veteran	1,309	1,099	1,303	1,458	2,020	1,999	2,281	2,004	53.1
Small business, Non-Veteran	911	760	764	1,170	1,439	1,538	1,920	1,653	81.3
Small business, Veterans	1,422	1,177	1,560	1,478	2,138	2,315	2,181	2,084	46.5

¹Numbers highlighted in red are statistically significant differences from the base year (1989) at the 5% level. Source: Surveys of Consumer Finance, Federal Reserve Board of Governors, 1989 - 2010.

Non-veteran small business households realized significant increases in mean net worth through 2007; however, those gains were erased by 2010. Veteran small business households realized significant increases in mean net worth through 2004; however, a large portion of those gains were erased by 2010.

Small Business Owning Households: Veteran and Non-Veteran

This section shows changes in the shares of high income and high net worth, mean income and net worth, for both veteran and non-veteran small business owners (Figures 3 through 6). These figures describe veteran income and net worth using an orange line and non-veteran income and net worth using a blue line for each stage of the business cycle shown in blue in the background. The actual points are included as Appendix A Tables A1 through A4.

High Income and Net Worth

The high income share of veteran small business households realized a slight decline as the economy was expanding from 1989 to 1992, while non-veteran households realized no significant change (Figure 3). As the economy was expanding from 2004 to 2007, the high income share of veteran small business households increased significantly from 52% to 60%, while non-veteran households realized no significant change. Even though the most severe contraction occurred between 2007 and 2010, veteran small business households realized no significant change in having high income, while non-veteran households fell significantly from 58% to 48%.

Veteran small business households didn't realize any significant change high net worth during any of the expansions or contractions of the economy (Figure 4). Non-veteran small business households realized significant increases in the share classified as high net worth in the expansions between 1998 and 2001 and 2004 and 2007.

Mean Income and Net Worth

Veteran small business households realized two significant declines in mean income during the slight contraction between 1989 and 1992 and during the severe contraction between 2007 and 2010 (Figure 5). Non-veteran small business households realized significant increases in mean income during the extended expansion from 1992 to 2001, and they realized a significant decrease in mean income during the Great Recession.

Veteran small business households realized a significant increase in mean net worth during the modest expansion from 1998 to 2001 (Figure 6). Non-veteran small business households realized significant increases in mean net worth during the modest expansion between 1995 and 2001 and significant decreases in mean net worth during the Great Recession. These results must be used with caution because they do not control for characteristics of the household head, household or business.

Figure 3: Share of High Income Small Business Owning Households by Business Cycle, 1989 – 2010

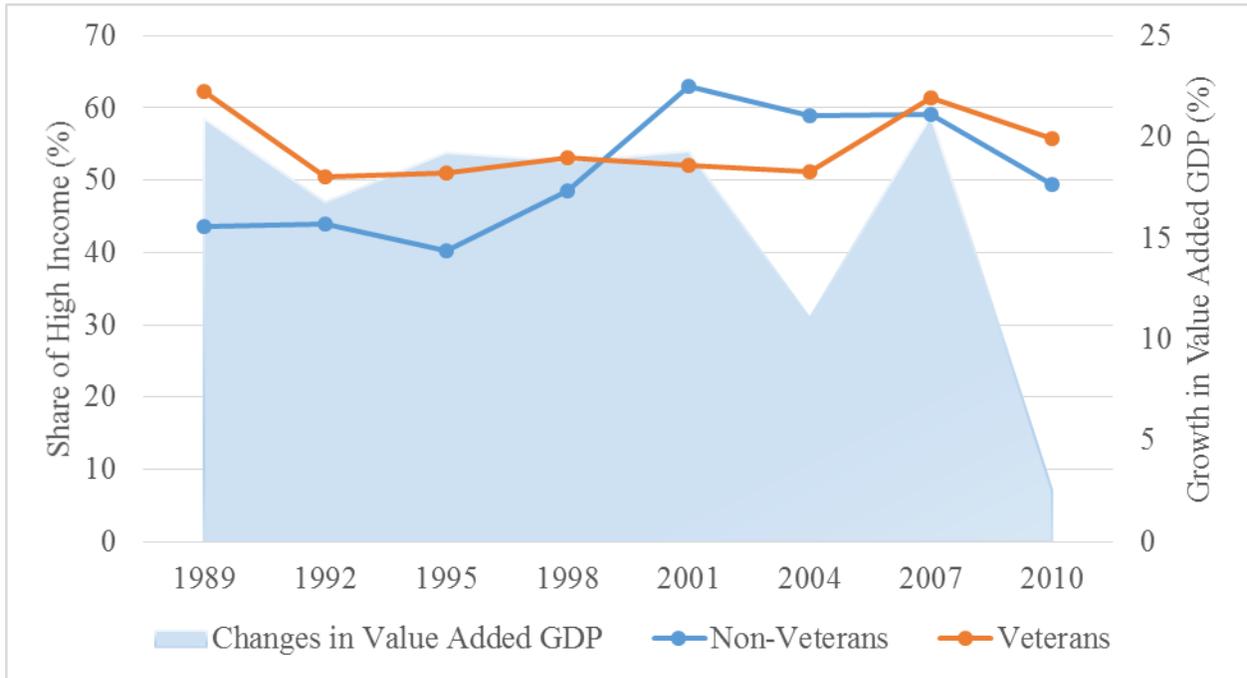
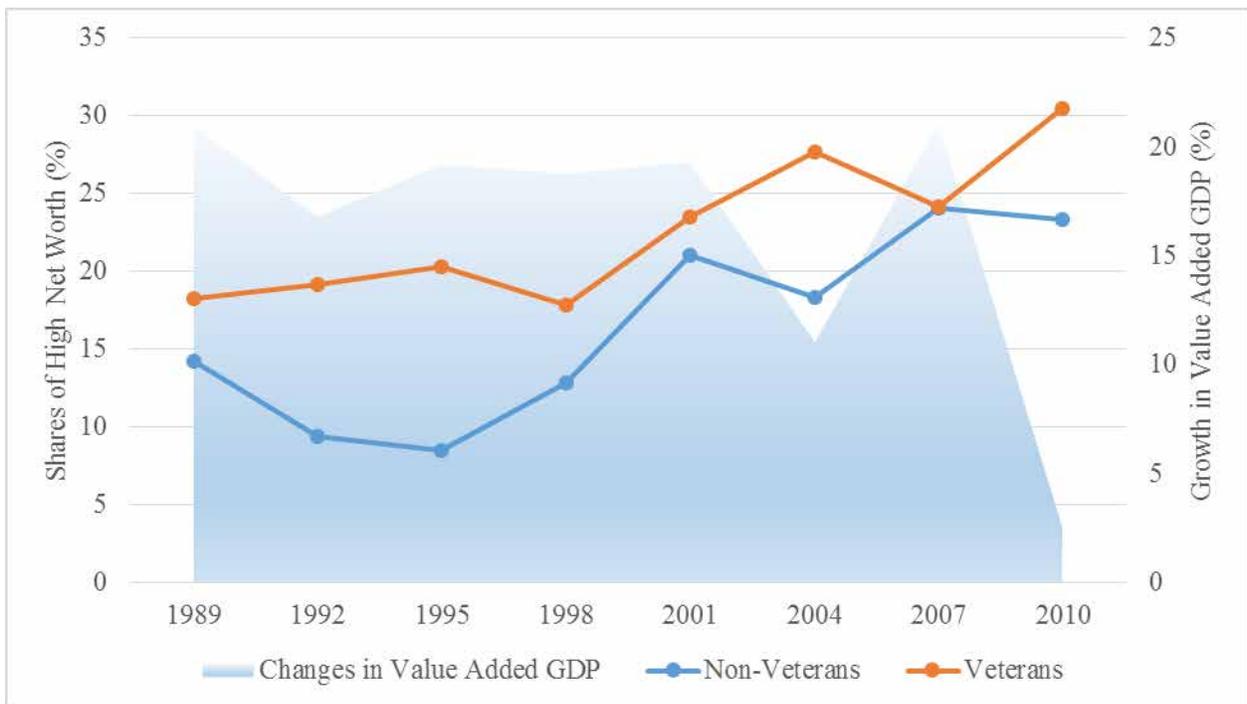


Figure 4: Share of High Net Worth Small Business Owning Households by Business Cycle, 1989 – 2010



Mean Income and Net Worth

Figure 5: Mean Household Income for Small Business Owners by Business Cycle, 1989 – 2010

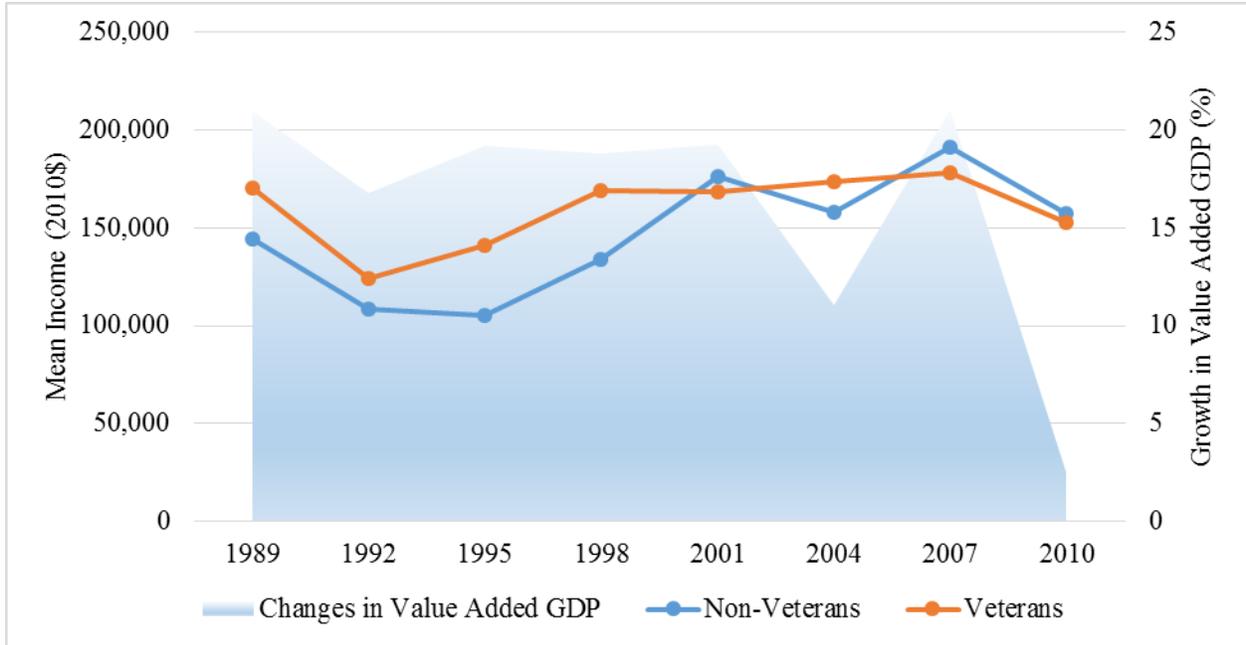
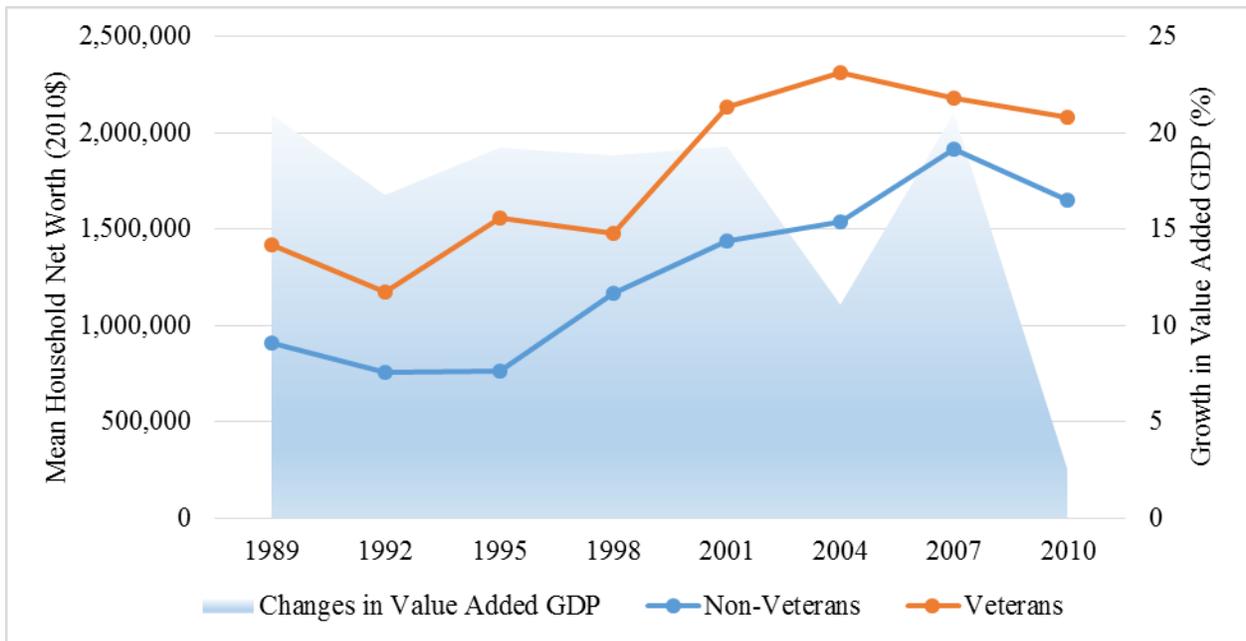


Figure 6: Mean Household Net Worth for Small Business Owners by Business Cycle, 1989 – 2010



Regression Analyses

The multivariate regression analyses, both logit and linear, add substantial rigor to the assessment of the hypotheses examined in this study because they control for key characteristics of households and businesses. Household characteristics include age, race, gender, educational attainment, marital status, ownership of financial and nonfinancial assets, professional practice occupation, and number of earners in the household. Business characteristics include employee size of firm, firm age, legal organization, industry, and founding status. As described earlier, the regression models test four dependent variables: the likelihood of being high income or net worth (logit models) and log income or log net worth (linear models).

This analysis assesses the impact of expansions and contractions in the U.S. economy as measured by changes in value added gross domestic product. A three year time lag is used to describe the rate of change prior to the year the SCF data were collected.¹³

Change in Income: All Households—Veteran and Non-Veteran

Table 8 examines the determinants of changes in income for all veteran and non-veteran households over the 21 years of the study (1989 to 2010). After controlling for household characteristics, veterans had a lower probability of being high income and had lower log income than non-veterans.¹⁴ The difference-in-difference (interaction term) estimators show that veteran households had higher log income in 1995 and 1998 than non-veteran households.

Several household characteristics warrant some discussion. Households with an older household head were more likely to be higher income. White household heads were likely to be higher income than their black and Hispanic counterpart household heads. Households with male

¹³ For instance, the rate of growth for the three years prior would be calculated by subtracting value added GDP in 1991 (the year in which data for the 1992 SCF were collected) from value added GDP in 1988 and computing the natural log of this difference. GDP annual growth rates over the three year lag remained relatively robust (higher than 5.5% annual growth rate) from the 1989 to 2001 SCF data collections; however, the growth rate slowed considerably leading into the 2004 SCF data collections (3.7%), rebounded in very robust fashion prior to the 2007 SCF data collection (7%), then slowed considerably during the Great Recession to less than 1%.

¹⁴ The probability of being high income was significantly higher than the reference year (1989) in 2001 and 2007; and significantly lower than the reference year in 1992. Log income was significantly higher in 2001 through 2007, and significantly lower in 1992 through 2001. The interaction terms (veterans by year) coefficients for 1995*veteran and 1998*veteran were positive and significant.

household heads were more likely to have higher income than their female counterpart household heads. Educational attainment matters; household heads with a higher level of education earn higher income. Households with a married household head had higher income than their unmarried counterpart. Households owning public stock or real estate had higher income than those not owning these assets. Households with a household head engaged in a professional occupation had higher income than their counterpart household heads engaged in other occupations. And finally, households with more income earners living in the household had lower total income. The results derived from these control variables are consistent for both the probability of high income and log income regressions.

Table 9 examines the determinants of changes in net worth for all veteran and non-veteran households over the 21 years of the study (1989 to 2010). After controlling for characteristics of the household, veterans exhibited similar probabilities of being high net worth and lower log net worth than non-veterans.¹⁵

Several household characteristics warrant some discussion. Households with an older household head were more likely to be higher net worth. White household heads were likely to be higher net worth than their black and Hispanic counterpart household heads. Households with male household heads were more likely to have higher net worth than their female counterpart household heads. Household heads with a higher level of education earn higher net worth. Households with a married household head had higher net worth than their unmarried counterpart. Households owning public stock or real estate and those engaged in a professional occupation had higher net worth.

Change in Income: Veteran Households With and Without Small Businesses

Table 10 examines the determinants of changes in income for veteran households with and without small businesses over the 21 years of the study (1989 to 2010). After controlling for characteristics of the veteran household heads, veteran small business households were

¹⁵ The probability of high net worth was significantly higher than the reference year (1989) in 2007 and 2010. Log net worth was significantly higher in 2001 through 2007, and significantly lower in 2010. The interaction terms (veterans by year) were insignificant for the probability of high net worth and log net worth.

Table 8: Determinants of Income: Veteran and Non-Veteran Households in Business Cycles (Regressions)

Log of value-added GDP differences, three year lag		All Respondents, 1989-2010			
<i>Business Cycle Indicator</i>		<i>All Private Sectors, GDP Value-Added</i>			
Dependent Variables	Characteristics ¹	Logistic Regression		Linear Regression	
		High Income (0/1)		Log Income	
		Parameter	p-value	Parameter	p-value
Intercept		-9.1659	0.0001	8.2500	0.0001
Veteran		-0.2189	0.0396	-0.1205	0.0025
Log Value-Added	1992 (<i>contraction</i>)	-0.0771	0.0001	-0.0159	0.0016
Log Value-Added	1995 (<i>expansion</i>)	-0.0308	0.0701	-0.0227	0.0001
Log Value-Added	1998 (<i>expansion</i>)	-0.0015	0.9201	-0.0183	0.0001
Log Value-Added	2001 (<i>expansion</i>)	0.0405	0.0059	0.0152	0.0012
Log Value-Added	2004 (<i>contraction</i>)	0.0236	0.1010	0.0131	0.0048
Log Value-Added	2007 (<i>expansion</i>)	0.0338	0.0182	0.0164	0.0002
Log Value-Added	2010 (<i>contraction</i>)	-0.0044	0.7506	0.0077	0.0882
Interaction: Log Value-Added	1992 & veteran	0.0393	0.1046	0.0137	0.1392
Interaction: Log Value-Added	1995 & veteran	-0.0067	0.7867	0.0245	0.0058
Interaction: Log Value-Added	1998 & veteran	-0.0003	0.9910	0.0222	0.0143
Interaction: Log Value-Added	2001 & veteran	-0.0139	0.5434	0.0009	0.9164
Interaction: Log Value-Added	2004 & veteran	0.0192	0.4335	0.0122	0.1730
Interaction: Log Value-Added	2007 & veteran	0.0005	0.9835	0.0113	0.1989
Interaction: Log Value-Added	2010 & veteran	0.0146	0.5134	0.0076	0.3920
Age		0.2119	0.0001	0.0564	0.0001
Age - squared		-0.0021	0.0001	-0.0005	0.0001
Race, Black		-0.4393	0.0001	-0.2526	0.0001
Race, Hispanic		-0.6328	0.0001	-0.1763	0.0001
Race, other		-0.1522	0.0705	-0.1583	0.0001
Gender, male		1.0036	0.0001	0.2950	0.0001
Education, high school diploma		0.9415	0.0001	0.3880	0.0001
Education, some college		1.4770	0.0001	0.5307	0.0001
Education, college degree or more		2.3210	0.0001	0.8890	0.0001
Marital status, married		1.3094	0.0001	0.5356	0.0001
Public stock ownership		0.9829	0.0001	0.4000	0.0001
Owns real estate		0.8316	0.0001	0.3426	0.0001
Professional occupation		0.3121	0.0001	0.0796	0.0001
Income earners in household		-0.2254	0.0001	-0.1217	0.0001
Adjusted R-squared					
McFadden R-squared			0.32		0.30
Number of Observations					35,513

¹Reference categories are the following: year=1989, race=white, education=no high school diploma.

Source: Surveys of Consumer Finance, Federal Reserve Board of Governors, 1989 - 2010.

Table 9: Determinants of Net Worth: Veteran and Non-Veteran Households in Business Cycles (Regressions)

Log of value-added GDP differences, three year lag		All Respondents, 1989-2010			
<i>Business Cycle Indicator</i>		<i>All Private Sectors, Log of GDP Value-Added</i>			
Dependent Variables	Characteristics ¹	Logistic Regression High Income (0/1)		Linear Regression Log Income	
		Parameter	p-value	Parameter	p-value
Intercept		-12.5458	0.0001	0.4346	0.0085
Veteran		-0.2262	0.3442	-0.2859	0.0172
Log Value-Added 1992		-0.0679	0.1897	-0.0166	0.2981
Log Value-Added 1995		-0.0649	0.1821	0.0195	0.1948
Log Value-Added 1998		-0.0063	0.8898	0.0037	0.7921
Log Value-Added 2001		0.0479	0.2993	0.0468	0.0008
Log Value-Added 2004		0.0409	0.3564	0.0517	0.0002
Log Value-Added 2007		0.0918	0.0307	0.0389	0.0031
Log Value-Added 2010		0.0923	0.0388	-0.0613	0.0001
Interaction: Log Value-Added 1992 & veteran		0.0373	0.4858	0.0267	0.3466
Interaction: Log Value-Added 1995 & veteran		0.0345	0.5256	0.0010	0.9717
Interaction: Log Value-Added 1998 & veteran		-0.0375	0.4643	-0.0097	0.7155
Interaction: Log Value-Added 2001 & veteran		-0.0021	0.9678	-0.0371	0.1742
Interaction: Log Value-Added 2004 & veteran		-0.0146	0.7752	-0.0477	0.0745
Interaction: Log Value-Added 2007 & veteran		-0.0532	0.2568	-0.0310	0.2365
Interaction: Log Value-Added 2010 & veteran		-0.0617	0.1779	-0.0455	0.0949
Age		0.1887	0.0001	0.2179	0.0001
Age - squared		-0.0013	0.0001	-0.0014	0.0001
Race, Black		-1.6332	0.0001	-1.4763	0.0001
Race, Hispanic		-0.7057	0.0017	-0.9924	0.0001
Race, other		-0.0391	0.7917	-0.3901	0.0001
Gender, male		0.7632	0.0001	0.8951	0.0001
Education, high school diploma		0.2679	0.1572	1.3360	0.0001
Education, some college		0.9507	0.0001	1.4669	0.0001
Education, college degree or more		1.9127	0.0001	1.9974	0.0001
Marital status, married		0.3006	0.0006	1.0448	0.0001
Public stock ownership		1.4627	0.0001	1.3785	0.0001
Owens real estate		1.4045	0.0001	1.3768	0.0001
Professional occupation		1.0373	0.0001	0.8973	0.0001
Income earners in household		-0.1674	0.0539	-0.0157	0.6466
Adjusted R-squared					
McFadden R-squared			0.36		0.33

Number of Observations

35,513

¹Reference categories are the following: year=1989, race=white, education=no high school diploma.

Source: Surveys of Consumer Finance, Federal Reserve Board of Governors, 1989 - 2010.

Table 10: Determinants of Income: Veteran Households in Business Cycles (Regressions)

Log of value-added GDP differences, three year lag		Veteran Households Only, 1989-2010			
<i>Business Cycle Indicator</i>		<i>All Private Sectors</i>			
Dependent Variables	Characteristics ¹	Logistic Regression High Income (0/1)		Linear Regression Log Income	
		Parameter	p-value	Parameter	p-value
Intercept		-9.4935	0.0001	8.4319	0.0001
Small business owner-manager		0.4094	0.0780	0.3936	0.0001
Log Value-Added 1992		-0.0436	0.0484	0.0011	0.8787
Log Value-Added 1995		-0.0414	0.0598	0.0068	0.3547
Log Value-Added 1998		0.0054	0.7946	0.0074	0.3186
Log Value-Added 2001		0.0338	0.1022	0.0186	0.0140
Log Value-Added 2004		0.0489	0.0241	0.0310	0.0001
Log Value-Added 2007		0.0274	0.2377	0.0300	0.0001
Log Value-Added 2010		0.0073	0.7210	0.0216	0.0060
Interaction: Log Value-Added 1992 & sb owner		0.0128	0.7967	-0.0325	0.0859
Interaction: Log Value-Added 1995 & sb owner		0.0221	0.6635	-0.0457	0.0192
Interaction: Log Value-Added 1998 & sb owner		-0.0575	0.2726	-0.0336	0.0857
Interaction: Log Value-Added 2001 & sb owner		-0.0661	0.1815	-0.0190	0.3282
Interaction: Log Value-Added 2004 & sb owner		-0.0527	0.3178	-0.0429	0.0329
Interaction: Log Value-Added 2007 & sb owner		0.0308	0.5561	-0.0163	0.4005
Interaction: Log Value-Added 2010 & sb owner		-0.0043	0.9319	-0.0549	0.0074
Age		0.2063	0.0001	0.0461	0.0001
Age - squared		-0.0021	0.0001	-0.0005	0.0001
Race, Black		-0.2321	0.0397	-0.0860	0.0308
Race, Hispanic		-0.7685	0.0001	-0.2819	0.0001
Race, other		-0.1791	0.3856	-0.0803	0.2503
Gender, male		1.1508	0.0002	0.3166	0.0001
Education, high school diploma		0.9880	0.0001	0.4099	0.0001
Education, some college		1.5286	0.0001	0.5069	0.0001
Education, college degree or more		2.2730	0.0001	0.8479	0.0001
Marital status, married		1.3029	0.0001	0.4886	0.0001
Public stock ownership		0.9490	0.0001	0.4045	0.0001
Owns real estate		0.8530	0.0001	0.3152	0.0001
Professional occupation		0.2328	0.0143	-0.0232	0.5583
Income earners in household		-0.2144	0.0025	-0.1477	0.0001
Adjusted R-squared					
McFadden R-squared			0.25		0.23
Number of Observations					9,875

¹Reference categories are the following: year=1989, race=white, education=no high school diploma.

Source: Surveys of Consumer Finance, Federal Reserve Board of Governors, 1989 - 2010

somewhat more likely (although statistically insignificantly) to have a higher probability of being high income and to have significantly higher log income than other veteran households without a small business. The difference-in-difference estimators, i.e., the interaction terms, suggest that

veteran small business households had lower log income than other veteran households in 1995, 2004, and 2010.¹⁶

Several control variables warrant further discussion in these regressions which include only veterans. Households with older male household heads with more education earn higher income; and households owning stock and real estate earn higher income. White households earned higher income than black and Hispanic households, but not other races, and professional occupation was only significant in the high income regression. Once again, households with more income earners had lower total household income.

Change in Net Worth: Veteran Households—With and Without Small Businesses

Table 11 examines the determinants of changes in net worth for veteran households with and without small businesses over the 21 years of the study (1989 to 2010). Veteran households with small businesses had higher probabilities of being high net worth and had higher log income than veteran households without small businesses. None of the interaction terms were significant in these net worth regressions.

Several control variables warrant further discussion in these regressions of veteran households only. Households with older household heads with more education had higher net worth, and households owning stock and real estate had higher net worth. White households had higher net worth than black and Hispanic households, but not other races, and professional occupation was only significant in the high net worth regression.

Change in Income: Small Business Owning Households: Veteran and Non-Veteran

Table 12 examines the determinants of changes in income for veteran and non-veteran households with small businesses. After controlling for household and business characteristics, these income regressions suggest that veteran and non-veteran small business households are very similar. The difference-in-difference estimators suggest there is tacit evidence that veteran

¹⁶ The probability of being high income was higher than the reference year for 2004 and lower than the reference year for 1992. Log income was higher in 2001 through 2010. The interaction terms (small business by year) were insignificant for the probability of high income regression and the interaction terms for 1995*small business, 2004*small business and 2010*small business were negative and significant for the log income regression.

Table 11: Determinants of Net Worth: Veteran Households in Business Cycles (Regressions)

Log of value-added GDP differences, three year lag	Veteran Households Only, 1989-2010			
<i>Business Cycle Indicator</i>	<i>All Private Sectors</i>			
Characteristics ¹	Logistic Regression High Net Worth Probability		Linear Regression Log Net Worth	
	Parameter	p-value	Parameter	p-value
Intercept	-14.3190	0.0001	-0.3092	0.4511
Small business owner-manager	1.4997	0.0003	1.2887	0.0001
Log Value-Added 1992	-0.0685	0.2472	0.0148	0.4370
Log Value-Added 1995	-0.0648	0.2943	0.0221	0.2538
Log Value-Added 1998	-0.0536	0.4047	0.0070	0.7079
Log Value-Added 2001	0.0347	0.4584	0.0131	0.5003
Log Value-Added 2004	0.0035	0.9489	0.0102	0.5918
Log Value-Added 2007	0.0260	0.5956	0.0125	0.5155
Log Value-Added 2010	-0.0101	0.8511	-0.1056	0.0001
Interaction: Log Value-Added 1992 & sb owner	0.0505	0.5380	-0.0625	0.2143
Interaction: Log Value-Added 1995 & sb owner	0.0522	0.5425	-0.0360	0.4808
Interaction: Log Value-Added 1998 & sb owner	-0.0323	0.7092	-0.0778	0.1181
Interaction: Log Value-Added 2001 & sb owner	0.0129	0.8637	-0.0104	0.8375
Interaction: Log Value-Added 2004 & sb owner	0.0358	0.6735	-0.0099	0.8489
Interaction: Log Value-Added 2007 & sb owner	-0.0184	0.8192	-0.0113	0.8216
Interaction: Log Value-Added 2010 & sb owner	0.0382	0.6107	0.0105	0.8431
Age	0.2151	0.0001	0.2455	0.0001
Age - squared	-0.0014	0.0001	-0.0016	0.0001
Race, Black	-1.4561	0.0066	-0.8105	0.0001
Race, Hispanic	-0.3770	0.3821	-1.0262	0.0001
Race, other	0.3992	0.1568	0.0998	0.5323
Gender, male	1.2931	0.0866	1.2664	0.0001
Education, high school diploma	-0.0185	0.9522	0.7348	0.0001
Education, some college	0.6089	0.0432	0.7801	0.0001
Education, college degree or more	1.6761	0.0001	1.3741	0.0001
Marital status, married	0.2779	0.0671	0.8212	0.0001
Public stock ownership	1.5239	0.0001	1.2342	0.0001
Owns real estate	1.2816	0.0001	1.0752	0.0001
Professional occupation	0.3238	0.0153	0.1520	0.1356
Income earners in household	-0.2019	0.2087	-0.0260	0.6523
Adjusted R-squared				
McFadden R-squared		0.37		0.23

Number of Observations 9,875

¹Reference categories variables are the following: year=1989, race=white, education=no high school diploma.

Source: Surveys of Consumer Finance, Federal Reserve Board of Governors, 1989 – 2010

Table 12: Determinants of Income: Veteran and Non-Veteran Small Business Households in Business Cycles

Dependent Variables Characteristics ¹	High Income (0/1)		Log Income	
	Parameter	p-value	Parameter	p-value
Intercept	-6.8377	0.0001	8.8424	0.0001
Veteran	0.0051	0.6896	0.1036	0.1610
Log Value-Added 1992	-0.0836	0.0767	-0.0068	0.8152
Log Value-Added 1995	-0.0602	0.1256	-0.0351	0.0522
Log Value-Added 1998	-0.0537	0.3408	-0.0159	0.4145
Log Value-Added 2001	0.0523	0.0710	0.0291	0.0190
Log Value-Added 2004	0.0536	0.0730	0.0238	0.0546
Log Value-Added 2007	0.0229	0.2502	0.0139	0.2762
Log Value-Added 2010	-0.0487	0.1955	-0.0197	0.2145
Interaction: Log Value-Added 1992 & veteran	0.0048	0.9351	-0.0391	0.1264
Interaction: Log Value-Added 1995 & veteran	-0.0115	0.8469	-0.0160	0.5367
Interaction: Log Value-Added 1998 & veteran	-0.0374	0.5230	-0.0201	0.4234
Interaction: Log Value-Added 2001 & veteran	-0.1685	0.0048	-0.0513	0.0404
Interaction: Log Value-Added 2004 & veteran	-0.1112	0.0687	-0.0528	0.0422
Interaction: Log Value-Added 2007 & veteran	-0.0020	0.9736	-0.0027	0.9118
Interaction: Log Value-Added 2010 & veteran	-0.0139	0.8332	-0.0261	0.3813
Age	0.1738	0.0001	0.0440	0.0001
Age - squared	-0.0017	0.0001	-0.0004	0.0001
Race, Black	-0.2415	0.1497	-0.2964	0.0001
Race, Hispanic	-0.1729	0.3817	-0.0060	0.9529
Race, other	-0.0105	0.9557	-0.1505	0.1002
Gender, male	0.5110	0.0019	0.2551	0.0003
Education, high school diploma	0.2888	0.0819	0.1728	0.0139
Education, some college	0.6515	0.0004	0.2037	0.0165
Education, college degree or more	1.3115	0.0001	0.5192	0.0001
Marital status, married	1.0582	0.0001	0.4658	0.0001
Public stock ownership	0.6201	0.0001	0.3143	0.0001
Owns real estate	0.6586	0.0001	0.2814	0.0001
Professional occupation	0.0335	0.6702	0.0628	0.0770
Income earners in household	-0.3454	0.0008	-0.1777	0.0001
Business size, number of employees	0.0328	0.0003	0.0058	0.0001
Business age	0.0095	0.3561	0.0043	0.3451
Business age - squared	0.0000	0.8655	0.0000	0.8776
Organization, partnership	-0.3104	0.0630	-0.2035	0.0010
Organization, sole proprietorship	-0.5574	0.0004	-0.3258	0.0001
Organization, sub s corporation	0.1371	0.4267	0.0005	0.9940
Industry, construction and manufacturing	0.2568	0.0613	0.2658	0.0001
Industry, wholesale and retail	0.2157	0.1294	0.3061	0.0001
Industry, service and other	0.7508	0.0001	0.5255	0.0001
Founding status, bought or invested	0.1576	0.3835	-0.1953	0.0049
Founding status, started	0.0643	0.7039	-0.1345	0.0357
McFadden/Adjusted R-squared		0.23		0.16

Number of Observations

8,920

¹Reference categories are the following: year=1989, race=white, education=no high school diploma, organization=regular corporation, industry=agriculture, and founding status=inherited.

Source: Surveys of Consumer Finance, Federal Reserve Board of Governors, 1989 – 2010

small business households had a lower probability of having high income in 2001 and had lower log income in 2004 than non-veteran small business households.

Again, several control variables warrant further discussion. Older small business households consistently had higher income than younger small business households. The influence of race was largely mitigated with log income being significantly lower for Blacks. Being male, better educated, married, and owners of stocks and real estate were all positively associated with higher income; and having more income earners in the household was associated with lower income. Households owning larger small businesses had higher income. Business age was insignificant; however, businesses organized as sole proprietorships or partnerships earned less income than corporations and other types of limited liability companies. Households with firms engaged in construction, manufacturing, wholesale or retail trade, or services and other earned higher income than agricultural businesses, and households with a firm inherited by the householder earned lower income than firms acquired by purchase or investment or started by the household head.

Change in Net Worth: Small Business Owning Households—Veteran and Non-Veteran

Table 13 examines the determinants of changes in net worth for veteran and non-veteran households with small businesses. Veteran households owning a small business had lower log net worth than non-veteran households owning a small business. None of the difference-in-difference estimators were statistically significant in this regression model.

Several control variables warrant further discussion. Older small business households consistently had higher net worth than younger small business households. The influence of race was largely mitigated with the probability of being high net worth being significantly lower for blacks. Being male, highly educated, and owners of stocks and real estate were all positively associated with higher net worth. Households owning larger and older small businesses had higher net worth. Businesses organized as sole proprietorships held less net worth than corporations and other types of limited liability companies.

Table 13: Determinants of Net Worth: Veteran and Non-Veteran Small Business Households in Business Cycles

Characteristics ¹	High Net Worth Probability		Log Net Worth	
	Parameter	p-value	Parameter	p-value
Intercept	-7.9283	0.0001	7.2474	0.0001
Veteran	-0.3702	0.3543	-0.2859	0.0320
Log Value-Added 1992	-0.1500	0.0262	-0.0373	0.2092
Log Value-Added 1995	-0.1279	0.0581	-0.0460	0.0793
Log Value-Added 1998	-0.1257	0.0504	-0.0322	0.2575
Log Value-Added 2001	0.0124	0.5147	0.0269	0.1076
Log Value-Added 2004	-0.0267	0.8491	0.0229	0.1020
Log Value-Added 2007	0.0460	0.1665	0.0165	0.3672
Log Value-Added 2010	0.0391	0.4230	-0.1013	0.0001
Interaction: Log Value-Added 1992 & veteran	0.1266	0.1402	-0.0074	0.8328
Interaction: Log Value-Added 1995 & veteran	0.0985	0.2467	0.0400	0.2696
Interaction: Log Value-Added 1998 & veteran	0.0227	0.7826	-0.0200	0.5620
Interaction: Log Value-Added 2001 & veteran	0.0101	0.9005	0.0109	0.7558
Interaction: Log Value-Added 2004 & veteran	0.0660	0.4369	0.0251	0.4761
Interaction: Log Value-Added 2007 & veteran	-0.0208	0.7910	0.0296	0.3790
Interaction: Log Value-Added 2010 & veteran	0.0121	0.8874	0.0620	0.1490
Age	0.1289	0.0001	0.1380	0.0001
Age - squared	-0.0009	0.0030	-0.0010	0.0001
Race, Black	-0.9233	0.0113	-0.9662	0.0001
Race, Hispanic	-0.3381	0.3520	-0.2088	0.1018
Race, other	0.0342	0.8967	-0.0588	0.6238
Gender, male	0.7090	0.0147	0.6660	0.0001
Education, high school diploma	0.1384	0.6372	0.3756	0.0004
Education, some college	0.4947	0.1196	0.4214	0.0002
Education, college degree or more	1.2649	0.0001	0.6764	0.0001
Marital status, married	0.0158	0.9165	0.3604	0.0001
Public stock ownership	1.0125	0.0001	0.7371	0.0001
Owns real estate	1.2309	0.0001	0.7908	0.0001
Professional occupation	0.0154	0.8855	-0.0727	0.1565
Income earners in household	-0.2256	0.0971	0.0068	0.8936
Business size, number of employees	0.0144	0.0001	0.0070	0.0001
Business age	0.0694	0.0001	0.0660	0.0001
Business age - squared	-0.0009	0.0038	-0.0011	0.0001
Organization, partnership	-0.2815	0.1021	-0.3881	0.0001
Organization, sole proprietorship	-1.1128	0.0001	-0.7399	0.0001
Organization, sub s corporation	0.1454	0.4065	0.0310	0.7324
Industry, construction and manufacturing	-0.2197	0.2889	-0.6213	0.0001
Industry, wholesale and retail	-0.2403	0.2648	-0.4330	0.0001
Industry, service and other	0.0526	0.7829	-0.2714	0.0013
Founding status, bought or invested	0.0141	0.9451	0.0675	0.4889
Founding status, started	-0.2913	0.1162	-0.3501	0.0002
McFadden/Adjusted R-squared		0.34		0.31

Number of Observations

8,920

¹Reference categories are the following: year=1989, race=white, education=no high school diploma, organization=regular corporation, industry=agriculture, and founding status=inherited.

Source: Surveys of Consumer Finance, Federal Reserve Board of Governors, 1989 – 2010

agriculture held higher net worth. Households with firms started by the founder had lower net worth than firms inherited by the founder.

Discussion and Policy Implications

After controlling for key personal, demographic and household characteristics the analysis indicates veteran households had lower income and net worth than non-veteran households,¹⁷ thus refuting hypothesis 1. Veteran small business households had higher income and net worth than their non-small business owning counterparts,¹⁸ thus supporting hypothesis 2. Veteran and non-veteran small business households were very similar, which refuted hypothesis 3. Veteran and non-veteran households with small businesses had very similar income and net worth, although veterans had significantly lower log net worth than non-veterans.¹⁹

How did veteran and non-veteran households fare during recent expansions and contractions in the U.S. economy? This examination of business cycles was especially interesting because of the significant longitudinal differences from 2007 to 2010 during the Great Recession. Mean income and net worth increased significantly from 1989 through 2007 for veteran and non-veterans; however by 2010 mean income and net worth had retreated to 1989 levels. Veteran small business households realized significant decreases in mean income from 1989 to 2010; although, these same households realized a significant increase in mean net worth through 2004; however, this increase was erased by 2010. By the end of the Great Recession veteran and non-veteran small business households had realized very similar impacts on income and net worth with gains in income and net worth essentially erased during the Great Recession.

¹⁷ In 1995 and 1998 veteran households had a higher rate of change in log income than non-veteran households; however, the rate of change in log income was similar for all other years. In 2001 and 2007 veteran households had a lower rate of change in log net worth than non-veteran households; however, the rate of change in log net worth was similar for all other years. In general, non-veteran households fared substantially better than veteran households.

¹⁸ Veteran small business households had lower rates of change in log income in 2004 and 2010 than other veteran households; however, rates of change in log income in other years were similar for the two types of veteran households.

¹⁹ Veteran small business owners had lower rates of change in income in 2001 and 2004 than non-veteran small business households; however, the rates of change in net worth between 1989 and 2010 were similar for veterans and non-veterans.

Recessions, in general, pose significant empirical challenges in terms of measuring their effects on businesses. For example, some businesses realize substantial decreases in sales (and may eventually fail), while other businesses, faced with less competition in their market, experience substantial increases in sales. Veteran and non-veteran households with small businesses realized significant declines mean income during the “Great Recession;” however, only non-veteran households with small businesses realized significant declines in mean net worth. In this study, the decrease in sales (demand) more than offset the decrease in competition (supply).

Even though veteran and non-veteran small business owners had similar results through the business cycles, perhaps the most important result was that veteran small business owners fared better than veterans not owning a small business. This evidence suggests that small business households have a higher probability of earning more income and accumulated more wealth than other veteran households. This result lends support to policy incentives to support the growth and development of small businesses owned by veterans.

Further Studies

This study would have been improved with access to panel data on these households and information about veteran-specific programs used by these households. Given the importance of the Great Recession to these small business owners, further research on these households utilizing the 2013 SCF is warranted. In addition, a study examining the survival and success of veteran small business owners utilizing opportunities to gain education and experience is warranted.

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Glossary

Business owner – is an individual who owns a large or small business or is self-employed.

Difference-in-difference – is a statistical technique used in this study to calculate the effect on veterans in each year of the SCF. The purpose of using this technique is to identify specific expansions or contractions in the economy where veterans would have fared “better” or “worse” than non-veterans. This technique calculates the effect of being a veteran by comparing the average change over time of the dependent variable (such as the probability of being high income) for veterans with the average change over time of the dependent variable for non-veterans.

Dummy variables – is a variable that has the value of 0 or 1. For instance, a dummy variable could be created for the variable gender, where 1=male and 0=female.

Household head (SCF) – the household head in the SCF is either the male in a mixed-sex couple or the older individual in a same-sex couple. The public data version of the SCF only reports information on the household head and spouse or partner.

Implicates – the SCF is a fully imputed dataset. Five different sets of imputations are available when using the SCF; a single set of imputations is call an implicate.

Interaction term – is a statistical techniques used in regression analysis. The interaction term is created by multiplying the values of two variables together to create a third variable. In this study, interaction terms are created using the veteran and business cycle variable. For instance, if veteran=1 and business cycle=2.5 then the interaction term would be 2.5; or if veteran=0 and business cycle=2.5 then the interaction term would be 0.

Log transformations – log transformation are computed by taking the natural logarithm of a value. Log transformations make income distributions more normally distributed with smaller variances.

Self-employed households – are households where the respondent or spouse indicates they are self-employed, but they are not business owners or managers. These type of self-employed households are called non-business self-employed. These households not recognized as small business households because they lacked relevant business variables, such as business age and legal organization.

Small business owner – small business owners are respondents who own and manage at least one business with fewer than 500 employees.

Value-added GDP – is a measure of the value of good and service produced in the U.S. economy, which is reported by the Bureau of Economic Analysis. In this study, value-added GDP is measured for each industrial sector of the U.S. economy. This measure is the contribution of each industrial sector to the overall GDP. The contribution of government to the GDP is subtracted from value-added GDP for this study.

Veteran household– is a household where the household head or spouse is a military veteran. They are classified as military veterans if they have served in the U.S. military or National Guard.

Appendix A – Supplemental Tables

Table A1: Likelihood of Being High Income for Veteran and Non-Veteran Small Business Owners by Business Cycle

Characteristics	Base 1989	Slight Expansion 1992	Expansion 1995	Expansion 1998	Expansion 2001	Slight Contraction 2004	Expansion 2007	Severe Contraction 2010
	(percentages)							
Small business, Non-Veterans	43.1	43.8	40.4	47.3	61.8	57.8	58.2	48.4
Small business, Veterans	60.0	51.7	50.8	52.9	50.1	52.1	60.2	55.1

Table A2: Likelihood of Being High Net Worth for Veteran and Non-Veteran Small Business Owners by Business Cycle

Characteristics	Base 1989	Slight Contraction 1992	Expansion 1995	Expansion 1998	Expansion 2001	Slight Contraction 2004	Expansion 2007	Severe Contraction 2010
	(percentages)							
Small business, Non-Veterans	14.2	9.4	8.5	12.8	21.1	18.3	24.1	23.4
Small business, Veterans	18.3	19.2	20.3	17.9	23.5	27.7	24.2	30.5

Table A3: Mean Income for Veteran and Non-Veteran Small Business Owners by Business Cycle

Characteristics	1989	Slight	Expansion	Expansion	Expansion	Slight	Expansion	Severe
		Contraction	1995	1998	2001	Contraction	2007	Contraction
(2010 dollars)								
Small business, Non-Veteran	144,282	108,494	105,453	133,672	176,596	157,917	191,380	157,727
Small business, Veterans	170,684	124,304	141,407	169,304	168,767	173,978	178,321	152,633

Table A4: Mean Net Worth for Veteran and Non-Veteran Small Business Owners by Business Cycle

Characteristics	Base	Slight	Expansion	Expansion	Expansion	Slight	Expansion	Severe
		Contraction	1995	1998	2001	Contraction	2007	Contraction
(2010 dollars)								
Small business, Non-Veterans	911,355	760,372	764,410	1,170,095	1,439,478	1,538,437	1,919,755	1,652,601
Small business, Veterans	1,422,240	1,177,471	1,559,809	1,478,206	2,138,026	2,314,812	2,181,357	2,083,896

Appendix B – Assumptions

Table B1: Mean and Median Household Income and Net Worth, 1989 to 2010

Year	Before Tax Income		Net Worth	
	Median	Mean	Median	Mean
(2010 dollars in thousands)				
1989	43.9	69.2	79.9	316.9
1992	40.7	61.0	75.6	284.5
1995	43.6	63.4	81.7	301.1
1998	44.8	71.2	95.9	378.0
2001	48.9	83.3	106.1	487.0
2004	49.8	81.4	107.2	517.1
2007	49.6	88.3	126.4	584.6
2010	45.8	78.5	77.3	498.8

Sources: Bricker, Kennickell, Moore, & Sabelhaus (2012). Changes in U.S. family finances from 2007 to 2010: Evidence from Survey of Consumer Finances, *Federal Reserve Bulletin*, 98(2), Tables 1 and 3; Bucks, Kennickell & Moore (2006). Recent changes in family finances in the U.S.: Evidence from the 2001 and 2004 Survey of Consumer Finances. *Federal Reserve Bulletin*, 92, Tables 1 and 3.; Kennickell, Starr-McCluer & Surette (1998). Recent changes in U.S. family finances: Results from the 1998 Survey of Consumer Finances, *Federal Reserve Bulletin*, 80, Tables 1 and 3.

Table B2: Value-Added GDP Log Differences, 1989 to 2010 by Industrial Group

Industry	1989	1992	1995	1998	2001	2004	2007	2010
Agriculture	3.17	4.02	4.25	3.46	1.00	4.24	4.09	3.97
Mining, utilities, construction	4.48	4.58	4.81	4.95	5.09	5.00	5.54	1.00
Manufacturing	5.19	4.90	5.19	5.19	5.37	1.00	5.44	1.00
Wholesale, retail	5.03	4.97	5.26	5.24	5.23	5.01	5.43	1.00
Finance, insurance, real estate	5.26	5.30	5.34	5.48	5.52	5.53	5.64	5.02
Services and other	5.50	5.55	5.60	5.67	5.77	5.68	5.88	5.59

Table B3: Inflation Adjustments, 1989 to 2010

Year	Inflation Factor
1989	1.69
1992	1.52
1995	1.42
1998	1.34
2001	1.23
2004	1.15
2007	1.05
2010	1.00