

Income and Wealth: How Did Households Owning Small Businesses Fare from 1998 to 2007

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Introduction

The general economic expansion earlier in this decade dramatically increased the wealth of some individuals while leaving others with less modest increases, or decreases, in wealth. While there is ample discussion of the growth of businesses in the United States over the past 30 years, there is very limited knowledge about the owners (individuals or households) of privately held businesses. The public debate about wealth distribution and income inequality centered around the divide between the rich and the poor or the wealthy and the poverty-stricken, rather than the difference between those who owned and/or operated businesses versus those who worked for others and the unemployed. This study examines changes in the distributions of income and wealth for three primary types of households: households not owning a business, households owning and managing only one small business (single business owners), and households owning and managing at least one small business and owning other businesses (multiple business owners). Using this classification of households (and business owners) and the Surveys of Consumer Finances from 1998 to 2007, this study assesses changes in the income earned and wealth accumulated by different types of small businesses from 1998 to 2007.

Using the Board of Governors of the Federal Reserve's Survey of Consumer Finances, this study examines two important questions:

- (1) Did families with small business owners living in the household increase their income and wealth by more than families without small business owners living in the household from 1998 to 2007?

- (2) Did families with more than one small business increase their income and wealth by more than other families owning small businesses from 1998 to 2007?

Literature Review

The financial situation of U.S. families changed substantially between the early 1990s and 2007. The literature review examines relevant literature assessing changes in the income and wealth of U.S. families. Special attention is given to evidence of changes in the income and wealth of U.S. families who own one or more small businesses. A relatively comprehensive literature exists on the financial condition (income and wealth) of families, but the literature is much less comprehensive for the subset of families who own businesses. The Federal Reserve Board assesses recent changes in U.S. family finances every three years when summarizing results derived from the most recent Survey of Consumer Finances (Kennickell and Starr-McCluer, 1997; Kennickell, Starr-McCluer and Surette, 2000; Aizcorbe, Kennickell and Moore, 2003; Bucks, Kennickell and Moore, 2006; Bucks, Kennickell, Mach and Moore, 2009).

Between 1992 and 1995, real mean and median family income increased slightly, although not sufficiently to offset the declines from 1989 to 1992 (Kennickell and Starr-McCluer, 1997). By 1995, median income and wealth were nearly the same as in 1989; however, mean income and wealth had not fully recovered. This period of time from 1992 through 1995 was one of continued economic expansion in the U.S. economy. By 1998, real mean and median family income had surpassed their 1989 levels, having exhibited strong growth between 1995 and 1998. This period was marked by an increase

in the holding of stock equity and a booming stock market (Kennickell, Starr-McCluer and Surette, 2000). While family indebtedness increased over this period of time, asset growth was more rapid. By 1998, the economy was in the seventh year of an economic expansion. Civilian unemployment was around 4.5% and the average annual inflation rate of 2.2%, as measured by the consumer price index, had been low for the previous three years. Mean and median family income continued to grow from 1998 through 2001 with the fastest growth occurring among higher income households (Azicorbe, Kennickell and Moore, 2003).

The Survey of Consumer Finances shows that the median value of real family income continued to trend upward, while the mean value of real family income actually declined from 2001 to 2004 (Bucks, Kennickell and Moore, 2006). This result may suggest distributional changes within the groups. The authors suggest that three important shifts occurred during this time: (1) house values appreciated and homeownership increased; (2) prices in the equity market generally recovered; and (3) the debt to asset ratio increased.

The most recent Survey of Consumer Finances suggests that the median value of real family income before taxes was unchanged from 2004 to 2007, while both median and mean net worth increased (Bucks, Kennickell, Mach and Moore, 2009). The increase in the share of total assets attributed to unrealized capital gains were especially important from 2004 to 2007. The share of unrealized capital gains in total assets rose from 5.1% to nearly 36% from 2004 to 2007.

While no other authors addressed small business owners, Wolff (1998) argued that “. . . small business equity, which tends to move with stock prices, is also highly

concentrated among the rich.” While small business owners may have realized an increase in the value of their assets with the increase in the stock market, other evidence suggests that small business owners hold more debt than non-business-owning families (Haynes and Avery, 1996). In addition, recent research suggests that small business owners are willing to assume more risk and hold more risky portfolios of assets (Xaio, Alhabeeb, Hong and Haynes, 2001). Thus, whether or not families owning small businesses improved their financial status between 1989 and 2004 is an open question. This study examines changes in the real income and wealth of families owning small businesses to determine whether they had higher mean income and wealth and increasing or decreasing shares of total income and wealth from 1989 to 2004.

Another study completed by Haynes (2005) suggests that households owning small businesses, especially those owning only one small business, appear to have made smaller contributions to total wealth in 2001 than in the early 1990s. The evidence suggested that households owning only one small business seemed to be losing the race. They were making progress in increasing income and wealth, but they were making less progress than households not owning small businesses. A more recent study provides further evidence that compared with other households, those with small businesses made less progress in increasing their wealth and very similar progress in increasing their income in the late 1980s, a time of robust business activity, and early 2000s, a time of recovery for businesses (Haynes and Ou, 2006). However, an examination of data from 1992, a year of recovery, through 2004, another year of recovery, indicated that households owning small businesses appeared to have progressed at about the same rate as other households.

A sharp downturn in the stock market occurred in the second quarter of 2000 putting downward pressure on the income and wealth of many households. Financial prosperity in the 1990s was primarily dependent upon the rise of the stock markets. The 2004 and 2007 SCFs capture this downturn in the stock market and enable a comparison of the financial success of small-business-owning families and other families in a time when the influence of the stock market changed substantially. On one hand, the lower expected returns in the stock market should have encouraged investors to shift money to business development. On the other hand, the downturn in the stock market substantially reduced the wealth of some investors and limited their ability to invest in other ventures. Thus, whether or not families owning small businesses improved their financial status by 2007 is an open question. This study examines changes in the real income and wealth of families owning small businesses to determine if they had higher mean and median income and wealth and increasing or decreasing shares of total income and wealth from 1998 to 2007.

Conceptual Considerations

This study utilizes a household decision-making model to assess the success of small businesses, as measured by changes in income and wealth. While most other studies of small business success utilize the profit function, this study utilizes household income and wealth to assess the success of business-owning households. This strategy for addressing small business issues was originally suggested by Lopez (1986) in the following statement:

“ . . . the financial resources of the small firm are arguably intertwined with those of the household. This interdependence of resources suggests a theoretical model,

where the small business activity is integrated into the household utility maximization model.”

This conceptual model maximizes household utility subject to time and budget constraints, where the business’s profit function is embedded in the budget constraint. Recent work by Haynes and Onochie (2005) suggests that increases in the available cash in the business (from higher gross sales or net profits) bring more cash into the household, while only increases in the value of business (wealth) increase the amount of money spent on other household assets. Interestingly, these business financial indicators were not associated with measures of general well-being in the household.

In general, this model suggests that invoking the weak separability assumption and treating the business profit function in isolation fails to recognize the intermingling of resources between the business and household. This study recognizes the importance of the intermingling of resources and examines two hypotheses:

(1) Families with small business owners living in the household increased their income and wealth by more than families without small business owners living in the household from 1998 to 2007; and

(2) Families with more than one small business increased their income and wealth by more than other families owning one small business from 1998 to 2007.

Empirical Considerations

This section summarizes the data from the 1998 and 2007 Surveys of Consumer Finances and presents the statistical models employed. While this is primarily a descriptive study of small businesses in two time periods, it employs multivariate logistic and linear

regression models to assess the determinants of high income and wealth among households owning small businesses.

Data

The 1998 through 2007 Surveys of Consumer Finances (SCF) were conducted for the Federal Reserve Board 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.

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 a list design employed to over-sample relatively wealthy households. Response rates for the area probability and list samples in 1998 and 2007 were approximately 70% and 30%, respectively.

Research conducted by the Federal Reserve Board suggests that nonresponse is positively correlated with wealth. This study is primarily interested in examining small-business-owning families. However, the entire sample is employed to assess the differences between business-owning and non-business-owning families. The SCF survey asks respondents about the previous year; hence, the SCF for 2007 actually gathers information about the finances of the family and business in 2006.

The variables of interest in this study include business ownership status of the household, household income and household wealth (including assets and debt held by members of the household). Business ownership status was determined by whether an

individual owned and/or actively managed at least one business. Households owning large businesses (500 or more employees) and households with only investors (owners, but not managers) were not included in this study. Small business owners are separated into two categories: single business owners, who own and manage only one business, and multiple business owners, who own and manage at least one small business and own (and possibly manage) other businesses.

Financial data, such as income and wealth data, often have a substantial percentage of missing values. The SCF is a fully imputed data set with five separate imputates available for every missing value. This study utilizes only one imputate in the SCF. Household income and wealth were computed using all of the financial information reported in the SCF. 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 wealth of the household was determined by generating a balance sheet, using a program supplied by the Federal Reserve Board, to estimate the wealth of each household. Total wealth was computed by subtracting total liabilities from total financial and nonfinancial 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. Nonfinancial assets were computed by summing the value of vehicles, primary residence, other residential real estate, equity in nonresidential real estate, business interests and other nonfinancial 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.

This study will discuss the changes in income from 1998 to the most recent data collected in 2007. All income figures have been adjusted to 2007 dollars using the current Consumer Price Index (CPI) as employed by Bucks, Kennickell, Mach and Moore (2009).

Control variables include personal and demographic characteristics of the household head and business owner, and characteristics of the business. The 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 more), marital status (married, previously married or never married) and public stock and real estate ownership (yes or no). Business characteristics include number of employees, 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 report. Personal and demographic characteristics are those characteristics 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. No business information is available for businesses owned but not managed by the respondent. Small businesses are businesses with fewer than 500 employees that are owned and managed by a family member. This study has not differentiated between franchise and nonfranchise businesses.

Models

This study is primarily descriptive, where family income and wealth are compared for business-owning and non-business-owning families from 1998 to 2007. This descriptive analysis requires the careful comparison of means using regression analysis to assess differences among business and non-business-owning families across time (1998 through 2007). The most important questions assessed in this study are the following:

(1) Did families with small business owners living in the household increase their income and wealth by more than families without small business owners living in the household from 1998 to 2007?

(2) Did families with more than one small business increase their income and wealth by more than other families owning small businesses from 1998 to 2007?

Logistic and linear regression models are used to examine these two questions for three time periods, 1998 to 2007, 2001 to 2007 and 2004 to 2007.

The first set of models utilizes dummy variables for the year 2007 and households with a small business to determine whether households owning a small business fared better from 1998 to 2007 than other households. The variables of interest are the main effects on the dummy variables (year 2007 and small business) and the interaction term. To be consistent with previous studies, high income and wealth are based on levels established in 1992, where high income was income over \$50,000 per year and high wealth was net worth over \$1 million in 1992 dollars. When these 1992 levels are adjusted for inflation, high income is \$73,779 and high wealth is \$1.476 million in 2007 dollars. Six separate models are used in this study: (1) logistic regression model to examine the probability of being high income; (2) logistic regression model to examine

the probability of being high wealth, where high wealth is holding \$1 million in 1992 dollars; (3) logistic regression model to examine the probability of being high income, where high income is being in the top 50% of income earners; (4) logistic regression model to examine the probability of being high wealth, where high wealth is being in the top 50% of wealth holders; (5) linear regression model utilizing log of household income as the dependent variable; and (6) linear regression model utilizing log of household wealth as the dependent variable. The six models are specified as follows:

$HI = f(SB, Y07, SB*Y07; \text{age, race, gender, education, marital status, stock ownership, real estate ownership})$

where HI = high income (1=greater than \$73,779 in 2007\$)

SB = household with a small business dummy variable;

Y07= year dummy variable for 2007;

age = age of the household head;

race = race of the household head (1=minority, 0=otherwise);

gender = gender of household head (1=male, 0=female);

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

marital status = marital status (1=married, 0=unmarried);

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

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

$HW = f(SB, Y07, SB*Y07; \text{age, race, gender, education, marital status, stock ownership, real estate ownership})$

where HW = high wealth (1= greater than \$\$1.476 in 2007\$)

all other variables are the same as above.

$HI50 = f(SB, Y07, SB*Y07; \text{age, race, gender, education, marital status, stock ownership, real estate ownership})$

where HI50 = high income (1=top 50% of income earners)

all other variables are the same as above.

$HW50 = f(SB, Y07, SB*Y07; \text{age, race, gender, education, marital status, stock ownership, real estate ownership})$

where HW50 = high wealth (1=top 50% of wealth holders)

all other variables are the same as above.

$\text{Log income} = f(SB, Y07, SB*Y07; \text{age, race, gender, education, marital status, stock ownership, real estate ownership})$

Log wealth = f(SB, Y07, SB*Y07; age, race, gender, education, marital status, stock ownership, real estate ownership)

Using the first model (high-income logistic regression) as an example, a positive and significant coefficient on the year variable would indicate that all households have a higher probability of being classified as high income in 2007 than 1998, *ceteris paribus*. A positive and significant coefficient on the small business variable would indicate that households with a small business owned and operated by a household member would have a higher probability of being classified as high income than other households without a small business owned and operated by a household member, *ceteris paribus*. A positive and significant coefficient on the interaction term would indicate that households with small businesses fared better than other households from 1998 to 2007. This same analysis was conducted for 2001 to 2007 and 2004 to 2007 to test for the robustness of these results over time.

The second set of regressions utilizes the same dummy variable for the year 2007 and a dummy variable to identify households owning multiple small businesses to determine whether households owning multiple small businesses fared better from 1998 to 2007 than households owning just one small business. This set of regressions uses observations for households owning and managing one or more small businesses only. The variables of interest are the main effects on the dummy variables (year 2007 and multiple small business ownership) and the interaction term. The second set of models is specified as follows:

HI = f(MB, Y07, MB*Y07; age, race, gender, education, marital status, stock ownership, real estate ownership, employees, firm age, legal organization, industrial classification, founding status)

where HI = high income (1=greater than \$73,779 in 2007\$)

MB = household with a multiple small businesses dummy variable;
 Y07= year dummy variable for 2007;
 age = age of the household head (dummy variables for less than
 35, 35 to 44, 45 to 54, 55 to 64, 65 to 74 and 75 or older);
 race = race of the household head (1=minority, 0=otherwise);
 gender = gender of household head (1= male and 0=female);
 education = education level (categorical variables for some high
 school, high school graduate, some college, college
 graduate);
 marital status = marital status (1= married or 0=unmarried);
 stock ownership = owns publicly traded stock (1=yes, 0=no);
 real estate ownership = owns real estate (1=yes, 0=no);
 employees = number of employees in the business (continuous);
 firm age = age of the business (continuous);
 legal organization = categorical variables for partnership, sole
 proprietorship, subchapter s corporation and regular
 corporation);
 industrial classification = categorical variables for agriculture,
 construction/manufacturing, wholesale/retail and
 service/other); and,
 founding status = categorical variables for bought/invested, started
 and inherited/given.

$HW = f(MB, Y07, MB*Y07; \text{age, race, gender, education, marital status, stock ownership, real estate ownership, employees, firm age, legal organization, industrial classification, founding status})$
 where HW = high wealth (1= greater than \$\$1.476 in 2007\$)
 all other variables are the same as above.

$HI50 = f(MB, Y07, MB*Y07; \text{age, race, gender, education, marital status, stock ownership, real estate ownership, employees, firm age, legal organization, industrial classification, founding status})$
 where HI50 = high income (1=top 50% of income earners)
 all other variables are the same as above.

$HW50 = f(MB, Y07, MB*Y07; \text{age, race, gender, education, marital status, stock ownership, real estate ownership, employees, firm age, legal organization, industrial classification, founding status})$
 where HW50 = high wealth (1=top 50% of wealth holders)
 all other variables are the same as above.

$\text{Log income} = f(MB, Y07, MB*Y07; \text{age, race, gender, education, marital status, stock ownership, real estate ownership, employees, firm age, legal organization, industrial classification, founding status})$

Log wealth = f(MB, Y07, MB*Y07; age, race, gender, education, marital status, stock ownership, real estate ownership, employees, firm age, legal organization, industrial classification, founding status)

Once again, the coefficient on the interaction term (MB*Y07) is assessed to determine whether households with multiple small businesses have fared better than other households owning small businesses from 1998 to 2007. This same analysis was conducted for 1998 to 2007, 2001 to 2007 and 2004 to 2007 to test for the robustness of these results over time. The next section reports the results of this study.

Results

This section compares the weighted samples in 1998, 2001, 2004 and 2007, evaluates the probability of being classified as high income and/or high wealth, examines the number of business-owning households, compares the demographic and financial characteristics of single- and multiple-business-owning families, compares real mean and median income and wealth, compares the shares of total family income and wealth between business-owning and non-business-owning families and across different types of business owners, and assesses the determinants of high income and high wealth families over the 10 years of this study (1998 through 2007).

Univariate Analysis

The sample weights were employed for the univariate and multivariate analyses in this study. The characteristics of the household and business were somewhat different in 1998 and 2007 (Table 1). The household heads interviewed in 2007 were somewhat older, more likely to be from a minority group, slightly better educated, slightly higher

Table 1 Sample Characteristics

Characteristics	1998	2001	2004	2007
Age				
Less than 35	23.3	22.7	22.2	21.7
35 to 44	23.3 *	22.3 *	20.7	19.6
45 to 54	19.2	20.7	20.7	20.8
55 to 64	12.8 *	13.2 *	15.3 *	16.8
65 to 74	11.2	10.7	10.4	10.5
75 or more	10.2	10.3	10.7	10.6
Gender				
Man	72.1	73.3	71.9	72.3
Woman	27.9	26.7	28.1	27.7
Race				
Nonwhite or Hispanic	22.2 *	23.7 *	26.4	26.1
White, non-Hispanic	77.8 *	76.3 *	73.6	73.9
Education				
No high school diploma	16.3 *	15.9 *	14.5	13.5
High school diploma	31.8	31.6	30.7 *	32.9
Some college	18.5	18.4	18.3	18.4
College degree	33.3	34.2	36.5	35.2
Marital Status				
Married	52.2	53.2 *	50.4	51.0
Not married	47.8	46.8 *	49.6	49.0
Income of household (2007 dollars)				
Less than \$10,000	9.5 *	7.6 *	7.2	6.4
\$10,000 to \$24,999	19.4	18.1	18.9	19.6
\$25,000 to \$49,999	27.2	27.0	26.1	26.4
\$50,000 to \$99,999	28.6	28.7	28.4	28.0
\$100,000 or more	15.3 *	18.6	19.3	19.6
Net Worth of Household (2007 Dollars)				
Less than \$50,000	39.5 *	37.7	38.3	36.6
\$50,000 to \$99,999	11.9 *	11.7 *	11.4	10.2
\$100,000 to \$249,999	21.2 *	18.8	18.9	18.8
\$250,000 to \$499,999	14.0	13.9	12.6 *	14.9
\$500,000 to \$999,999	7.8 *	9.5	9.8	10.5
\$1,000,000 or more	5.6 *	8.5	9.0	9.1
Owns Public Stock				
Yes	15.3	18.6 *	19.3 *	19.6
No	84.7	81.4 *	80.7 *	80.4
Owns Real Estate (>\$50,000)				
Yes	9.5 *	7.6 *	7.2	6.4
No	90.5 *	92.4 *	92.8	93.6

Table 1 Sample Characteristics (continued)

Characteristics	1998	2001	2004	2007
Business Owner				
Yes	12.7	13.7	13.2	13.6
No	87.3	86.3	86.8	86.4
<i>Business Owners Only</i>				
Small Business Owner Manager				
Yes	55.4	53.8	52.4	52.3
No	44.6	46.2	47.6	47.7
Business Age				
Less than 1 year	4.4	5.7	9.2 *	5.5
1 to 4 years	29.0	22.8	25.2	25.9
5 to 9 years	18.9	17.5	21.0	17.9
10 to 19 years	24.9	23.8	21.3	23.0
20 years or more	22.8	30.2	23.4	27.7
Business Size (including owner)				
1 or fewer	42.3	43.7	44.1	44.9
2 to 4	35.0	31.1	32.1	29.8
5 to 9	12.7	12.8	9.7	9.9
10 to 24	4.8 *	6.9	7.1	8.3
25 or more	5.2	5.6	6.9	7.1
Business Size (gross sales)				
Less than \$50,000	54.9 *	49.6	51.9	47.8
\$50,000 - \$99,999	11.5	10.7	13.6	12.0
\$100,000 - \$249,999	10.3	12.2	9.7	13.1
\$250,000 - \$499,999	8.4	9.4	8.3	7.7
\$500,000 - \$999,999	6.7	6.7	3.9	6.0
\$1,000,000 or more	8.1 *	11.5	12.6	13.3
Legal Organization				
Partnership	24.1 *	24.0 *	28.1 *	34.2
Sole proprietorship	51.1 *	49.3	48.3	44.2
Subchapter S corporation	13.0	15.7	14.2	14.1
Subchapter C corporation	11.8	11.0 *	9.3	7.4
Business Industrial Classification				
Agriculturally related	10.0	13.4	9.6	10.3
Mining/construction/manufacturing	24.4	19.4	23.6	23.9
Wholesale, retail	16.2	11.8	17.8	13.7
Services and other	49.4	55.3	49.0	52.1
Founding Status				
Bought or invested	20.9 *	18.3	16.2	16.2
Started	66.1	68.3	71.6 *	65.5
Inherited/given/other	12.9 *	13.5 *	12.2 *	18.3
Number of Observations, all	4,305	4,442	4,519	4,418
Number of Observations, business only h	1,277	1,354	1,385	1,417

income earners, slightly higher wealth holders, and more likely to own real estate than household heads in 1998.

The businesses operated by members of the household were quite similar in 1998 and 2007. Businesses were somewhat larger, more likely to be organized as partnerships and less likely to be organized as sole proprietorships, and less likely to have been purchased (bought or invested in) businesses and more likely to have been inherited businesses in 2007 than in 1998.

All respondents were significantly more likely to be high income earners in 2007 than 1998 with 26.3% of households being high income in 1998 and 31.0% of households being high income in 2007 (Table 2). Families owning any businesses were significantly more likely to be high income earners in 2007 than 1998. Just under 48% of small business owners were classified as high income in 1998, while nearly 59% of small business owners were classified as high income by 2007. The largest percentage gain in the likelihood of being high income (53.7%) from 1998 to 2007 was achieved by small business owners with more than one business.

The wealth picture was very similar, with all households realizing a significant increase in the likelihood of being classified as high wealth. Small-business-owning households realized an increase in the likelihood being classified as high wealth from 13.4% in 1998 to 23.7% in 2007 (Table 3). Again, the largest percentage gain in the likelihood of being high wealth (82.7%) from 1998 to 2007 was achieved by small business owners with more than one business.

In 1998, small-business-owning households were over two times more likely to be classified as high income (47.6% versus 23.0%) and about eight times more likely to be

Table 2 Probability of Being High Income, 1998 to 2007

Characteristics	1998	2001	2004	2007	Proportional Change		
					98 to 07	01 to 07	04 to 07
All respondents	0.263	0.312	0.300	0.310	0.178	-0.006	0.033
No business ownership	0.230	0.266	0.258	0.263	0.143	-0.011	0.021
Any business ownership	0.486	0.597	0.574	0.605	0.246	0.014	0.055
Small business	0.476	0.583	0.565	0.589	0.236	0.009	0.042
single business only	0.471	0.553	0.523	0.550	0.166	-0.005	0.051
multiple businesses	0.497	0.694	0.760	0.763	0.537	0.101	0.005

Note: Bolded and italicized proportions are statistically different at the 0.05 level of significance from the 2007 proportions (reference group).

Table 3 Probability of Being High Wealth, 1989 to 2004

Characteristics	1998	2001	2004	2007	Proportional Change		
					98 to 07	01 to 07	04 to 07
All respondents	0.033	0.052	0.052	0.060	0.824	0.172	0.158
No business ownership	0.017	0.024	0.029	0.030	0.776	0.230	0.052
Any business ownership	0.144	0.222	0.207	0.254	0.759	0.142	0.226
Small business	0.134	0.210	0.196	0.237	0.763	0.126	0.209
single business only	0.093	0.165	0.139	0.167	0.795	0.010	0.200
multiple businesses	0.301	0.373	0.460	0.550	0.827	0.477	0.197

Note: Bolded and italicized proportions are statistically different at the 0.05 level of significance from the 1989 proportions (reference group).

classified high wealth (13.4% versus 1.7%) than households not owning a business; and multiple business owners had the highest probability of being classified high income

(49.7%) and high wealth (30.1%) of the small business owners. In 2007, a household owning any small business had nearly a 59% chance of being classified high income and more than a 23% chance of being classified as high wealth. By 2007 the income gap between households with and without small businesses had widened slightly and the wealth gap had remained about the same. Small-business-owning households were now just over two times more likely to be classified high income (58.9% versus 26.3%) and nearly eight times more likely to be classified as high wealth (23.7% versus 3.0%). Multiple business owners still appeared to be the most prosperous small business group, with over three-fourths of them high income and over one-half classified as high wealth.

From 1998 to 2007 the likelihood of being high income and high wealth increased for all groups. More recently (from 2004 to 2007), households owning a small business have done much better than other households. Households owning a small business realized a 4.2% increase in the likelihood of being high income and more than 20% increase in the likelihood of being high wealth, while households with no business ownership realized increases of 2.1% and 5.2% in the likelihood being high income and high wealth, respectively. Given this relatively positive increase in the likelihood of being a high income earner or high wealth holder one would expect the percentage of small-business-owning households to increase. Interestingly, the percentage of households with small businesses increased slightly from 11.7% of all households in 1998 (about 12 million small businesses and 102.5 million households) to nearly 12.4% of all households in 2007 (14.3 million small businesses and 116.1 million households).

Table 4 compares mean household income for all households and those owning at least one business. Real mean income was significantly higher in 2007 than in 1998 for

Table 4 Mean Income, 1998 to 2007

Characteristics	1998	2001	2004	2007	Proportional Changes		
					98 to 07	01 to 07	04 to 07
		(2007 dollars)					
All respondents	<i>67,718</i>	81,064	77,299	84,399	0.246	0.041	0.092
No business ownership	<i>56,045</i>	<i>64,199</i>	62,301	64,207	0.146	0.000	0.031
Any business ownership	<i>147,708</i>	187,157	175,649	212,947	0.442	0.138	0.212
Small business	<i>139,284</i>	168,373	157,842	185,350	0.331	0.101	0.174
single business only	<i>109,812</i>	142,074	125,622	143,736	0.309	0.012	0.144
multiple businesses	<i>257,817</i>	262,432	306,732	371,180	0.440	0.414	0.210

Note: Bolded and italicized means are statistically different at the 0.05 level of significance from the 2007 means (reference group).

all household types, increasing by nearly 25% from \$67,718 in 1998 to \$84,399 in 2007. Households not owning a business realized a real mean income increase of 14.6% from 1998 to 2007. Small business real mean income increased from \$139,284 to \$185,350 (33.1%). Real mean income for small businesses owning just one business increased from \$109,812 in 1998 to \$143,736 in 2007 (30.9%), even though it had fluctuated substantially over this period of time. Multiple-business-owning households realized an increase of over 40% in real mean income from 1998 to 2007. Median income results are similar to the mean income results, although median income increased by a much lower percentage than mean income for non-business owners (6.2%) and a much higher percentage than mean income for multiple business owners (97.1%). Refer to Table 4.1 for other median income results (See Appendix A).

The wealth story is very similar (Table 5). Real mean wealth increased by over 56% for all households from 1998 to 2007. Households not owning a business realized a real mean wealth increase of just under 40%. Households owning a small business realized a substantial increase in wealth from \$1,167,271 to \$1,906,807 (63.4%).

Table 5 Mean Wealth, 1998 to 2007

Characteristics	1998	2001	2004	2007	Proportional Changes		
					98 to 07	01 to 07	04 to 07
		(2007 dollars)					
All respondents	<i>356,310</i>	467,234	483,604	557,592	0.565	0.193	0.153
No business ownership	<i>219,341</i>	274,485	287,857	306,783	0.399	0.118	0.066
Any business ownership	<i>1,294,922</i>	1,679,758	1,767,183	2,154,334	0.664	0.283	0.219
Small business	<i>1,167,271</i>	1,529,587	1,604,712	1,906,807	0.634	0.247	0.188
single business only	<i>783,066</i>	1,092,480	1,036,995	1,168,055	0.492	0.069	0.126
multiple businesses	<i>2,712,511</i>	<i>3,092,892</i>	4,228,141	5,205,702	0.919	0.683	0.231

Note: Bolded and italicized means are statistically different at the 0.05 level of significance from the 2007 means (reference group).

Households with just one business realized a significantly more modest increase (49.2%), while households with more than one business realized substantially higher increases in real mean wealth (91.9%) than other small business owners. Median wealth results are similar to the mean wealth results, although median wealth increased by a much lower percentage than mean wealth for non-business owners (19.6%) and a much higher percentage than mean wealth for multiple business owners (214%). Please refer to Table 5.1 for other median income results (See Appendix B).

Aggregate household income increased by just over 42% for all respondents between 1998 and 2007 (Table 6). The unit of observation is all families belonging to a specific group in each time period. Aggregate income may increase over time either because the group has become larger or because group members have earned more income. Families with small business ownership realized a much higher percentage change in aggregate income than families without any business ownership (58.8% versus 28%). Households owning multiple businesses realized the largest increase in aggregate

Table 6 Aggregate Income for All Households, 1998 to 2007

Characteristics	1998	2001	2004	2007	98 to 07	Changes	
						01 to 07	04 to 07
		(2007 dollars)					
	(x 1 t.)	(x 1 t.)	(x 1 t.)	(x 1 t.)			
All respondents	6.9	8.6	8.7	9.8	0.420	0.140	0.126
No business ownership	5.0	5.9	6.1	6.4	0.280	0.085	0.049
Any business ownership	1.9	2.7	2.6	3.4	0.789	0.259	0.308
Small business	1.7	2.2	2.2	2.7	0.588	0.227	0.227
single business only	1.1	1.5	1.4	1.7	0.545	0.133	0.214
multiple businesses	0.6	0.8	0.8	1.0	0.667	0.250	0.250

income (nearly 67%) of any households owning small businesses, while households owning only one business realized a smaller increase in aggregate income (54.5%).

Families with no business ownership realized smaller percentage changes in aggregate wealth than families with some small business ownership (Table 7). Small business owners nearly doubled their aggregate wealth from 1998 to 2007 from \$14.0 trillion in 1998 to \$27.3 trillion in 2007. Households owning just one small business realized an increase in aggregate wealth of over 82%, while those households owning more than one small business realized an increase in aggregate wealth of over 110%.

Multiple business owners are a critical part of the small business economic engine. In 1998 these multiple business households constituted about 20% of all small-business-owning households; however, they earned over 35% of total household income and held over 46% of the wealth of small business owners. In 2007, they constituted about 18% of all small-business-owning households; however, they now earned 37% of total household income and held over 50% of the wealth of small-business-owning

Table 7 Aggregate Wealth for All Households, 1998 to 2007

Characteristics	1998	2001	2004	2007	Changes			
					98 to 07	01 to 07	04 to 07	
	(x 1 t.)	(x 1 t.)	(x 1 t.)	(x 1 t.)				
		(2007 dollars)						
All respondents	36.5	49.8	54.2	64.7	0.773	0.299	0.194	
No business ownership	19.6	25.2	28.0	30.8	0.571	0.222	0.100	
Any business ownership	16.9	24.5	26.2	34.0	1.012	0.388	0.298	
Small business	14.0	20.2	22.1	27.3	0.950	0.351	0.235	
single business only	7.5	11.3	11.7	13.7	0.827	0.212	0.171	
multiple businesses	6.5	8.9	10.3	13.7	1.108	0.539	0.330	

households. It appears that households owning multiple small businesses are becoming more significant contributors to aggregate household income and wealth.

Multivariate Analysis

Tables 8, 9 and 10 examine the determinants of high income and high wealth for all households from 1998 to 2007, 2001 to 2007 and 2004 to 2007, respectively. The six models reported in these tables examine how households owning and managing small businesses fared in relation to other households from 1998 to 2007. Households owning small businesses have a higher probability of being high income and high wealth; a higher probability of being in the top 50% of income and wealth; and have higher log income and log wealth than other households (Table 8). In general, households have a higher probability of being high income and high wealth; have a lower probability of being in the top 50% of income and wealth; and have higher log income in 2007 than 1998. The interaction term was nearly statistically significant in just the high income

Table 8 Determinants of Being a High Income and High Wealth Among All Households, 1998 – 2007

Characteristics	All Households, 1998 - 2007											
	Logistic Regression				Logistic Regression				Logistic Regression			
	High Income Probability		High Wealth Probability		Highest 50% Income		Highest 50% Wealth		Log Income		Log Wealth	
	Parameter		Parameter		Parameter		Parameter		Parameter		Parameter	
	Estimate	p- value	Estimate	p- value	Estimate	p- value	Estimate	p- value	Estimate	p- value	Estimate	p- value
Constant	-2.4823	0.0001	-8.8639	0.0001	-0.1998	0.0797	-4.8245	0.0001	10.2250	0.0001	5.2556	0.0001
Small business owner manager	0.2915	0.0116	1.5252	0.0001	0.4061	0.0016	1.3991	0.0001	0.1571	0.0067	1.2159	0.0001
Year dummy, 1998	0.2468	0.0002	0.5880	0.0001	-0.1591	0.0059	-0.2432	0.0002	0.2021	0.0001	0.0849	0.1820
Interaction: small business and 1998	0.3088	0.0543	0.2349	0.3396	0.2401	0.1809	0.0508	0.8129	-0.0236	0.7606	0.0437	0.8109
Age of owner manager	-0.0145	0.0001	0.0415	0.0001	-0.0226	0.0001	0.0566	0.0001	-0.0047	0.0001	0.0479	0.0001
Gender - man	0.8545	0.0001	0.7792	0.0010	0.9393	0.0001	0.4933	0.0001	0.3532	0.0001	0.6607	0.0001
Race - minority	-0.2665	0.0008	-0.6368	0.0030	-0.2325	0.0005	-0.3856	0.0001	-0.1872	0.0001	-0.4086	0.0001
Education - no high school diploma	-2.3248	0.0001	-2.0574	0.0001	-2.1554	0.0001	-1.5662	0.0001	-0.8971	0.0001	-1.1975	0.0001
Education - high school diploma	-1.4881	0.0001	-1.8023	0.0001	-1.2911	0.0001	-1.0151	0.0001	-0.5396	0.0001	-0.3802	0.0001
Education - some college	-0.8646	0.0001	-1.2767	0.0001	-0.8476	0.0001	-0.6798	0.0001	-0.4001	0.0001	-0.5183	0.0001
Marital status - married	1.1338	0.0001	0.0879	0.6064	0.8270	0.0001	0.2807	0.0008	0.4175	0.0001	0.2186	0.0062
Owns Stocks	0.7961	0.0001	1.3654	0.0001	0.8215	0.0001	1.2522	0.0001	0.3372	0.0001	1.0769	0.0001
Owns Real Estate (>\$50,000)	1.8253	0.0001	2.6633	0.0001	1.5846	0.0001	2.9262	0.0001	0.5798	0.0001	3.6049	0.0001
McFadden R-squared		0.3288		0.3512		0.3160		0.4547		0.2791		0.4699

probability equation. The positive coefficient on the interaction term indicates that households owning small businesses in 2007 had a higher probability of being high income than other households in 1998 and 2007. In other words, households owning small businesses appear to have fared better than other households in increasing their probability of being high income over this period of time. The other income and wealth regressions would suggest that households owning small businesses in 2007 fared about the same as other households from 1998 to 2007. In general, it appears that households owning small businesses increased their income and wealth at the about the same rate as other households.

A similar analysis using the data from 2001 to 2007 does not support all the results found in 1998 to 2007 (Table 9). Households owning small businesses have a higher probability of being high income and high wealth, a higher probability of being in the highest 50% of income and wealth categories, and higher log income and wealth than other households. However, households only have a higher probability of being high wealth in 2007 than in 2001. The interaction term is not statistically significant in any of these regressions. Therefore, these income and wealth regressions suggest that households owning small businesses in 2007 fared about the same as other households from 2001 to 2007.

A similar analysis using the data from 2004 to 2007 generally supports the results found in 2001 to 2007 (Table 10). Households owning small businesses have a higher probability of being high income and high wealth, a higher probability of being in the highest 50% of income and wealth categories, and higher log income and wealth than other households. Households have a higher probability of being high income and wealth

Table 9 Determinants of Being a High Income and High Wealth Among All Households, 2001 - 2007

Characteristics	All Households, 2001 - 2007											
	Logistic Regression				Logistic Regression				Logistic Regression			
	High Income Probability		High Wealth Probability		Highest 50% Income		Highest 50% Wealth		Log Income		Log Wealth	
	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value
Constant	-2.0631	0.0001	-8.2564	0.0001	-0.3999	0.0006	-4.8031	0.0001	10.4280	0.0001	5.5671	0.0001
Small business owner manager	0.5174	0.0001	1.9317	0.0001	0.3350	0.0071	1.8451	0.0001	0.2717	0.0001	1.2704	0.0001
Year dummy, 1998	0.0248	0.6968	0.3714	0.0083	-0.0293	0.6147	-0.0883	0.1758	0.0379	0.0838	-0.0508	0.4095
Interaction: small business and 1998	0.0843	0.5940	-0.1318	0.5507	0.2964	0.0940	-0.4043	0.0718	-0.1142	0.0662	-0.0489	0.7794
Age of owner manager	-0.0192	0.0001	0.0462	0.0001	-0.0236	0.0001	0.0539	0.0001	-0.0058	0.0001	0.0470	0.0001
Gender - man	0.8689	0.0001	0.4387	0.0551	0.9811	0.0001	0.3498	0.0002	0.2988	0.0001	0.5946	0.0001
Race - minority	-0.2235	0.0034	-0.7752	0.0002	-0.1643	0.0144	-0.4051	0.0001	-0.1187	0.0001	-0.5087	0.0001
Education - no high school diploma	-2.0861	0.0001	-2.1018	0.0001	-2.2759	0.0001	-1.6886	0.0001	-0.8355	0.0001	-1.4242	0.0001
Education - high school diploma	-1.4426	0.0001	-1.8630	0.0001	-1.2875	0.0001	-1.0324	0.0001	-0.5011	0.0001	-0.4984	0.0001
Education - some college	-0.8302	0.0001	-1.2142	0.0001	-0.7871	0.0001	-0.6880	0.0001	-0.3315	0.0001	-0.5391	0.0001
Marital status - married	1.0639	0.0001	0.3530	0.0361	0.8686	0.0001	0.3494	0.0001	0.3993	0.0001	0.3630	0.0001
Owns Stocks	0.8065	0.0001	1.3991	0.0001	0.7722	0.0001	1.2486	0.0001	0.3631	0.0001	0.9477	0.0001
Owns Real Estate (>\$50,000)	1.8557	0.0001	2.0747	0.0001	1.6666	0.0001	2.9906	0.0001	0.5949	0.0001	3.5630	0.0001
McFadden R-squared		0.3323		0.3606		0.3322		0.4639		0.3517		0.4874

Table 10 Determinants of Being a High Income and High Wealth Among All Households, 2004 - 2007

All Households, 2004 - 2007												
Characteristics	Logistic Regression				Logistic Regression				Logistic Regression			
	High Income Probability		High Wealth Probability		Highest 50% Income		Highest 50% Wealth		Log Income		Log Wealth	
	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value
Constant	-2.5226	0.0001	-9.0667	0.0001	-0.4939	0.0001	-5.5596	0.0001	10.3191	0.0001	5.1054	0.0001
Small business owner manager	0.6840	0.0001	1.7685	0.0001	0.4466	0.0004	1.7418	0.0001	0.2334	0.0001	1.3210	0.0001
Year dummy, 2004	0.1448	0.0245	0.2969	0.0284	-0.0474	0.4157	0.0166	0.8001	0.0419	0.0582	0.0243	0.6860
Interaction: small business and 2004	-0.0910	0.5711	0.0083	0.9700	0.1709	0.3390	-0.2688	0.2209	-0.0758	0.2286	-0.0826	0.6296
Age of owner manager	-0.0144	0.0001	0.0445	0.0001	-0.0211	0.0001	0.0574	0.0001	-0.0041	0.0001	0.0469	0.0001
Gender - man	1.0205	0.0001	0.6331	0.0040	0.8705	0.0001	0.5566	0.0001	0.3048	0.0001	0.8426	0.0001
Race - minority	-0.1700	0.0251	-0.6622	0.0008	-0.1242	0.0601	-0.2146	0.0042	-0.0982	0.0001	-0.3157	0.0001
Education - no high school diploma	-2.4194	0.0001	-1.7239	0.0001	-2.3321	0.0001	-1.6239	0.0001	-0.8083	0.0001	-1.0926	0.0001
Education - high school diploma	-1.5621	0.0001	-1.9781	0.0001	-1.3537	0.0001	-0.9386	0.0001	-0.5070	0.0001	-0.2786	0.0001
Education - some college	-0.9292	0.0001	-1.1525	0.0001	-0.8399	0.0001	-0.7447	0.0001	-0.3714	0.0001	-0.4883	0.0001
Marital status - married	1.1127	0.0001	0.2901	0.0658	1.0729	0.0001	0.2705	0.0011	0.4465	0.0001	0.1119	0.1345
Owns Stocks	0.8165	0.0001	1.3470	0.0001	0.8835	0.0001	1.3288	0.0001	0.3301	0.0001	1.0353	0.0001
Owns Real Estate (>\$50,000)	1.8547	0.0001	2.9690	0.0001	1.6396	0.0001	3.3229	0.0001	0.5840	0.0001	3.7887	0.0001
McFadden R-squared		0.3483		0.3585		0.3424		0.4770		0.3396		0.4958

in 2007 than in 2004. Once again, the interaction term is not statistically significant in any of these regressions. Therefore, these income and wealth regressions suggest that households owning small businesses in 2007 fared about the same as other households from 2004 to 2007.

The control variables were quite interesting in this regression analysis. High income households are headed by younger people, while higher wealth households are headed by older people. Higher income households are more likely to be headed by men, the owners are well educated and they are married. In addition, high income and high wealth households are more likely to own public stock and real estate.

Tables 11, 12 and 13 utilize information on households with small business owners to assess how multiple and single business owners fared from 1998 to 2007, 2001 to 2007 and 2004 to 2007, respectively. Households owning multiple businesses had a higher probability of being high wealth, a higher probability of being in the highest 50% wealth bracket and higher log income and wealth than other households owning small businesses (Table 11). Households owning small businesses had a higher probability of being high income and high wealth than other households in 2007 than in 1998. These households owning multiple businesses held more wealth than other small businesses.

The interaction term was insignificant in all cases, except the log wealth equation. In the log wealth equation, the positive coefficient on the interaction term indicates that households owning multiple small businesses in 2007 had a higher probability of being high wealth than other households owning just one small business in 1998 and 2007. In other words, households owning multiple small businesses appear to have fared better than other households owning just one small business in increasing their wealth over this

Table 11 Determinants of Being a High Income and High Wealth Among Small Business Households, 1998 - 2007

Small Business Households Only, 1998 - 2007												
Characteristics	Logistic Regression				Logistic Regression				Logistic Regression			
	High Income Probability		High Wealth Probability		Highest 50% Income		Highest 50% Wealth		Log Income		Log Wealth	
	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value
Constant	-1.6475	0.0045	-6.6128	0.0001	0.0561	0.9338	-2.0452	0.0217	9.9165	0.0001	9.4500	0.0001
Owns/manages multiple businesses	-0.0703	0.7923	1.3115	0.0002	0.5055	0.1306	1.1652	0.0124	0.2718	0.0313	0.7141	0.0001
Year dummy, 1998	0.3914	0.0144	0.7840	0.0018	0.0600	0.7433	-0.2169	0.3193	0.1429	0.0633	0.1396	0.1317
Interaction: multiple owner and 1998	0.6833	0.0753	0.5613	0.2190	0.0634	0.8992	0.1321	0.8418	0.0986	0.5701	0.4452	0.0333
<i>Owner Characteristics</i>												
Age of owner manager	-0.0111	0.1176	0.0226	0.0206	-0.0196	0.0151	0.0590	0.0001	-0.0033	0.3168	0.0333	0.0001
Gender - man	0.2830	0.3507	1.4517	0.0093	1.0433	0.0007	0.7090	0.0529	0.3827	0.0071	0.4042	0.0182
Race - minority	-0.0043	0.9839	-0.7469	0.0634	-0.1461	0.5401	-0.1886	0.4671	-0.1526	0.1372	-0.0884	0.4744
Education - no high school diploma	-1.4361	0.0001	-1.2473	0.0594	-1.1097	0.0004	-0.2301	0.5565	-0.4138	0.0054	-0.3588	0.0448
Education - high school diploma	-1.0457	0.0001	-1.0963	0.0003	-0.9179	0.0001	-0.2902	0.2654	-0.4316	0.0001	-0.2798	0.0105
Education - some college	-0.8228	0.0001	-1.1112	0.0003	-0.6721	0.0036	-0.6759	0.0122	-0.3919	0.0001	-0.3309	0.0033
Marital status - married	0.8575	0.0001	-0.2283	0.4254	0.3562	0.1081	0.0784	0.7603	0.1877	0.0462	0.1624	0.1516
Owns Stocks	0.2464	0.1369	0.6308	0.0023	0.5638	0.0113	1.2287	0.0001	0.1338	0.0906	0.7616	0.0001
Owns Real Estate (>\$50,000)	1.1563	0.0001	2.4172	0.0016	1.1055	0.0001	2.3589	0.0001	0.6507	0.0001	2.1062	0.0001
<i>Business Characteristics</i>												
Business age	0.0239	0.0064	0.0452	0.0001	0.0154	0.1257	0.0272	0.0570	0.0118	0.0038	0.0232	0.0001
Business size, number of employees	0.0196	0.5712	0.1092	0.1237	0.0117	0.8074	0.0169	0.8594	0.0005	0.5491	0.0012	0.2481
Organization, partnership	-0.6934	0.0137	-0.4737	0.1542	-0.6919	0.0843	-0.9013	0.0818	-0.4209	0.0013	-0.6520	0.0001
Organization, sole proprietorship	-0.6249	0.0163	-1.1645	0.0002	-0.7293	0.0557	-1.0722	0.0300	-0.3618	0.0028	-0.7253	0.0001
Organization, subchapter s corporation	0.3095	0.3215	-0.2087	0.5322	0.5952	0.2264	0.0894	0.8796	0.2057	0.1380	-0.0383	0.8182
Industry, construction, manufacturing	0.8416	0.0037	0.4343	0.3353	0.5271	0.0695	-0.0433	0.9167	0.9293	0.0001	-0.2982	0.0648
Industry, wholesale, retail	0.6643	0.0305	-0.0050	0.9919	0.5883	0.0661	-0.9666	0.0256	0.9714	0.0001	-0.5382	0.0020
Industry, services and other	1.2450	0.0001	0.8274	0.0468	1.2134	0.0001	-0.2546	0.5227	1.1810	0.0001	-0.1803	0.2358
Founding status, bought, invested	0.2494	0.4235	-0.4237	0.2794	0.1771	0.6288	-0.0698	0.8890	-0.3859	0.0068	0.0282	0.8693
Founding status, started	-0.2398	0.4042	-0.7530	0.0346	-0.1524	0.6543	-0.9490	0.0362	-0.4458	0.0007	-0.6456	0.0001
McFadden R-squared		0.1890		0.3462		0.1855		0.3502		0.1494		0.3720

period of time. The main effect term for the year dummy 1998 was significant at the 13% level of significance. Therefore, this result should be viewed with caution.

Similar results were found in analyzing the 2001 to 2007 information (Table 12). These households owning multiple small businesses had more wealth than households owning just one small business. Households owning small businesses had a lower probability of being in the highest 50% wealth bracket and had lower wealth in 2007 than in 2001. The interaction term was significant in the log wealth equation suggesting that households owning multiple small businesses appear to have fared better than other households owning just one small business in increasing their wealth over this period of time.

Similar results were found in analyzing the 2004 to 2007 information (Table 13). Households owning multiple small businesses were more likely to be high wealth, to be in the highest 50% wealth bracket and to have more wealth than households owning just one small business. Households owning small businesses had somewhat lower mean log income and wealth in 2007 than in 2004. The interaction term is not statistically significant in any of these regressions. Therefore, these income and wealth regressions suggest that households owning multiple small businesses in 2007 fared about the same as households owning just one small business from 2004 to 2007. Equity (fairness) considerations are important in assessing any subset of households. Over 47% of all income earned by households was earned by those in the top 10 %, while over 53% of all income earned by households owning a small business was earned by those in the top

Table 12 Determinants of Being a High Income and High Wealth Among Small Business Households, 2001 – 2007

Small Business Households Only, 2001 - 2007												
Characteristics	Logistic Regression				Logistic Regression				Logistic Regression			
	High Income Probability		High Wealth Probability		Highest 50% Income		Highest 50% Wealth		Log Income		Log Wealth	
	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value
Constant	-0.9118	0.1117	-5.4725	0.0001	0.5682	0.3820	-0.8844	0.3277	10.3998	0.0001	9.8827	0.0001
Owns/manages multiple businesses	-0.0232	0.9283	0.5311	0.0594	-0.0937	0.7560	-0.0272	0.9511	0.1242	0.2237	0.3626	0.0063
Year dummy, 2001	0.0123	0.9393	-0.1124	0.6058	0.2078	0.2511	-0.5000	0.0314	-0.1302	0.0471	-0.2071	0.0151
Interaction: multiple owner and 2001	0.6047	0.1115	1.3307	0.0013	0.5479	0.2474	1.2708	0.0504	0.2210	0.1245	0.7720	0.0001
<i>Owner Characteristics</i>												
Age of owner manager	-0.0103	0.1411	0.0339	0.0002	-0.0175	0.0258	0.0460	0.0001	-0.0063	0.0242	0.0386	0.0001
Gender - man	-0.0474	0.8742	1.1805	0.0136	0.3215	0.2856	0.5191	0.1788	0.2070	0.0901	0.1866	0.2399
Race - minority	0.0868	0.6865	-0.5703	0.1195	0.0415	0.8643	-0.5126	0.0439	-0.1839	0.0363	-0.1339	0.2408
Education - no high school diploma	-1.0497	0.0007	-1.8187	0.0028	-1.0151	0.0012	-0.0277	0.9487	-0.1610	0.2035	-0.1695	0.3031
Education - high school diploma	-1.2393	0.0001	-1.4166	0.0001	-1.1730	0.0001	-0.4054	0.1251	-0.4422	0.0001	-0.4227	0.0001
Education - some college	-0.6972	0.0005	-1.2259	0.0001	-0.6897	0.0034	-0.5602	0.0502	-0.2401	0.0036	-0.3592	0.0008
Marital status - married	0.9859	0.0001	-0.1936	0.4884	0.8035	0.0002	0.2415	0.3774	0.3259	0.0001	0.4265	0.0001
Owns Stocks	0.5951	0.0003	1.1147	0.0001	0.6263	0.0032	0.9863	0.0008	0.3026	0.0001	0.7516	0.0001
Owns Real Estate (>\$50,000)	1.4898	0.0001	1.6983	0.0015	1.3790	0.0001	2.4580	0.0001	0.7648	0.0001	1.8279	0.0001
<i>Business Characteristics</i>												
Business age	0.0207	0.0162	0.0395	0.0002	0.0134	0.1654	0.0355	0.0143	0.0134	0.0001	0.0196	0.0001
Business size, number of employees	0.0176	0.6315	0.1317	0.1063	0.0423	0.6297	0.0110	0.8569	0.0027	0.1742	0.0026	0.3187
Organization, partnership	-0.7683	0.0108	-0.2794	0.3644	-0.7227	0.0553	-1.3610	0.0165	-0.1737	0.1225	-0.5857	0.0001
Organization, sole proprietorship	-0.9407	0.0008	-1.0917	0.0002	-0.7452	0.0340	-1.5065	0.0054	-0.3391	0.0011	-0.8343	0.0001
Organization, subchapter s corporation	0.4034	0.2290	0.0941	0.7605	0.1481	0.7272	0.0266	0.9676	0.2032	0.0817	0.1960	0.1965
Industry, construction, manufacturing	0.3840	0.1483	0.5961	0.1413	0.1705	0.5358	-0.2109	0.6095	0.4554	0.0001	-0.2083	0.1462
Industry, wholesale, retail	0.3983	0.1722	0.3046	0.4770	0.9911	0.0036	-1.0028	0.0229	0.7477	0.0001	-0.5319	0.0007
Industry, services and other	0.7134	0.0037	0.6115	0.0966	0.7927	0.0024	-0.3673	0.3478	0.7307	0.0001	-0.3576	0.0068
Founding status, bought, invested	0.1360	0.6787	-0.4121	0.2773	-0.2928	0.4542	0.2534	0.6331	-0.3840	0.0022	0.1144	0.4832
Founding status, started	-0.1575	0.5965	-0.8853	0.0112	-0.4320	0.2312	-0.7239	0.1229	-0.3232	0.0045	-0.5987	0.0001
McFadden R-squared		0.2093		0.3279		0.1954		0.3498		0.1803		0.3850

Table 13 Determinants of Being a High Income and High Wealth Among Small Business Households, 2004 – 2007

Small Business Households Only, 2004 - 2007												
Characteristics	Logistic Regression				Logistic Regression				Logistic Regression			
	High Income Probability		High Wealth Probability		Highest 50% Income		Highest 50% Wealth		Log Income		Log Wealth	
	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value
Constant	-1.9361	0.0013	-6.3077	0.0001	-0.4991	0.4397	-2.3632	0.0102	10.2616	0.0001	9.3716	0.0001
Owns/manages multiple businesses	0.4849	0.1163	1.2401	0.0001	-0.2111	0.5374	1.4165	0.0175	0.0674	0.5520	0.8022	0.0001
Year dummy, 2007	-0.0097	0.9521	0.0961	0.6638	0.0542	0.7630	-0.3236	0.1351	-0.1244	0.0592	-0.1630	0.0555
Interaction: multiple owner and 2007	0.1092	0.7945	0.6823	0.1165	0.7419	0.1396	-0.0583	0.9395	0.2976	0.0539	0.3508	0.0785
<i>Owner Characteristics</i>												
Age of owner manager	-0.0095	0.1773	0.0298	0.0012	-0.0214	0.0055	0.0624	0.0001	-0.0060	0.0314	0.0438	0.0001
Gender - man	0.7133	0.0207	1.7371	0.0020	0.9053	0.0018	1.1208	0.0018	0.3972	0.0011	0.3516	0.0253
Race - minority	-0.2750	0.1868	-0.7125	0.0469	-0.5291	0.0160	-0.2646	0.2909	-0.2480	0.0037	-0.0629	0.5686
Education - no high school diploma	-1.3511	0.0001	-1.5888	0.0181	-1.0526	0.0011	-0.1723	0.6697	-0.3794	0.0052	-0.0221	0.8996
Education - high school diploma	-1.2635	0.0001	-1.4669	0.0001	-0.6265	0.0026	0.1157	0.6648	-0.3857	0.0001	-0.2700	0.0068
Education - some college	-0.7147	0.0005	-1.1444	0.0001	-0.4759	0.0441	-0.6270	0.0233	-0.4109	0.0001	-0.3677	0.0008
Marital status - married	1.0248	0.0001	-0.0953	0.7316	0.9481	0.0001	0.0715	0.7846	0.3457	0.0001	0.3685	0.0005
Owns Stocks	0.1106	0.5220	0.5743	0.0030	0.5603	0.0100	1.1332	0.0002	0.0879	0.2007	0.5445	0.0001
Owns Real Estate (>\$50,000)	1.3898	0.0001	2.4033	0.0006	1.1685	0.0001	2.5928	0.0001	0.6441	0.0001	2.0216	0.0001
<i>Business Characteristics</i>												
Business age	0.0230	0.0106	0.0430	0.0001	0.0149	0.1319	0.0166	0.2394	0.0163	0.0001	0.0199	0.0001
Business size, number of employees	0.0111	0.7206	0.1691	0.1026	0.0475	0.6787	0.0121	0.9087	0.0029	0.1640	0.0027	0.3093
Organization, partnership	-0.2680	0.3635	-0.4976	0.1278	-0.3008	0.4166	-1.1089	0.0760	-0.1462	0.2117	-0.4560	0.0026
Organization, sole proprietorship	-0.6563	0.0173	-1.1436	0.0003	-0.5170	0.1410	-1.6653	0.0058	-0.2942	0.0081	-0.8465	0.0001
Organization, subchapter s corporation	0.8746	0.0113	0.4123	0.2157	1.0216	0.0320	-0.0120	0.9867	0.1899	0.1282	0.2105	0.1918
Industry, construction, manufacturing	0.4086	0.1552	0.3645	0.4049	0.0438	0.8821	0.0977	0.8014	0.4561	0.0001	-0.4255	0.0053
Industry, wholesale, retail	0.8100	0.0079	-0.0822	0.8585	0.5769	0.0762	-0.4195	0.3093	0.7037	0.0001	-0.5160	0.0014
Industry, services and other	1.3206	0.0001	0.6944	0.0878	0.8771	0.0023	0.2960	0.4365	0.9226	0.0001	-0.3258	0.0245
Founding status, bought, invested	0.1081	0.7462	-0.4384	0.2521	0.3025	0.4014	-0.1891	0.7160	-0.3991	0.0018	-0.0346	0.8344
Founding status, started	-0.3163	0.2942	-1.1610	0.0007	0.2390	0.4669	-1.2071	0.0096	-0.3415	0.0030	-0.6437	0.0001
McFadden R-squared		0.2523		0.3685		0.2202		0.3788		0.1733		0.3962

10% (Table 14). The concentration of income in the top 10% bracket increased from 41.1% in 1998 to 47.1% in 2007 (a 14.5% increase) for all households, while the concentration of income in the top 10% bracket increased from 49.7% to 53.3% (a 7.3% increase) for households owning small businesses.

The wealth story is somewhat different (Table 15). The concentration of wealth in the top 10% of households increased from 67.3% to 71.5% (a 6.3% increase), while the concentration of wealth in the top 10% of households owning small businesses declined from 66.3% to 64.8% (a 2.3% decrease). This suggests that firms in the lower wealth quintiles, especially in the 90th quintile, realized more wealth accumulation than firms in the top quintile.

In order to explore the influence of debt held in mortgages and other debt secured by residential real estate, two additional control variables were added to the analyses in Tables 8 through Table 13: the log of debt in mortgages secured by residential real estate and log of debt held in other debt secured by residential real estate. Even though variables were statistically significant factors in predicting income and wealth, the addition of these variables did not change the most important results. See Appendix C for Tables 8.1 through Table 13.1.

Conclusions

This study is primarily concerned with changes in income and wealth of families owning and not owning small businesses from the late 1990s to 2007. Who were the winners and losers? This study utilizes cross-section data to assess changes in income and wealth of all households and families owning different types of businesses from 1998 to 2007.

Table 14 Income Deciles for All Households and Small Business Owner/Manager Households

Decile	All Households				Small Business Owner Manager Households			
	1998	2001	2004	2007	1998	2001	2004	2007
10%	0.0086	0.0094	0.0098	0.0099	0.0107	0.0117	0.0104	0.0091
20%	0.0209	0.0196	0.0211	0.0193	0.0235	0.0205	0.0200	0.0205
30%	0.0321	0.0298	0.0319	0.0289	0.0325	0.0278	0.0305	0.0291
40%	0.0443	0.0401	0.0424	0.0380	0.0374	0.0371	0.0377	0.0353
50%	0.0566	0.0517	0.0549	0.0490	0.0461	0.0493	0.0471	0.0430
60%	0.0719	0.0657	0.0688	0.0630	0.0591	0.0582	0.0583	0.0520
70%	0.0902	0.0834	0.0863	0.0800	0.0705	0.0721	0.0727	0.0620
80%	0.1135	0.1061	0.1099	0.1020	0.0873	0.0909	0.0969	0.0850
90%	0.1507	0.1429	0.1509	0.1390	0.1363	0.1424	0.1418	0.1310
100%	0.4112	0.4513	0.4240	0.4710	0.4966	0.4900	0.4846	0.5330

Table 15 Net Worth Deciles for All Households and Small Business Owner/Manager Households

Decile	All Households				Small Business Owner Manager Households			
	1998	2001	2004	2007	1998	2001	2004	2007
10%	0.0000	0.0000	0.0000	0.0000	0.0015	0.0028	0.0015	0.0011
20%	0.0007	0.0007	0.0007	0.0006	0.0058	0.0070	0.0052	0.0049
30%	0.0036	0.0036	0.0031	0.0027	0.0106	0.0122	0.0098	0.0093
40%	0.0102	0.0090	0.0083	0.0079	0.0170	0.0190	0.0164	0.0139
50%	0.0201	0.0173	0.0163	0.0163	0.0249	0.0277	0.0232	0.0196
60%	0.0329	0.0285	0.0277	0.0279	0.0343	0.0367	0.0354	0.0317
70%	0.0502	0.0460	0.0440	0.0439	0.0498	0.0502	0.0478	0.0465
80%	0.0782	0.0755	0.0731	0.0670	0.0718	0.0800	0.0725	0.0764
90%	0.1312	0.1309	0.1343	0.1185	0.1218	0.1456	0.1396	0.1489
100%	0.6729	0.6885	0.6925	0.7152	0.6625	0.6188	0.6486	0.6477

While panel data would be preferred, the unit of observation is all families belonging to a specific group in each time period. Clearly, the economic pie increased in size during this period of time for households owning small businesses. However, the most important questions are the following: Did households owning small businesses make more financial gains in terms of changes in income and wealth than households not owning a business; and did households owning multiple small businesses make more financial gains than households owning just one small business?

Another study completed by Haynes and Ou (2006) suggests that households owning small businesses, especially those owning only one small business, appear to have made smaller contributions to total wealth in 2001 than in the early 1990s. This evidence suggested that households owning only one small business seemed to be losing the race. They were making progress in increasing income and wealth, but they were making less progress than households not owning small businesses.

This study suggests that the story changed significantly from the late 1990s through 2007. Households with and without small businesses have made very similar progress in increasing their income and wealth during a time of robust business activity. Households owning multiple small businesses appear to have accumulated wealth at somewhat faster rates than households owning just one small business. This result would suggest that the financial success of small business owners in one business is often leveraged into financial success in other business ventures. If public policy is targeting growth in gross domestic product, households owning multiple small businesses appear to have the most potential to grow the economy.

The proportion of households owning and managing at least one small business has been remarkably static over a relatively long period of time, with about 12% of households owning and managing a small business. From 1998 to 2007 the growth in the number of small businesses (19.4%) outpaced the growth in the number of households (13.2%). The largest share of growth occurred in households owning and managing one business, even though the high income and wealth growth was realized by households owning and managing two or more small businesses. With the relatively good financial success of households owning small businesses over the past decade, why haven't more small businesses been started or expanded? The period of rapid economic expansion may have been a difficult time to start and nurture a new business and grow an existing small business venture for several reasons:

- (1) Labor costs increased. The unemployment rate remained around 4% starting in 1998, with some movement upward to over 6% in early 2003, and a fall back to the 4% to 4.5% range in 2006; hence, the labor supply was tight for most of the decade (Bureau of Labor Statistics, 2005). In this type of labor market, small business owners faced higher wages. In addition, small business owners may have faced substantial challenges finding and retaining high quality employees.
- (2) The opportunity cost of capital increased. Financial capital remained relatively expensive to borrow from 1998 through 2006, with rates ranging from 9.5% in 2000 to 4% in 2003 and 2004. While financial capital became less expensive to borrow from 2000 through 2004, rates steadily increased from late 2004 through 2006. Perhaps most important, the value

of the stock market (S&P 500) increased by over 4% annually from early 1998 through 2006. Investors, particularly family and friends who may have been willing to invest in a small business venture, had less risky alternatives for their excess cash. In this type of financial market, small business owners may have been facing higher costs of financing and restricted access, especially for start-up financing.

- (3) Other employment opportunities increased the opportunity cost of prospective owners. If higher inflation-adjusted net income and wealth are the only important criteria considered by the business owner, many of the family members owning a business may have been better off working for someone else. In a market with relatively low unemployment in a growing economy, the opportunity cost of risking one's family's financial resources in a small business venture increases substantially.

In the current economy, reeling from the severe disruptions in the financial markets, unemployment rates have increased to over 10%, loosening the labor supply; the stock market has declined by over 30% since mid-2008 loosening financial capital; and other investment and employment opportunities for small business owners are much less plentiful. Based on this assessment, it must be a good time to start a business because good people can be hired and retained, money is available from traditional and nontraditional lenders for qualified borrowers and the opportunity cost of starting a business has declined. Perhaps it is a good time to start a new business because of the cost advantages realized in a recessionary economy. However, astute small business

owners contemplating starting or expanding a business will be most concerned about the depth of the recessionary trough, rather than whether financial capital is available.

The results have some rather interesting public policy implications. If households owning small businesses are making similar financial progress to households not owning a business, then small business ownership may become a less attractive employment option because small business ownership is risky. Are additional incentives needed to encourage small business ownership?

Recent changes in bankruptcy laws have removed part of the safety net for small business borrowers by making it more difficult for those with credit card debt to liquidate their assets in a Chapter 7 bankruptcy. With the emergence of more line-of-credit and credit-card-based lending by large banks to small businesses, this change in the bankruptcy law has had a significant impact on the strength of the safety net. Are other revisions in the bankruptcy law needed to provide a more secure safety net for small business owners (and their wealth)?

What might be done to improve the financial performance of households owning a single small business? In general, households owning multiple small businesses outperform households owning a single small business for a host of reasons, including more experience, education and financial capital. Revising rules to allow more angel and venture capital for these small businesses might provide more financial capital. Small businesses are essentially relationship borrowers; hence, they may be adversely affected by further concentration in commercial banking and less relationship lending at the local level. Further work is needed to determine if large banks are interested in servicing small businesses.

A subset of small business owners, agricultural producers (farmers), are recipients of substantial subsidies provided by the 2008 Farm Bill and other legislation. Should some of these subsidy programs (such as revenue guarantees, price protection and production insurance) be extended to small businesses?

Most important, small business owners as a group realized substantial gains in real income and wealth from 1998 to 2007, and they ran a very good race with other households not owning small businesses. Households owning at least one small business realized slightly lower increases in the probability of being high wealth than households not owning a small business. This result suggests that investments in small businesses realized lower financial returns than investments in other assets. Even among small business owners, it appears that more of the growth in wealth was derived from ownership in publicly traded stocks and real estate than from the ownership of small businesses. Given these relatively modest differences in the aggregate gains in wealth between households with and without small businesses it should be no surprise that the number of households owning small businesses has remained quite stable.

Further research utilizing high quality panel data is needed to compare the returns on business and other assets and assess the modest gains in income and wealth of small-business-owning households during this time of robust economic growth.

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Appendix A

Table 4.1 Median Income, 1998 to 2007

Characteristics	1998	2001	2004	2007	Proportional Changes		
					98 to 07	01 to 07	04 to 07
		(2007 dollars)					
All respondents	42,601	46,895	47,374	47,305	0.110	0.009	-0.001
No business ownership	38,729	42,085	43,991	41,135	0.062	-0.023	-0.065
Any business ownership	71,002	92,587	84,597	90,496	0.275	-0.023	0.070
Small business	69,712	90,182	84,597	86,383	0.239	-0.042	0.021
single business only	67,130	86,575	75,573	81,241	0.210	-0.062	0.075
multiple businesses	73,584	102,207	147,763	145,000	0.971	0.419	-0.019

Note: Bolded and italicized means are statistically different at the 0.05 level of significance from the 2007 means (reference group).

Appendix B

Table 5.1 Median Wealth, 1998 to 2007

Characteristics	1998	2001	2004	2007	Proportional Changes		
					98 to 07	01 to 07	04 to 07
		(2007 dollars)					
All respondents	93,986	102,690	102,085	121,900	0.297	0.187	0.194
No business ownership	76,098	79,825	79,571	91,030	0.196	0.140	0.144
Any business ownership	363,111	494,037	506,317	504,140	0.388	0.020	-0.004
Small business	348,088	475,557	474,918	459,000	0.319	-0.035	-0.034
single business only	314,986	434,388	363,223	381,400	0.211	-0.122	0.050
multiple businesses	578,279	977,325	1,327,324	1,816,000	2.140	0.858	0.368

Note: Bolded and italicized means are statistically different at the 0.05 level of significance from the 2007 means (reference group).

Appendix C

Table 8.1 Determinants of Being a High Income and High Wealth Among All Households, 1998 - 2007

All Households, 1998 - 2007												
Characteristics	Logistic Regression				Logistic Regression				Logistic Regression			
	High Income Probability		High Wealth Probability		Highest 50% Income		Highest 50% Wealth		Log Income		Log Wealth	
	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value
	Estimate	p-value	Estimate	p-value	Estimate	p-value	Estimate	p-value	Estimate	p-value	Estimate	p-value
Constant	-2.9197	0.0001	-8.7466	0.0001	-0.6487	0.0001	-4.4458	0.0001	10.0890	0.0001	5.2582	0.0001
Small business owner manager	0.2442	0.0378	1.5130	0.0001	0.3549	0.0066	1.4113	0.0001	0.1317	0.0224	1.1978	0.0001
Year dummy, 1998	0.2062	0.0019	0.6480	0.0001	-0.2215	0.0002	-0.1859	0.0052	0.1883	0.0001	0.0880	0.1671
Interaction: small business and 1998	0.2458	0.1323	0.1425	0.5706	0.1726	0.3440	0.0434	0.8395	-0.0590	0.4440	0.0086	0.9626
Age of owner manager	-0.0041	0.0764	0.0400	0.0001	-0.0119	0.0001	0.0496	0.0001	-0.0018	0.0344	0.0479	0.0001
Gender - man	0.8612	0.0001	0.7069	0.0034	0.9558	0.0001	0.4886	0.0001	0.3480	0.0001	0.6478	0.0001
Race - minority	-0.2738	0.0006	-0.7280	0.0009	-0.2365	0.0005	-0.3993	0.0001	-0.1889	0.0001	-0.4163	0.0001
Education - no high school diploma	-2.2495	0.0001	-1.9698	0.0001	-2.1069	0.0001	-1.6864	0.0001	-0.8672	0.0001	-1.1818	0.0001
Education - high school diploma	-1.4599	0.0001	-1.7416	0.0001	-1.2832	0.0001	-1.0457	0.0001	-0.5155	0.0001	-0.3659	0.0001
Education - some college	-0.8705	0.0001	-1.3039	0.0001	-0.8503	0.0001	-0.6937	0.0001	-0.3873	0.0001	-0.5152	0.0001
Marital status - married	1.0903	0.0001	0.1068	0.5396	0.7546	0.0001	0.3861	0.0001	0.3862	0.0001	0.2233	0.0054
Owns Stocks	0.8120	0.0001	1.3568	0.0001	0.8544	0.0001	1.2543	0.0001	0.3286	0.0001	1.0583	0.0001
Owns Real Estate (>\$50,000)	1.0828	0.0001	2.6239	0.0001	0.7890	0.0001	3.4944	0.0001	0.3402	0.0001	3.5860	0.0001
Log debt in mortgages secured by residential real estate	0.0740	0.0001	-0.0210	0.0976	0.0916	0.0001	-0.0796	0.0001	0.0286	0.0001	-0.0019	0.7974
Log debt in other debt secured by residential real estate	0.0688	0.0001	0.1196	0.0001	0.0623	0.0001	0.0435	0.0014	0.02952	0.0001	0.04911	0.0001
McFadden R-squared		0.3432		0.3739		0.3339		0.4639		0.2886		0.4708

Table 9.1 Determinants of Being a High Income and High Wealth Among All Households, 2001 – 2007

Characteristics	All Households, 2001 - 2007											
	Logistic Regression				Logistic Regression				Logistic Regression			
	High Income Probability		High Wealth Probability		Highest 50% Income		Highest 50% Wealth		Log Income		Log Wealth	
	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value
Constant	-2.4722	0.0001	-8.1516	0.0001	-0.7859	0.0001	-4.4250	0.0001	10.3124	0.0001	5.5759	0.0001
Small business owner manager	0.5014	0.0001	1.9775	0.0001	0.3047	0.0153	1.8569	0.0001	0.2558	0.0001	1.2616	0.0001
Year dummy, 1998	-0.0210	0.7458	0.4008	0.0051	-0.0719	0.2236	-0.0437	0.5094	0.0273	0.2101	-0.0493	0.4236
Interaction: small business and 1998	-0.0226	0.8884	-0.2817	0.2135	0.2123	0.2365	-0.4277	0.0564	-0.1580	0.0106	-0.1064	0.5425
Age of owner manager	-0.0093	0.0001	0.0448	0.0001	-0.0145	0.0001	0.0469	0.0001	-0.0034	0.0001	0.0467	0.0001
Gender - man	0.8844	0.0001	0.3877	0.0956	0.9939	0.0001	0.3593	0.0002	0.2957	0.0001	0.5864	0.0001
Race - minority	-0.2524	0.0011	-0.8504	0.0001	-0.1914	0.0048	-0.3951	0.0001	-0.1257	0.0001	-0.5133	0.0001
Education - no high school diploma	-2.0228	0.0001	-2.0315	0.0001	-2.2371	0.0001	-1.8112	0.0001	-0.8086	0.0001	-1.4078	0.0001
Education - high school diploma	-1.4165	0.0001	-1.8199	0.0001	-1.2682	0.0001	-1.0628	0.0001	-0.4774	0.0001	-0.4808	0.0001
Education - some college	-0.8221	0.0001	-1.2545	0.0001	-0.7778	0.0001	-0.7081	0.0001	-0.3170	0.0001	-0.5349	0.0001
Marital status - married	1.0140	0.0001	0.3614	0.0365	0.8129	0.0001	0.4294	0.0001	0.3720	0.0001	0.3633	0.0001
Owens Stocks	0.8361	0.0001	1.4018	0.0001	0.8200	0.0001	1.2336	0.0001	0.3588	0.0001	0.9274	0.0001
Owens Real Estate (>\$50,000)	1.1222	0.0001	2.0563	0.0001	0.9499	0.0001	3.5598	0.0001	0.3864	0.0001	3.5594	0.0001
Log debt in mortgages secured by residential real estate	0.0719	0.0001	-0.0223	0.0566	0.0800	0.0001	-0.0793	0.0001	0.0239	0.0001	-0.0046	0.5197
Log debt in other debt secured by residential real estate	0.0830	0.0001	0.1247	0.0001	0.0613	0.0001	0.0753	0.0001	0.0318	0.0001	0.0626	0.0001
McFadden R-squared		0.3471		0.3828		0.3459		0.4745		0.3622		0.4888

Table 10.1 Determinants of Being a High Income and High Wealth Among All Households, 2004 – 2007

Characteristics	All Households, 2004 - 2007											
	Logistic Regression				Logistic Regression				Logistic Regression			
	High Income Probability		High Wealth Probability		Highest 50% Income		Highest 50% Wealth		Log Income		Log Wealth	
	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value
Constant	-2.8709	0.0001	-8.8369	0.0001	-0.8444	0.0001	-5.1231	0.0001	10.2061	0.0001	5.1091	0.0001
Small business owner manager	0.6025	0.0001	1.6845	0.0001	0.3435	0.0064	1.7591	0.0001	0.1919	0.0001	1.2680	0.0001
Year dummy, 2004	0.1189	0.0682	0.2760	0.0455	-0.0733	0.2134	0.0178	0.7888	0.0348	0.1132	0.0146	0.8079
Interaction: small business and 2004	-0.1302	0.4234	-0.0123	0.9569	0.1619	0.3688	-0.3051	0.1645	-0.0961	0.1239	-0.1119	0.5132
Age of owner manager	-0.0061	0.0057	0.0421	0.0001	-0.0131	0.0001	0.0505	0.0001	-0.0018	0.0092	0.0469	0.0001
Gender - man	1.0409	0.0001	0.5514	0.0140	0.9000	0.0001	0.5194	0.0001	0.3060	0.0001	0.8288	0.0001
Race - minority	-0.1974	0.0100	-0.7340	0.0003	-0.1496	0.0250	-0.2148	0.0045	-0.1052	0.0001	-0.3255	0.0001
Education - no high school diploma	-2.3266	0.0001	-1.6489	0.0001	-2.2695	0.0001	-1.7472	0.0001	-0.7769	0.0001	-1.0683	0.0001
Education - high school diploma	-1.5275	0.0001	-1.9163	0.0001	-1.3288	0.0001	-0.9864	0.0001	-0.4812	0.0001	-0.2557	0.0004
Education - some college	-0.9403	0.0001	-1.2083	0.0001	-0.8427	0.0001	-0.7693	0.0001	-0.3598	0.0001	-0.4844	0.0001
Marital status - married	1.0653	0.0001	0.3499	0.0314	1.0129	0.0001	0.3707	0.0001	0.4179	0.0001	0.1134	0.1312
Owns Stocks	0.8365	0.0001	1.3345	0.0001	0.9256	0.0001	1.3034	0.0001	0.3260	0.0001	1.0084	0.0001
Owns Real Estate (>\$50,000)	1.2090	0.0001	2.9691	0.0001	0.9979	0.0001	3.8417	0.0001	0.3828	0.0001	3.7581	0.0001
Log debt in mortgages secured by residential real estate	0.0614	0.0001	-0.0292	0.0114	0.0691	0.0001	-0.0726	0.0001	0.0226	0.0001	-0.0012	0.8654
Log debt in other debt secured by residential real estate	0.0860	0.0001	0.1323	0.0001	0.0707	0.0001	0.0828	0.0001	0.0351	0.0001	0.0723	0.0001
McFadden R-squared		0.3605		0.3856		0.3533		0.4865		0.3502		0.4977

Table 11.1 Determinants of Being a High Income and High Wealth Among Small Business Households, 1998 – 2007

Characteristics	Small Business Households Only, 1998 - 2007											
	Logistic Regression				Logistic Regression				Logistic Regression			
	High Income Probability		High Wealth Probability		Highest 50% Income		Highest 50% Wealth		Log Income		Log Wealth	
	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value
Constant	-1.7433	0.0031	-6.5510	0.0001	-0.1080	0.8742	-1.7255	0.0574	9.8813	0.0001	9.5429	0.0001
Owns/manages multiple businesses	-0.0724	0.7861	1.3907	0.0001	0.4327	0.1948	1.2678	0.0062	0.2671	0.0342	0.7287	0.0001
Year dummy, 1998	0.3383	0.0374	0.7881	0.0022	-0.0057	0.9758	-0.1477	0.5068	0.1223	0.1147	0.1408	0.1300
Interaction: multiple owner and 1998	0.6243	0.1077	0.3210	0.4935	0.1338	0.7902	-0.1093	0.8687	0.0664	0.7037	0.3335	0.1112
<i>Owner Characteristics</i>												
Age of owner manager	-0.0081	0.2672	0.0209	0.0435	-0.0162	0.0492	0.0565	0.0001	-0.0024	0.4892	0.0322	0.0001
Gender - man	0.2749	0.3685	1.3959	0.0135	1.0611	0.0007	0.6925	0.0603	0.3733	0.0086	0.3815	0.0251
Race - minority	-0.0469	0.8280	-0.8793	0.0328	-0.1362	0.5722	-0.2761	0.2955	-0.1649	0.1088	-0.1311	0.2877
Education - no high school diploma	-1.3276	0.0001	-1.0919	0.1013	-1.0687	0.0006	-0.2037	0.6071	-0.3780	0.0111	-0.3019	0.0907
Education - high school diploma	-0.9940	0.0001	-0.9997	0.0012	-0.8889	0.0001	-0.2546	0.3307	-0.4079	0.0001	-0.2480	0.0230
Education - some college	-0.8063	0.0001	-1.0801	0.0005	-0.6639	0.0041	-0.6858	0.0114	-0.3794	0.0001	-0.3114	0.0055
Marital status - married	0.8438	0.0001	-0.1789	0.5431	0.3149	0.1573	0.1296	0.6185	0.1805	0.0553	0.1745	0.1224
Owns Stocks	0.2529	0.1316	0.6073	0.0041	0.5847	0.0091	1.2530	0.0001	0.1342	0.0898	0.7447	0.0001
Owns Real Estate (>\$50,000)	0.7633	0.0052	2.4663	0.0021	0.7570	0.0041	2.9601	0.0001	0.5286	0.0001	2.1421	0.0001
Log debt in mortgages secured by residential real estate	0.0324	0.0578	-0.0210	0.3402	0.0395	0.0412	-0.0750	0.0202	0.0101	0.2030	-0.0125	0.1894
Log debt in other debt secured by residential real estate	0.0684	0.0012	0.1000	0.0001	0.0259	0.3398	0.0736	0.0551	0.0248	0.0052	0.0510	0.0001
<i>Business Characteristics</i>												
Business age	0.0250	0.0047	0.0462	0.0001	0.0168	0.0968	0.0247	0.0879	0.0121	0.0031	0.0225	0.0001
Business size, number of employees	0.0185	0.5865	0.1164	0.1332	0.0115	0.8174	0.0127	0.8736	0.0006	0.5149	0.0012	0.2413
Organization, partnership	-0.6705	0.0181	-0.4112	0.2247	-0.6602	0.1004	-0.9698	0.0619	-0.4057	0.0019	-0.6408	0.0001
Organization, sole proprietorship	-0.5872	0.0258	-1.1995	0.0002	-0.6722	0.0789	-1.1489	0.0208	-0.3432	0.0046	-0.7272	0.0001
Organization, subchapter s corporation	0.2978	0.3446	-0.2613	0.4431	0.6124	0.2140	0.0194	0.9738	0.2008	0.1472	-0.0616	0.7109
Industry, construction, manufacturing	0.8311	0.0044	0.3616	0.4264	0.5311	0.0677	-0.1366	0.7529	0.9223	0.0001	-0.3151	0.0500
Industry, wholesale, retail	0.7025	0.0229	-0.0079	0.9874	0.6302	0.0499	-1.1247	0.0138	0.9823	0.0001	-0.5443	0.0017
Industry, services and other	1.2340	0.0001	0.8265	0.0476	1.2170	0.0001	-0.3650	0.3846	1.1753	0.0001	-0.1921	0.2044
Founding status, bought, invested	0.1637	0.6042	-0.4828	0.2291	0.0920	0.8041	-0.0425	0.9325	-0.4142	0.0038	0.0098	0.9545
Founding status, started	-0.3048	0.2954	-0.7883	0.0304	-0.2312	0.5032	-0.9446	0.0373	-0.4665	0.0004	-0.6562	0.0001
McFadden R-squared		0.1993		0.3669		0.1900		0.3619		0.1523		0.3782

Table 12.1 Determinants of Being a High Income and High Wealth Among Small Business Households, 2001 – 2007

Characteristics	Small Business Households Only, 2001 - 2007											
	Logistic Regression				Logistic Regression				Logistic Regression			
	High Income Probability		High Wealth Probability		Highest 50% Income		Highest 50% Wealth		Log Income		Log Wealth	
	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value	Parameter Estimate	p-value
Constant	-1.0016	0.0836	-5.3718	0.0001	0.5041	0.4411	-0.7263	0.4259	10.4298	0.0001	9.9320	0.0001
Owns/manages multiple businesses	-0.0539	0.8363	0.5137	0.0742	-0.1150	0.7044	-0.0183	0.9670	0.1202	0.2382	0.3539	0.0074
Year dummy, 2001	-0.0837	0.6097	-0.1666	0.4563	0.1315	0.4748	-0.5105	0.0298	-0.1432	0.0303	-0.2366	0.0058
Interaction: multiple owner and 2001	0.5815	0.1317	1.1608	0.0062	0.5293	0.2680	1.1408	0.0798	0.1789	0.2152	0.6894	0.0002
<i>Owner Characteristics</i>												
Age of owner manager	-0.0055	0.4522	0.0302	0.0015	-0.0142	0.0787	0.0453	0.0001	-0.0066	0.0228	0.0385	0.0001
Gender - man	-0.0617	0.8378	1.1880	0.0157	0.3082	0.3085	0.5006	0.1970	0.1967	0.1069	0.1655	0.2953
Race - minority	0.0701	0.7477	-0.7047	0.0595	0.0291	0.9051	-0.5822	0.0239	-0.2013	0.0220	-0.1676	0.1412
Education - no high school diploma	-0.9344	0.0025	-1.7572	0.0040	-0.9474	0.0024	-0.0099	0.9820	-0.1393	0.2725	-0.1220	0.4586
Education - high school diploma	-1.2255	0.0001	-1.3403	0.0001	-1.1666	0.0001	-0.3578	0.1769	-0.4253	0.0001	-0.3890	0.0001
Education - some college	-0.6819	0.0008	-1.2150	0.0001	-0.6808	0.0041	-0.5390	0.0605	-0.2303	0.0052	-0.3393	0.0015
Marital status - married	0.9692	0.0001	-0.1477	0.6096	0.7817	0.0003	0.2371	0.3882	0.3281	0.0001	0.4293	0.0001
Owns Stocks	0.6045	0.0003	1.1160	0.0001	0.6311	0.0031	1.0057	0.0006	0.2991	0.0001	0.7451	0.0001
Owns Real Estate (>\$50,000)	1.0188	0.0003	1.8869	0.0010	1.0680	0.0001	2.7340	0.0001	0.7642	0.0001	1.8019	0.0001
Log debt in mortgages secured by residential real estate	0.0443	0.0075	-0.0372	0.0617	0.0308	0.0989	-0.0393	0.1970	-0.0034	0.6015	-0.0040	0.6365
Log debt in other debt secured by residential real estate	0.0651	0.0043	0.0993	0.0001	0.0606	0.0460	0.0799	0.0604	0.0241	0.0021	0.0487	0.0001
<i>Business Characteristics</i>												
Business age	0.0214	0.0139	0.0385	0.0003	0.0135	0.1646	0.0333	0.0219	0.0130	0.0001	0.0189	0.0001
Business size, number of employees	0.0180	0.6269	0.1484	0.0861	0.0420	0.6277	0.0093	0.8693	0.0028	0.1589	0.0027	0.2828
Organization, partnership	-0.7884	0.0093	-0.2387	0.4436	-0.7289	0.0538	-1.3228	0.0197	-0.1692	0.1321	-0.5772	0.0001
Organization, sole proprietorship	-0.9349	0.0009	-1.1182	0.0001	-0.7306	0.0380	-1.4814	0.0062	-0.3370	0.0012	-0.8296	0.0001
Organization, subchapter s corporation	0.3338	0.3228	0.0085	0.9784	0.0925	0.8280	0.0370	0.9551	0.1825	0.1183	0.1527	0.3133
Industry, construction, manufacturing	0.3268	0.2242	0.7095	0.0896	0.1399	0.6137	-0.2473	0.5603	0.4589	0.0001	-0.2044	0.1528
Industry, wholesale, retail	0.3743	0.2042	0.3991	0.3666	0.9905	0.0037	-1.0321	0.0229	0.7555	0.0001	-0.5179	0.0010
Industry, services and other	0.6615	0.0080	0.7476	0.0488	0.7647	0.0036	-0.4126	0.3072	0.7403	0.0001	-0.3417	0.0096
Founding status, bought, invested	0.0826	0.8030	-0.4474	0.2516	-0.3472	0.3760	0.2126	0.6895	-0.3953	0.0016	0.0905	0.5775
Founding status, started	-0.2150	0.4755	-0.9307	0.0095	-0.4838	0.1820	-0.7615	0.1053	-0.3339	0.0033	-0.6210	0.0001
McFadden R-squared		0.2201		0.3485		0.2014		0.3560		0.1830		0.3906

Table 13.1 Determinants of Being a High Income and High Wealth Among Small Business Households, 2004 - 2007

Small Business Households Only, 2004 - 2007												
Characteristics	Logistic Regression				Logistic Regression				Logistic Regression			
	High Income Probability		High Wealth Probability		Highest 50% Income		Highest 50% Wealth		Log Income		Log Wealth	
	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value
Constant	-2.1083	0.0005	-6.2488	0.0001	-0.6058	0.3529	-2.1149	0.0234	10.2881	0.0001	9.3766	0.0001
Owns/manages multiple businesses	0.5243	0.0940	1.2449	0.0001	-0.1815	0.5985	1.4125	0.0171	0.0617	0.5859	0.7945	0.0001
Year dummy, 2007	-0.0403	0.8036	0.0753	0.7375	0.0458	0.7991	-0.3268	0.1332	-0.1277	0.0526	-0.1748	0.0392
Interaction: multiple owner and 2007	0.0379	0.9290	0.5104	0.2511	0.6991	0.1663	-0.1601	0.8346	0.2626	0.0895	0.2719	0.1717
<i>Owner Characteristics</i>												
Age of owner manager	-0.0054	0.4561	0.0289	0.0033	-0.0195	0.0125	0.0620	0.0001	-0.0062	0.0308	0.0444	0.0001
Gender - man	0.7247	0.0190	1.6785	0.0030	0.9137	0.0016	1.1228	0.0020	0.3875	0.0014	0.3327	0.0334
Race - minority	-0.2804	0.1826	-0.7802	0.0325	-0.5205	0.0185	-0.3386	0.1811	-0.2608	0.0023	-0.0851	0.4392
Education - no high school diploma	-1.2262	0.0002	-1.4542	0.0330	-0.9908	0.0022	-0.1942	0.6375	-0.3552	0.0092	0.0487	0.7814
Education - high school diploma	-1.2802	0.0001	-1.3730	0.0001	-0.6324	0.0025	0.1265	0.6348	-0.3719	0.0001	-0.2436	0.0144
Education - some college	-0.7132	0.0006	-1.1355	0.0001	-0.4808	0.0429	-0.5906	0.0338	-0.3976	0.0001	-0.3414	0.0018
Marital status - married	1.0385	0.0001	-0.0204	0.9431	0.9478	0.0001	0.0580	0.8261	0.3547	0.0001	0.3847	0.0003
Owns Stocks	0.1282	0.4635	0.5579	0.0047	0.5791	0.0083	1.1192	0.0003	0.0818	0.2344	0.5374	0.0001
Owns Real Estate (>\$50,000)	0.9406	0.0009	2.3597	0.0011	0.9366	0.0005	2.9458	0.0001	0.6356	0.0001	1.9130	0.0001
Log debt in mortgages secured by residential real estate	0.0415	0.0188	-0.0109	0.6047	0.0241	0.2212	-0.0443	0.1602	-0.0025	0.7165	0.0044	0.6228
Log debt in other debt secured by residential real estate	0.0503	0.0169	0.0904	0.0001	0.0197	0.4333	0.0539	0.1294	0.0217	0.0043	0.0491	0.0001
<i>Business Characteristics</i>												
Business age	0.0240	0.0083	0.0427	0.0001	0.0156	0.1162	0.0123	0.3876	0.0157	0.0001	0.0190	0.0001
Business size, number of employees	0.0102	0.7344	0.1936	0.0749	0.0444	0.6944	0.0101	0.9165	0.0029	0.1534	0.0028	0.2822
Organization, partnership	-0.2964	0.3180	-0.5088	0.1250	-0.3171	0.3934	-1.1158	0.0733	-0.1474	0.2075	-0.4651	0.0020
Organization, sole proprietorship	-0.6648	0.0164	-1.2002	0.0002	-0.5201	0.1397	-1.6922	0.0049	-0.2984	0.0072	-0.8566	0.0001
Organization, subchapter s corporation	0.7971	0.0219	0.3118	0.3574	0.9870	0.0390	-0.0379	0.9581	0.1637	0.1910	0.1421	0.3776
Industry, construction, manufacturing	0.4021	0.1641	0.3608	0.4149	0.0559	0.8501	0.0171	0.9659	0.4497	0.0001	-0.4343	0.0043
Industry, wholesale, retail	0.8296	0.0067	-0.0849	0.8555	0.5908	0.0689	-0.4957	0.2405	0.7017	0.0001	-0.5139	0.0014
Industry, services and other	1.3123	0.0001	0.7225	0.0791	0.8828	0.0021	0.2188	0.5756	0.9202	0.0001	-0.3306	0.0218
Founding status, bought, invested	0.0359	0.9153	-0.4232	0.2807	0.2637	0.4657	-0.2077	0.6910	-0.4036	0.0016	-0.0505	0.7591
Founding status, started	-0.3654	0.2322	-1.1865	0.0008	0.2132	0.5175	-1.2583	0.0074	-0.3467	0.0025	-0.6572	0.0001
McFadden R-squared		0.2603		0.3841		0.2218		0.3837		0.1755		0.4023