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## THE "LACK OF SEPARATION" REVISITED: SMALL BUSINESS OWNERS AND RISK

Susan Coleman and Richard Cohn

### ABSTRACT

The close link between the personal financial affairs of a small business owner and his or her firm has been noted in prior research. This article compares attitudes toward risk on the part of small business owners (SBOs) and non-small business owners (NSBOs). In addition, it compares the personal balance sheets of SBOs to those of NSBOs to determine if SBOs hold a higher level of risky assets. Results reveal that small business owners express a greater willingness to accept risk and hold a higher level of risky assets in their personal portfolios. This finding is consistent with small business owners' willingness to own and operate small firms which are, by their very nature, risky.

### I. INTRODUCTION

In an important article published in 1992, James Ang discussed at length the lack of separation between business and personal risks for small business owners. According to Ang (1991, 1992) and Ang et al. (1995), the dividing line between personal assets and resources and business assets and resources is a fuzzy one. Typically, the entrepreneur's personal financial resources are the major source of financing for the business, particularly at start-up. Loans from family and friends may supplement this. In addition, family members and the entrepreneur himself may work for the business at a reduced salary or no salary.

The National Survey of Small Business Finances (*1993 National Survey of Small Business Finances*, 1999) has enabled us to gain a better understanding of the financial condition and behavior of small firms. Using data from the NSSBF, Ang et al. (1995) found that a high percentage of firms pledged personal collateral for loans. They also observed that smaller and less profitable firms were even more likely to pledge personal collateral, placing the personal assets of those small business owners at risk. Other researchers have used the NSSBF to examine small firm use of various types of financial products and sources of capital.

To date, however, very little is known about the financial behavior of small business owning households or their attitudes toward risk. The Survey of Consumer Finances (*1995 Survey of Consumer Finances*, 1999), also conducted by the Federal Reserve, allows us to ask and answer some of these questions.

This research uses the 1995 Survey of Consumer Finances to compare attitudes toward risk on the part of small business owning households (SBOs) and non-small business owning households (NSBOs). In addition, it examines holdings of "risky" assets to determine if SBO and NSBO households behave differently.

### SMALL FIRM OWNERS AND RISK

As noted by Ang (1991, 1992) and Ang et al. (1995), small business owners face many types of risk. Small

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business owners often integrate personal and business accounts, thereby eradicating the line between family and business finances. Small firms organized as sole proprietorships or partnerships face the risk of unlimited liability. In the event of a lawsuit, both personal and business assets are vulnerable. Even firms having the corporate form of organization are subject to the risk of partial liability if the firm's owner has pledged personal assets as collateral, as is frequently the case. Small firms typically have a high failure rate; rates in excess of 50 percent are commonly cited (Bates & Nucci, 1989; Cochran, 1981). Unlimited liability and the practice of pledging personal assets and providing personal guarantees can result in simultaneous business and personal bankruptcies. Finally, the personal financial portfolios of small business owners are typically undiversified. Assets and wealth are tied up with the business and cannot be easily separated from it.

In light of the risks faced by small business owners, it is generally assumed that entrepreneurs are less risk averse than the general public. There is not a lot of empirical work to substantiate that notion, however. In fact, neither Brockhaus (1980) nor Masters and Meier (1988) found any difference between managers and entrepreneurs in terms of risk-taking propensity. Begley and Boyd (1987), however, did find that entrepreneurs demonstrated greater risk-taking propensity than the CEOs of small firms. Koiranen et al. (1997) found that entrepreneurs in "growth" firms demonstrated greater willingness to take risks than the owners of "lifestyle" firms. To date, however, there are no studies that examine the relationship between risk-taking propensity, small business ownership, and characteristics of the small firm owner's personal balance sheet. That is the unique contribution of this research.

### **FINANCIAL CHARACTERISTICS OF SMALL FIRMS**

A relatively small number of researchers have provided insights into the financial characteristics of small firms. Titman and Wessels (1988) found that smaller firms used significantly more short term debt than larger firms, leading them to conclude that high transaction costs discouraged greater use of both long term debt and equity. Carter and Van Auken (1990) observed that small firms have lower liquidity and higher debt than larger firms. They attributed this to the more limited access of small firms to equity capital. In a similar study, Osteryoung et al. (1992) also found that smaller firms had higher ratios of both short term and long term debt to total assets than larger firms. Finally, Van Auken and Holman (1995) found that small, privately-held firms had lower liquidity and higher debt than small publicly-held firms.

Each of these studies suggests a riskier capital structure for small firms, particularly privately held small firms, than for large, publicly held firms. Low liquidity increases the risk of business failure because the small business owner may not have sufficient cash to conduct his daily transactions. High debt also increases the riskiness of the firm, because it imposes fixed costs in the form of interest and principal payments. Added to that, high short term debt exposes the firm to interest rate risk in a rising rate environment and to refinancing risk or the risk that the lender will not renew the loan.

These studies, combined with the insights supplied by Ang (1991, 1992) and Ang et al. (1995), lead one to conclude that small business ownership is a risky proposition by its very nature. If this is the case, we might ask if small business ownership attracts individuals who are willing and prepared to cope with higher levels of risk. In light of the risks associated with small firm ownership, we might also ask how the personal balance sheets of small firm owners reflect greater risk-taking propensity. This research will address these two questions in an attempt to demonstrate the relationship between attitudes toward risk and the composition of the personal balance sheets of SBOs.

### **EMPIRICAL ANALYSIS**

#### **The Sample**

Data for this study were drawn from the 1995 Survey of Consumer Finances (SCF) conducted on a triennial

basis by the Federal Reserve. The 1995 SCF is the most recent survey for which data are publicly available and includes financial and other information on over 4,000 households. The survey, which lasts from 1 1/2 to 3 hours, collects information on household assets and liabilities, use of financial products and financial service providers, and employment.

The 1995 SCF includes data on 1,121 households in which one member of the household, or primary economic unit (PEU), was a small business owner. A small business is defined as one having 500 or fewer employees. Characteristics of the businesses owned by SCF households are included in Table 1.

Table 1

Characteristics of Small Businesses Included in the 1995 Survey of Consumer Finances

N=1121

Variable	Mean	Stan. Dev.	1stQ	Median	3rdQ
# of emp	33.14	77.24	2	4	20
Age of bus.	18.88	12.21	9	16	26
Net worth	3,397,487	14,704,508	25,000	200,000	1,250,000
1994 sales	12,170,622	153.64 M	20,000	199,000	2,000,000
1994 net inc.	1,491,136	15,730,771	1,500	40,000	240,000

On average, small businesses included in the SCF were relatively mature, having an average age of 18.88 years. The mean number of employees was 33.14 although the median was a much more modest 4 employees, indicating that the majority of small businesses were very small. As Table 1 reveals, 1994 sales and net income for these businesses were highly skewed. The mean sales amount for 1994 was \$12.17 million. The median for 1994 sales was only \$199,000, however. Similarly, the mean 1994 net income was \$1.5 million while the median was only \$40,000. This suggests that the means were influenced by a small number of very high sales and high net income companies. The majority of firms in the sample had modest sales and net income, however. The same skewness effect can be seen in the 1994 net worth (assets-liabilities). The mean net worth for small businesses included in the SCF was \$3.4 million whereas the median net worth was \$200,000. Households falling into the first quartile had a net worth of less than \$25,000.

Over 60 percent of the small firms included in the SCF were either sole proprietorships or partnerships. Thus, the owners of these businesses would face the problem of unlimited liability discussed above; business failure could also result in personal failure. Approximately 50 percent of the businesses were in the service sector. Since many service businesses lack assets that can be used as collateral, this suggests that owners of these businesses may have had to pledge personal assets in order to obtain business financing. In fact, 27 percent of the small business owners included in the 1995 SCF indicated that they had pledged either personal collateral or personal guarantees for business loans. Thus, their personal assets were at risk, and their net worth was dependent on the success or failure of the business.

Table 2  
Demographic Characteristics

Characteristic	SBO	NSBO	t-value	prob>t
Age	52.27	48.80	-6.9235	0.0001
Family Size	2.70	2.38	-6.8052	0.0001
Tot. Income	710,548	125,154	-7.2569	0.0001
Net Worth	10,310,439	1,429,951	-8.9260	0.0001
Chi-square				
Male	72.85%	95.09%	243.849	0.001
Married	55.17%	80.55%	225.486	0.001
Some College	54.56%	76.72%	169.430	0.001

The 1995 SCF also includes data on 3,134 non-small business owning households (NSBOs). Table 2 compares major characteristics of the SBOs and NSBOs. The mean age for the head of SBO households was 52.27 years, compared to 48.80 years for the NSBO households, revealing that small business owners were slightly older. SBOs also had slightly larger households than NSBOs having an average family size of 2.7 compared to 2.38. It is noteworthy that SBOs had significantly higher total family income for 1994 as well as significantly higher household net worth. For both types of households, however, family income and net worth were highly positively skewed.

Table 3  
1994 Total Household Income and Net Worth

	#	1Q	Median	3rdQ
SBO tot.inc.	1121	50,000	27,000	400,000
NSBO tot. inc.	3134	7,000	34,000	63,000
SBO net worth	1121	272,980	1,300,400	6,152,700
NSBO net worth	3134	9,400	66,490	256,200

### B. Attitudes Toward Risk

As noted above, little is known about small business owners' attitudes toward risk or how these attitudes translate into behavior. In an attempt to assess attitudes toward risk, the Survey of Consumer Finances asks respondents if they are willing to accept high risk, some risk, or no risk in order to achieve above average

returns. A comparison of the responses of small business owning and non-small business owning households is revealing.

Table 4

## Attitudes Toward Risk

Attitude	SBO N=1121	NSBO N=3134	Chi-square	Prob
Highbet	36.40	18.95	139.533	0.001
Somewhat	47.90	39.69	22.868	0.001
Nobet	15.70	41.35	240.130	0.001

A significantly higher percentage of SBOs indicated that they were willing to accept higher levels of risk in return for higher rewards than NSBOs. Eighty-four percent of SBOs responded that they would accept high risk or some risk, compared to 58.64 percent of NSBOs. Only 15.7 percent of SBOs indicated that they were unwilling to accept any risk at all, compared to 41.35 percent of NSBOs. Clearly, the entrepreneurs and small business owners in this sample had a higher propensity for risk than non-small business owners, at least on the basis of self-report data. This finding conflicts with prior findings of Brockhaus (1980) and Masters and Meier (1988), both of whom found no significant differences in risk-taking propensity between entrepreneurs and managers.

### C. Holdings of Risky Assets

Self-proclaimed attitudes toward risk are one thing whereas observed risk-taking behaviors are entirely another. One way to assess how attitudes toward risk translate into behavior is to examine the asset composition of small business owning households to determine if they hold a higher percentage of "risky" types of assets. Risky assets are defined as holdings of stocks, stock mutual funds, non-government bonds, foreign bonds, investment real estate, business ownership, and various other types of assets for which returns are less certain. It should be noted, however, that although these types of assets are "risky" if held individually, holding them as a part of a well-diversified portfolio may have the effect of mitigating their risk (Reilly & Norton, 1999).

A simple comparison of risky assets as a percentage of total household assets for SBOs and NSBOs is provided in Table 5. This comparison reveals that SBOs held a significantly higher percentage of risky assets in total than NSBOs (58.73% vs. 19.87%). Although it is not surprising that SBOs held a higher percentage of assets represented by business interests, they also held a significantly higher percentage of assets in the form of investment real estate and other risky assets as well.

A final step in this analysis examines the relationship of risky assets as a percentage of household net worth to a series of predictor variables including a dummy variable representing small business ownership. The hypothesis being tested is that small business owners, who are less risk-averse according to self-report data, should hold a higher percentage of their personal wealth in the form of risky assets. Thus, small business ownership should be a predictor of the level of risky assets.

Table 5

## Holdings of Risky Assets as a Percentage of Total Household Assets

Asset	SBO N=1121	NSBO N=3134	t-value	Prob
Stock <sup>1</sup>	9.41	8.70	-1.3515	0.1703
Bonds <sup>2</sup>	.29	.19	-1.2561	0.2093
Business <sup>3</sup>	31.42	.66	-37.2784	0.0001
Real Estate	12.86	6.84	-9.1624	0.0001
Other	4.75	3.48	-3.3086	0.0010
Total	58.73	19.87	-40.5390	0.0001

<sup>1</sup>Includes stock, stock mutual funds, and stock held in IRAs, pension funds, or trust accounts.

<sup>2</sup>Includes non-government bond funds and foreign bonds.

<sup>3</sup>Includes ownership interests in actively or passively held businesses.

A regression model was developed having the following form:

$$\text{Riskp} = a_0 + b_1 \text{Age} + b_2 \text{Married} + b_3 \text{Gender} + b_4 \text{Famsize} + b_5 \text{Ed} + b_6 \text{Networth} + b_7 \text{Busown} + e$$

The variables included in the model are defined in Table 6. The dependent variable, Riskp, represents the ratio of risky assets to net worth. Independent variables were selected based upon prior research in the area of risk aversion. Age was chosen as an independent variable, because prior research reveals that investors become increasingly risk averse with age (Bajtelsmit & VanDerhei, 1997; Bellante & Saba, 1986; Morin & Suarez, 1983). One would therefore expect a negative relationship between the independent variable, Age, and the percentage of risky assets. Several researchers have also found that women are more risk averse as investors than men (Bajtelsmit & VanDerhei, 1997; Barsky & Juster, 1997; Hinz et al., 1997; Jianakoplos & Bernasek, 1998), and that married individuals are more risk averse than singles (Hinz et al., 1997; Sunden & Surette, 1998), leading one to expect negative signs for the independent variables, Gender and Married. Jianakoplos and Bernasek (1998) found a positive relationship between risk aversion and family size. Thus, one would anticipate a negative relationship between the independent variable, Famsize, and the percentage of risky assets.

Educational level may also have an impact on a household's willingness to hold risky assets as has been noted by Barsky and Juster (1997) who found that individuals with a college education were more risk tolerant. In

Table 6

Variables Used in Regression Analysis

Dependent Variable:

**Riskp:** Risky assets divided by net worth. Risky assets (assets for which a return is less certain) include non-government bond mutual funds, stock mutual funds, foreign bonds, stocks, brokerage accounts, loans owned to the individual or to the business, land contracts or mortgages owed to the individual, investment real estate, the value of actively or passively held businesses, and the portion of these same types of risky assets held in trust accounts, pensions, or IRAs.

Independent Variables:

**Age:** Age of the head of household in years

**Married:** Dichotomous variable; married=1

**Gender:** Dichotomous variable; female=1

**Famsize:** Number of people in the household or primary economic unit

**Ed:** Dichotomous variable; at least one year of college=1

**Busown:** Dichotomous variable; owns and actively manages a business=1

**Networth:** Total household assets minus total household liabilities

a similar study, Riley and Chow (1992) found that holdings of equity increased with educational

level leading us to expect a positive sign for the independent variable Ed. A number of researchers have observed the relationship between risk aversion and wealth (Barsky & Juster, 1997; Cohn et al., 1975; Jianakoplos & Bernasek, 1998; Morin & Suarez, 1983; Riley & Chow, 1992). Their findings have consistently revealed that greater wealth is associated with increased tolerance for risk. We would therefore anticipate a positive relationship between the independent variable Networth and the percentage of risky assets. Finally, given the higher propensity for risk among small business owners noted above, one would anticipate a positive relationship between the independent variable Busown and holdings of risky assets.

A correlation analysis was performed to determine the possibility of multicollinearity among the independent variables. Results revealed that the variables were not highly intercorrelated. The highest correlations occurred between the variables Gender and Married (.65) and between Famsize and Married (.47). All of the other independent variables had correlations of less than .40. For example, the correlation coefficient between Ed and Networth was positive as one might anticipate, but a surprisingly low .20.



Table 7

**Results of Regression Analysis**  
**Predictors of Risky Assets as a Percentage of Net Worth**

F Value: 58.137  
 Prob>F: 0.0001  
 R-square: 0.0975

Variable	Parameter Estimate	T for HO	Prob>T
Intercept	0.1465	2.813	0.0049
Age	0.0005	0.611	0.5414
Gender	-0.0156	-0.429	0.6678
Married	0.0322	0.958	0.3380
Famsize	0.0028	0.277	0.7816
Ed*	0.1023	4.502	0.0001
Networth*	.00000003	6.163	0.0001
Busown*	0.3558	13.109	0.0001

\*results significant at the .01 level

#### Results of Regression Analysis

Results of the regression analysis are provided in Table 7. Significant variables included Ed, Networth, and Busown, all having a positive sign. Thus, more highly educated individuals are likely to hold more risky assets as a percentage of net worth. This finding is consistent with prior research done by Barsky and Juster (1997) and Riley and Chow (1992). Similarly, higher net worth households hold a higher percentage of risky assets consistent with prior research (Cohn et al., 1975; Morin & Suarez, 1983). Finally, individuals owning and actively managing their own businesses held a higher percentage of risky assets, indicating that small business owners' attitudes toward risk do, in fact, translate into higher risk-taking behavior.

The results shown in Table 7 may be influenced by the inclusion of small business ownership in risky assets. If this is the case, one would expect SBOs to have a higher percentage of risky assets than NSBOs. To test for this possibility, a second regression was run eliminating small business ownership from the percentage of risky assets (Riskp) and from net worth (Networth). Results for this regression are shown in Table 8. Significant variables, all having a positive sign, again included Ed, Networth, and Busown. These findings reveal that, even if small business ownership is eliminated from the asset structure, SBOs still held more risky assets as a percentage of net worth than NSBOs, thus clearly indicating a higher propensity for risk.

## DISCUSSION

Ang et al.'s (1995) lack of separation theory would lead one to expect a close relationship between small business owners and their firms. As Ang (1991, 1992) and Ang et al. (1995) note, small business owners tend to be undiversified in their personal holdings, they face the problem of partial or unlimited liability in their firms, and they often pledge personal assets or personal guarantees in order to obtain loans. Given the risky nature of small business ownership, one would therefore expect small business owners to be individual so willing to embrace a higher level of risk. Prior research on this point, however, has been

Table 8

**Results of Regression Analysis**  
**Predictors of Risky Assets as a Percentage of Net Worth**  
**(Business ownership eliminated from risky assets and net worth)**

F Value: 29.062  
 Prob>F: 0.0001  
 R-square: 0.0513

Variable	Parameter Estimate	T for HO	Prob>T
Intercept	0.1227	2.210	0.0271
Age	0.0007	0.865	0.3921
Gender	-0.0151	-0.392	0.6954
Married	0.0283	0.787	0.4316
Famsize	0.0029	0.273	0.7850
Ed*	0.1052	4.309	0.0001
Networth*	.00000005	5.871	0.0001
Busown*	0.2099	7.378	0.0001

\*results significant at the .01 level

inconclusive.

This research examines the risk-taking attitudes and behaviors of small business owners (SBOs) and compares them to those of non-small business owners (NSBOs), using data from the 1995 Survey of Consumer Finances. Findings reveal that SBOs not only express a greater willingness to take risks, but they also hold a higher percentage of “risky” assets than NSBOs. Thus, their greater propensity for risk is borne out in the way they structure their household balance sheets. These findings suggest that small business owners are, indeed, different. Their willingness to accept the risks of small business ownership is consistent with their willingness to embrace a higher level of risk in their personal financial affairs. These findings also suggest that, although small business ownership may be partially a function of opportunity, education, and training, it is also influenced by the attitudes, beliefs, and preferences of the individual and members of his or her immediate family.

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