Retirement Savings of Nonfarm Self-employed Workers:
An Exploratory Study

Self-employment is increasing rapidly, especially among women, but there is little research on self-employed workers and retirement planning. A survey was developed and mailed to 250 self-employed workers who belonged to comparable associations. The largest amounts of annual savings were in stocks and business equity and the smallest amounts were in tax-advantaged plans. Participation in retirement planning was low. Respondents who were older, married, with higher income, and with more savings during the past year had larger total retirement savings.

Sharon A. DeVaney, Purdue University[1]
Ya-ping Su, Purdue University[2]
Constance Y. Kratzer, Virginia Tech[3]
Deanna L. Sharpe, University of Missouri-Columbia[4]

Introduction

About 1 of 11 workers in the United States was self-employed in 1994 (Bregger, 1996). The numbers of self-employed in the U.S. are expected to increase to 18 million by 1998, up from 11 million people in 1995 (West, 1995). A major difference between self-employed and wage and salary workers is in preparation for retirement. The self-employed must initiate their own retirement plans. The 1993 Current Population Survey (CPS) showed that few self-employed workers were covered by formal plans. "On the current primary job, the self-employed report retirement coverage only 15% of the rate of wage-and salary workers; however, with the addition of previous jobs, secondary jobs, and active IRAs, the ratio increases to 36%" (Woods, 1994, p. 14). Self-employed workers are usually excluded from pension studies (McGarry & Davenport, 1996). Hence, there is little research on self-employed workers and retirement planning.

Identification of self-employed workers is somewhat ambiguous and may lead to underestimation of the number of self-employed. The CPS defines the self-employed as sole proprietors and partners of unincorporated businesses (Haber, Lamas, & Lichtenstein, 1987). But, those who own a controlling interest in an incorporated business are included with wage and salary workers because they are employees of the businesses they operate. Also, when self-employment is reported as a secondary activity, the CPS excludes this from the count of self-employed workers.

In 1995, the self-employed were classified by occupation as follows: managerial and professional, 30.0%; technical, sales, and administrative support, 22.3%; precision production, craft, and repair, 15.4%; farming, forestry, and fishing, 14.8%; service occupations, 11.1%; and operators, fabricators, and laborers, 6.0% (U.S. Bureau of the Census, 1996, p. 402). In 1995, 15% and 85%, respectively, of self-employed workers were in farm and nonfarm industries (U.S. Bureau of the Census, 1996, p. 402).

Theoretical Framework

Entrepreneurship and human capital theories provide insight into the economic reasons for self-employment. Entrepreneurs innovate by introducing a new good, method or market, finding a new source of materials, or creating a new type of business organization (Schumpeter, 1934). Knight (1921) believed that effective entrepreneurship was a combination of self-confidence, low risk aversion and capital. Entrepreneurs are thought to have a strong belief that they control their own lives instead of being manipulated by the external environment. The belief is known as locus of control. The scale used to measure external versus internal locus of control (Rotter, 1966; 1976) has been used to predict who is likely to become an entrepreneur.

The notion of an entrepreneur as bold and imaginative may not fit all self-employed workers. Perhaps some identify more closely with human capital theory. It may be their stock of human capital, i.e., investment in education, skill development, and health,

that encourages them to start a business (Becker, 1975). Casson (1982) suggests the following possibilities: (a) self-employment may be an alternative to unemployment, (b) control by self is preferred to control by others, or (c) part-time convenient work may be required.

Characteristics of Self-Employed Workers

Demographics

Younger workers are less likely to be self-employed because they lack skills and resources necessary to start a business (Bregger, 1996), and self-employment becomes increasingly common as one gets older. About a fourth of all employed persons 65 and older are self-employed. Some of this is likely to be a result of starting a second career after retirement.

Men are more likely to be self-employed than women. However, the proportion of women in self-employment has increased from 1 in 4 in 1975 to 1 in 3 in 1990 (Devine, 1994). On average, self-employed women tend to be older, with more education, more likely to be married, and to be white than women who work for wages and salaries.

Higher levels of education increase the probability of being self-employed because education increases a person's ability to provide a service that is wanted by others and education can increase managerial skill (Borjas, 1986).

A spouse's income or assets can be a source of capital, the spouse can work in the business for below-market wages, and if the spouse has a wage or salary job, that income can provide a buffer for the fluctuating income of self-employment (Long, 1982).

Although self-employment and small business have been a vehicle for various ethnic, religious, and racial groups to achieve upward economic and social mobility, the rate of self-employment for minorities is below the overall rate (Aronson, 1991).

Misreporting, overstatement, and understatement of earnings can occur in self-employment (Balkin, 1989). Income may be under reported to avoid taxation or regulation or because of lack of formal records. Income may be overstated because of the tendency to work longer hours and more weeks per year, earnings include an implicit return to capital, and the need to pay fringe benefits out of earnings. Self-employed workers can use a car for business travel or they may have a home office, so earnings may be understated.

Fifty to 60% of self-employed businesses fail during the first two or three years (Evans & Leighton,

1989). However, lack of information about self-employment affects what is known about the stability of self-employment (Aronson, 1991). Many small businesses use personal or informal sources of credit that are not recorded in databases such as Dun and Bradstreet that provide credit ratings.

Locus of Control

Some believe that self-employed workers exhibit greater internal locus of control, i.e., persons with internal locus of control believe that outcomes are a consequence of their own behavior. Those who believe that a person's actions do not have much influence on events have an external locus of control. Persons holding internal control expectancies are usually more cautious and calculating about their choices and more attentive to information relevant to decision making (Dessart & Kuylen, 1986; Lefcourt, 1976; Rodin, 1990).

Risk Taking

Although entrepreneurs are popularly believed to be risk-takers, Swayne and Tucker (1973) concluded that they are between risk neutral and risk averse. Palmer (1971) identified entrepreneurs as individuals who correctly interpret the risk of the situation and then determine policies which minimize the risks involved.

Retirement Planning

Health and finances are usually the top concerns of persons making plans for retirement. A study on confidence in financial preparation for retirement showed only a few differences in the beliefs of non-retired and retired persons (DeVaney, 1995). Confidence for both groups depended upon: the belief that they could meet basic expenses, maintain good health, and the presence of a pension. In addition, the non-retired were confident if they had started saving, had a supplemental retirement annuity, and if they believed they could find a comparable job if needed.

Methodology

A survey instrument was developed, pilot tested, and revised. The final survey contained 65 questions on job characteristics, retirement planning, savings and investments for retirement, risk-taking, locus of control, and demographics. Questions on locus of control were taken from Bugaighis and Schumm (1983) and Schumm, Coulson, Jurich, & Bollman (1990). Risk-taking was measured by questions developed from several articles on risk

tolerance. Although the need for a scale to measure risk-taking is often mentioned, a non-proprietary scale to measure risk was not located.

To develop the sample, three associations in suburban locations in three states (eastern, north central, and south central) who met the criteria of being self-employed, nonfarm, small business owners were contacted. Permission was received to contact members by mail. The Dillman (1978) method was followed in mailing the survey instrument. Data were collected from July through September of 1996. The overall response rate was 41.6% (104/250).

The dependent variable was the total household retirement savings. Independent variables included: age, marital status, education, income, savings in the past year intended for retirement, job tenure, concern about having enough income in retirement, and indices for retirement planning and locus of control. The index for retirement planning included: thinking about retirement, discussing retirement with spouse or a close friend, attending programs or reading articles or books about retirement, using computer programs to learn about retirement planning, consulting professionals, and belief about what had been done compared to other people of the same age.

Responses for income, annual retirement savings, and total retirement savings were collected by category to overcome reluctance to provide discrete amounts and the possibility of under reporting. Savings for retirement during the past year was measured by asking about the amount saved in: (1) savings accounts, bonds, or certificates of deposit, (2) Individual Retirement Accounts (IRAs), (3) Keogh plans, (4) Simplified Employee Pension plans, (5) Employee Stock Ownership Plans or profit sharing plans, (6) 401(k) or 403(b) thrift or savings plans or supplemental retirement annuities, (7) mutual funds, (8) stocks, or (9) equity in their business. For each category, a value of 0 equaled no savings during the past year, 1 equaled less than $1,000, 2 equaled savings between $1,000 and $2,000, and 3 equaled more than $2,000.

Two sets of analyses were conducted to answer the research questions: (1) what are the characteristics of self-employed workers, and (2) what factors affect retirement savings of the self employed. Ordinary Least Squares regression was used to analyze the second research question.

Table 1
Coding of Variables

Variable	Coding Scheme
Dependent variable:	
Retirement savings	Continuous (1 to 6)
	1 = Less than $10,000
	2 = $10,001 to $20,000
	3 = $20,001 to $50,000
	4 = $50,001 to $100,000
	5 = $100,001 to $250,000
	6 = More than $250,000
Independent variables:	
Age	Continuous
Married	1 = married
	0 = otherwise
Education	1 = BS or advanced
	0 = otherwise
Low income	1 = Less than $50,000
	0 = otherwise
Middle income	1 = $50,001-$75,000
	0 = otherwise
High income	1 = More than $75,000
	0 = otherwise
Savings past year	Continuous
	(Sum for 9 types of savings)
	0 = No savings in the past year
	1 = Less than $1,000
	2 = Between $1,000 and $2,000
	3 = More than $2,000
Job tenure < 4 years	1 = yes
	0 = no
Concern for ret. income	1 = yes
	0 = no
Retirement plan index	Continuous (10 to 35)
Locus of control index	Continuous (16 to 34)

Findings

Sample Characteristics

Characteristics of the sample are shown in Table 2. A typical respondent was 45 years old, married, and had a college education. Sixty percent had more than $50,000 annual household income.

The amount of savings during the past year for retirement in a specific option (from least to most) was: Keogh plans; SEPs; ESOPs; 401(k) or 403(b); IRAs; mutual funds; savings accounts, bonds or CDs; equity in own business; or stocks.

One-third of the sample had been self-employed for 3 years or less. Forty-four percent expressed moderate concern or a lot of concern about having enough retirement income.

The questions on planning for retirement were scored from 1 to 5, Not at all to A lot. The responses were summed to form an index. The range for the retirement planning index was 10 to 35 (M = 20.04, SD = 6.76). The Alpha reliability for the index was .90 (Cronbach, 1951).

Responses for locus of control were coded from 1 to 5, Strongly disagree to Strongly agree. The four questions on external locus of control were reverse coded and an index was developed. The range for the index was 16 to 34 with a mean of 26.13 (SD = 3.78). The Alpha reliability for the scale was .74 (Cronbach, 1951).

Other Characteristics

Sixty percent said their business was a service. The businesses tended to be small. Twenty-three percent were sole proprietors, and 21.4% had one employee. The average number of hours worked per week was 40.5 hours (SD = 14.8). The respondents had been in their current job an average of 8.5 years (range of 1 to 42 years), but one-third had been in business for 3 years or less .

Respondents expected to retire at age 63 1/2 and indicated that retirement income would be needed for an average of 22.5 years. About half (48%) expected to need between 60 and 80% of current income for retirement.

The five questions on risk-taking were scored from 1 to 5, Strongly disagree to Strongly agree. Overall, respondents showed a moderate to high level of agreement in taking risks. An index was developed for risk taking, but the Alpha reliability for the index was only .40 (Cronbach, 1951). Hence, risk-taking was not used as an independent variable in the analysis.

Total Retirement Savings

Respondents were most likely to have total retirement savings between $50,000 and $100,000. This was the dependent variable for the analysis. The regression model was significant at $p < 0.0001$. R squared for the model was 60.8% meaning that about 61 percent of the variance was being explained by the independent variables. The results of the regression are shown in Table 3.

Self-employed workers who were older and married had higher amounts of retirement savings. The finding for age is consistent with the life-cycle hypothesis of savings (Ando & Modigliani, 1963) which suggests that older persons are more likely to have a relatively higher level of savings. The finding for marital status was consistent with research by Long

Table 2
Description of the Sample (N = 104)

Variable	M (SD)	N	Percentage
Independent Variables:			
Age	44.60 (9.8)		
Married		76	73.0%
Not married		28	27.0%
BS or advanced		70	67.3%
High school or less		34	32.7%
Low income (less than 50,000)		41	39.4%
Middle income (50,000-75,000)		25	24.0%
High income (more than 75,000)		38	36.5%
Savings past yr	8.45 (6.04)		
0 to 24 (No savings to more than $18,000)			
Sav acct, CD	1.27 (1.25)		
IRAs	1.17 (1.27)		
Keogh plans	0.31 (0.74)		
SEPs	0.40 (0.89)		
ESOPs	0.52 (0.96)		
401(k)/403(b)	1.13 (1.31)		
Mutual funds	1.22 (1.31)		
Stocks	1.54 (1.33)		
Equity /bus	1.28 (1.34)		
Job tenure < 4 years		36	34.6%
Job tenure => 4 years		68	63.4%
Little concern for ret. income		58	55.8%
A lot or moderate concern		46	44.2%
Retire planning	20.04 (6.76)		
Locus of control	26.13 (3.78)		
Other Characteristics:			
No. dependents	1.2 (1.4)		
Hours/week	40.5 (14.8)		
Weeks/year	49.1 (3.6)		
Years/job	8.5 (7.7)		
Expect ret. age	63.5 (9.3)		
Yrs/ret. income	22.5 (8.2)		
Risk-taking:			
Preserve assets	3.38 (1.02)		
Safe invest	3.13 (1.04)		
Risk/return	3.45 (0.92)		
Tie up for return	3.86 (0.76)		
Check invest	3.72 (0.81)		
Accept changes	3.78 (0.71)		

(1982) who stated that having a spouse can provide resources of income, capital or labor for the self-employed worker.

Compared to self-employed workers without a college degree, graduates and those with an advanced education were more likely to have larger amounts of savings for retirement. This appears to be consistent with human capital theory which suggests that people

with higher education will plan for the future and have more retirement savings. Compared to the upper income group, those who had low or middle incomes had less total retirement savings. Those who saved more during the year were more likely to have higher total retirement savings.

There was a positive effect for retirement planning. About half were giving retirement a lot or a moderate amount of thought which probably meant that they were setting aside money in various forms of savings or investments with the intention of using the funds for retirement.

A slight positive effect was found for locus of control suggesting that people who have higher levels of locus of control will have more retirement savings.

Table 3
Total Retirement Savings of Self-employed Workers

Variable	B	SE	p
Age	0.07	0.01	0.0001***
Married	0.47	0.31	0.0001***
BS or advanced	0.19	0.27	0.0068**
Low income	-1.31	0.33	0.0002***
Middle income	-0.64	0.33	0.0021**
Savings/past yr	0.04	0.03	0.0001***
Job < 4 years	0.33	0.27	0.2303
Concern ret. inc.	-0.37	0.25	0.1230
Ret. planning	0.07	0.03	0.0146*
Locus of control	0.03	0.04	0.0358*

*$p < 0.05$ **$p < 0.01$ ***$p < 0.001$

Discussion and Implications

The contribution of the study was the development of a survey designed to capture the unique characteristics of self-employed workers and preparation for retirement. The high cost of starting businesses may deplete their savings and it may be difficult to save for retirement (West, 1995). The high rate of business failure could leave many self-employed workers dependent on social support in their later years. Although the self-employed tend to be married and can use income and capital from a spouse, that may not be sufficient to provide for retirement.

The survey revealed limited use of tax advantaged savings. This could mean that many of the self-employed are unaware of the tax advantages of these types of pension plans or they might not use these plans because these options tie up funds and frequently do not allow for loans. Instead, they may invest in CDs, savings accounts, mutual funds or stocks because there is no penalty for withdrawal and they feel that they have control over the funds.

There was limited use of retirement programs, financial advisers, and computer programs on retirement planning. It should be highly advantageous for self-employed associations to sponsor programs on retirement planning. Consumer educators are urged to contact associations of the self-employed and inquire about their interest in retirement planning. Educators may need to develop programs targeted to their special needs and interests.

Future research should attempt to compare retirement planning of these workers with that of wage and salary workers. That would allow for comparison of locus of control and risk-taking. With a larger sample, there might be a stronger effect for locus of control. Further study is needed to understand how the self-employed view the amount of control they exert relative to their businesses. A larger sample would allow for more analysis of job-tenure, racial and ethic backgrounds, and gender differences.

When self-employment activities are placed in the context of a married couple, it would be helpful to assess the way the couple uses income from those activities. Is self-employment income used for savings, for consumption, or is it invested into the business? How do retirement savings differ for those who consider self-employment as a secondary activity compared to those who consider self-employment as a primary activity should be included in future research.

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Endnotes
1.   Assistant Professor, Department of Consumer Sciences and Retailing.
2.   M.S., Department of Sociology.
3.   Assistant Professor, Department of Housing, Interior Design and Resource Management.
4.   Assistant Professor, Department of Family and Consumer Economics.