# Retirement Preparation Of The Nonfarm Self-Employed

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*Despite growth in the numbers of self-employed workers, there is little research on the retirement planning behavior of this group. The purpose of this study was to identify characteristics of self-employed workers and determine factors that lead to increased savings for retirement. Findings from a survey mailed to a convenience sample indicated the largest amounts of annual savings were in stocks and business equity and the smallest amounts were in Keogh plans. Self-employed workers tended to have larger total retirement savings if they were older, had higher income levels, and had conducted some retirement planning activities.*

Key Words: *Retirement, Saving, Self-employed, Financial planning, Pensions*

With increasing uncertainty about labor force participation, increases in the number of contingent workers, and change in retirement trends, the financial preparation for retirement by self-employed workers is an important topic for research. However, self-employed workers are usually excluded from pension studies (McGarry & Davenport, 1996) and little is known about their retirement planning. Hence, the purpose of this exploratory study was to develop a profile of self-employed workers and ascertain the factors affecting their financial preparation for retirement.

## Identifying and Describing the Self-Employed

Identification of self-employed workers is somewhat ambiguous and can lead to underestimation of the number of self-employed. The Current Population Survey (CPS) defines the self-employed as sole proprietors and partners of unincorporated businesses (Haber, Lamas & Lichtenstein, 1987). 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. The CPS also excludes self-employment reported as a *secondary activity* from the count of self-employed workers.

About 1 in 11 workers in the United States was self-employed in 1994 (Bregger, 1996). The self-employed are in a variety of occupations: managerial and professional (30%); technical, sales, and administrative support (22%); precision production, craft, and repair (15%); farming, forestry, and fishing (15%); service occupations (11%); and operators, fabricators, and laborers (6%) (U.S. Bureau of the Census, 1996, p. 402). Most (85%) of self-employed workers are nonfarm workers (U.S. Bureau of the Census, 1996, p. 402).

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).

## Theoretical Framework

Entrepreneurship and human capital theories provide insight into the economic reasons for self-employment. A classic definition of entrepreneurship is that the entrepreneur innovates by introducing a new good, method or market, finding a new source of materials, or creating a new type of business organization (Schumpeter, 1934). Another classic belief is that effective entrepreneurship is a combination of self-confidence, low risk aversion, and capital (Knight, 1921). In essence, entrepreneurs may have strong beliefs that

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they control their own lives instead of being manipulated by the external environment.

The decision to start a business may be based on someone's assessment of the productive value of their human capital in the form of education, skills, and health (Becker, 1975). Casson (1982) suggests that people choose self-employment as an alternative to unemployment, or because control by self is preferred to control by others, or because part-time convenience work is preferred to a full-time career.

The life cycle savings hypothesis could also provide a theoretical framework for retirement preparation of the self-employed. The life cycle hypothesis suggests that households accumulate assets during their working lives to finance consumption after retirement when earned income is reduced (Ando & Modigliani, 1963). Households tend to dissave at early stages in the life cycle and to increase savings in the middle stages as earnings increase. In general, the more uncertainty there is about future income prospects, the higher the level of savings should be (Fan, Chang & Hanna, 1993).

## Previous Studies

Previous research on selecting self-employment and the comparison of income of self-employed and other workers has shown that the self-employed frequently exhibit some distinct characteristics. Consistent with human capital theory, age and education appear to influence the choice to be self-employed. Self-employment is more common among older individuals. About a fourth of all employed persons age 65 and older are self-employed. Many of these have started a business after retirement or just prior to retirement. It has been stated that younger workers lack the skills and resources to start a business (Bregger, 1996). However, some members of generation X (age 18 to 30 approximately) are involved in well-publicized entrepreneurial enterprises. Higher levels of education increase the probability of being self-employed. In general, education and experience increase a person's ability to provide a service that others desire and also increases managerial skill (Borjas, 1986).

Men are more likely to be self-employed than women. However, the proportion of women in self-employment increased from 1 in 4 in 1975 to 1 in 3 in 1990 (Devine, 1994). Self-employed women tend to be older and have more education. They are more likely to be married and to be white than women who work for wages and salaries. Owning a small business has been a vehicle for various ethnic, religious, and racial groups to achieve upward economic and social mobility, but the rate of self-employment for minorities is below the overall rate (Aronson, 1991).

Reliable reports of self-employment earnings are difficult to obtain (Balkin, 1989). Income in dollars per hour may be over reported because the self-employed often work longer hours and more weeks per year compared to other workers. Earnings may include an implicit return to capital or be calculated before removal of fringe benefits. On the other hand, self-employment income may be understated to avoid taxation or because formal records were not kept. Use of a personal car or a home office for business also results an understatement of earnings.

Self-employment is a risky venture. Fifty to 60% of self-employed businesses fail during the first two or three years (Evans & Leighton, 1987). Because many small businesses use personal or informal lines of credit which are not recorded in published credit ratings such as Dun and Bradstreet, these percentages may not be accurate. Relatively little is known about the stability of self-employment (Aronson, 1991).

A spouse can provide time and money resources to the business of the self-employed partner by working in that business for below-market wages or by providing capital for the business. If the spouse receives a wage or salary, the spouse's income can provide a buffer for the fluctuating income of self-employment (Long, 1982). Thus, the contributions of the spouse to the business could help offset some of the risks associated with self-employment.

Little research has been done on the risk tolerance of the self-employed, although there is some research on the risk tolerance of entrepreneurs. Although entrepreneurs are often thought to be risk-takers, Swayne and Tucker (1973) concluded they were between risk neutral and risk averse. Palmer (1971) found entrepreneurs were individuals who correctly interpret the risk of a situation and devise policies to minimize that risk. Entrepreneurs may have a relatively greater internal locus of control when compared to individuals who work for someone else. Persons with an internal locus of control believe outcomes are a consequence of their own behavior. In contrast, persons with an external locus of control believe their actions do not have much influence on events. Persons with an internal locus of control are usually cautious, calculating about choice, and attend to information relevant to decision making (Dessart &

 

Kuylen, 1986; Lefcourt, 1983; Rodin, 1990). Sung and Hanna (1996) found that the self employed were significantly more likely to be risk tolerant than otherwise similar employed householders.

The self-employed face the need to plan for retirement. It is reasonable to expect that the self-employed would place finances at the top of their list of concerns when planning for retirement in a manner similar to the general public (DeVaney, 1995). However, Yuh and DeVaney (1996) found that households headed by a self-employed person had accumulated much less in retirement funds than otherwise similar households headed by an employee. On the basis of the limited literature on this subject and expectations regarding behavior of the self-employed, it was hypothesized that, for the self-employed, the level of total retirement savings was a function of characteristics of the self-employed business owner.

It was hypothesized that self-employed workers who have a higher level of human capital (measured by age, education level, and business experience) and economic resources (measured by income and prior savings level), who are married, who have given thought to retirement, and exhibit an internal locus of control have higher levels of total retirement savings. In sum, the study was developed to identify characteristics of self-employed workers and to ascertain the factors affecting financial preparation for retirement.

## Method

A survey instrument was developed, pilot tested with self-employed persons who belonged to an association of business owners, and revised. The final survey contained 65 questions on business characteristics, retirement preparation, 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 and Bollman (1990). Risk-taking was measured by questions from financial planning journals and previous research (Sung & Hanna, 1996).

The criteria for inclusion in the sample was being self-employed, nonfarm, and that the business which was owned consisted of one or only a few persons. Given the relatively smaller proportion of self-employed workers in the United States compared to other employment classifications, a random survey of the general population was not likely to capture a sufficient number of self-employed workers for analysis. Therefore, to develop the sample for this study, three professional associations of self-employed nonfarm small business owners were contacted. These associations were in suburban locations in three states: Indiana, Missouri, and Virginia.

Permission to contact association members by mail was obtained. The Dillman (1978) method was followed in mailing the survey instrument. Data were collected from July through September of 1996. The overall response rate of 42% (104/250) was slightly lower than expected. Perhaps small business owners are reluctant to divulge information related to their business or they place a high value on the opportunity cost of their time and they chose not to take the time to complete the survey.

The Appendix presents coding for the variables used in the regression to determine factors related to retirement savings. The dependent variable was total household retirement savings and the statistical method was ordinary least squares regression. In the survey, respondents were asked to indicate the level of total retirement savings by selecting a category from 1 to 6, representing amounts less than $10,000 to over $300,000. Categories were used to overcome the reluctance to provide discrete amounts and the possibility of under reporting. For the analysis, the responses were recoded to the mid-range of each category as shown in the Appendix.

Independent variables included age, marital status, education, income, savings in the past year intended for retirement, business experience, concern about having enough income in retirement, and indices for retirement planning and locus of control. Responses for income and annual retirement savings were collected by category to avoid non-response.

Savings for retirement during the past year was measured by asking about the amount saved in: (1) savings accounts, bonds, or certificates of deposit (CDs), (2) Individual Retirement Accounts (IRAs), (3) Keogh plans, (4) Simplified Employee Pension plans (SEPs), (5) Employee Stock Ownership Plans (ESOPs) 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. Responses for all nine categories were summed to yield an ordinal measure of savings behavior that could range between 0 and 27.

Concern about having enough income in retirement was measured by: don't know, not a concern, somewhat concerned, moderately concerned, and a lot of concern. Responses could range from 1 to 5. For the regression analysis, the responses were recoded as 1 equals a lot or moderate concern about retirement and 0 otherwise.

Questions for retirement planning focused on: 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 that the retirement planning that had been conducted was comparable to other people of the same age. Question responses were scored from 1 (not at all) to 5 (a lot) to form an index that could range from 7 to 35.

Responses on nine questions in the locus of control index were coded from 1 (strongly disagree) to 5 (strongly agree). Scores were summed to form an index that could range from 9 to 45.

## Findings

*Characteristics of the Sample*

The respondents tended to be service-providers or creators of a small product. The majority of respondents (88%) were female. No differences were found by gender, so gender was not included as a variable in the regression analysis. A large majority (93%) of the sample was in good health and almost all (98%) were white. Table 1 presents the variables included in the regression analysis and characteristics which were obtained by the survey, but not included in the regression. The purpose of including these additional characteristics is an attempt to develop a profile of characteristics of self-employed workers.

A typical respondent was 45 years old and had a college education. Seventy-three percent were married. Sixty percent had more than $50,000 in annual household income. Options selected by respondents for savings during the past year for retirement (from greatest to least) were: stocks; equity in own business; savings accounts, bonds or CDs; mutual funds; IRAs; 401(k) or 403(b) plans; ESOPs; SEPs; Keogh plans. Forty-four percent expressed a lot or moderate concern about having enough retirement income. One-third of respondents had been in their business for 3 years or less.

Questions on retirement planning were scored from 1 to 5, not at all to a lot. Responses were summed to form an index. The index ranged from 10 to 35 with a mean of 20.04 (SD = 6.76). The Alpha reliability for the index was .90 (Cronbach, 1951). This result suggested that respondents had engaged in at least some retirement planning. Responses for locus of control were coded from 1 (strongly disagree) to 5 (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). This result suggested that, consistent with expectations for business owners, respondents had an internal locus of control. The Alpha reliability for the scale was .74 (Cronbach, 1951).

 

**Table 1**
Sample Characteristics (N = 104)

| Variable | M (SD) | N | % |
|---|---|---|---|
| *Independent Variables*: | | | |
| *Human Capital:* | | | |
| Age | 44.60 (9.8) | | |
| BS or more | | 70 | 67.3% |
| High school or less | | 34 | 32.7% |
| Business tenure < 4 years | | 36 | 34.6% |
| Business tenure => 4 years | | 68 | 63.4% |
| *Economic and Personal Resources:* | | | |
| Income < $50,000 | | 41 | 39.4% |
| Income $50 to $75,000 | | 25 | 24.0% |
| Income > $75,000 | | 38 | 36.5% |
| Savings past year | 8.45 (6.04) | | |
| Savings 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 in business | 1.28 (1.34) | | |
| Married | | 76 | 73.0% |
| Not married | | 28 | 27.0% |
| *Concerns/Locus of Control:* | | | |
| Little concern for retirement income | | 58 | 55.8% |
| A lot or moderate concern ret. income | | 46 | 44.2% |
| Retire planning index | 20.04 (6.76) | | |
| Locus of control index | 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/business | 8.5 (7.7) | | |
| % of current income needed for retirement | | | |
| Less than 60% | | 18 | 17.3% |
| 60 to 80% | | 50 | 48.0% |
| 80 to 100% | | 28 | 26.9% |
| Other comments | | 8 | 7.7% |
| Expected ret. age | 63.5 (9.3) | | |
| Yrs need retire 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) | | |

*Additional Characteristics of Self-employed Workers*
Several other characteristics are reported here although they were not used in the regression analysis. The respondents had 1.2 dependents, on average, with a range from 0 to 7. The respondents worked in their business an average of 40.5 hours per week (SD = 14.8); the range was between 5 and 80 hours. They worked 49 weeks a year, on average, with a range of 32 to 52 weeks. The average number of years worked in their business was 8.5 years (range of 1 to 42 years). About half (48%) said they would need 60% to 80% of pre-retirement income after retirement, a frequently recommended measure. A few expected to need less than 60% of current income, but one-third expected to need more than 60 to 80%.

There were two questions in the survey where there was a substantial amount of non-response. (Non-response for these two items was not detected during the pilot test of the survey.) The questions were concerned with the expected age of retirement and the number of years that the respondent would need retirement income. The percentage who did not respond to each of these questions was 19% and 16%, respectively. Of those who responded, the average age of expected retirement was 63.5 years, and retirement income was thought to be needed for an average of 22.5 years. Anecdotal responses suggest that some self-employed workers feel less certain about when they will retire. However, this was not captured at this time by the survey. Because of non-response, the questions about timing of retirement and length of time that income was needed were not included in the regression analysis.

Questions on risk-taking were scored from 1 (strongly disagree) to 5 (strongly agree). Overall, respondents showed a moderate to high level of agreement in taking risks, a characteristic one would expect to find in the self-employed. The Alpha reliability for the risk-taking index was only .40. Therefore, this variable was not used in the regression analysis (Cronbach, 1951).

*Factors Associated with Total Retirement Savings*
The dependent variable was the level of total retirement savings. The average amount of total retirement savings was $117,864. The results obtained by using ordinary least squares regression to estimate the empirical model of retirement savings are reported in Table 2. The regression model was significant at $p < 0.001$. The independent variables explained about 50% of the variance in the dependent variable. Age, level of income, and retirement planning were significant predictors of total retirement savings when controlling for all other variables. The effects of education, marital status, concern about retirement income, and locus of control were not significant.

For each one year increase in age, the retirement savings of self-employed workers would increase by $3,691 holding other variables constant. The effect for age is consistent with the life-cycle hypothesis of savings (Ando & Modigliani, 1963) that postulates that people will tend to smooth consumption by saving more in the later stages of the life-cycle to compensate for earlier periods of dissaving.

Level of income had an important effect on total retirement savings. The savings for retirement for self-employed workers in the low income group will be $90,979 less than the high income group when controlling all other variables. The savings for retirement for those in the middle income group will be $67,547 less than the upper income group when controlling for all other variables.

**Table 2**
OLS Regression of Total Retirement Savings on Characteristics of Self-employed Workers (N=104)

| Variable | Coefficient | Significance |
|---|---|---|
| Intercept | -94480 | 0.2287 |
| *Human Capital of Business Owner:* | | |
| Age | 3691 | 0.0001*** |
| BS or more | 168 | .9925 |
| *Economic and Personal Resources of Business Owner:* | | |
| Low income | -90979 | 0.0001*** |
| Middle income | -67547 | 0.0020** |
| Savings/past year | 1593 | 0.3521 |
| Married | 11757 | 0.5607 |
| *Concerns/Locus of Control of Business Owner:* | | |
| Enough retire inc. | -26161 | 0.1138 |
| Retirement planning | 4283 | 0.0106* |
| Locus of control | -30 | 0.9899 |
| *Business Characteristic:* | | |
| Business tenure | 8088 | 0.6459 |

*p <0.05 ** p < 0.01 *** p < 0.001
Adjusted $R^2$ = 50.2%

For a one unit increase in retirement planning, there will be a $4,283 increase in savings for retirement savings. This shows that respondents who increase their retirement planning efforts by attending programs, consulting professionals, and other activities are likely to increase their level of retirement savings.

## Discussion

A contribution of this study was the development and testing of a survey designed to assess the unique characteristics of self-employed workers and their retirement planning. Since both defining and finding the self-employed can be difficult, potential respondents were contacted through professional associations. This selection process may not have captured a representative sample of the self-employed. However, results of this study contribute to the small amount that is known about the retirement planning behavior of the self-employed. The survey provides a starting point for further analysis.

Survey results revealed that tax advantaged retirement savings vehicles were used by the respondents. Since no comparable earlier studies were found, it is difficult to say whether the usage of tax advantaged plans is typical or atypical. It would be interesting to know the level of awareness of the self-employed for plans such as IRAs, SEPs, SIMPLEs or Keoghs. Also, self-employed workers are likely to make savings decisions based on annual profits and they may have had a lean year. Although some workers may view saving as a repeated behavior, this may differ for the self-employed because of fluctuating income. Or, because the tax advantaged plans limit accessibility to funds, self-employed workers may invest in stocks, mutual funds, savings accounts or CDS to avoid penalties for withdrawal and to retain control over the funds.

It is also possible that the self-employed view their business as their retirement plan. A business that gains in value over time can be sold at the owner's retirement. While proceeds are subject to taxation at the capital gains rate, this rate may be lower than the owner's income tax in the years prior to the sale of the business. Thus, investing in the business rather than in a specific retirement plan could allow a business owner to reduce the impact of taxation while still developing a retirement fund.

The findings show that utilizing resources such as retirement programs, financial advisers, and computer programs on retirement is important. The opportunity exists for financial practitioners and educators to develop programs on retirement planning resources and needs that are specifically tailored to the unique needs of the self-employed. Such programs could be sponsored by self-employed associations. Financial practitioners and educators should focus on self-employed individuals and associations, in addition to their attempt to educate the public about retirement preparation. Programs and information must be targeted to the self-employed by including the words self-employed in the titles of the programs and publications and in the promotional literature. Of course, the information must be appropriate.

Interestingly, business tenure and concern for retirement income were not significantly related to level of total retirement savings of the self-employed. The group surveyed was relatively older, married, and had at least a college degree. Respondents who were in the early years of their business may consider retirement preparations secondary to investment in their business. Dollars that might have been saved for retirement might be plowed back into the business. Respondents may have retirement plans in place from previous employment or may be relying on the success of the business to provide them with retirement income.

## Implications for Research

How do the characteristics and retirement planning behaviors of the self-employed differ from wage-and-salary workers? Do the self-employed have a different locus of control and risk tolerance compared to those who work for others? What role does work experience, racial and ethnic background, or gender play in the decision to be self-employed? For the married self-employed, how do couples treat self-employment income? Is it used for consumption, saving, or invested back into the business?

How do characteristics and retirement planning behaviors differ if the self-employed consider that employment to be a secondary rather than a primary activity? Does the current tax structure facilitate or constrain retirement savings for business owners and their employees? Do small business owners consider the value of their business to be their retirement plan or is retirement savings simply forsaken because dollars are needed to fund current business operations? Finding answers to these questions would expand the little that is currently known about the retirement planning behavior of the self-employed.

## Appendix

**Table A-1**
Coding of Variables

| Variable | Coding Scheme | |
|---|---|---|
| *Dependent variable*: | | |
| Retirement savings | | |
| | 1 = Less than $10,000 was recoded to $5,000 | |
| | 2 = $10,001 to $20,000 was recoded to $15,000 | |
| | 3 = $20,001 to $50,000 was recoded to $35,000 | |
| | 4 = $50,001 to $100,000 was recoded to $75,000 | |
| | 5 = $100,001 to $250,000 was recoded to $175,000 | |
| | 6 = More than $250,000 was recoded to $300,000 | |
| *Independent variables*: | | |
| Age | Continuous | |
| BS or more | = 1, | 0 = otherwise |
| Less than $50,000 | = 1, | 0 = otherwise |
| $50,001-$75,000 | = 1, | 0 = otherwise |
| More than $75,000 | = 1, | 0 = otherwise (reference) |
| Savings past year | Summed over 9 types of savings | |
| | 0 = None | |
| | 1 = Less than $1,000 | |
| | 2 = $1,000 to $2,000 | |
| | 3 = More than $2,000 | |
| Married | = 1, | 0 = otherwise |
| Enough retire income | = 1, 0 = otherwise | |
| Retirement planning | Continuous (10 to 35) | |
| Locus of control | Continuous (16 to 34) | |
| Business tenure<4 years | =1, | 0 = otherwise |

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