THE SURVEY OF INCOME AND
PROGRAM PARTICIPATION

FACTORS ASSOCIATED WITH HOUSEHOLD NET WORTH

No. 40

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SUMMARY
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I. INTRODUCTION

The Survey of Income and Program Participation (SIPP) is one of the few household surveys that provide data on the distribution of net worth.[1/] This study describes SIPP as a source of data on net worth and presents models based on SIPP that identify the factors that are associated with net worth.

In a structural or causal sense, net worth is a function of inheritance, past levels of disposable income, the propensity to save, and the return on investments. These factors are difficult or impossible to measure in a household survey, so no attempt is made to present a structural model that would estimate causal relationships.

In a recent Census Bureau report, we used the SIPP asset and liability module to analyze and describe the characteristics of household wealth holdings in the U.S. [Bureau of the Census, 1986]. The report presented a descriptive analysis of asset ownership and wealth holdings based on tabulations for various subgroups of the population. The purpose of this paper is to further

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[1/] Surveys covering household assets and liabilities have been collected infrequently and based on relatively small samples. For example, two major wealth surveys are the Survey of Financial Characteristics of Consumers (SFCC) conducted in 1962 and 1963, which canvassed 2,557 households, and the 1983 Survey of Consumer Finances which covered 3,824 households. For a description of these surveys, see Projector and Weiss, 1966, and Avery, et. al., 1984.

analyze the factors correlated with wealth holdings by using a multivariate regression model. In order to estimate the model, data from other SIPP supplements were matched to the wealth information. A description of the SIPP data set is presented in the next section. A model is developed in the third section, and the empirical results are presented in the final section.

II. THE DATA SET

SIPP is a panel survey in which approximately 20,000 households are interviewed every four months for a period of two and one-half years. At each interview, basic information on labor force participation, income, and participation in government programs is obtained for each adult for each of the previous four months. Changes in household composition also are identified on a monthly basis. This survey design allows SIPP to provide subannual as well as annual income estimates, and makes it possible to adjust annual household income estimates for changes in household composition during the year. Besides the core questions, supplements obtain information on topics of special interest. Detailed items concerning ownership and amounts of assets and liabilities were asked in the fourth wave of interviews, conducted from September through December, 1984.

It was anticipated that several design features of SIPP would have a positive effect on the measurement of wealth [Lamas and McNeil, 1984]. Perhaps the most important feature is the panel design of the survey. There is evidence to suggest that repeated interviews increases the reliability of the reporting of financial data [Ferber and Frankel, 1981]. The panel design allows asset

ownership information to be collected during each interview, thereby increasing the probability that the asset roster is correct by the time questions about asset values are asked in the fourth wave. Other design features of the survey include the separation of asset ownership questions from asset amount questions and a call-back procedure that allows interviewers to telephone back for missing information.

Asset coverage in SIPP is fairly comprehensive. The assets covered in the SIPP wealth module include: (a) deposits in financial institutions, including passbook savings accounts, money market deposit accounts, certificates of deposits, and interest-earning checking accounts; (b) other interest-earning assets, such as money market funds, U.S. Government securities, municipal or corporate and U.S. Savings Bonds; (c) stocks and mutual fund shares; (d) rental property; (e) mortgages held by home sellers; (f) equities in own home, second homes, and other real estate; (g) equity in own businesses (including farms); (h) motor vehicles; (i) regular checking accounts; (j) IRA and KEOGH accounts; and (k) other financial assets. On the liability side, questions were asked about credit card and store bills, bank loans, and other unsecured debts.

The major wealth items not covered in SIPP are consumer durables (other than homes and motor vehicles), equities in pension plans, and the cash surrender value of life insurance. These items were not covered because it is particularly difficult to obtain reliable estimates of the value of these assets in a household survey; individuals do not have this information easily accessible.

In this study, wealth is based on the equity value of marketable assets. Net worth is defined as the value of all assets covered in SIPP less any debts (either unsecured or secured by the assets).[2] The estimates in this paper are presented on a household basis. The estimates were obtained by adding together the holdings of the adult members of the household.

A major advantage of SIPP is that it is comprehensive in the breadth of information collected from each household. Data collected in other modules of the survey are important in the analysis of wealth holdings. For example, total lifetime work experience, and health status are important in understanding asset and liability accumulations. Information from several modules are used in this study. These include modules on:

(a) work history (years of work experience, lifetime work interruptions, usually worked full-time or part-time, occupational tenure);

(b) education history (highest degree obtained, year degree earned, field of study);

(c) disability and health status (work disability, functional limitations, perceived health status, health and life insurance coverage);

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[2]The survey covers the civilian noninstitutional population of the United States and members of the Armed Forces living off post or with their families on post. "Group quarters" are excluded from the results shown in this paper. Group quarters include units which consist of unrelated individuals living together in quarters that may have separate rooms but share common facilities such as dining halls. Individuals in group quarters would not normally share financial resources.

(d) pension plan coverage and retirement expectations (pension plan coverage, vested rights, age at which expect to retire, social security coverage); and

(e) characteristics of job from which retired (retired from job, year retired, number of years worked, amount of pension).

The first three modules were collected in the third wave of interviews, while the latter two were collected in the fourth wave. To create the data set for this study, the third wave information for the householder was matched to the fourth wave data.[3] For married-couple households, third wave information for the spouse of the householder was also matched to the fourth wave data. This data set is unique in that other household surveys which concentrate on wealth holdings do not collect such detailed information on other subject areas.

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[3]Under the SIPP survey procedures, the first person listed in whose name the home is owned or rented is designated as the householder (or reference person). If the house is owned or rented jointly by a married couple, either the husband or the wife may be listed first, thereby becoming the householder. One person per household is designated as the householder.

III. THE MODEL

Wealth holdings are determined by initial or inherited wealth (Wo) and savings, compounded according to the types of assets held and the length of time held [Blau and Graham, 1985]. Wealth holdings at time t (W_t) can be expressed as

$$W_t = W_0(1+r)^t = \sum_{i=1}^{t} S_i(1+r)^{t-1}$$

where

W_0 is initial wealth holdings, r is an average rate of return on investments and S_i is savings in period i. The models presented in this section examine the relation of demographic and economic characteristics of households to current wealth holdings. The models are not structural models which estimate causual relations, but rather can be considered reduced form models measuring the correlation of exogenous variables to endogenous variables. The models control for various factors and are estimated for various types of households. In this way, the marginal correlation between household wealth holdings and various independent variables can be estimated, holding a set of control factors constant.

Three types of asset holdings are examined including: (a) total net worth or the value of all assets minus all liabilities; (b) financial assets defined as total net worth minus home equity and equity in vehicles; (c) liquid financial assets which includes checking accounts, interest earning assets at financial institutions[4], savings bonds, IRA or KEOGH accounts, and stocks and mutual fund shares.

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[4]These include savings accounts, money market funds, government securities, corporate bonds and other interest earning assets.

The models regress household wealth on current household income, factors related to past income and savings streams (work history, educational attainment, and health status), demographic variables (age, race, Spanish-origin, number of children), factors related to savings for precautionary needs (life and health insurance coverage), and characteristics related to retirement savings motives (expected retirement age, pension plan coverage, social security coverage). The regressions were estimated separately for married couple households and for other types of households. The variables included in the model and their expected relationships are described below.

Household income is expected to be positively correlated with wealth holdings. Households with higher income have greater resources available for savings and asset accumulation. Results in table 1 show that households with higher income have significantly higher net worth. Median net worth increases from $5,080 for the lowest income group to $123,470 for the highest income category. To avoid the problem of assets generating income, nonproperty income is used in the regressions.

In addition to current income, wealth holdings are related to past income streams and permanent income. Several characteristics such as lifetime work experience, educational history and health status, are related to past income levels and the household's permanent income. Due to a lack of other information, analysts have often used several proxies for work experience, such as age minus education minus six. SIPP, however, collected several aspects of work experience more directly. This information includes: (a) year first worked 6 straight months or longer; (b) number of years person worked 6 months or longer; (c) whether usually worked full-time or part-time; and, (d) periods since age 21 when person did not work for 6 months or longer and reason for not working. Lifetime work experience variables for the householder and spouse are included in the model.

Table 1. Net Worth by Monthly Household Income, 1984

Monthly Household Income	Number of Households (thous.)	Median Net Worth	Mean Net Worth
Total.....	86,790	$ 32,677	$ 78,734
Less than $900....	22,297	5,080	29,659
$900 to $1,999....	26,599	24,647	52,719
$2,000 to $3,999..	27,173	46,744	80,074
$4,000 and over...	10,720	123,474	242,055

Source: U.S. Bureau of the Census, 1986.

Education history is also expected to be positively related to permanent income. In addition to the number of years of schooling completed, SIPP collects information on highest degree obtained, year degree was obtained, and field of study.

Physical or mental conditions which limit the type or amount of work the individual can perform can have a negative effect on income streams. In addition, persons with health limitations may have higher out of pocket expenses for medical care. To control for these factors, information collected in SIPP is used, including perceived health status (excellent, very good, fair, poor), work disablity status (health or condition that limits the kind or amount of work performed at a job or business), and functional impairment status (the ability to perform a set of physical activities including seeing, hearing, walking or getting around).

Demographic characteristics are included in the model to control for differences in propensity to save and demand for different asset types. Age of the householder is expected to be correlated with net worth since increasing age provides a greater opportunity for asset accumulation. In addition, the lifecycle hypothesis of savings suggests that asset holdings increase during work life and decline after retirement [Modigliani and Ando, 1963]. Table 2 shows that median net worth increased from $5,760 for the youngest householders to $73,660 for householders 55 to 64 years old and then declined to $55,180 for the oldest age group. Other demographic characteristics included are race and Spanish origin, and for unmarried householders, the marital status and sex of the householder. For younger households, the number of children is included in the model. Studies have found that savings tend to decline with the number of children present, but increase with the number of children who have left the household [Blinder, Gordon and Wise, 1983].

Table 2. Net Worth by Age of the Householder, 1984

Age of Householder	Number of households (thous.)	Median Net Worth	Mean Net Worth
Less than 35 years..	25,730	$ 5,764	$ 22,703
35 to 44 years.....	17,393	35,581	69,480
45 to 54 years.....	12,596	56,791	115,263
55 to 64 years.....	12,920	73,664	130,498
65 and over.....	18,151	60,266	104,851
65 to 69 years....	5,668	66,621	125,420
70 to 74 years....	5,014	60,573	103,435
75 and over.....	7,468	55,178	90,189

Source: U.S. Bureau of the Census, 1986.

Retirement decisions also affect savings and wealth. Earlier retirement and longer life expectancy increase the need for asset accumulation during work life in order to provide for consumption after retirement. However, the availability of Social Security and other pension plans tend to reduce the need for private accumulation and may encourage earlier retirement [Modigliani, 1986]. To control for retirement expectations, the expected age of retirement is used. In addition, SIPP collects information on whether a pension plan was provided for any employee through an employer or union, whether the person was covered by the plan and, if covered, whether the person had vested rights in the plan. To examine the effect of Social Security coverage, a variable is included whether the householder expects to receive benefits from their own work experience.

Finally, uncertainties in life expectancy and in major medical expenses increase the need of savings for precautionary reasons. These uncertainties tend to increase wealth holdings and reduce decumulation of assets after retirement [Davies, 1981]. However, life and health insurance can cover for some unexpected needs. Insurance coverage can reduce risk and reduce the need for wealth accumulation. SIPP collects information on whether individuals are covered by life insurance and the face value of the policy, as well as whether the householder and family have a private health insurance coverage, either a government or private health insurance.

IV. EMPIRICAL RESULTS

The models presented in this section regress household net worth, financial holdings, and liquid assets on the demographic and economic characteristics of households discussed above. Net worth and asset holdings are concentrated towards the lower end and have a log-normal distribution. As a result, a log linear form was chosen

$$\ln(NW) = b_0 + b_1 \ln(NPINC) + \sum_i b_i \, DEMO_i$$

$$+ \sum_j b_j \, WEXP_j + \sum_k b_k \, RET_k + \sum_l b_l \, OTH_l + e$$

where

NW is household net worth, NPINC is monthly household nonproperty income, DEMO are various demographic characteristics of the householder, WEXP are lifetime work experience variables, RET are pension plan characteristics, and OTH are other variables controlled for in the model. Similar models were estimated for financial assets and liquid assets.

The regressions were estimated separately for married-couple household (which includes variables related to the spouse) and for other households with unmarried householders. In addition, since some variables relate to labor force characteristics and some to retirement plans, the universe was further defined for relevant age groups. The regressions were estimated for householders 21 to 64 years old, the universe asked the work experience and pension plan coverage questions in SIPP, and for householders 65 and over.

The mean value of the variables are shown in Table 3. Married-couple households had greater financial resources than other households. For example, married-couple households had a mean net worth of $102,032 compared to $46,962 for other households, and had liquid assets of $22,564 compared to

Table 3. Mean Value of Regression Variables

Variables	Married-Couple Households			Other Households		
	Total	Householder 21 to 64	Householder 65 and over	Total	Householder 21 to 64	Householder 65 and over
Dependent Variables						
Net Worth	102,032.	94,372.	146,563.	46,962.	37,445.	72,166.
Financial Assets	55,716.	49,672.	90,063.	24,134.	18,349.	39,293.
Liquid Assets	22,564.	17,018.	53,155.	14,701.	8,994.	29,146.
Non Property Income	2,698.	2,918.	1,565.	1,365.	1,610.	804.
Demographic Characteristics						
Age	46.5	41.9	72.1	49.4	39.4	75.2
Males	(X)	(X)	(X)	(X)	(X)	(X)
Black	.07	.07	.06	.17	.19	.11
Other	.02	.03	.01	.02	.02	.01
Spanish origin	.05	.05	.03	.05	.06	.02
Years of education						
Householder	12.60	13.00	10.49	12.02	12.86	9.97
Spouse	12.39	12.67	10.90	(X)	(X)	(X)
Metropolitan Area						
Less than 1,000,000	.35	.35	.33	.34	.33	.34
Greater than 1,000,000	.37	.38	.35	.44	.47	.37
Labor Force Variables						
Householder						
Self-employed	(X)	.17	(X)	(X)	.08	(X)
Years of Work Experience	(X)	22.43	(X)	(X)	15.67	(X)
Usually Worked Full-time	(X)	.96	(X)	(X)	.84	(X)
Number of Interruptions	(X)	.07	(X)	(X)	.21	(X)
Spouse						
Self-employed	(X)	.08	(X)	(X)	(X)	(X)
Years of Work Experience	(X)	12.36	(X)	(X)	(X)	(X)
Usually Worked Full-time	(X)	.75	(X)	(X)	(X)	(X)
Number of Interruptions	(X)	.28	(X)	(X)	(X)	(X)

Table 3. Mean Value of Regression Variables (Cont.)

Variables	Married-Couple Households			Other Households		
	Total	Householder 21 to 64	Householder 65 and over	Total	Householder 21 to 64	Householde 65 and over
Pension Plans						
Covered by Plan	(X)	.14	(X)	(X)	.12	(X)
Vested Rights in Plan	(X)	.34	(X)	(X)	.22	(X)
Expect Social Security benefits	(X)	.32	(X)	(X)	(X)	(X)
Years Retired	(X)	(X)	4.77	(X)	(X)	2.94
Retired	(X)	(X)	.45	(X)	(X)	.25
Health Characteristics						
Householder						
Health (Very Good or Excellent)	.59	.65	.26	.48	.58	.23
Work Disability	.14	.12	(X)	.16	.16	(X)
Functional Limitation	.06	.11	.30	.19	.13	.32
Severe Functional Limitation	.06	.03	.19	.14	.06	.33
Spouse						
Work Disability	.13	.11	(X)	(X)	(X)	(X)
Functional Limitation	.19	.14	.47	(X)	(X)	(X)
Severe Functional Limitation	.07	.04	.20	(X)	(X)	(X)
Health Insurance Coverage	.87	.88	.80	.69	.70	.66
Life Insurance Coverage	.81	.83	.72	.59	.62	.55

$14,701 for other households. Married-couple households had a mean monthly household nonproperty income of $2,698, while other households had such income of $1,365. There were also significant differences in demographic characteristics. For example, married-couple households had fewer Black householders.

The regression results are shown in Tables 4, 5 and 6 for net worth, financial holdings and liquid assets, respectively. The regression F tests are significant for all regressions and the R-squares ranged from .29 to .32 for married-couple households and from .32 to .35 for other households. Since SIPP has a complex survey design, the t-statistics have been adjusted for a design effect.

The results showed a positive and significant relation between net worth and nonproperty income. Since a log linear model was used, the regresion coefficient of nonproperty income measures the elasticity of net worth with respect to income, holding other factors constant.[5] For married-couple households a 1 percent change in nonproperty income resulted in a .28 percent change in net worth. For other households, there was a .43 percent change in net worth from 1 percent change in income. The elasticities were larger for elderly householders. There was a similar positive relation between income and holdings of financial and liquid assets. The impact of income on liquid assets was relatively greater as expected, since changes in income are

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[5] In terms of partial derivatives, the coefficient is $b_1 = \partial \ln(NW) / \partial \ln(NPINC) = \partial / \partial NW \,(\ln NW) * \partial NW / \partial NPINC * \partial / \partial NPINC \left(\frac{1}{\ln NPINC}\right) = \partial NW / \partial NPINC \cdot \left(\frac{NPINC}{NW}\right) =$ point elasticity of net worth to nonproperty income.

Table 4. Regression Results for Log of Total Net Worth

(t-statistics in parentheses)

Variables	Married-Couple Household			Other Households		
	Total	Householder 21 to 64	Householder 65 and over	Total	Householder 21 to 64	Householder 65 and over
Log Monthly Non-Property Income.	.275* (8.17)	.272* (7.42)	.401* (4.33)	.429* (10.18)	.410* (8.42)	.602* (5.45)
Demographic Characteristics						
Age	.241* (19.99)	.101* (16.71)	.026* (2.41)	.191* (12.28)	.111* (14.94)	.065* (5.20)
Age Squared	-.002* (-13.13)	(X)	(X)	-.001* (-6.77)	(X)	(X)
Black	-1.551* (-13.50)	-1.44* (-11.26)	-1.61* (-7.00)	-2.02* (-15.65)	-1.94* (-13.02)	-1.76* (-6.62)
Other	-.523 (-2.78)	-.297 (-1.47)	-1.88* (-3.78)	-.574** (-1.72)	-.282 (-.76)	-1.65** (-1.91)
Spanish origin	-.693 (-4.98)	-.582* (-3.84)	-.765* (-2.28)	-1.44* (-6.50)	-1.27* (-5.13)	-2.37* (-4.32)
Years of education						
Householder	.069* (6.78)	.057* (4.85)	.071* (4.14)	.105* (7.18)	.090* (4.62)	.098* (4.36)
Spouse	.082* (7.33)	.071* (5.49)	.081* (4.29)	(X)	(X)	(X)
Males	(X)	(X)	(X)	.327* (3.31)	.251* (2.05)	-.146 (-.75)
Metropolitan Area						
Less than 1,000,000	-.100 (1.38)	-.013 (-.16)	-.106 (-.79)	-.271* (-2.16)	-.146 (-.91)	-.356** (-1.79)
Greater than 1,000,000	-.129** (-1.74)	-.032 (-.38)	-.067 (-.49)	-.535* (-4.35)	-.421* (-2.70)	-.642* (-3.23)
Labor Force Variables						
Householder						
Self-employed	(X)	1.27* (13.32)	(X)	(X)	1.63* (7.55)	(X)
Years of Work Experience	(X)	-.004 (-.88)	(X)	(X)	-.007 (-.97)	(X)
Full-time	(X)	.581* (3.48)	(X)	(X)	.526 (3.24)	(X)
Number of Interruptions	(X)	-.296 (-3.26)	(X)	(X)	-.207* (-2.16)	(X)
Spouse						
Self-employed	(X)	.551* (4.59)	(X)	(X)	(X)	(X)
Years of Work Experience	(X)	.013* (3.78)	(X)	(X)	(X)	(X)
Usually worked full-time	(X)	.047 (.62)	(X)	(X)	(X)	(X)
Number of Interruptions	(X)	-.088** (-1.79)	(X)	(X)	(X)	(X)

Table 4. Regression Results for Log of Total Net Worth (continued)

(t-statistics in parentheses)

Variables	Married-Couple Household			Other Households		
	Total	Householder 21 to 64	Householder 65 and over	Total	Householder 21 to 64	Householde 65 and over
Pension Plans						
Covered by Plan	(X)	.267* (2.58)	(X)	(X)	-.170 (-.91)	(X)
Vested Rights in Plan	(X)	.443* (5.43)	(X)	(X)	.179 (1.11)	(X)
Expected Retirement Age	(X)	-.003* (-2.11)	(X)	(X)	.0003 (0.19)	(X)
Expect Social Security benefits	(X)	.020 (.20)	(X)	(X)	.103 (.521)	(X)
Years Retired	(X)	(X)	-.203 (-.24)	(X)	(X)	.004 (.21)
Retired	(X)	(X)	.061 (.33)	(X)	(X)	1.68 (.52)
Health Characteristics						
Householder						
Health (Very Good or Excellent)	.303* (4.38)	.313* (4.06)	.077 (.58)	.458* (4.16)	.514* (3.88)	.210 (1.05)
Work Disability	-.223* (-2.26)	-.128 (-1.04)	(X)	-.329* (-2.18)	-.233 (-1.16)	(X)
Functional Limitation	-.073 (-.78)	-.123 (-1.09)	-.071 (-.54)	-.102 (-.72)	-.188 (.11)	-.260 (-1.30)
Severe Functional Limitation	-.320* (-2.21)	-.351** (-1.71)	-.475* (-3.02)	-.675* (-3.82)	-.555** (-1.91)	-.920* (-4.25)
Spouse						
Work Disability	-.276* (-2.72)	-1.97 (-1.58)	(X)	(X)	(X)	(X)
Functional Limitation	-.137 (-1.43)	-.078 (-.68)	-.329* (-2.53)	(X)	(X)	(X)
Severe Functional Limitation	-.087 (-.62)	-.190 (-.99)	-.09 (-.57)	(X)	(X)	(X)
Health Insurance Coverage	.988* (10.51)	.968* (8.63)	.876* (5.95)	1.48* (12.76)	1.40* (9.02)	1.50* (8.12)
Life Insurance Coverage	.505* (6.26)	.544* (5.61)	.180 (1.40)	.526* (5.12)	.672* (4.98)	.264 (1.62)
Constant	-2.491	-.396	4.22	-3.53	-.244	-.58
R-square	.29	.29	.28	.32	.32	.23
F-tests	286.72*	154.79*	47.23*	276.87*	133.80*	50.24*

Table 5. Regression Results for Log of Financial Assets

(t-statistics in parentheses)

Variables	Married-Couple Household			Other Households		
	Total	Householder 21 to 64	Householder 65 and over	Total	Householder 21 to 64	Householder 65 and over
Log Monthly Non-Property Income.	.236* (4.46)	.298* (5.30)	.341* (2.16)	.256* (5.42)	.264* (4.86)	.411* (3.27)
Demographic Characteristics						
Age	.260* (13.66)	.172* (18.64)	.080* (4.42)	.110* (6.31)	.118* (14.29)	.112* (7.88)
Age Squared	-.113 (-5.91)	(X)	(X)	.0001 (.42)	(X)	(X)
Black	-1.81* (-15.51)	-2.49* (-12.69)	-2.92* (-7.46)	-2.34* (-16.16)	-2.05* (-12.33)	-2.91* (-9.62)
Other	-.175* (-2.78)	-.021 (-1.47)	-.793 (-.93)	-.624** (-1.66)	-.337 (-.82)	-1.68** (-1.71)
Spanish origin	-.757* (-3.45)	-.549* (-2.36)	-1.84* (-3.21)	-.856* (-3.45)	-.558* (-2.03)	-2.32* (-3.72)
Years of education						
Householder	.164* (10.20)	.130* (7.17)	.199* (6.77)	.216* (13.20)	.207* (9.59)	.177* (6.97)
Spouse	.165* (9.33)	.147* (7.44)	.130* (4.03)	(X)	(X)	(X)
Males	(X)	(X)	(X)	.674* (6.08)	.635* (4.64)	.170 (.77)
Metropolitan Area						
Less than 1,000,000	-.100 (-.32)	-.013 (1.49)	-.294 (-1.28)	.083 (.59)	.114 (.64)	.070 (.31)
Greater than 1,000,000	.023 (.20)	.236** (1.84)	-.055 (-.22)	.362* (2.63)	.483* (2.78)	.169 (.75)
Labor Force Variables						
Householder						
Self-employed	(X)	2.82* (19.18)	(X)	(X)	2.39* (9.86)	(X)
Years of Work Experience	(X)	-.006 (-.71)	(X)	(X)	.002 (.30)	(X)
Full-time	(X)	-.060 (-.23)	(X)	(X)	-.177 (-.78)	(X)
Number of Interruptions	(X)	-.32* (-2.36)	(X)	(X)	-.254* (-2.38)	(X)
Spouse						
Self-employed	(X)	.951* (5.16)	(X)	(X)	(X)	(X)
Years of Work Experience	(X)	.013* (2.38)	(X)	(X)	(X)	(X)
Usually Worked Full-time	(X)	-.022 (-.19)	(X)	(X)	(X)	(X)
Number of Interruptions	(X)	-.200* (-2.65)	(X)	(X)	(X)	(X)

Table 5. Regression Results for Log of Financial Assets (continued)

(t-statistics in parentheses)

Variables	Married-Couple Household			Other Households		
	Total	Householder 21 to 64	Householder 65 and over	Total	Householder 21 to 64	Householder 65 and over
Pension Plans						
Covered by Plan	(X)	.181 (1.14)	(X)	(X)	-.023 (.11)	(X)
Vested Rights in Plan	(X)	.300* (2.39)	(X)	(X)	.032 (.18)	(X)
Expected Retirement Age	(X)	-.009* (-3.58)	(X)	(X)	-.003 (-1.11)	(X)
Expect Social Security benefits	(X)	.036 (0.24)	(X)	(X)	.200 (.91)	(X)
Years Retired	(X)	(X)	.011 (.46)	(X)	(X)	-.022 (-.92)
Retired	(X)	(X)	-.178 (-.56)	(X)	(X)	.92* (2.50)
Health Characteristics						
Householder						
Health (Very Good or Excellent)	.564* (5.17)	.596* (5.04)	.190 (.84)	.556* (4.50)	.669* (4.54)	.139 (.61)
Work Disability	-.272** (-1.75)	-.221 (-1.18)	(X)	-.316** (-1.87)	-.258 (-1.15)	(X)
Functional Limitation	-.290* (-1.97)	-.356* (-2.06)	-.301 (-1.34)	-.252 (-1.58)	-.173 (-.81)	-.416* (-1.82)
Severe Functional Limitation	-1.14* (-5.02)	-1.22* (-3.88)	-1.15* (-4.30)	-1.05* (-5.28)	-.843* (-2.60)	-1.18* (-4.80)
Spouse						
Work Disability	-.454* (-2.84)	-.409* (-2.14)	(X)	(X)	(X)	(X)
Functional Limitation	-.273** (-1.81)	-.236 (-1.34)	-.330 (-1.49)	(X)	(X)	(X)
Severe Functional Limitation	-.318 (-1.44)	-.171 (-.58)	-.533** (-1.95)	(X)	(X)	(X)
Health Insurance Coverage	.926* (6.25)	.900* (5.23)	1.41* (5.60)	1.48* (11.35)	1.24* (7.19)	1.86* (8.86)
Life Insurance Coverage	.402* (3.17)	.446* (3.00)	.501* (2.29)	.383* (3.32)	.597* (3.98)	.155 (.84)
Constant	-9.39	-8.24	-3.29	-5.98	-6.33	-6.09
R-square	.29	.30	.32	.34	.29	.30
F-tests	281.85*	163.06*	52.95*	197.14*	116.87*	70.97*

(X) - Not applicable.

* - Significant at the .05 level.

** - Significant at the .10 level.

Table 6. Regression Results for Log of Liquid Assets

(t-statistics in parentheses)

Variables	Married-Couple Household			Other Households		
	Total	Householder 21 to 64	Householder 65 and over	Total	Householder 21 to 64	Householder 65 and over
Log Monthly Non-Property Income.	.424* (9.83)	.425* (9.32)	.465* (2.86)	.356* (8.22)	.345* (7.31)	.451 (3.40
Demographic Characteristics						
Age	.065* (4.18)	.116* (15.48)	.086* (4.63)	.024 (1.52)	.097* (13.54)	.10 (7.00
Age Squared	.0005* (2.98)	(X)	(X)	.007* (4.43)	(X)	(X
Black	-1.98* (-13.46)	-1.88* (-11.91)	-2.48* (-6.14)	-1.99* (-15.06)	-1.82* (-12.59)	-2.73 (-8.53
Other	-.066* (-2.78)		-.396 (-.45)	-.100 (-.29)	.109 (.30)	-1.66 (-1.60
Spanish origin	-.736* (-4.12)	-.661* (-3.51)	-1.56* (-2.65)	-.848* (-3.73)	-.640* (-2.68)	-1.86 (-2.83
Years of education						
Householder	.152* (11.62)	.132* (8.98)	.196* (6.44)	.235* (15.73)	.252* (13.44)	.17 (6.54
Spouse	.158* (11.03)	.160* (9.99)	.105* (3.15)	(X)	(X)	(X)
Males	(X)	(X)	(X)	.206* (2.03)	.186 (1.56)	.17 (.74
Metropolitan Area						
Less than 1,000,000	.483* (5.16)	.571* (5.60)	.235 (.99)	.442* (3.43)	.441* (2.83)	.45 (1.91
Greater than 1,000,000	.712* (7.49)	.787* (7.61)	.514* (2.17)	.683* (5.41)	.764* (5.06)	.47 (2.01
Labor Force Variables						
Householder						
Self-employed	(X)	.762* (6.41)	(X)	(X)	.334 (1.59)	(X
Years of Work Experience	(X)	.002 (.40)	(X)	(X)	-.003 (-.48)	(X
Full-time	(X)	-.169 (-.82)	(X)	(X)	-.274** (-1.74)	(X
Number of Interruptions	(X)	-.156 (-1.38)	(X)	(X)	-.123 (-1.33)	(X
Spouse						
Self-employed	(X)	.125 (.84)	(X)	(X)	(X)	(X
Years of Work Experience	(X)	.014* (3.25)	(X)	(X)	(X)	(X
Usually Worked Full-time	(X)	-.124 (-1.31)	(X)	(X)	(X)	(X
Number of Interruptions	(X)	-.124* (-2.02)	(X)	(X)	(X)	(X

Table 6. Regression Results for Log of Liquid Assets (continued)

(t-statistics in parentheses)

Variables	Married-Couple Household			Other Households		
	Total	Householder 21 to 64	Householder 65 and over	Total	Householder 21 to 64	Householder 65 and over
Pension Plans						
Covered by Plan	(X)	.358* (2.78)	(X)	(X)	.167 (.93)	(X)
Vested Rights in Plan	(X)	.418* (4.12)	(X)	(X)	.271** (1.77)	(X)
Expected Retirement Age	(X)	-.013* (-6.49)	(X)	(X)	-.008* (-3.06)	(X)
Expect Social Security benefits	(X)	.197 (1.62)	(X)	(X)	.047 (.25)	(X)
Years Retired	(X)	(X)	.016 (.65)	(X)	(X)	-.029 (-1.13)
Retired	(X)	(X)	.096 (.29)	(X)	(X)	1.24* (3.18)
Health Characteristics						
Householder						
Health (Very Good or Excellent)	.494* (5.56)	.566* (5.92)	.065 (.28)	.516* (4.57)	.654* (5.10)	.212 (.88)
Work Disability	-.105 (-.83)	-.221 (-1.30)	(X)	-.277** (-1.79)	-.342** (-1.76)	(X)
Functional Limitation	-.231** (-1.93)	-.271** (-1.94)	-.161 (-.70)	-.239** (-1.65)	-.219 (-1.18)	-.369 (-1.53)
Severe Functional Limitation	-1.04* (-5.60)	-1.20* (-4.73)	-.954* (-3.46)	-.985* (-5.43)	-.903* (-3.20)	-1.05* (-4.05)
Spouse						
Work Disability	-.314* (-2.41)	-.339* (-2.19)	(X)	(X)	(X)	(X)
Functional Limitation	-.158 (-1.28)	-.954 (-.67)	-.328 (-1.43)	(X)	(X)	(X)
Severe Functional Limitation	-.422* (-2.34)	-.296 (-1.24)	-.564 (-2.00)	(X)	(X)	(X)
Health Insurance Coverage	1.53* (12.71)	1.40* (10.03)	1.68* (6.50)	1.80* (15.12)	1.54* (10.23)	2.04* (9.20)
Life Insurance Coverage	.854* (8.25)	.813* (6.77)	.787* (3.49)	.599* (5.69)	.799* (6.13)	.266 (1.36)
Constant	-7.05	-8.00	-6.16	-5.06	-6.69	-7.07
R-square	.32	.31	.31	.35	.33	.28
F-tests	334.75*	184.85*	52.13*	315.93*	139.16*	67.23*

(X) - Not applicable.

* - Significant for the .05 level.

** - Significant for the .10 level.

likely to be invested, at least temporarily, in more liquid assets. For married-couple households, for example, the elasticity of financial and liquid assets with respect to income were .24 and .42, respectively.

Lifetime work experience is expected to be correlated with past income and savings streams. Information collected in the work history module of SIPP was used to create a set of variables for householders 21 to 64 years of age and their spouses. The results show that stronger labor force attachment has a positive effect on net worth. For example, interruptions lasting 6 months or longer for the householder or spouse had a negative effect on total net worth and financial assets. Householders who usually worked full-time during their worklife, as well as those who were self-employed, had higher net worth holdings. In addition, the number of years of work experience of spouses had a positive effect on net worth.

As expected, disabilities and poor health status had a negative effect on net worth. Householders with very good or excellent health status had higher net worth; work disabilities and severe functional limitations had a negative and significant effect on asset holdings.[6] For elderly householders and their spouses, health problems which resulted in severe functional limitations had a negative correlation with net worth and asset holdings.

Various factors related to retirement decisions and pension plan coverage had a significant effect on net worth for married-couple households. The

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[6]Persons were considered to have a functional limitation if they had difficulty seeing, hearing, walking, or getting around. They were considered to have a severe functional limitation if they were unable to perform one or more of these activities.

householder's expected age at retirement was negatively related to net worth for married couple households, that is, persons who expect to retire earlier had higher net worth and asset holdings. This result is consistent with the lifecycle hypothesis which suggests that longer retirement periods increase savings and the peak of wealth in order to provide for consumption after retirement [Modigliani, 1986]. In addition to expected retirement age, two binary variables were included in the model to control for the householder being covered by a private pension plan or having vested rights in a pension plan. A third variable was used to identify householders who expect to receive Social Security benefits based on their own work experience. The results show that, holding expected retirement age constant, married householders covered by a pension plan had higher net worth than the control group (married householders not covered by a private pension plan) and those with vested rights had the highest net worth. However, the expectation of receiving Social Security benefits did not have a significant effect on net worth.

Uncertainities in life expectancies and in major medical expenses increase the need for savings for precautionary reasons. Life and health insurance coverage, however, can reduce the risk and need for asset accumulation. Two binary variables were used to identify persons with private health and life insurance coverage. Results show that private health insurance coverage was related to net worth holdings; households covered had higher net worth and asset holdings. Life insurance coverage was also positively related to net worth and asset holdings for married couple householders and unmarried householders less than 65 years old. The results may reflect greater risk avoidance behavior on the part of covered householders who, in addition to having insurance coverage, have higher wealth holdings.

Even when income, work experience, health status and other factors were controlled for, there were important differences in wealth holdings by demographic characteristics such as age, race, and educational level. As shown in Table 2, elderly householders have significantly greater median net worth than younger householders. Elderly persons have had a longer time period to accumulate home equity, other assets, and wealth. In addition, the lifecycle hypothesis of savings suggests that asset holdings increase during the work life and decline after retirement. The age of the householder and age squared were used in the model to test for a nonlinear relationship between net worth and age. The coefficients for the age variables were significant and indicated a lifecycle relationship between net worth and age. The coefficient for age was positive and for age squared was negative. For example, according to the coefficient for married couple households, net worth increased to 60.3 years of age and then declined at a slow rate thereafter.

Two binary variables were used to classify the householder into three race categories (White, Black and Other) and another binary variable was included for Spanish origin of the householder. The regression results indicate that Black householders and those of Spanish origin had lower asset holdings; the coefficients were significant and negative. This was consistent across age groups and asset holdings. Black householders had the lowest net worth when all other variables are held constant. The "Other" race variable was negative but not significant in all cases. In addition to the race and Spanish origin variables, a binary variable was included in the regressions

for unmarried households which controlled for the sex of the householder. Holding other factors constant, male householders had higher asset holdings than female-headed households. Lastly, the results indicate that net worth and asset holdings increase with educational attainment. The years of education of the householder had a positive and significant effect on net worth. In addition, the educational level of the spouse is also positive and significant.

Summary

In this paper, we examine the demographic and economic characteristics of households associated with net worth and asset holdings. Information on lifetime work experience, health status and disabilities, retirement expectations and pension plan coverage, and characteristics of the job from which retired, which were collected on other modules of SIPP, was matched to the wealth data collected in the survey. This data set provides a wide array of factors used to analyze household net worth.

The results from models estimated for net worth, financial holdings and liquid assets suggest that several characteristics are related to net worth and asset holdings. Nonproperty income is positively related with net worth. In addition, householders and spouses with greater labor force attachment had higher net worth holdings. Retirement expectations and pension plan coverage were also important. Householders who expected to retire earlier had higher net worth. Furthermore, coverage and vested rights in employer provided pension plans were associated to net worth holdings. However, householders in poor health or with disabilities had lower net worth. Holding these factors constant, there were also significant differences by demographic characteristics.

In general, Black or Spanish origin householders had lower net worth and asset holdings, while those with more educational attainment had higher net worth.

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