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Asset Accumulation In Early Married Life

ROBERT FERBER and LUCY CHAO LEE*

ABSTRACT

This longitudinal study of the factors influencing the accumulation of financial assets by young married couples in three metropolitan areas of Illinois, finds that couples that start out with a strong financial base tend to improve their relative financial position over time. Especially intriguing is the finding that those couples that acquired initially substantial amounts of debt were more likely to be well off financially at a later time, possibly because the principal asset purchased with these debts, own home, appreciated substantially during the period studied.

The results also suggest that a measure of normal income becomes relevant to explaining variations in asset accumulation only after five or six years of the marriage, while socioeconomic variables other than income seemed to have relatively little effect on changes in asset holdings over time.

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I. Introduction

WHAT INFLUENCES THE ACCUMULATION of financial assets by young married couples? Do couples that start out with more assets tend to maintain this lead over time? Do couples that borrow tend to be better or worse off financially than those who do not? To what extent can asset accumulation be explained in terms of some of the current concepts of consumer finance?

Questions such as these are considered in this study. They are explored by making use of asset and other information collected from two localized panels of young married couples. One was a sample of the young couples married in the Summer of 1968 in the cities of Peoria and Decatur, Illinois, and the other is a sample of the young couples married in the Chicago Metropolitan Area in the Summer of 1972. Both of these panels were interviewed at the same time, and with the same survey instruments as the Decatur-Peoria panel after it was launched. As described in further detail later, the data used in this study relate to the first eight years of marriage of the Decatur-Peoria panel members and the first three years of marriage of the Chicago panel members.

Based on these data, this paper explores a number of questions relating to the determinants of asset position. One such question is whether a concept of permanent, or normal, income provides a more effective explanation of asset accumulation than current income. This would seem a logical hypothesis since

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most asset accumulation is made with long run objectives in mind, so that some more permanent concept than observed income may be more relevant.

A second is the effect of debt on asset accumulation. Although this question has not been explored much in the earlier research, it is a frequent subject of discussion, namely, whether couples that incur large amounts of debt are more likely to improve their asset position (particularly net assets) than couples with smaller amounts of debts.

A third question relates to the effect of initial asset holdings on later asset accumulation. Is it true, for example, that the "rich get richer" from the very start of the marriage?

A fourth question is the extent to which variables other than socioeconomic help explain variations in savings. To what extent, for example, do attitudinal variables help in this regard? What about other variables that may reflect asset accumulation tendencies? Two such types of variables are available for this study, namely, attitudes toward saving (including plans if any for saving), and measures of ownership of credit cards and of durable goods.

In addition, a set of questions was asked that led to a classification of one or both members of the couple as the "family financial officer" (*FFO*). Does it make any difference in explaining savings behavior whether the wife or the husband is the *FFO*?

As a basis for specification of alternative models, we begin by reviewing some of the previous work in this subject area. The data set and its characteristics are described in Section III. The presentation of the general analytical approach, in Section IV, is followed by the results in Section V. A concluding section reviews and discusses the implications of the findings.

II. Earlier Studies

Until recent years, the principal attention given to consumer assets in the economics literature was to their role as an independent variable, partly as an input into the investment stream and partly as a determinant of consumption and saving behavior. The general tendency in the classical literature has been to treat consumer assets as an exogenous variable, determined by savings accumulations over many past periods and, hence, as a given quantity in explaining some aspect of consumer spending or saving behavior in the current period. The principal exceptions seem to have been Irving Fisher's treatise investigating, in part, the influence of interest rates on asset accumulation [5], and discussions such as those by Keynes on the reasons for holding particular types of assets.

It is only in the last 20 or 30 years that much attention has been given to seeking to explain the level and composition of consumer asset holdings, partly perhaps because of the increasing amounts of such assets and partly (and not unrelatedly) because of the increasing amount of data available on the subject. Even so, empirical treatment of the determinants of total asset holdings or of net worth are few and far between, and models of the asset accumulation process in the early stages of the life cycle seem to be nonexistent. Indeed, on a cross-section basis, which is of primary relevance to the present study, only two such studies

can be cited, both based on the 1962–63 Federal Reserve Survey of Family Financial Holdings and focusing on determinants of net worth. Thus, both Crockett and Friend [3], and Projector and Weiss [10], found that income, age and various other socioeconomic variables affected net worth holdings and that the long-run normal income elasticity of net worth tends to exceed unity.

A number of other studies have focused on individual assets and still others on determinants of assets divided into general categories. These latter studies could be construed as attempting to explain gross asset holdings insofar as the individual categories sum to a meaningful total, and it would therefore seem useful to summarize briefly these principal studies.

By running regressions with a different asset holding as dependent in each case, Watts and Tobin, using the data from the 1950 BLS Consumer Expenditures Study, concluded that “households tend to maintain some sort of balance in their capital accounts both between assets yielding direct service and financial assets, and between liquid funds and liabilities” [12]. They, as well as Guthrie at a later time [6], found that as households moved up the economic scale, more of all kinds of assets were acquired and debts were reduced.

This absence of substitution among assets was also observed in a study involving pension contributions by Cagan [1], and in a study of a different set of data by Henry Claycamp [2]. Based on that study, Claycamp propounded a so-called “independence hypothesis,” that “the aggregate distribution of assets. . . approximates that which would be found if the ownership of assets were independent” [2].

Studying the demand separately by ordinary least squares for four assets (marketable bonds, life insurance reserves, time and savings deposits in commercial banks, savings accounts in other institutions), Hamburger [7] found interest rates and total wealth to be highly significant, income to have negligible effect and some of the assets to be close substitutes for each other. The latter finding was also obtained by Darby [4].

Broader models of asset-demand functions derived from utility theory have been studied by Motley [9] and Wachtel [11]. Motley found, like Hamburger, considerable interdependence among assets, and with both permanent income and transitory income affecting asset holdings. Wachtel used four categories of assets also, but two of these (durables, and consumption excluding durables) were not financial assets. Using a partial adjustment approach, he finds that transitory income more than permanent income influences these asset holdings in addition to the lagged effects of the holdings themselves.

A roughly similar approach was taken by Hendershott and Lemmon, who estimated demand equations for financial assets within the framework of a general equilibrium flow-of-funds model of financial markets [8]. Using quarterly estimates from the flow-of-funds accounts for 1957–71, they estimated such equations in two stages. An initial set of four equations was used to estimate total financial assets of households and three categories of household liabilities, while a second set of four equations, building on the first set, estimated the division of financial assets into four categories. The findings of most relevance to the present study were a close relationship between purchase of housing and the issuance of home

mortgages, the use of capital gains on equities partly to repay liabilities and partly to increase other financial assets, and the tendency for an increase in household disposable income to increase holdings of savings accounts and reduce the demand for open-market securities.

Summing up this section, this past work would seem to suggest that a large number of cross-section variables are likely to affect total asset holdings, one of which is likely to be some concept of permanent or normal income.

III. Descriptive Aspects

As noted earlier, the data used in this study are from two panels—couples married in the summer of 1968 in the cities of Peoria and Decatur, Illinois, and couples married in the summer of 1972 in the Chicago area. In each case, the husband had to be 30 years of age or less at that time and involved only first marriages. Since these couples were interviewed approximately every six months after being selected, a sizable amount of data were collected relating to their money management and financial behavior.

More specific to the purposes of this study, a complete financial portfolio was obtained from the Peoria-Decatur couples in the third interview, when the couple had been married approximately one year, a second complete portfolio five years later, and a third two years thereafter. In the case of the Chicago panel, a financial portfolio was obtained also after the first year of marriage and another portfolio two years later in the third year of marriage (which corresponds to the third of the portfolios obtained from the Peoria-Decatur couples). The analytical focus of the study is, therefore, on the characteristics and determinants of financial asset holdings at the end of the first, sixth, and eighth years of marriage for the Peoria-Decatur couples, and those at the end of the first and third years of marriage for the Chicago couples (corresponding to the last two periods for the Peoria-Decatur panel.)¹

The other data used in the analysis refer to various characteristics and attitudes of both members of the couple. In most instances, these data were obtained for each member separately. The specific variables used are described in the later sections, and given in the appendix. Here, we examine the characteristics of the asset holdings and how they have changed over this period.

A general picture of the distribution of the couples by their total financial holdings is provided in Table I for three main quantities, namely, gross assets, total debts and net assets. Not surprisingly, the table shows that in terms of gross assets most couples had relatively little at the end of the first year of marriage. More than half of the couples had less than \$5,000 in gross assets and an even larger proportion had debts amounting to this much. As a result, about 38% of the couples in Peoria-Decatur had net assets that were either negative or

¹ A more complete description of these data is available in a brochure obtainable from the Survey Research Laboratory, University of Illinois, Urbana, Illinois 61801. It is unfortunate that financial portfolios were not obtained as of the time of marriage. From a survey point of view, however, it was felt that such an attempt would be too damaging to the cooperativeness of the panel members in view of the highly sensitive nature of this information.

Table I
Percent Distribution of Financial Holdings

Amount	Years after marriage				
	Peoria-Decatur			Chicago	
	One	Six	Eight	One	Three
<u>Gross Assets</u>					
\$ 0 to 1,000	27.5%	12.8%	3.4%	26.0%	6.9%
1,001 to 5,000	23.5	3.4	3.4	34.1	14.5
5,001 to 15,000	20.1	21.5	14.1	16.2	13.3
15,001 to 25,000	20.8	32.2	26.8	5.2	6.9
25,001 to 50,000	8.1	26.2	41.6	15.6	45.1
50,001 or more	0	4.0	10.7	2.9	13.3
	100.1%	100.1%	100.1%	100.0%	100.1%
Median	\$1,100	\$12,400	\$13,400	\$300	\$15,800
Mean	5,892	12,412	14,162	5,257	16,199
Coefficient of variation	119%	71%	67%	186%	91%
<u>Total debts</u>					
\$ 0 to 1,000	49.7%	14.8%	5.4%	64.7%	23.1%
1,001 to 5,000	10.7	6.7	12.1	13.9	11.6
5,000 to 15,000	26.2	43.0	49.0	2.9	6.4
15,001 to 25,000	2.8	29.5	22.8	11.6	36.4
25,001 to 50,000	.7	6.1	10.1	6.9	19.1
50,001 or more	0	0	.7	0	3.5
	100.1%	100.1%	100.1%	100.0%	100.0%
Median	\$1,100	\$12,400	\$13,400	\$300	\$15,800
Mean	5,892	12,412	14,162	5,257	16,199
Coefficient of variation	119%	71%	67%	186%	91%
<u>Net Assets</u>					
\$-10,001 or less	0%	.7%	0%	0%	1.7%
-10,000 to -1,001	3.4	1.3	1.3	4.0	4.0
-1,000 to 1,000	34.9	18.1	9.4	30.6	10.4
1,001 to 5,000	40.3	32.2	14.8	31.2	19.7
5,001 to 15,000	18.8	35.6	36.9	26.6	37.6
15,001 to 25,000	2.0	7.4	21.5	4.0	15.0
25,001 to 50,000	.7	2.7	10.7	2.9	9.8
50,001 or more	0	2.0	5.4	.6	1.7
	100.1%	100.0%	100.0%	99.9%	99.9%
Median	\$1,700	\$4,800	\$10,700	\$2,500	\$6,700
Mean	3,433	7,994	16,480	5,119	11,501
Coefficient of variation	144%	157%	130%	147%	123%

Note: Base is 147 families for the Decatur-Peoria panel and 173 families for the Chicago panel.

negligible. Whether it was due to inflation in four years or other factors, the Chicago couples on the average had both more gross assets and net assets than did the Peoria-Decatur couples after their first year of marriage.

Over time, the members of both panels improved their financial position substantially, all of the distributions shifting markedly to the right. Debt increased

sharply, especially among the Chicago families, but gross assests rose even more, with the result that most families increased the value of their net assets. In Peoria-Decatur, the proportion with net assets under \$1,000 dropped from 38% initially to 20% after six years of marriage and to less than 11% two years later; in Chicago, the corresponding drop was from 35% initially to less than half this proportion (16%) only two years later. At the other extreme, the proportion with net assets exceeding \$25,000 rose from less than 1% initially to 16% in Peoria-Decatur after eight years of marriage; and in Chicago from 3% the year after marriage to nearly 12% only two years later.

The Chicago families exhibited a much greater proclivity than the Peoria-Decatur families to go into debt, as is evident from the fact that their median debt was higher after three years of marriage than was that of the Peoria-Decatur families after eight years. However, much of this debt seems to have been translated into higher net assets, in view of the increase in their net assets after three years of marriage above that of the Peoria-Decatur families after six years of marriage.

It is interesting to note that, on the basis of disaggregative analysis, the only assets fairly common in both panels among the couples at the start of the marriage were checking accounts, savings accounts in banks, life insurance and a home; the frequency of the latter is not too surprising in view of the relative scarcity of apartments in these two smaller-sized cities. On the debt side, nearly 60% had a loan on a car; almost that many owed something on other personal property; and about 40% had a home mortgage. The frequency of ownership of these assets changed little over the period studied, except for pronounced increases in the frequency of ownership of a home and of common and preferred stock. Particularly relevant for the later analysis is the fact that investment in a home represented the bulk of initial assets and debts, and of the change over time. In Peoria-Decatur, for example, two-thirds of initial gross assets, 70% of initial debt and 55% of initial net assets were represented by investment in a home. With the percent owning a home rising from 44% to over 90%, the proportion of the increase in these three financial magnitudes accounted for by home ownership was 78%, 102%, and 52%, respectively.

The improvement in financial position in the early years of the marriage is further evidenced in Table II, which compares changes in net assets between years one and eight for the Peoria-Decatur panel and between years one and three for the Chicago families. In both panels, couples in a better financial position at the beginning of the marriage either maintained this position or became even better off. Thus, of the couples that had net assets initially between \$5,000 and \$15,000 in Chicago, nearly 44% had net assets exceeding \$15,000 two years later. Of the couples in Peoria-Decatur that initially had net assets between \$5,000 and \$15,000, only 14% had worsened their position after seven years of marriage, while nearly 61% had improved their position. Most interestingly, perhaps, most of the couples that started in the lowest financial category had upgraded themselves substantially.

IV. Analytical Approach

While the main focus of this section is to seek answers to the five sets of questions propounded in Section I in terms of net assets, there is also considerable interest

Table II

Percent Distribution of Net Assets for Families in Later Year For Given Level of Assets in Year 1

Amount in Year 3	Amount in Year 1				
	\$-10,000 to -1,001	\$-1,000 to 1,000	\$1,001 to 5,000	\$5,001 to 15,000	\$15,001 or more
<u>A. Chicago</u>					
\$-1,001 or less	42.9%	11.3%	1.9%	0%	0%
-1,000 to 1,000	28.6	15.1	11.1	4.3	0
1,001 to 5,000	0	32.1	27.8	4.3	0
5,001 to 15,000	28.6	28.3	42.6	47.8	23.1
15,001 to 25,000	0	1.9	13.0	34.8	15.4
25,000 or more	0	11.3	3.7	8.7	61.5
	100.1%	100.0%	100.1%	99.9%	100.0%
Number of families	7	53	54	46	13
Amount in Year 8					
	\$-10,000 to -1,000	\$-1,000 to 1,000	\$1,001 to 5,000	\$5,001 to 15,000	\$15,001 or more
<u>B. Peoria-Decatur</u>					
\$-10,000 to -1,001	20.0%	1.9%	0%	0%	0%
-1,000 to 1,000	20.0	19.2	5.0	0	0
1,001 to 5,000	0	23.1	10.0	14.3	0
5,001 to 15,000	0	40.4	45.0	25.0	0
15,001 to 25,000	40.0	9.6	30.0	17.9	50.0
25,001 or more	20.0	5.8	10.0	42.9	50.0
	100.0%	100.0%	100.0%	100.1%	100.0%
Number of families	5	52	60	28	4

in the extent to which these factors can explain variations in gross assets and debt. These latter two variables are major financial indicators of family well-being in themselves. Also, there is the possibility that a more meaningful explanation of fluctuations in net assets may be obtained through first explaining fluctuations in these other two variables. For this reason, we adopt a twin approach of seeking to explain net assets in terms of functions for gross assets, and for debts, and, on the other hand, directly by expressing net assets as a function of alternative hypothesized relevant variables.

By the indirect approach, we have a set of three equations, one expressing net assets (*NA*) as the difference between gross assets (*GA*) and debts (*TD*), and two separate equations for *GA* and for *TD* respectively. By the direct approach, we have a single equation for *NA*.

For the explanatory variables, in addition to the three dependent variables, we have the following four sets of variables:

1. A measure of family income, which may be reported income for the particular year (*Y*), or a measure of long run, or "normal", income (*Y_n*).²

² For testing the concept of normal income, its estimation is given by the following equation: $Y_n = f(Y_{t-1}, SE)$, where Y_{t-1} is the reported income at the preceding stage where applicable, and *SE* is the aforesaid socioeconomic characteristics, excepting number of children and the family financial

2. A set of socioeconomic characteristics (*SE*), which includes the age, occupation and education of the husband, whether the wife is working, as well as a variable identifying the "family financial officer." (*FFO*)³
3. A set of variables (*AT*) reflecting the budget plans of the family and the priority accorded to savings.
4. A set of variables reflecting ownership of a home (*H*) and ownership of various other financial instruments (*OF*), which include major durables and credit cards.

Going back to the studies reviewed earlier, the following two general models are formulated to explain fluctuations in net assets. For the indirect approach, we have the following recursive system:

$$\widehat{NA} = \widehat{GA} - \widehat{TD} \quad (1.1)$$

$$\widehat{GA} = f(Y, TD, SE, AT, H, OF) \quad (1.2)$$

$$\widehat{TD} = f(Y, SE, AT, H, OF) \quad (1.3)$$

In other words, we test all four sets of explanatory variables in both the *GA* and *TD* equations. In particular, to test the effect of debt or asset accumulation, and considering that much of the debt incurred by these couples was for an appreciating asset such as a home, this variable is used as explanatory in Equation 1.2. For the same reason, ownership of a home is included as a dichotomous explanatory variable in Equation 1.3.

For the direct estimation of *NA*, two forms are used, namely:

$$NA = f(Y, TD, H, SE, AT, OF) \quad (2)$$

$$NA = f(Y, GA, H, SE, AT, OF) \quad (3)$$

Once again the four set of explanatory variables are included in each equation. The difference between the two equations is the inclusion of total debts as an explanatory variable in Equation 2 and its substitution by gross assets in Equation 3. This is done to explore which of these two indicators seems to affect net assets most strongly and, also, to ascertain the extent to which net assets is influenced by debts.

The test of these two alternative approaches is based not only on the goodness of fit and the significance of the coefficients but also on the ability of each approach to estimate more closely the actual net assets of the sample families.⁴

officer (*FFO*), since the rest of these variables are considered more likely to reflect the long run level of family income. The adjusted goodness of fit R^2) for the three years for the Peoria-Decatur panel was .24, .19, and .54, respectively, with the *SE* variables dominating the regression in Year 1 and lagged income most important in Years 6 and 8; for the Chicago panel R^2 was .09 and .33, for Years 1 and 3, respectively.

³ Such identification was made on the basis of answers obtained to three questions relating to who paid the bills, who looked after excess funds and who kept track of expenditures. On the basis of these answers, it was found feasible to identify the family financial officer as the husband, wife or both, separately in each wave.

⁴ If we were interested only in estimating net assets, we could substitute Equations 1.2 and 1.3 into Equation 1.1 and estimate net assets directly from that model. However, our interest is also in ascertaining the influence of the various independent variables separately on gross assets and on total debt, which is why the three equations are not combined.

Table III
Beta Coefficients Estimates of Parameters of Assets Functions, Year 1

Independent variable	Peoria-Decatur				Chicago			
	GA1	TD1	NA1	NA1	GA1	TD1	NA1	NA1
GA1				1.00**				1.17**
TD1	.83**		+		.60**		—	
Y1	+	—	+	—	.14**	—	.29**	.13**
Homeownership	—	.62**	—	-.38**	.33**	.86**	.69**	-.45**
Number of credit cards	—	+	—	—	—	.08 ^Δ	—	-.09 ^Δ
Number of durables	—	.14*	—	—	—	+	—	-.09 ^Δ
Expense budget	-.08 ^Δ	+	-.16 ^Δ	-.14*	-.06 ^Δ	—	-.11 ^Δ	—
FFO is husband	—	+	—	—	+	—	+	+
FFO is wife	—	—	+	+	+	—	+	+
Wife works	-.09 ^Δ	—	-.18 ^Δ	—	—	—	—	—
Age (H)	.08 ^Δ	+	.17 ^Δ	+	.10**	+	.21**	+
Education (H)	.10*	+	.20**	+	—	.08*	—	—
Priority of saving (H)	+	+	+	+				
Priority of saving (W)	+	—	+	+				
Adjusted R ²	.80**	.61**	.22**	.67**	.86**	.77**	.40**	.70**

Notes: 1. Beta coefficients are shown only if significant at the .01 (**), .05 (*), or .10 (^Δ) level. Only a positive or negative sign is shown for those coefficients with less than .10 level of significance. 2. (H) refers to husband; and (W), to wife.

Another dimension to the analysis is provided by the availability of data for the Peoria-Decatur panel for three periods (Years 1, 6 and 8), and of data for the Chicago panel for two periods (Years 1 and 3). As a result, estimates of these models can be made for each of the periods separately. In addition, a further test will be made by seeing how these models estimate changes in financial holdings during the interim, that is from Year 1 to Year 8 for the Peoria-Decatur panel, and from Year 1 to Year 3 for the Chicago panel.

All parameters were estimated by ordinary least squares using linear forms, with the financial variables (*NA*, *GA*, *TD* and *Y*) in dollar terms.⁵

V. Results

Parameter estimates obtained by applying the foregoing models to Year 1 data for each panel, incorporating the alternative variations of income and other variables discussed earlier, are presented in Table III for net assets, including alternately gross assets and total debts. Only equations with current income are shown, since the normal income variable at this early stage of the marriage did not yield any meaningful, or statistically significant, results.

To bring out more clearly the principal findings, parameter estimates are given in Table III (as well as in later tables) only where they are significant at the .10 level or beyond. A variable included in a function but not significant at that level

⁵ Since there were an appreciable number of zero values, especially for Year 1, and since net assets were sometimes negative, expressing these variables in logs was not feasible.

is shown by a plus or minus for the direction of influence, while a blank space means that the variable was not included at all.

Looking at the results in Table III, we find that the adequacy of the different models, and the most important variables, vary substantially both with the model and, to a lesser extent, by the panel. Yet, by panel there are some striking similarities. In terms of dominant variables, the pattern is, essentially, as follows: gross assets is affected by total debt; total debt is affected by home ownership; and net assets is closely related to gross assets. Also, homeownership influences net assets strongly and negatively when gross assets is included in the function for both panels, which may reflect the proxy nature of the homeownership variable as a substitute for debt. Each of the best-fitting functions explains half or more of the variance in the dependent variable, even more so for the Chicago panel.

With respect to the four questions raised initially on the importance of different factors influencing asset holding, as noted earlier normal income is of no significance. Reported income dominates normal income in all equations, and is highly significant in the assets functions for the Chicago panel.

Total debt is highly significant in explaining gross assets but not in explaining net assets except through homeownership. The principal explanation lies in the fact that many of these families were borrowing fixed dollars to invest in variable dollar assets, mainly own homes, whose value was appreciating. Thus, at the time of these Year 1 interviews, over half these families had invested in a home or in marketable securities.⁶

The socioeconomic variables seem to have less effect, varying by area. Education and age of the husband are correlated with the financial variables for Peoria-Decatur; but only age is correlated positively with asset holdings for the Chicago panel.⁷ The husband's reported priority for saving seems to be positively associated with all the financial variables for Peoria-Decatur, though again the effect is not strong.

The results for Year 6 for Peoria-Decatur are not too different from those of Year 1 for that panel, as can be seen in Table IV, even though five more years of marriage had elapsed. As before, gross assets is affected primarily by total debt, which is in turn affected by home ownership as well as credit cards and number of durables owned, while net assets are dominated by gross assets. Similar to Year 1, the normal income estimate had negligible influence on each function and is therefore not shown, nor is reported income significant at even the 0.10 level for any function. The data in Table IV also suggest that owners of large amounts of gross assets or net assets in Year 1 tend to have large amounts of the same assets in Year 6. On the other hand, the socioeconomic variables have little effect, as do the saving priority variables.

The results for Peoria-Decatur for Year 8 are presented in Table V, with those

⁶ A similar explanation would seem to account for the negative coefficient for homeownership when gross assets is an independent variable in the net assets equation. If gross assets are held constant, a home-owning family will have more debt, and hence less net assets, than a non-home-owning family.

⁷ Corresponding variables for the wife were tried in earlier functions, but eliminated because of non-significance and multicollinearity with the husband variables.

Table IV
Beta Coefficient Estimates of Parameters of
Assets Functions, Year 6

Independent variables	Peoria-Decatur			
	GA6	TD6	NA6	NA6
GA6				.94**
TD6	.59**		.20**	
Y6	+	+	+	—
GA1	.23**			
TD1		+		
NA1			.48**	.15**
Homeownership	—	.38**	—	— .16**
Number of credit cards	+	.23*	—	— .09*
Number of durables	+	.16*	+	—
Expense budget	—	.15 ^Δ	—	— .08*
FFO is husband	—	+	—	—
FFO is wife	—	—	+	+
Wife works	—	—	—	+
Age (H)	—	—	—	—
Education (H)	.13 ^Δ	+	+	+
Priority for saving (H)	—	+	—	—
Priority for saving (W)	+	—	+	+
Adjusted R^2	.58**	.38**	.35**	.84**

Notes: 1. Beta coefficients are shown only if significant at the .01(**), .05(*), or .10(^Δ) level. Only a positive or negative sign is shown for those coefficients with less than .10 level of significance.
 2. (H) refers to husband; and (W), to wife.

for Chicago for Year 3; the latter, despite the difference in stage of the marriage, are fairly similar to the Year 8 results for Peoria-Decatur. The dominance of the relationships by financial variables noted in the preceding two tables still exists, but the pattern is now somewhat different. Gross assets in both panels is now affected appreciably by gross assets in the preceding period and by income, as well as by total debt. This change is most notable in the Peoria-Decatur function, in which the relative effect of previous gross assets now exceeds that of total debt; and normal income, rather than current income, is also highly significant. For the Chicago function, however, at an earlier stage of the marriage than Peoria-Decatur, total debt remains the dominant variable, though the autocorrelation effect shows up strongly too. Current income remains the more significant income term than normal income.

Total debt is still affected strongly by homeownership, particularly in the Chicago panel, where acquisition of a home was rising sharply. For the more established families in Peoria-Decatur, the homeownership variable is now slightly less important than two other financial variables—number of credit cards owned and prior debt.

Net assets is still influenced mostly by gross assets, previous net assets and homeownership also exert considerable influence on the net assets function, with

Table V
Beta Coefficient Estimates of Parameters of Assets Functions
Peoria-Decatur, Year 8 and Chicago, Year 3

Independent variable	Peoria-Decatur				Chicago			
	GA8	TD8	NA8	NA8	GA3	TD3	NA3	NA3
GA8				.95**				
TD8	.28**		—					
YN8	.25**	+	.31**	+				
GA6	.41**							
TD6		.29**						
NA6			.39**	.10**				
GA3								.77**
TD3					.63**		—	
Y3					.17**	+	.29**	+
GA1					.11**			
TD1						-.12		
NA1							.34**	.23**
Homeownership	—	.21*	—	-.12**	.17**	.71**	.28**	-.26**
Number of credit cards	—	.25**	+	-.12**	—	+	—	—
Number of durables	+	+	+	—	+	+	+	—
Expense budget	—	+	—	—	.08*	—	—	—
FFO is husband	+	—	+	+	+	—	+	+
FFO is wife	+	+	+	+	+	—	+	+
Wife works	-.12	+	—	—	—	—	—	+
Age (H)	+	—	+	+	.11**	+	.14**	+
Education (H)	.14 ^A	+	+	—	—	+	+	—
Priority of saving (H)	—	—	—	—				
Priority of saving (W)	+	—	+	+				
Adjusted R^2	.54**	.31**	.39**	.89**	.80**	.53**	.42**	.63**

Notes: 1. Beta coefficients are shown only if significant at the .01(**), .05(*), or .10(^A) level. Only a positive or negative sign is shown for those coefficients with less than .10 level of significance. 2. (H) refers to husband; and (W), to wife.

the latter variable showing the same negative effect as for the net assets functions for the earlier years.

The socioeconomic, the attitudinal and the budget variables are of relatively minor importance. Age and education of the husband seem to exert some positive effect on the financial variables but have nowhere near the significance of the financial variables.

Study of the changes in financial holdings provides another perspective on the determinants of the financial behavior of these couples. The regression results in Table VI are based on the same models as before, but with the dependent variables as arithmetic changes from Year 1 to Year 8 for Peoria-Decatur (Year 3 for Chicago), and with the financial independent variables in both change and level form (since both forms could be relevant). In fact, both forms of the variables are significant in various functions, but the basic pattern of the results is similar to that in Table V. The function for changes in gross assets is dominated by the change-in-debt variable for both Chicago and Peoria-Decatur, with current income of lesser but appreciable importance. Home acquisition (which in this form

Table VI
Beta Coefficients Estimates of Parameters of Changes in Assets
Decatur-Peoria Years 1-8, and Chicago, Years 1-3

Independent variables	Decatur-Peoria				Chicago			
	ΔGA	ΔTD	ΔNA	ΔNA	ΔGA	ΔTD	ΔNA	ΔNA
ΔGA				.97**				.82**
ΔTD	.42**		—		.78**		—	
ΔY	—	.26**	—	-.11**	+	-.12**	+	.16**
Y8	.32**	—	.37**	+				
Y3					.16**	+	.32**	.14 ^Δ
Home acquisition	—	.38**	—	-.19**	.12*	.73**	.26*	-.36**
Change in credit cards	—	.17**	—	-.08*	+	+	+	+
Change in durables	.23**	+	.27**	+	—	+	—	—
Change in number of children	+	+	+	—	.12**	-.12**	.26**	.24**
Expense budget	—	+	—	—	—	—	—	—
FFO is husband	+	+	+	—	—	—	—	+
FFO is wife	+	+	+	—	+	-.12 ^Δ	+	.14*
Wife works	—	+	—	—	+	-.14*	+	.13*
Age (H)	+	—	+	+	+	—	+	+
Education (H)	.16 ^Δ	.16 ^Δ	.18 ^Δ	—	—	+	—	—
Priority for saving (H)	—	+	—	—				
Priority for saving (W)	+	—	+	+				
Adjusted R^2	.39**	.41**	.19**	.86**	.82**	.59**	.22**	.51**

Notes: 1. Beta coefficients are shown only if significant at the .01(**), .05(*), or .10(^Δ) level. Only a positive or negative sign is shown for those coefficients with less than .10 level of significance. 2. (H) refers to husband; and (W), to wife.

is equivalent to change in homeownership) dominates both change-in-debt functions for Chicago with the change-in-income variable also highly significant though with opposite signs in the two areas.

Change in net assets is affected most strongly by change in gross assets in both panels. Again, change-in-income variables show up strongly too, and with opposite signs in the two panels.⁸

The effect of the socioeconomic and other variables is once more rather marginal. As in Table V, not often significant but showing up consistently are age and education of the husband (the latter for Peoria-Decatur). The wife being the family financial officer seems to be associated with less debt and more net assets in Chicago but the opposite pattern is evident for Peoria-Decatur (as is also true for the husband being the family financial officer).

Is the direct or indirect approach better for explaining net assets? The answer, using all three models, is clearly the former, as shown in Table VII. This table

⁸ This inconsistency of the signs may reflect the longer period covered by the data for Peoria-Decatur than Chicago, plus the much higher rate of home acquisition in the smaller area. Building on their rising incomes in the first eight years of marriage, 92% of the Peoria-Decatur families had acquired homes, and hence considerable debt, by the end of the period. In Chicago, however, the period covers only the first three years of marriage (two years for the change variables), so home acquisition rose at a much lower rate, and families were more likely to be in the downpayment accumulation stage, if they were planning to acquire a home at all.

Table VII
Simple Coefficients of Determination for Alternative Approaches
to Estimating Net Assets, by Panel

Period	Variable dependent	Indirect estimate, $\widehat{GA} - \widehat{TD}$	Direct estimate including as a variable	
			<u>TD</u>	<u>GA</u>
<u>Peoria-Decatur</u>				
Year 1	NA	.14	.31	.71
Year 6	NA	.23	.42	.87
Year 8	NA	.35	.43	.90
Years 1-8	Δ NA	.19	.30	.88
<u>Chicago</u>				
Year 1	NA	.19	.45	.72
Year 3	NA	.11	.47	.66
Years 1-3	Δ NA	.05	.29	.56

provides estimates of the goodness of fit obtained by the two different models (alternately including gross assets or total debts in the net assets function), and for net assets estimated as a difference between estimated gross assets and total debt, separately for each panel.

The direct approach yields much better results, especially when gross assets is included in the net assets function. These results serve to confirm those evident from the preceding tables, which demonstrated that the net assets function had a much higher goodness of fit than any of the gross assets or total debt functions. In other words, disaggregation of net assets into its principal components does not yield any improvement in explaining fluctuations in that variable.

VI. Conclusions

To come back to the questions raised at the beginning of this study, some fairly definitive answers are indicated by the foregoing results. For one thing, the descriptive statistics in Tables I and II suggest that, whether the couples start out with more or less assets, they tend to increase their possessions in the first few years of the marriage. Not only are the autocorrelations between gross assets and net assets strongly positive but the relative dispersion of these asset distributions decreases markedly over time.

Which variables differentiate between couples that improve their financial position in these first few years of marriage and those that do not? A strong base established at the beginning of marriage is an obvious answer, as suggested by the regression results. For both panels the primary determinant of the amount of net assets after several years of marriage, as well as of the change in net assets since marriage, is the amount and the change in gross assets, in turn affected by the couples going into debt to purchase their own home. These results offer the intriguing suggestion that the couples best off financially after a few years of marriage are those who are venturesome enough to acquire substantial amounts of debt. For both panels the influence of debt on gross assets, and of gross assets

in turn on net assets, is much greater than the autocorrelation of gross assets or net assets with themselves.

Unless it be inferred from these findings that the way for a young couple to get rich is to rush into debt, it should be stressed that the positive influence of debt may have been due more to general economic conditions than to the financial acumen of these couples. This is because the dominant form of debt in this sample was represented by purchase of a home. Since the period during which members of these panels were making these purchases, 1968-76, was characterized by continually rising prices for homes, the debt that these couples incurred to acquire their homes served to raise the value both of their gross assets and net assets. Whether the same conditions would hold at other times is doubtful.

The results also suggest that a measure of normal income may be more useful than current annual income for explaining variations in asset accumulation, but only after about eight years of marriage, by which time income patterns are more likely to be stabilized: compare, for example, the results in Tables IV and V.

The socio-economic variables other than income seem to have relatively little effect on asset holdings over time. There are some indications that households with older and better educated husbands have more assets, and debts, especially in Peoria-Decatur for which the data span a longer period. The attitudinal variable used and various behavior variables are of minor importance,⁹ except for credit cards, a larger number of which tend to increase debt and reduce net assets.

In closing, it should be emphasized that the best results are based on a limited data set and should be treated only as suggestions for future work. Nevertheless, in view of the virtual absence of any studies of the asset accumulation practices of married couples in this very early stage of family formation, these results should provide a basis for more intensive study of this key segment of the population.

CODING OF VARIABLES

<u>Variable</u>	<u>Code</u>
Age (<i>H</i>)	Actual years
Education (<i>H</i>)	1 = some high school or less 2 = high school graduate 3 = some college 4 = college graduate 5 = graduate school or more
Savings attitude (<i>H</i>)	1 = do not save 2 = save for old age 3 = save for old age and other things 4 = save under any circumstances

⁹ Several other attitudinal variables were tested as well, including "satisfaction with life" and opinion whether "life is full of opportunities," using both single-equation least squares and two-stage least squares in a system in which these variables were dependent (on financial and socioeconomic variables) as well as interdependent. Some of these variables, especially the wife's satisfaction with life, were statistically significant at even the .01 level with the single equation OLS approach, but not in the 2SLS model.

Savings attitude (<i>W</i>)	Same code
<i>FFO</i> is husband	1 = yes, 0 = no
<i>FFO</i> is wife	1 = yes, 0 = no
Wife works	1 = yes, 0 = no
Homeownership	1 = yes, 0 = no
Expense budget	0 = none
	1 = spend as needed
	2 = budget a few items
	3 = budget every item
Number of children	Actual number
Number of credit cards	Actual number
Number of durables owned	Actual number
Family income (<i>Y</i>)	In thousands of dollars
Gross assets (<i>GA</i>)	In hundreds of dollars
Total debts (<i>TD</i>)	In hundreds of dollars
Net assets	In hundreds of dollars

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