The Relationship between Income and Net Worth in the U.S.:
A Virtuous Cycle for High but Not Low Income Households

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Abstract

Is there a reciprocal relationship between household income and net worth and does that relationship depend on initial income? Using cross-lagged panel models of household income and net worth data from the Panel Study of Income Dynamics, we compare the income-wealth relationships of high and low income households from 1989 to 2011. Adjusting for demographic differences, we find a reciprocal relationship between income and wealth for high, but not low, income households. Results suggest intra-generational mobility works differently by initial income, which could partially explain the difficulty of escaping poverty and low U.S. support for liberal social welfare policy.

Keywords: intra-generational mobility; income; net worth; inequality; social welfare policy

Introduction

Many Americans – 35% according to a recent Pew Research Center poll (2014) – believe the poor are poor because they do not work hard enough or irresponsibly spend all their money rather than saving (Whitaker, 2014; Feagin, 1975; Gilens, 1999). Contrary to this individualistic belief, however, Shapiro, Meschede, and Osoro (2013) find that those with higher asset levels enjoy higher wealth returns from their income than others. Do economic returns to income and assets also depend on initial income? More broadly, does the American dream work equally for everyone, regardless of initial income?

Financial standing in young adulthood has obvious implications for financial standing in later life. For example, individuals who carry heavy student loan or other debt burdens have lower paying jobs after graduation, delay marriage and childbearing, have less net worth, and are less able to accumulate savings toward a mortgage down payment or retirement (Elliott and Nam, 2013; Rothstein and Rouse, 2011; American Student Assistance, 2013; Addo, 2013). In contrast, young adults who earn high incomes or who accumulate savings rather than debt early in life are likely to be in better financial standing later in life as well.

This intra-generational economic inequality could partly reflect growing inequality between wealthy and poor households, which Thomas Piketty (2014) suggests is inherent to advanced capitalism where income from capital grows at a faster pace than income from wages. Rather than counteract this trend toward growing inequality, however, U.S. financial policy may intensify intra-generational economic inequality. In other words, policy may encourage diverging economic trajectories. The current U.S. tax structure, for example, excludes low income households from asset-building programs available to the middle class (e.g., the mortgage deduction) (Spilerman, 2000). Social welfare policies also disqualify families above a

certain asset threshold from social support (e.g., food stamps), creating a disincentive for poor households to save (Spilerman, 2000). In the current American policy context, therefore, household ability to capitalize on income and wealth may depend on initial financial standing.

Counter arguments, which helped justify the Personal Responsibility and Work Opportunity Act, suggest individuals can work their way out of poverty through individual effort. According to this perspective, income should equally help both low and high income households accumulate wealth. Similarly, all households should be able to leverage their wealth to help boost their income (e.g., by pursuing further education). While this individual accountability view is central to belief in the American Dream and enjoys widespread support in the U.S., it may be inaccurate. Given current financial policy, coupled with unequal challenges such as higher emergency healthcare costs or limited access to saving mechanisms among low income households, perhaps high income households are able to profit disproportionately from income and wealth gains.

To assess whether the American Dream works equally, regardless of initial income, we use cross-lagged panel models of household income and net worth (a proxy for wealth) data from the Panel Study of Income Dynamics (PSID) to compare economic trajectories of high and low income households in the U.S. Limiting the sample to households headed by young adults (ages 18 - 44) in 1983, we examine the reciprocal relationship between household income and net worth every four years until 2011 (ages 40 - 66).

To preview our results, we find a consistent relationship between income and net worth among high income households, which weakened during the recession. Among low income households, however, the relationship between income and net worth is inconsistent and significantly weaker than that among high income households. This evidence suggests low

income households are less able to capitalize on income and wealth and, given the current American policy context, intra-generational mobility is less possible for low income households. The American dream, in other words, does not work equally for everyone.

In what follows, we offer reviews of literature on intra-generational inequality, the relationship between income and wealth, and public support for social welfare policy. We then describe our data, methods, and results, and finally discuss implications of our findings in the conclusion.

Intra-Generational Mobility

There are multiple areas of inquiry related to intra-generational mobility. For example, one area attempts to distinguish individual from aggregate or societal-level change in earnings or occupational standing (Fields and Ok, 1999; Featherman and Hauser, 1978). Another area of research attempts to distinguish between temporary and permanent intra-generational changes in earnings (Gottschalk and Moffitt, 2009). We seek to address another area of intra-generational research about the factors associated with change in individual or household financial standing.

Sociological research often examines the impact of macro-level factors, including economic growth, industrial change, or union membership, on large-scale financial trends (e.g., Breen, 1997; Western and Rosenfeld, 2011). This research, however, may be unable to account for individual or household variation in economic outcomes within the same context. Economists frequently examine individual level intra-generational mobility, but tend to focus on education and work experience (e.g., Becker, 1964; Mincer, 1974; see Heckman et al., 2006 for a review). While education and experience are critical for income from labor, however, they are less directly related to income from capital, which is becoming increasingly important in

advanced capitalism (Piketty, 2014). In fact, the proportion of household income from labor has declined since the early 1970s (Jacobson and Occhino, 2012) and as of 2012 capital income constitutes 25% of overall personal income (Woodward, 2013, Table 10).

The importance of net worth for income therefore appears to be increasing, yet its importance for intra-generational mobility (i.e. future financial outcomes) remains less examined. Furthermore, wealth is a critical measure of financial standing (Conley, 1999; Shapiro, 2004). The poor are often portrayed as guilty of not working hard enough and irresponsibly spending all their money rather than saving (Whitaker, 2014) and many Americans believe this individual responsibility explanation (Feagin, 1975; Gilens, 1999). Despite this commonly held belief, evidence from the student debt field suggests that income has less power for building wealth among some groups than it does others. For instance, Hiltonsmith (2013) finds that although households with college graduates and student debt have higher earnings immediately after leaving college, by the time the graduates reach their 40s their income falls behind that of households with college graduates and no student debt. Hiltonsmith (2013) suggests this disparity may occur because indebted students are not able to build assets soon after graduating from college at the same levels as students with no student debt. Then, because assets can be converted back into income in the future (e.g., rent from real estate, dividends from stocks, or interest from bonds), as they age these indebted students have less income available. Therefore, instead of thinking that one needs a certain level of income before he or she can build wealth, it may be that having a certain level of wealth positions one for greater earning.

Further, while income may promote wealth among high income households, it may hold limited potential to generate wealth at lower incomes. Beyond policy disincentives, low income American households also have less access to mechanisms for building wealth, including bank

accounts, stocks, and mortgages (Retsinas and Belsky, 2005). Furthermore, historical research

suggests that even exogenous increases in wealth yield different effects depending on initial

financial standing: improving wealth among those in the middle of the distribution, but not at the

bottom (Bleakley and Ferrie, 2013). Income may therefore hold limited potential to generate

wealth among low income households. A vivid example of this can be found in research on race.

Shapiro, Meschede, and Osoro (2013) find that a $1.00 increase in income later translates to a

$5.00 increase in wealth for Whites, but only a $0.70 increase for Blacks. Here it is clear that,

even if incomes are equal, some people receive greater financial benefits from their income than

other groups largely because of structural inequality. However, when Blacks start off with

similar levels of assets, Shapiro and colleagues find they have a return of $4.03 for each dollar

increase in income. Contrary to common belief, this suggests initial asset levels may also play

an instrumental role in the power of income to generate assets.

Public Support for Social Welfare Policy

If the relationship between income and net worth depends, at least in part, on initial

financial standing in the U.S., it could help explain lack of support for liberal social welfare

policy. Sociological explanations for social policy focus on large-scale factors, including

economic interests, the power of wealth, globalization, the state, and the legacy of existing

policies (Domhoff, 2006; Ferguson, 1995; Skocpol and Amenta, 1986). Given the central role of

money and lobbying in U.S. politics, less research has attempted to understand popular views.

Exceptions, such as Thomas Frank's (2004) *What's the Matter with Kansas*, often emphasize

ideology and cultural backlash to explain support for conservative policy. Comparative research,

however, emphasizes the importance of cross-national differences, including current social

welfare policy and country-specific differences (Andreß and Heien, 2001; Larsen, 2008), in explaining public views of social policy. If the income-wealth relationship in the U.S. fundamentally differs for low and high income households, that difference could help explain lack of public support for liberal social welfare. For example, those who live in or grew up in a high income household may assume that the intra-generational mobility process works similarly across the income distribution. Projecting their own experiences onto others, individuals may vote according to their assumptions, which may not in fact match reality.

Alternatively, unequal initial financial standing coupled with individualism could encourage Americans to undervalue the effort and ability of low income and minority families, thereby lowering support for liberal social welfare policy. That is, if intra-generational mobility depends on initial financial standing in the U.S., income from investing effort and ability into work cannot fully explain young adults' financial outcomes. Because Americans tend toward individualistic views (Kluegel and Smith, 1986; McCloskey and Zaller, 1984), the disconnect between effort and income is rarely appreciated. From the individualistic perspective, an individual's earnings at her job are closely linked to her use of effort and ability, allowing income generated by assets to artificially inflate perceptions about the amount of effort and ability some people invest while lowering perceptions about how much others invest. Because people of color and lower income families are less likely to have income-generating assets, perceptions may unjustly devalue their use of effort and ability in earning wages. Thus, beyond assumed similarity, individualistic equations of effort and ability with earnings could offer another mechanism through which variation in intra-generational mobility processes across the income distribution could reduce American public support for liberal social welfare policy.

Based on the above review, we hypothesize that income will be positively associated with later net worth among U.S. households with high initial income (at least $50,000), but not among those with low initial income. Similarly, we expect that household net worth will be positively associated with later income among high but not low income households. If these hypotheses are supported, the qualitatively different processes of intra-generational mobility by income category may help explain lack of support for transformative social welfare policy in the U.S.

Data and Methods

This analysis relies on data from the Panel Study of Income Dynamics, which began in 1968 with a nationally representative sample of more than 18,000 individuals living in 5,000 families. Following these families since 1968, the PSID provides longitudinal data on a variety of measures, including income and wealth. The sample has grown over time to approximately 24,000 individuals and nearly 8,700 families as the original families had children and created new families. We limit the sample for this analysis to black and white heads of household, due to the small numbers representing other racial groups in the PSID. We also limit the sample by age, including only young household heads, who were ages 18 to 44 in 1989 and ages 40 to 66 by 2011. By limiting the sample to the typical working ages, when most families accumulate wealth and saving for retirement, we cover the life stage that is arguably most important for intra-generational mobility. Limiting the sample to households headed by young adults in 1989 also enables longitudinal analysis without censoring due to retirement, for example.

Using M*plus*7, we conduct multi-group (high- and low-income households), multivariate non-linear cross-lagged panel model analyses of household income and net worth. M*plus*7 estimates these models using the robust maximum likelihood estimation procedure, with standard

errors robust to non-normal data (Yuan and Bentler, 2000), weighted to adjust for likelihood of sampling. Because the pattern of change in income and net worth is non-linear, we estimate an unspecified growth model (freely estimating 2007 and 2011 values). Time is measured in 10-year increments.

Household income and net worth are measured in 1989, 2003, 2007, and 2011. To calculate net worth, PSID sums the values of various types of assets held in a given year, including a business, checking or savings accounts, real estate, stocks, and other assets, subtracting credit card and other debt. This measure of net worth is therefore continuous and time-varying. Total household income, also a continuous measure, is calculated as the sum of total household income from the previous tax year including all taxable income, transfer income, and Social Security income for everyone in the household. For each year, net worth and income are inflated to 2011 values based on the Consumer Price Index (CPI).

To adjust for non-normality, we convert income and net worth using the Inverse Hyperbolic Sine (IHS) transformation. Rather than the natural log, we use the IHS conversion because it allows us to maintain negative net worth values without restricting the sample or distorting standard errors (Pence, 2006). To ease interpretation, IHS income and net worth are divided by 10,000.

All models control for demographic differences measured in 1989, including family size and region, as well as age, race, gender, education, and marital status of the head of household (all time-invariant measures). Family size includes the number of people in the household. Region is measured using indicators for residence in the Northeast (the omitted category), North Central, South, or West regions. Household head's age is measured in years and, because we limit the sample to black and white household heads only, race is an indicator for white. Gender

is an indicator for whether the household head is male. Education level identifies whether the

head of household has a high school degree or less (12 years or less), some college (more than 12

and less than 16 years), or a four-year degree or more (16 years or higher). Marital status is an

indicator for whether the household head is married. We exclude households missing these

demographic measures from the regression analysis (approximately 1% of the sample), leaving a

total sample size of 3,189 households.

Because we hypothesize different results depending on initial household income, we run

multi-group models to compare results among households with 1989 income above and below

$50,000 (measured in 2011 dollars). This $50,000 threshold is 217% of the 2011 federal poverty

level for a household with four people ($23,021). A threshold of 200% of federal poverty level

is used as an eligibility cutoff for some federal programs such as the Partners for Healthy

Children program. Furthermore, while there are some exceptions, households with a total

income above $50,000 are not likely to face severe financial hardship. In our sample, 1,449

households fall in the low income category and 1,740 fall in the high income category above

$50,000.

Results

Descriptive information for the sample is shown in Table 1. Compared to low income

households, high income households are slightly larger and more likely to be in the Northeast or

the West. The heads of high income households are more likely to be older, more educated,

white, male, and married than heads of low income households.

[Tables 1 and 2 and Figure 1 about here]

Mean household income and net worth (as well as overall increases over time), by initial household income category, are shown in Table 2. Figure 1 traces the income and net worth trajectories for low and high income households, revealing different patterns of net worth accumulation. High income households accumulated wealth at a faster pace than did low income households until 2003. After 2003, however, both income categories experienced relatively little change in net worth.

Figure 2 shows the overall increase in mean income and net worth from 1989 to 2011 by initial income category. The figure clearly illustrates that, while both groups experienced gains in financial standing (measured in 2011 dollars), the net worth gain differs dramatically by income category. Both high and low income households saw mean income gains close to $50,000, with a slightly higher increase among low income households. However, the mean net worth increase among high income households ($428,029) dwarfs that among low income households ($149,159).

[Figure 2 about here]

The descriptive information suggests income may have held greater potential for wealth accumulation among high income households until 2003. After 2003, however, the similar pattern by income category suggests income may carry equally limited capacity for wealth during a recession. Of course, this descriptive information could reflect demographic differences. To assess whether different patterns remain after adjusting for various differences, we use cross-lagged panel models to control for family size, region, and household head's age, race, education, gender, and marital status. The model fits the data well, with a root mean squared error of approximation (RMSEA) of 0.049 and a comparative fit index (CFI) score of 0.958 (Browne and Cudeck, 1993; Hu and Bentler, 1999). Results of this model are presented in

Table 3 and illustrated in Figure 3. In the following sections, we discuss the relationship

between income and net worth first among low income households, then among high income

households, and finally the differences between the two groups.

[Table 3 and Figure 3 about here]

Low Income Households (below $50,000)

Among low income households, the model explains an increasing proportion of variation

in income over time, with R^2 increasing from 0.204 in 1989 to 0.618 in 2011. The proportion of

variation in net worth explained increases until 2007, but then decreases in 2011. This trend

toward increasing R^2 values over time could reflect changes with age (e.g., if income becomes

more strongly determined by demographics and previous financial standing as the household

head ages) or other changes over time (e.g., if socioeconomic segregation or some other trend

made household financial standing more strongly predictable over time). We cannot explain

why the pattern exists, but the trend toward greater financial determinacy suggests intra-

generational mobility may have decreased over time.

Among low income households, while net worth consistently predicts later net worth

(and income similarly predicts later income), the relationship between income and later net worth

is never significant. This finding is consistent with arguments that low income households have

a disincentive to build wealth due to social welfare policy (Spilerman, 2000) and limited access

to mechanisms for building savings (Retsinas and Belsky, 2005).

Although net worth does not depend on previous income, the reverse is not always true.

Income significantly depends on earlier household net worth, but only in 2007 and 2011.

Because the recession began late in 2007, it likely does not explain the increasing importance of

net worth for income. Nevertheless, the importance of net worth for later income suggests the earning potential of low income households is enhanced by wealth. Thus, even among low income households, the evidence supports arguments by Piketty (2014) and others that income from capital is becoming increasingly important (Jacobson and Occhino, 2012; Woodward, 2013). Currently, the amount of wealth held by low income households is unlikely to constitute a substantial proportion of household income. However, the importance of wealth suggests low income households are able to leverage some of those assets to boost future income, even during the recession.

High Income Households ($50,000 or above)

The proportions of variation in income and net worth explained by the model follow patterns similar to those for low income households. Financial standing was more strongly predicted over time, suggesting decreased intra-generational mobility for both high and low income households over time.

Contrary to low income households, among high income households there is a significant relationship between income and later net worth in each year examined. This suggests high income households are able to convert some of their income into wealth. High income households also enjoy significant income returns to previous net worth, but only in 2007. Despite arguments that income from capital is growing in importance, high income households only saw significant returns in 2007, immediately before the recession.

Importantly, high income households show evidence of a reciprocal relationship between income and net worth. That is, at least in some years, net worth is associated with later income gains and income is positively associated with later wealth. Thus, high income households enjoy

a virtuous cycle of financial success, with wealth feeding off income gains and vice versa. Similar to the way compound interest grows over time, high income households enjoy a situation in which financial gains generate further gains. Income begets wealth and wealth begets income, suggesting the rich really do get richer in the U.S.

<u>Differences between Low and High Income Households</u>

Contrary to high income households, low income households do not enjoy this virtuous cycle. While wealth is associated with higher income in later years, low income households are less able to convert income into wealth. In fact, in each year the relationship between income and later net worth is significantly stronger among high than low income households ($p<0.05$ in 2003 and 2007; $p<0.10$ in 2011).

Furthermore, the relationship between net worth and later income is significantly stronger among high income households compared to low income households. This difference holds in each year (at least at $p<0.10$), even in 2011 when the relationship becomes insignificant among high income households.

To summarize, the financial standing of high income households consistently depends more strongly on previous financial standing measures. High income households seem to enjoy a stronger return to financial gains than do low income households. In the struggle to improve their financial standing, therefore, low income households face a disadvantage compared to their higher income counterparts.

Conclusion

The American dream does not work equally for everyone. Compared to high income households in the U.S., whose financial future rests securely on the two legs of income and wealth, the future of low income households stands on only one leg: income. Welfare to work programs, such as the Personal Responsibility and Work Opportunity Act, may help poor households increase their labor market attachment and earned income, with considerable benefits (Greenberg et al., 2009). However, results of this study suggest labor income is not enough to lift poor households out of poverty. Income only facilitates wealth accumulation among families with higher initial incomes. Consistent with other recent findings (Shapiro, Meschede, and Osoro 2013), the benefits of income or wealth gains are not equal. Whether due to financial policy disincentives or lack of access to saving mechanisms, low income households in the U.S. are not able to translate income gains into wealth gains.

The lack of wealth gains from income has implications during periods of reduced income, such as a job loss or reduced earning power during a recession. While high income households are able to draw on wealth previously accumulated from their income, low income households do not have the same reserves. Reliance on income alone reduces the financial stability of low income households.

When low income households do manage to accumulate wealth, it has benefits for later income. This suggests low income households are able to leverage savings to boost their income, through education for example. Nevertheless, even this net worth-income relationship is stronger among high income households, suggesting high income households reap a greater income benefit from net worth.

In summary, high income households enjoy a virtuous cycle between income and net worth, which is unavailable to low income households. Furthermore, although low income

households experience an income return to net worth, this return is significantly stronger among high income households. In the struggle to improve their financial standing, therefore, low income households face substantial disadvantages.

The qualitatively distinct financial trajectories by income category could help explain popular American support for conservative fiscal policy and the lack of understanding for the plight of low income households. If individuals from high income households assume the process of moving up the financial ladder works similarly across the income distribution, they may understandably question the motivation of their lower income counterparts. However, results of this analysis suggest intra-generational mobility fundamentally differs by income category in the U.S. Alternatively, individualistic equations of effort and ability with earnings could encourage the American public to undervalue the work ethic of groups with low income or net worth. While we do not study policy attitudes, our results are consistent with the role of current U.S. social welfare policy and country-specific economic interests in explaining public support (Andreß and Heien, 2001; Larsen, 2008).

The American dream suggests that hard work will pay off and allow poor households to move out of poverty. In fact, however, the financial benefits of success accrue largely to high income households. Low income households are left stranded, without even equal benefits to financial gains. If they experience little financial benefit from any income and asset gains, why should low income households keep working hard? High income households enjoy substantial financial benefits from their income and assets. The same should be true for low income households.

To make the American dream more equally available – and facilitate upward mobility at the lower end of the income distribution, our results suggest political reform needs to increase

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the payoff to financial gains among low income households. In other words, policies should strengthen the relationship between income and net worth at lower incomes. For example, by creating an incentive (rather than the current disincentive) for low income households to save, social welfare policy could help increase the financial stability – and possibly even the long-term income – of low income American households. These incentives could involve matching funds for each dollar saved or subsidized interest rates, among others. By increasing access to and comfort with banks, mortgages, or other wealth accumulation methods, low income households would be able to turn some of their hard-earned income into assets. These wealth-building tools are central to the financial future of low income households in the U.S. and equal access to the American dream.

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Tables and Figures

Table 1: Descriptive Statistics by Household Income Category in 1989

	Low-Income (< $50,000)		High-Income (>=$50,000)	
	Mean	Std Dev	Mean	Std Dev
Family Size	3.03	1.50	3.28	1.38
Region				
Northeast	0.14	0.35	0.27	0.45
North Central	0.34	0.47	0.27	0.44
South	0.38	0.49	0.24	0.43
West	0.14	0.35	0.22	0.41
Head of Household				
Age	28.72	5.89	32.38	5.57
White	0.75	0.43	0.93	0.25
Male	0.79	0.41	0.91	0.28
High School or Less	0.51	0.50	0.20	0.40
Some College	0.34	0.47	0.35	0.48
4-Years of College or More	0.16	0.37	0.45	0.50
Married	0.70	0.46	0.90	0.30
N	1449		1740	

Source: weighted PSID data 1989. N unweighted = 3,189

Table 2: Mean Household Income and Net Worth over Time by 1989 Income Category

Household Income Category		1989	2003	2007	2011	Increase 1989-2011
Low Household Income	Income	$30,683	$78,458	$78,196	$81,009	$50,326
(<$50,000)	Net Worth	$27,961	$175,559	$159,633	$177,120	$149,159
High Household Income	Income	$95,777	$138,053	$152,567	$141,680	$45,903
(≥$50,000)	Net Worth	$174,269	$608,987	$651,075	$602,298	$428,029

Source: weighted PSID. Sample consists of adults 18-44 in 1989 and 40-66 in 2011.
All numbers are rounded. (N unweighted = 3,189; low income N = 1,449, high income N = 1,740)

Table 3: Regression Coefficients of Multi-Group Cross-Lagged Panel Model

DV Indep Var	Low-Income (< $50,000)				High-Income (≥ $50,000)				Difference	
	B	β	p	R^2	B	β	p	R^2	χ^2	p
Net Worth 2003				0.243				0.332		
Net Worth 1989	**0.42**	**0.28**	**0.000**		**0.33**	**0.33**	**0.000**		**0.62**	**0.433**
Income 1989	**-0.17**	**-0.05**	**0.359**		**0.77**	**0.20**	**0.000**		**9.70**	**0.002**
Family Size	-0.05	-0.02	0.590		0.13	0.05	0.191		3.22	0.073
Region (vs. Northeast)										
North Central	0.45	0.07	0.146		-0.11	-0.02	0.595		0.45	0.505
South	0.33	0.05	0.294		-0.56	-0.08	0.025		5.58	0.018
West	0.29	0.03	0.501		0.49	0.07	0.041		6.04	0.014
Age	0.01	0.02	0.650		-0.06	-0.11	0.002		10.77	0.001
Race	0.31	0.05	0.202		0.74	0.06	0.052		2.94	0.086
Sex	1.45	0.20	0.000		1.35	0.13	0.001		0.90	0.342
Education	0.44	0.23	0.000		0.27	0.13	0.000		0.00	0.975
Marital Status	0.43	0.07	0.202		0.56	0.06	0.094		3.93	0.048
Income 2003				0.309				0.299		
Net Worth 1989	**0.02**	**0.02**	**0.551**		**0.02**	**0.04**	**0.375**		**3.58**	**0.059**
Income 1989	**0.25**	**0.14**	**0.001**		**0.55**	**0.32**	**0.000**		**7.63**	**0.006**
Family Size	0.05	0.05	0.195		0.14	0.12	0.000		1.52	0.217
Region (vs. Northeast)										
North Central	0.18	0.06	0.366		-0.10	-0.03	0.321		0.01	0.929
South	0.09	0.03	0.629		-0.22	-0.07	0.024		0.07	0.793
West	0.43	0.11	0.040		0.07	0.02	0.483		2.51	0.113
Age	-0.04	-0.17	0.000		-0.02	-0.06	0.047		10.30	0.001
Race	0.03	0.01	0.817		0.36	0.07	0.006		0.59	0.444
Sex	0.58	0.17	0.000		1.00	0.22	0.000		2.43	0.119
Education	0.25	0.28	0.000		0.13	0.14	0.000		1.71	0.191
Marital Status	0.38	0.12	0.040		-0.12	-0.03	0.282		2.52	0.112
Net Worth 2007				0.656				0.687		
Net Worth 2003	**0.78**	**0.74**	**0.000**		**0.74**	**0.71**	**0.000**		**0.27**	**0.605**
Income 2003	**0.14**	**0.06**	**0.065**		**0.32**	**0.13**	**0.000**		**4.84**	**0.028**
Family Size	-0.03	-0.01	0.617		-0.02	-0.01	0.720		0.09	0.769
Region (vs. Northeast)										
North Central	-0.37	-0.06	0.096		0.00	0.00	0.984		0.00	0.956
South	-0.25	-0.04	0.270		0.22	0.03	0.158		0.97	0.325
West	0.24	0.03	0.322		0.33	0.04	0.028		1.14	0.287
Age	0.00	0.00	0.926		-0.02	-0.04	0.108		3.46	0.063
Race	0.47	0.07	0.014		0.80	0.06	0.002		2.56	0.109
Sex	0.30	0.04	0.151		0.01	0.00	0.968		1.22	0.270
Education	0.14	0.07	0.008		0.16	0.07	0.002		0.44	0.506
Marital Status	-0.52	-0.08	0.018		0.48	0.05	0.041		18.24	0.000
Income 2007				0.544				0.54		
Net Worth 2003	**0.07**	**0.16**	**0.000**		**0.12**	**0.25**	**0.000**		**10.71**	**0.001**
Income 2003	**0.48**	**0.49**	**0.000**		**0.51**	**0.46**	**0.000**		**1.75**	**0.186**
Family Size	0.08	0.09	0.003		0.09	0.09	0.002		0.09	0.764
Region (vs. Northeast)										

North Central	-0.71	-0.24	0.000		-0.13	-0.04	0.160	6.84	0.009
South	-0.45	-0.16	0.000		-0.08	-0.02	0.413	1.17	0.279
West	-0.36	-0.09	0.003		0.14	0.04	0.141	2.62	0.106
Age	-0.01	-0.06	0.037		-0.01	-0.04	0.076	0.50	0.480
Race	0.27	0.09	0.006		0.41	0.07	0.001	1.38	0.240
Sex	0.05	0.02	0.680		0.29	0.06	0.043	2.28	0.131
Education	0.13	0.14	0.000		0.13	0.13	0.000	0.76	0.385
Marital Status	0.17	0.06	0.145		-0.16	-0.03	0.139	3.40	0.065
Net Worth 2011			0.475				0.525		
Net Worth 2007	**0.73**	**0.65**	**0.000**		**0.73**	**0.63**	**0.000**	**2.01**	**0.156**
Income 2007	**0.04**	**0.02**	**0.729**		**0.30**	**0.12**	**0.000**	**3.54**	**0.060**
Family Size	0.07	0.03	0.314		-0.01	0.00	0.900	0.23	0.632
Region (vs. Northeast)									
North Central	-0.39	-0.05	0.177		-0.05	-0.01	0.781	0.58	0.447
South	-0.42	-0.06	0.106		-0.63	-0.07	0.016	2.63	0.105
West	-1.07	-0.10	0.011		-0.70	-0.08	0.003	1.70	0.192
Age	0.00	0.00	0.914		0.05	0.09	0.000	4.31	0.038
Race	0.31	0.04	0.096		0.09	0.01	0.739	0.00	1.000
Sex	-0.17	-0.02	0.502		-0.02	0.00	0.935	0.19	0.661
Education	0.12	0.05	0.079		0.00	0.00	0.977	0.13	0.716
Marital Status	0.36	0.05	0.204		0.41	0.03	0.197	0.04	0.841
Income 2011			0.618				0.599		
Net Worth 2007	**0.05**	**0.10**	**0.004**		**0.00**	**-0.01**	**0.749**	**3.25**	**0.072**
Income 2007	**0.65**	**0.61**	**0.000**		**0.67**	**0.67**	**0.000**	**0.11**	**0.744**
Family Size	0.19	0.19	0.000		0.09	0.08	0.000	5.19	0.023
Region (vs. Northeast)									
North Central	-0.20	-0.07	0.077		-0.24	-0.07	0.002	0.15	0.699
South	-0.23	-0.08	0.024		-0.28	-0.08	0.002	0.40	0.528
West	-0.01	0.00	0.937		-0.29	-0.08	0.002	4.54	0.033
Age	0.00	-0.01	0.595		0.00	-0.01	0.477	0.00	0.975
Race	0.16	0.05	0.124		0.10	0.02	0.263	0.00	0.975
Sex	0.04	0.01	0.657		0.24	0.05	0.035	1.62	0.203
Education	0.05	0.05	0.068		0.12	0.12	0.000	2.65	0.103
Marital Status	0.02	0.01	0.855		0.27	0.06	0.026	3.64	0.056
N	1,149				1,740			3,189	

Source: PSID. Sample consists of adults 18-44 in 1989 and 40-66 in 2011. All numbers are rounded.
B indicates standardized coefficient. DV indicates dependent variable. Indep Var indicates independent variable.

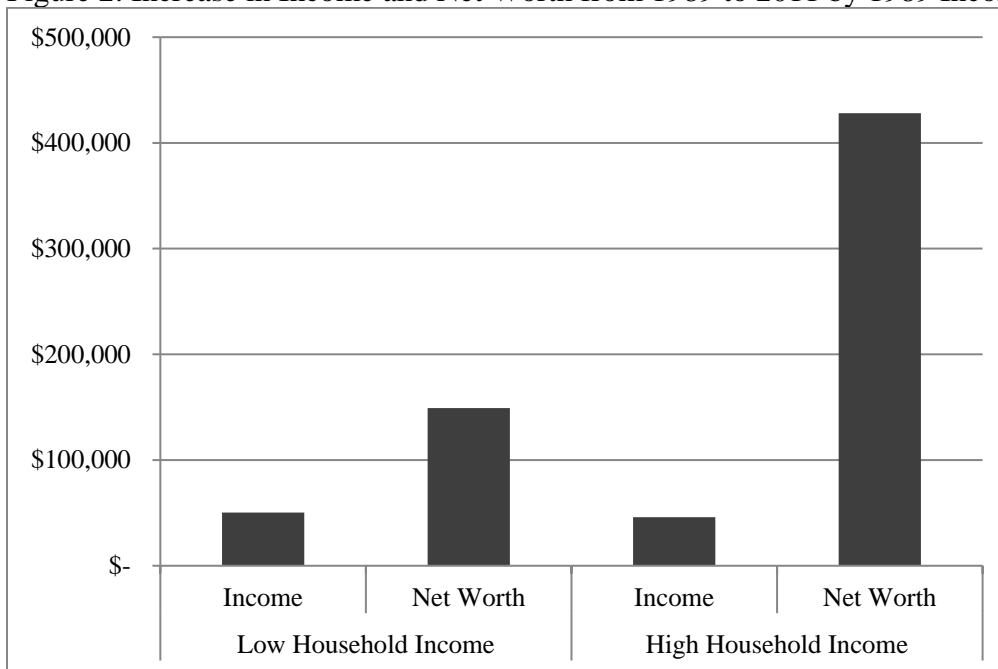Figure 1: Mean Household Income and Net Worth over Time by 1989 Income Category
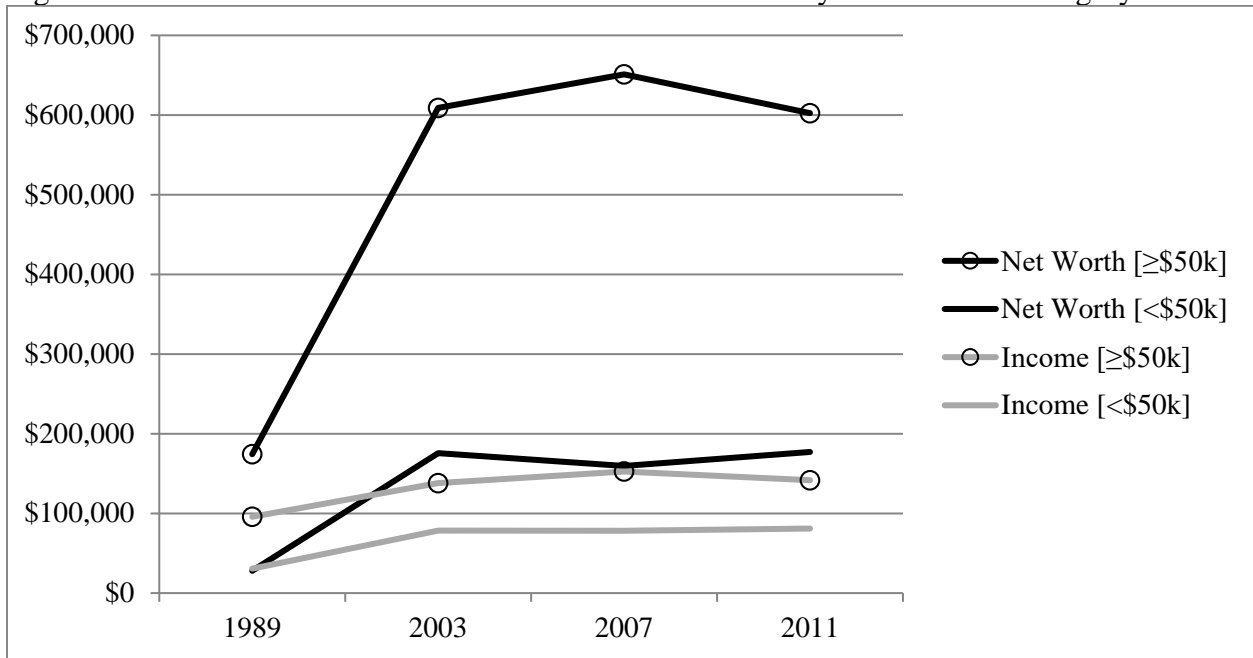
Source: weighted PSID.
<$50k = household income in 1989 less than $50,000 (N = 1,449)
≥$50k = household income in 1989 greater than or equal to $50,000 (N = 1,740)

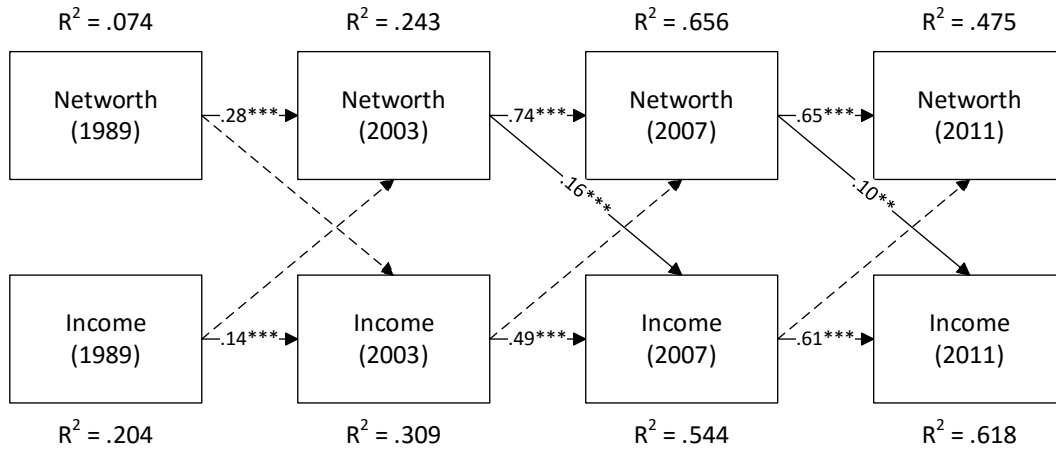Figure 2: Increase in Income and Net Worth from 1989 to 2011 by 1989 Income Category

Source: weighted PSID.
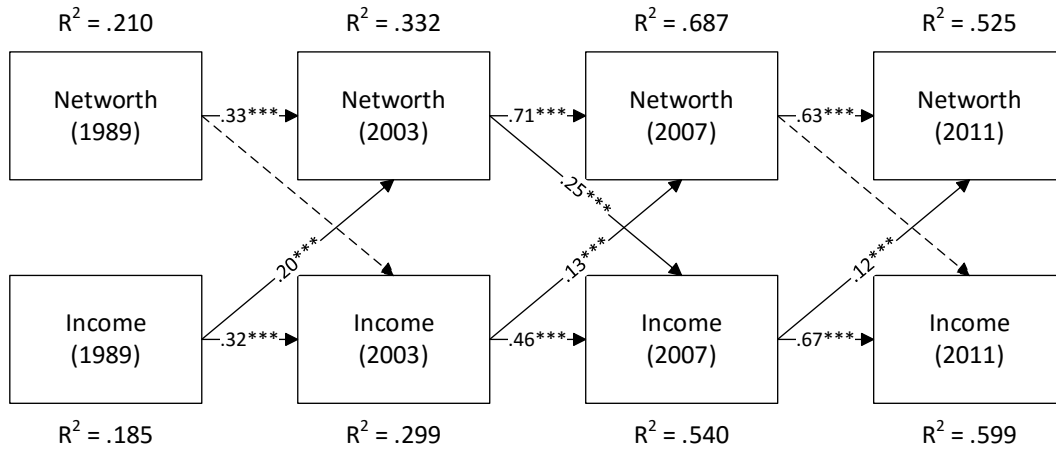<$50k = household income in 1989 less than $50,000 (N = 1,449)
≥$50k = household income in 1989 greater than or equal to $50,000 (N = 1,740)

Figure 3: Multivariate Cross-Lagged Panel Model for Low and High Income Households

Low Income Households (< $50,000)

High Income Households (≥ $50,000)

Diagrams illustrate the multi-group cross-lagged panel model in Table 3.
Source: PSID. Sample consists of adults 18-44 in 1989 and 40-66 in 2011. All numbers are rounded. (N = 3,189)
 * p < .05, ** p <.01, *** p <.001