Examining Changes in Transitions into and out of the Middle Class Over Time

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Abstract

The assessment of intragenerational mobility is perhaps one of the fundamental questions in social science research because it is so integral to the democratic notion that ones position in society should not be predetermined by where they started. While that is the subject of much debate, less attention is paid to the characteristics of the movers and stayers as well as the underlying components of stasis and change, both of which we place at the center of the analysis. Using the PSID from 1970 - 2009, we will show that there are not only changes in relative mobility, but also changes in who moves up and down and the contributing factors of those moves. Our results suggest that the changes in the population dynamics of mobility are greater and, we argue, more important than changes in mobility rates.

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1 Introduction

Intragenerational mobility is integral to the democratic notion that one's position in society should not be predetermined by where they started; those who 'work hard and play by the rules' ought to be able to move up in society. While the level of mobility and its trends are the subject of much debate, less attention is paid to the characteristics of the movers and stayers as well as the underlying components of stasis and change, both of which we place at the center of the analysis (See Duncan et al., 1993; Winship, 2013; Acs, 2011). Most research examining intragenerational income mobility focuses on the relationship to (in)equality. There is little argument that income inequality in the United States has increased in the last quarter of the 20th century and into the current period (Weinberg and Jones Jr., 2000; Piketty and Saez, 2003; Harris and Sammartino, 2011). Ceteris paribus, an economy with rising levels of inequality ought to have lower levels of income mobility than an economy with declining levels of inequality even if the evidence for such patterns is thin (Burkhauser and Couch, 2009).

While most research on intragenerational mobility focuses on the fluidity across income categories as well as movement up, out of low-income and down, out of high-income, we move beyond the traditional debate, and focus on the mobility patterns of middle-income families and their characteristics, from 1970 to 2009. We examine these demographics using both relative and absolute measures of income mobility.

Earlier work on this question (Duncan et al., 1993) found that, on net, about 1/3 who left the middle class moved down in the distribution while about 2/3 moved up. Demographic change (single parenthood and assortive mating) were the prime movers. But since that study, the situation has reversed as the demographic characteristics, the welfare state, and the structure of the labor and capital markets have all changed radically since the 1990s and especially, as we begin to exit the still troublesome Great

Recession(GR).

We use the Panel Study of Income Dynamics (PSID), harmonized over the years by the Cross National Equivalence File (CNEF), to document a variety of mobility patterns. Our evidence suggests first, that aggregate levels of mobility have changed little through the end of the 20th century. Second, disaggregating mobility reveals a general trend toward more upward mobility and less downward mobility before 2000, but a reversal of those trends after 2000, most likely due to flat income growth in the 2000s and the effects of the GR. Upward and downward movements are about equal now (meaning less upward mobility than previous research suggested). Third, movements are not distributed equally across demographic groups; economic characteristics (human capital, wages, etc.) have an increasingly important effect on who moves and where since 2000. We conclude that within superficial and descriptive stasis, there is great change.

There is disagreement regarding patterns of intragenerational mobility. Some argue that mobility has remained unchanged with Americans as likely to move up or down as they have in the past (Rose and Winship, 2009; Winship, 2013). Others argue the opposite (though not yet with panel data): relative to previous generations, more Americans are more likely to experience downward mobility (Acs, 2011; Short and Smeeding, 2012). Our work suggests that by focusing on incomes in the 'middle' of the distribution, mobility is not constant, with favorable, upward mobility increasing from the 1970s through the 1990s, but unfavorable, downward mobility increasing in the 2000s.

2 The earlier literature

Research on intragenerational income mobility in the United States based on panel data is a relatively under-developed topic area. Historically, the literature focused on the relative and absolute income mobility of individuals within cohorts (DiPrete and Eirich, 2006) or the earnings mobility of individuals (See Burkhauser and Couch, 2009, for a review). Recent work that focuses on the income mobility of families and distinguishes between short- and long-term income mobility. It also has begun to use panels of IRS tax data which are suitable for tracing the mobility or the top end of the distribution, but not the lower end (Debacker et al., 2011; Auten et al., 2013). Our paper contributes to the knowledge of income mobility by testing the sensitivity to different income cut points and measures of household income across the entire income distribution.

Income mobility refers to changes in income over longer periods of time, usually 10 years. Evidence using this measure suggests that changes in mobility have been modest. Examining changes in relative mobility suggest that in any given time period families in the first quintile of earnings were twice as likely to leave that quintile (57%) as families in the fifth quintile of earnings (27%) (Bradbury, 2011). Changes in absolute mobility suggest a similar pattern with the exit rate in any given time period from the 1st quintile (53%) about eight times higher than the exit rate from the 5th quintile (7%) (Acs and Zimmerman, 2008). These figures are in the range of other studies using the PSID and suggest stagnating changes over time in relative and absolute mobility upward, out of the lowest quintile and downward, out of the highest quintile (Gottschalk and Danziger, 1998). In laymans terms, there has been no real shift in the risk of mobility, making the study of the topic a bit "like watching grass grow" (Acs and Zimmerman, 2008; Aaron, 1978, pg. 17).

The literature on middle income mobility is a distinct and far more limited subset.

In part, the reason is because 'the middle' is such an abstract term and, even if it is defined using income categories, is heterogeneous (Atkinson and Brandolini, 2011). Duncan et al., (1993) use absolute measures of income and three broad income categories (low, middle, high) to examine the number of transitions into and out of the middle in 5 year increments between 1968 and 1986 for working aged individuals (25-50) in the PSID. Acs (Acs, 2011) also uses three broad income categories, but uses relative measures of income to examine mobility into and out of the middle from one generation to the next between 1979-1980 and 2004-2006 using the NLSY. The results suggest that inter- and intra-generational downward mobility from the middle accounts for about 1/3rd of all transitions with considerable differences across economic and demographic groups.

Despite a relative dearth of studies investigating middle class mobility, we believe it is important. Not only do most Americans consider themselves to be middle class (Commerce, 2010), but they also believe in the American Dream: everyone has an equal chance to experience mobility, regardless of the direction (Trusts, 2012). Further, 'the middle class' is of constant, and perhaps increasing, political importance as it is often mentioned in important presidential speeches. For example, president Obama's 2013 State of the Union discussed re-orienting tax policies to improve the living conditions of the middle class by reducing their taxes while increasing their benefits (through improved access to education, transportation, etc.). 'The poor' and 'the rich' may be better understood and more easily defined than 'the middle,' but the subjective definition does not reduce the importance of studying it.

The study of intragenerational mobility, generally, stands in contrast to the study of income mobility for middle-income groups, in particular. First, it is sparse with few studies that emphasize transitions into and out of the middle-income categories or even mention the term middle-income or middle-class. Second, by focusing on

the middle, it appears that even if aggregate mobility rates are constant over time, transitions across categories are not. Third, the characteristics of the movers and stayers are emphasized in a way they are not in the traditional literature on mobility. Together, we believe that the study of intragenerational middle income transitions is both valuable and understudied.

3 Data and Methods

To examine intragenerational mobility in the United States between 1970 and 2009, we use data from the PSID. Begun in 1968 with 5,000 families, the PSID samples original family members, their descendants, and their married partners every year through 1997 and biannually afterward. With the inclusion of original PSID family member's children forming their own households, the most recent survey conducted in 2009 includes data on nearly 9,000 families. Designed to study income dynamics, the PSID contains detailed data on the sources of earned income, including that from work, capital, and transfers. Other panel data that cover the time frame of interest are not nationally representative (i.e., the Wisconsin Longitudinal Study) while other nationally representative panel data sets do not cover as long a period of time (i.e., the SIPP). The PSID is the only nationally representative panel data set that covers the time frame and variables of interest.

Though the underlying data is from PSID, the data we use is from the Cross National Equivalence File (CNEF) for several reasons. First, CNEF harmonizes the variables of interest across time and countries, for potential future comparative analysis. Second, CNEF provides estimates of pre- and post-tax and transfer income, which is central to this analysis. Transfer income includes private transfers (child support, alimony, and gifts), public transfers (welfare payments from AFDC or TANF, SSI, unemployment,

worker's compensation, and food stamps), and social security pensions. Income from government transfer programs is derived from variables in the PSID, tax data is only available from the PSID prior to 1991. After 1991, tax data is estimated by the CNEF using NBER's TAXSIM model. While extensive information on TAXSIM is available elsewhere (see Feenberg and Coutts, 1993; Butrica and Burkhauser, 1997), two points in this simulation are worth highlighting: all tax payers take the standard deduction and everyone who is eligible for the earned income tax credit (EITC) receives it (Plueger, 2009). While the former is an issue for families with high incomes as not everyone takes the standard deduction, the latter is an issue for families of low incomes as not everyone claims the EITC . The CNEF therefore provides a superior way of working with income data from the PSID because it provides a uniform and accurate method of assessing income across time.

The study period used to measure mobility is comprised of overlapping three survey periods totaling four years (i.e. 1970, 1972, 1974 and 1971, 1973, 1975). Income is defined as pre- or post-tax and transfer household income averaged across two time periods at both the start and end of any given 4-year study period. Income is inflation adjusted to 2009 dollars using the CPI-U-RS[1] and adjusted for family size by divided by the square root of family size, a common equivalence scale, or using the U.S. poverty line in that year[2] creating an 'income-to-needs' ratio. The sample is restricted to prime, working age, household heads and spouses between the ages of 25 and 58 in the first year of a given study period with reported income in each year of the study period. Because the criteria are applied to each study period individually, the sample size changes, ranging from 2,500 to 4,300.

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[1]   SOURCE: U.S. Bureau of the Census, Current Population Reports, Income, Poverty, and Health Insurance Coverage in the United States: 2010 (P60-238, September, 2010). Appendix A. Annual Average Consumer Price Index Research Series (CPI-U-RS) Using Current Methods All Items: 1947-2009.

[2]   SOURCE: U.S. Bureau of the Census, Current Population Survey, Annual Social and Economic Supplements. Table 1. Weighted Average Poverty Thresholds for Families of Specified Size: 1959 to 2010.

Table 1: Average income by income-to-needs ratio

Study period	Pre-tax, pre-transfer			Post-tax, post-transfer		
	<2	2-6	> 6	<2	2-6	> 6
Absolute mobility						
1970 - 1974	$11,928	$35,267	$82,213	$13,544	$32,704	$78,677
1985 - 1989	$10,074	$37,341	$90,038	$12,721	$33,513	$82,359
2003 - 2007	$10,981	$38,759	$113,843	$13,049	$36,237	$104,249
Relative mobility						
1970 - 1974	$11,197	$33,691	$78,009	$12,897	$31,389	$73,791
1985 - 1989	$10,074	$37,341	$90,038	$12,721	$33,513	$82,359
2003 - 2007	$11,509	$40,092	$117,920	$13,602	$37,585	$111,666
Note: Inflation adjusted to 2009 using CPI-U-RS						

The choice of age bracket is grounded in our exploration of income transitions in the middle-class. Most discussion regarding the middle-class focus on the prime-age working population who have finished their schooling and entered the full-time, full-year workforce, but are not yet able to retire. Prime-age is often defined by the Census Bureau and the Bureau of Labor Statistics in a variety of official reports as those between the ages of 25 to 54. While we maintain the lower bound age, we extend the upper bound age to 58 in the first year of the study period to capture the age at which individuals are able to collect early retirement (62). The choice of 58 as opposed to 54 does not qualitatively change our findings, but does increase our sample size, which improves the explanatory power of our regression analysis.

To assess transitions into and out of the middle-income category, two sets of upper and lower bounds are created. The first is an absolute income measure where the lower boundary and upper boundary of middle income is set at the two and 6 six times the income-to-needs ratio in the middle year of the middle study period across the entire sample (1987). The second is a relative income measure with the lower and upper boundaries of the middle set at two and six times the income-to-needs ratio in any given year. Relative and absolute measures of income mobility are shown in table 3.

Gottschalk and Danziger (1998) provide a helpful example to distinguish between absolute and relative mobility. Imagine that the United States experienced a period of economic growth that doubled everyones real income even as no one experienced any other change in their income. In this example, everyone experienced rising levels of absolute mobility, but no one experienced any change in their relative mobility. For example, a poor family earning $15,000 at the beginning would see their earnings rise to $30,000 at the end, lifting them out of absolute poverty, but relative to the rest of the population, they would still be poor.

To examine changes in the mobility into and out of income categories over time, transitions are defined as a household that starts in one income category and ends in another category within a 4-year window. In particular, we focus on four types of transitions:

1. Move into high income = begin in middle income in period t and move into high income in period $t + 3$

2. Move out of low income = begin in low income in period t and move into middle income in period $t + 3$

3. Move out of high income = begin in high income in period t and move into middle income in period $t + 3$

4. Move into low income = begin in middle income in period t and move into low income in period $t + 3$

Transitions 1 and 2 are considered favorable while transitions 3 and 4 are considered unfavorable.

To isolate the net contribution of individual socioeconomic indicators from time, we use the following logistic regression model:

$$Pr(Y_i = 1) = log\left(\frac{\pi_i}{1 - \pi_i}\right)$$

$$= \alpha + \sum \beta_k P_k + \sum \beta_k F_k + \sum \beta_k E_k + \sum \beta_k D_k + \sum \beta_k T_k + \epsilon \tag{1}$$

Which is to say that the probability of experiencing each of the four outcomes Y_i (enter high-income, enter low-income, exit high-income, and exit low-income) is the natural logarithm of the probability of experiencing a given outcome, divided by the probability of not experiencing that outcome, and are referred to as odds. Each of the four outcomes are assessed using relative measures of post-tax, post-transfer income categories. With four outcomes of interest, model 1 is run four times.

P_k is a vector of variables representing personal characteristics including race, sex, age, education. Race is defined as White and non-White, age is defined as being over the age of 34, and education is defined as less than high school, high school, and more than high school. F_k is a vector of variables representing family characteristics including change in marital status and presence of children. Marital status is defined as always single, always married, got married, or got divorced. Presence of children is defined as children are or are not present in the household or a family gained or lost the presence of children. E_k is a vector of variables representing economic characteristics including change in employment status, number of workers, and hourly wage from labor. Employment status is defined as always having a full-time job, never having a full-time job, gaining a full-time job, or losing a full-time job. Number of workers is defined as maintaining the same number of workers in a household, gaining a worker or losing a worker while a worker is defined as working a full- or part-time job. Hourly wage from labor is defined as the total annual household wages from labor divided by the annual number of hours worked by an individual and is aggregated into always earning less or more than \$15 per hour and rising above or falling below earning \$15

per hour.

D_k is a vector of dummy variables measuring each person's distance between their initial income and the boundary line for a given transition in quintiles. For example, in the analysis from middle into high income status, a family of four in 1987 with an initial income of $63,000 would have an income that was 50% of the $126,000 transition line (six times the poverty line of $21,000) and would be in the third quintile. According to Duncan, et al., (1993) "The importance of including these dummy variables is because if the entire income distribution were moving closer to the upper boundary of the middle-income group, then the typical person 'at-risk' of making a transition into the upper-income group would be closer to the boundary over time. The dummy variables measuring a person's distance to the transition boundary adjust for this differential risk." Finally, T_k is a vector of dummy variables for each of the 33, 4-year study periods. The result is a method for examining changes in absolute and relative mobility rates over time and the characteristics that contribute to those changes.

4   Results: Cross-sectional Comparisons

We begin the analysis by comparing PSID data to the Census Bureau's Current Population Survey (CPS) to suggest that the PSID is indeed a nationally representative sample. To do this, we treat the PSID as if it were a series of cross-sections using pre-tax, pre-transfer total family income unadjusted for family size for each PSID household against published CPS data on total household income.[3] The income cuts are as close as possible to the cut points chosen for the PSID sample and published CPS estimates: $25,000 and $75,000, in 2009 dollars. Shown in Figure 1, the two

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[3]   SOURCE: U.S. Bureau of the Census, Current Population Reports, Series P60-238, Table A-1, "Households by Total Money Income, Race, and Hispanic Origin of Householder: 1967 to 2009"

data sources are highly correlated with a declining proportion of middle and lower income households and a rising proportion of upper income households, trends which are monotonic. Households in the PSID appear to be similar to the population of households in the United States as measured by the CPS, the workhorse of almost all cross-sectional income distribution studies.

Figure 1: Distribution of low-, middle-, and high-income in the CPS and the PSID
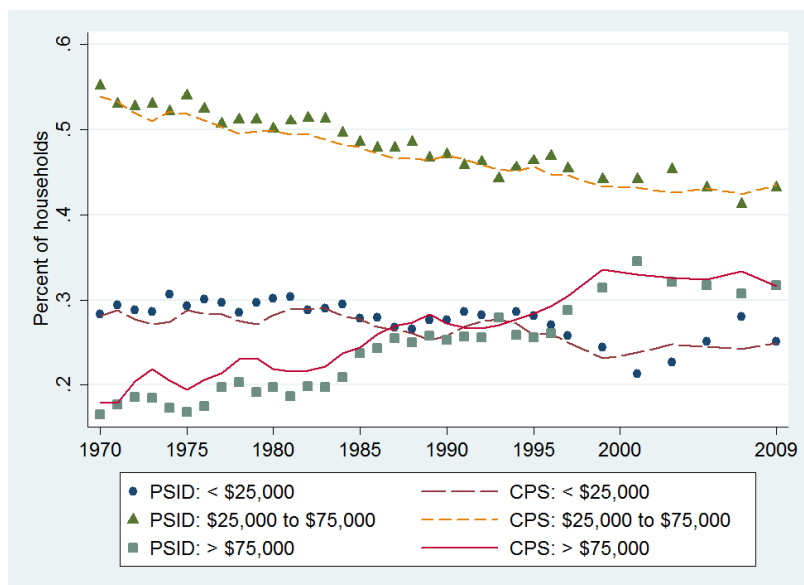
Next, we examine cross-sectional trends in the PSID using a sample of 25- to 58-year-olds and the various adjustments to income described earlier. Two observations are evident. First, it is clear that adjusting for taxes and transfers alters the trends. While pre-tax, pre-transfer income suggests a decline in middle-income households, post-tax, post-transfer income suggests a relatively stable proportion of household in the middle of the income distribution. Further, while both measures of income show a decline in the proportion of households with low-income and an increase in the proportion of households with high-income, the decline is larger and the rise is smaller using post-tax, post-transfer income.

Second, it is apparent that growth, decline, and stagnation in the income categories

Figure 2: Cross-sectional distribution of low, mid, and high income households in the PSID
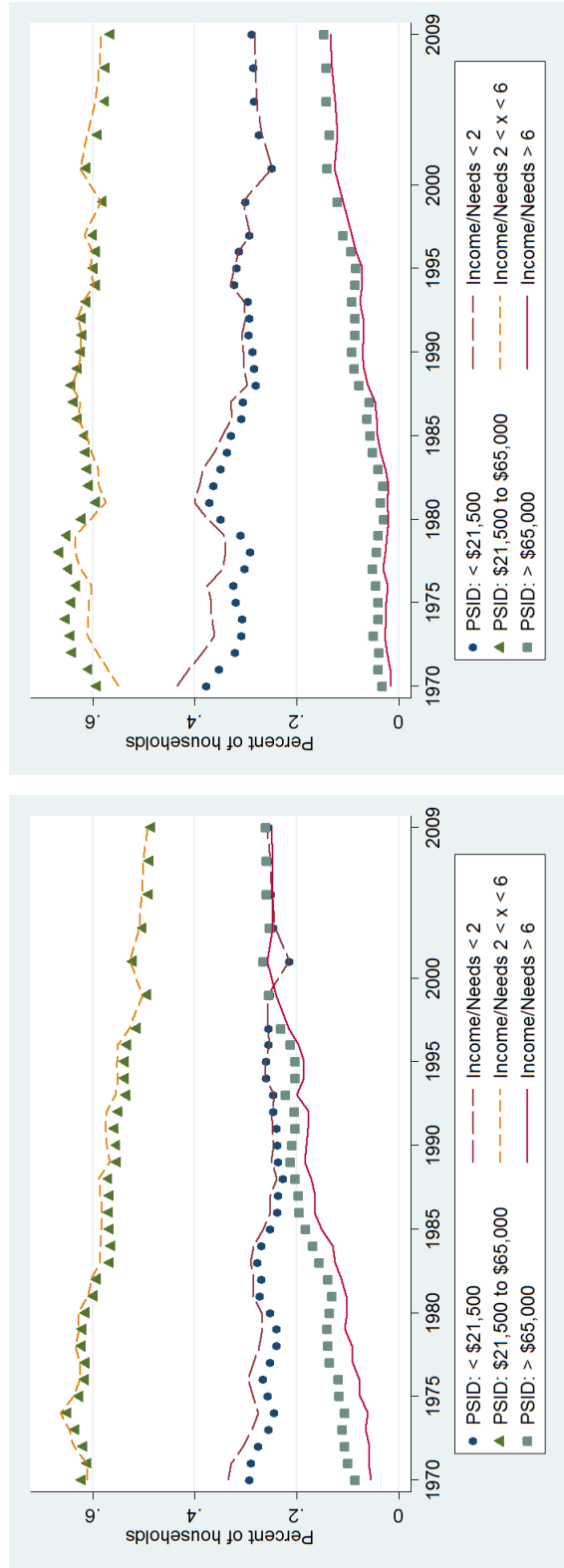
(a) Pre-tax, pre-transfer

(b) Post-tax, post-transfer

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are reflective of particular time periods. Focusing on post-tax, post-transfer income-to-needs, the proportion of middle-income households are stagnant at about 62% between the 1970s and the 1990s when it declines to 58% during the 2000s. The proportion of low-income households declined steadily from a high of 38% in 1970 to 25% in 2001 and then there is a rise to 29% in 2009. The proportion of high-income households rose steadily throughout the study period from 3% in 1970 to 14% in 2001 and then stagnates through 2009. Beginning in 2001, there is a marked change in the directional trends in the proportion of low- and mid-income households.

5 Results: Income Transitions

Changes in the proportion of households by income category reflect transitions or flows into and out of those income categories. It is relevant to understand whether the increase in the proportion of high-income households is a reflection of more families moving into high-income or fewer moving out of high-income. Similarly, we want to know whether the decrease in the proportion of low-income households is a reflection of more families moving out of low-income or fewer families moving into low-income.

Together, those flows represent changes in mobility rates, as shown in figure 3. The main conclusion to draw is that mobility rates have remained stagnant over time, regardless of the whether mobility is measured using relative or absolute rates or income is measured pre- or post- taxes and transfers. It does appear that mobility rates have declined after the period ending in 2001, but the decline is moderate and does not distract from overall trend of stasis.
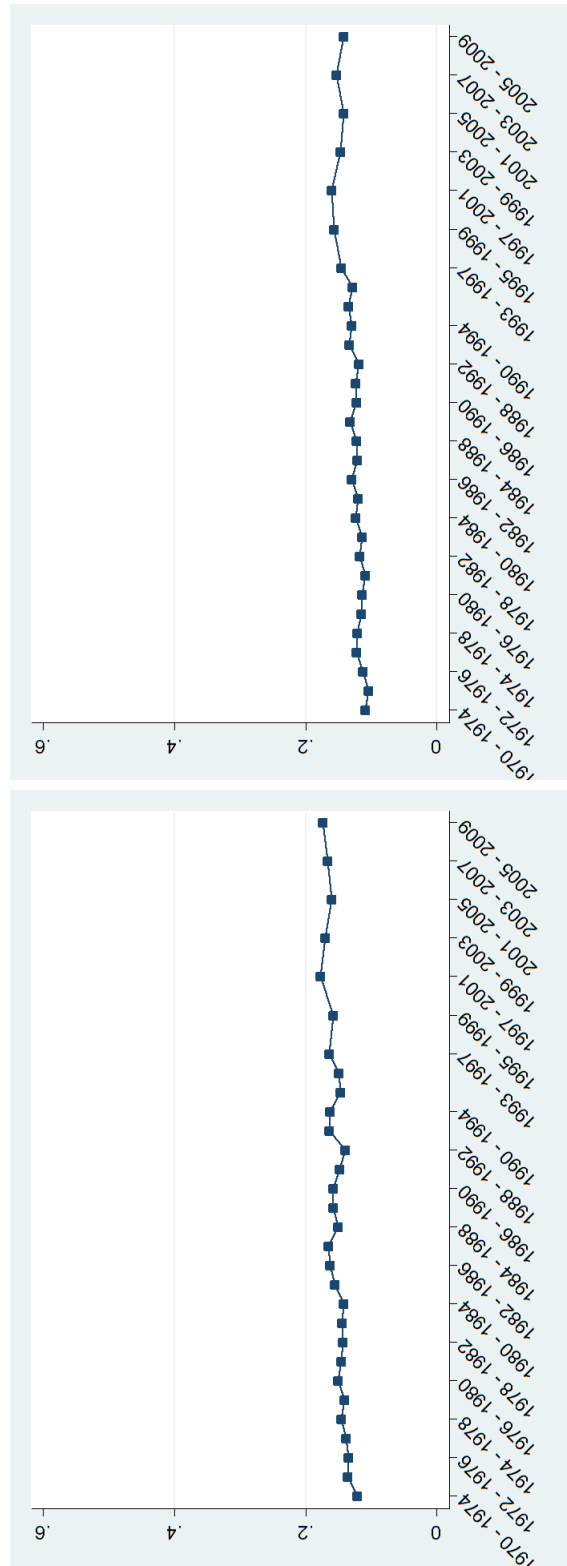
Desegregating the mobility rates into the percent of adults making income transitions reveals significant change within the overall stasis. Figure 4 describes income transitions using a definition of mobility that is relative and income that is post-tax,

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Figure 3: Percent of adults who move
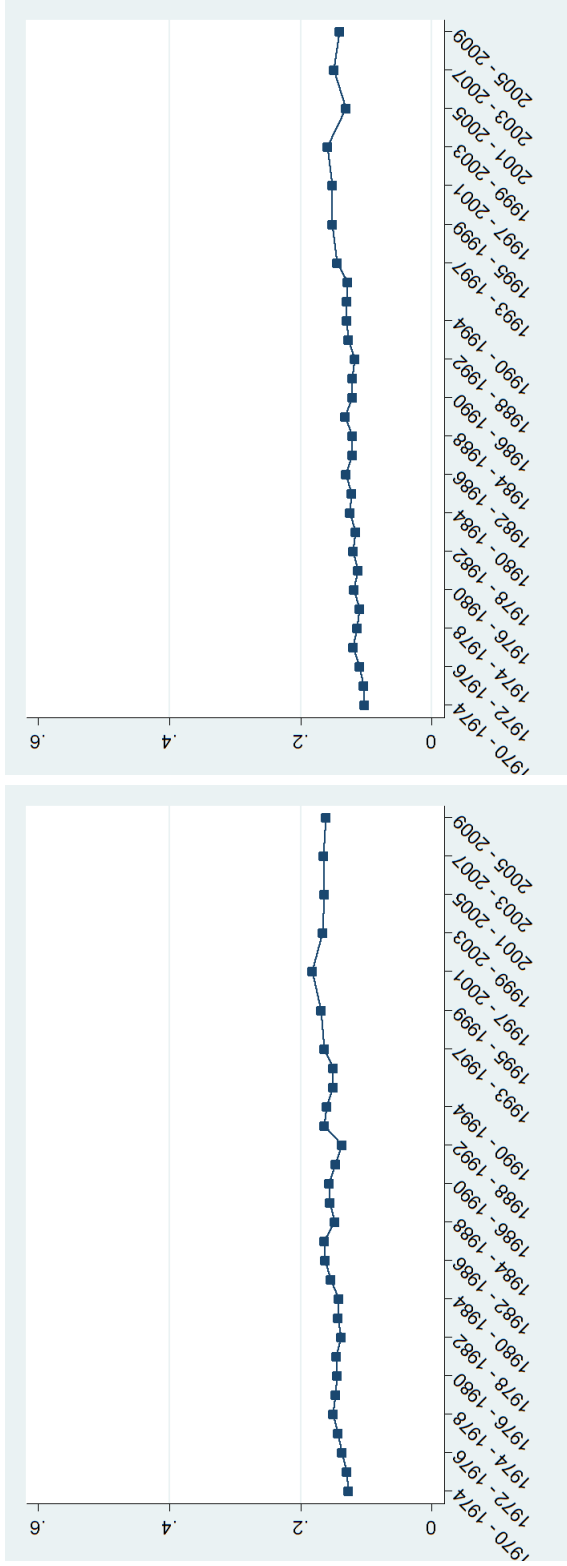
(a) Pre-tax, pre-transfer - relative

(b) Post-tax, post-transfer - relative

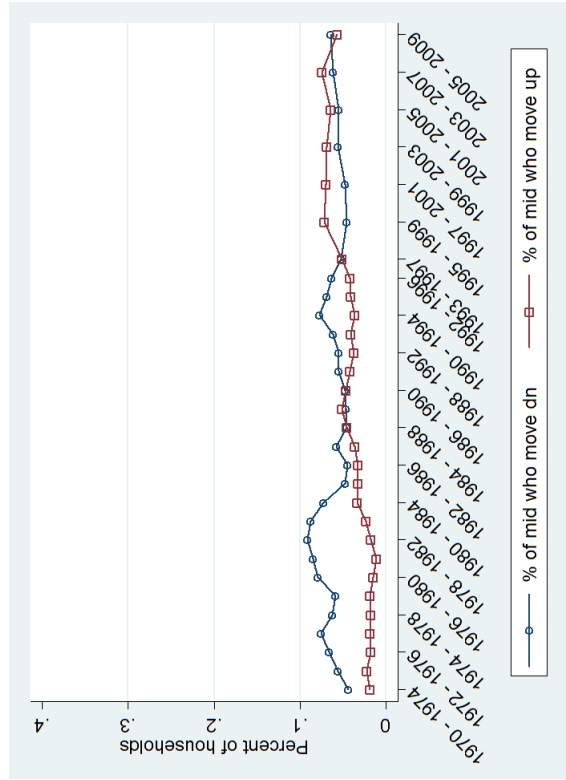(c) Pre-tax, pre-transfer - absolute

(d) Post-tax, post-transfer - absolute

post-transfer because there is little difference using alternative measures. Focusing on middle income transitions reveals that from 1970 until the mid-1990s, the percent of middle income families moving down was higher than the percent of middle income families moving up. Afterward, the trend is reversed. The percent of families who move up stagnated throughout the 2000's and declined during the last study period while the percent of families who move down increased throughout the 2000's. Though there are clear periods of rise and fall, the overall trends suggest that the percent of families who move down is relatively stagnant at about 7% while the percent of families who move up has increased over time, from 2% to 7%.
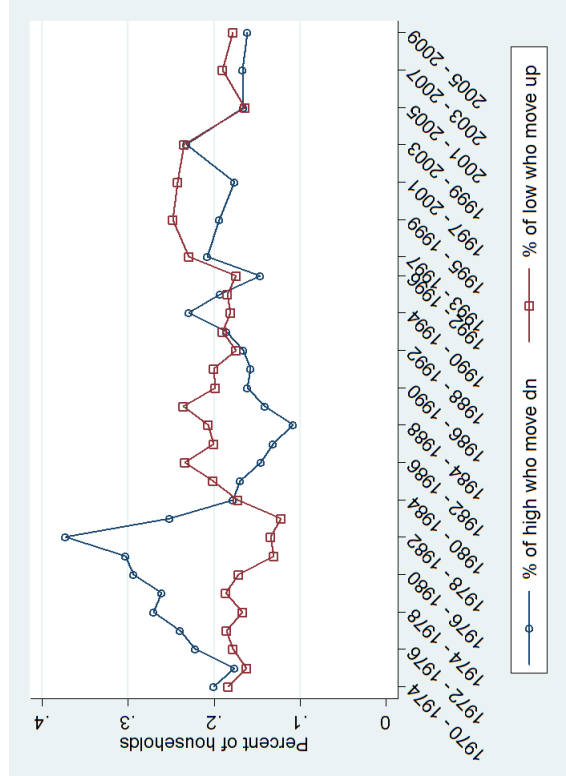
High-income transitions are less stable than mid- or low-income transitions. The percent of high-income families who move down rose steadily from 1970 through the 1980 and then declined dramatically through the late 1980s when it began to increase slowly and steadily until the end of the study period to 18%. Though not shown, transitions out of high-income into mid-income for those above 10-times poverty are far more stable indicating that the instability is located in high-income earners between 6 - 10 times poverty. The percent of low-income families who move up has hovered around 20% through the entire time period with small perturbations from that main trend line. Unlike aggregate mobility rates which appear to be stagnant over time, transitions into and out of disaggregated income categories are not.

Another way of thinking about income transitions is to examine the percent of adults that do not move, that stay in their income category, shown in figure 5. In looking at income stability, it is clear that the percent of families who stay in mid-income has declined monotonically over time, from 94% in 1970 to 88% in the last study period, 2005 - 2009. The percent of low-income families who stay has also declined from 1970 to the late 1990s, from 81% to 75%, but risen since 2000 to 82%. The percent of high-income families who stay has remained stagnant at about 90% since

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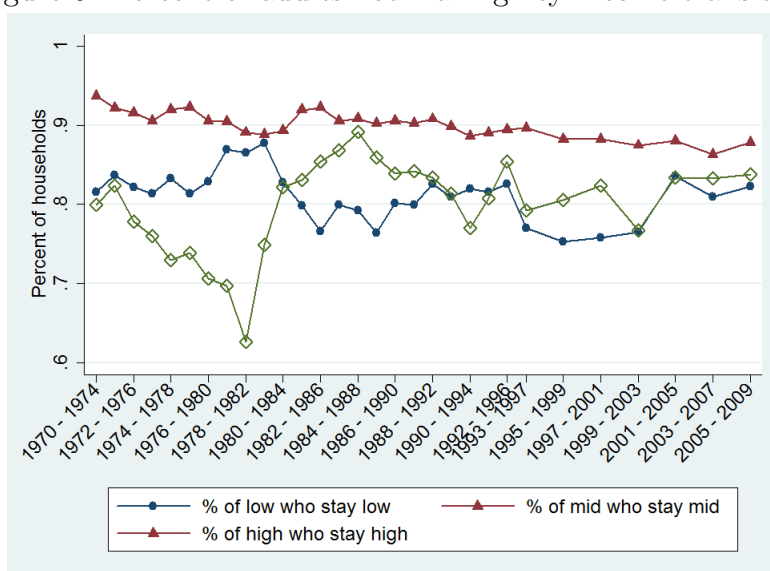Figure 4: Percent of adults making key income transitions

(b) Low- and high-income transitions

(a) Mid-income transitions

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Figure 5: Percent of adults not making key income transitions

the 1980s. Even if mobility rates change little over time, immobility rates within income categories reveal significant change.

6 Results: Explaining Transitions

We turn now to our econometric model to better understand the effect of socioeconomic characteristics and time on the likelihood of experiencing a transition using relative measures of income mobility and post-tax, post-transfer earnings. Figure 6 shows changes in the regression adjusted mobility rates. The figure looks nearly identical to the regression unadjusted mobility rates, shown in figure 3.

During the 1970s, the predicted probability of moving out of high-income to mid-income rose, declined during the 1980s, and remained constant after the 1990s at about 20%. The predicted probability of leaving low-income remained at about 15% throughout the entire time period with the two exceptions: between 1976 and 1984, it declined to 10% and between 1993 - 2003, it rose to about 20%. The predicted probability of moving down from mid-income remained relatively constant over time

Figure 6: Regression adjusted probability of income transition
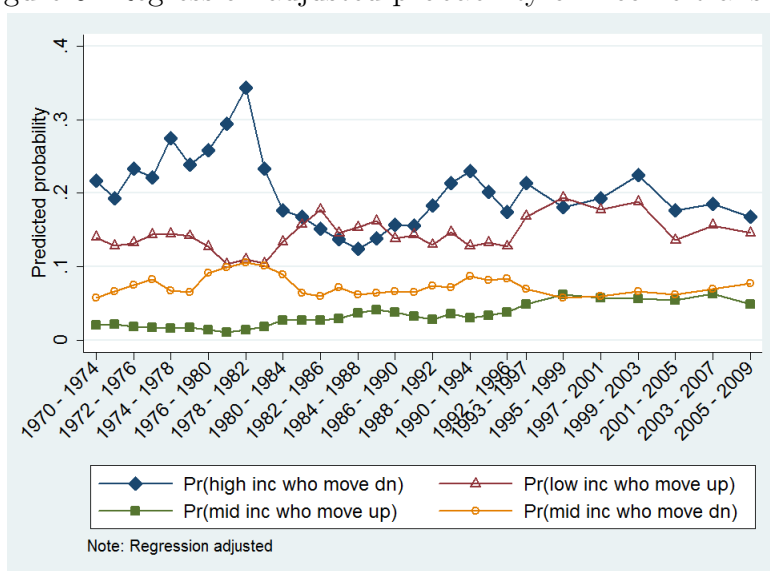
at about 8%, while the probability of moving up from mid-income rose steadily from 3% in 1970 to 7.5% in 2009. Changes in the probability of experiencing income transitions are not constant over time.

Results from the econometric models are shown in Table 2 and suggests the contributing factors to making a given transition. There are three sets of factors, personal, family, and economic characteristics. The explanatory power of the model is highest for moving into low-income and lowest for moving out of high-income.

Personal characteristics are significant, but smaller in size than the other variables in the model. Whites are more likely to experience favorable transitions and less likely to experience unfavorable transitions than non-whites. An individual who is 35 years of age or older is less likely to make an unfavorable transition and more likely to move out of low-income than one who is younger. Men are less likely to move out of low-income and more likely to move into low-income than women. A college degree increases the probability of experiencing favorable transition and reduces the probability of experiencing unfavorable transition compared to a high school degree.

Table 2: Income transitions: All study periods

| | Favorable income transitions | | | | Unfavorable income transitions | | | |
| | Move into high | | Move out of low | | Move out of high | | Move into low | |
	b	se	b	se	b	se	b	se
Personal characteristics:								
White	1.585***	(0.11)	1.464***	(0.04)	0.981	(0.12)	0.702***	(0.02)
Male	0.934	(0.05)	0.886***	(0.03)	1.163	(0.09)	1.494***	(0.05)
Age >= 35	0.957	(0.05)	1.352***	(0.04)	0.779**	(0.07)	0.785***	(0.03)
Less than HS	0.918	(0.10)	0.825***	(0.03)	1.340	(0.25)	1.293***	(0.05)
More than HS	1.828***	(0.10)	1.337***	(0.05)	0.566***	(0.05)	0.825***	(0.03)
Family characteristics:								
Got married	2.981***	(0.27)	3.030***	(0.23)	0.855	(0.18)	0.773*	(0.08)
Never married	0.798***	(0.05)	1.414***	(0.06)	2.356***	(0.26)	1.968***	(0.08)
Got divorced	0.595***	(0.09)	1.554***	(0.12)	3.047***	(0.57)	3.225***	(0.22)
Have kids	0.758*	(0.10)	0.859	(0.11)	1.012	(0.18)	1.152	(0.11)
Never have kids	1.358***	(0.07)	1.898***	(0.08)	0.622***	(0.05)	0.717***	(0.03)
Lose kids	2.211***	(0.18)	2.946***	(0.20)	0.347***	(0.06)	0.518***	(0.04)
Economic characteristics:								
Gain FT job	1.558***	(0.14)	1.874***	(0.10)	1.312	(0.24)	0.924	(0.07)
Never have FT job	0.883*	(0.05)	0.797***	(0.03)	1.536***	(0.14)	2.238***	(0.09)
Lose FT job	0.740**	(0.07)	0.566***	(0.04)	2.390***	(0.29)	2.726***	(0.16)
Gain worker	2.297***	(0.24)	1.257***	(0.06)	0.988	(0.21)	1.192*	(0.08)
Lose worker	0.885	(0.09)	0.658***	(0.04)	2.559***	(0.31)	1.392***	(0.08)
Rise above \$15 p\hr	0.817	(0.16)	2.306***	(0.11)	1.376	(0.52)	0.661***	(0.06)
Always low < \$15p\hr	1.112	(0.12)	0.294***	(0.01)	1.472**	(0.22)	2.991***	(0.13)
Fall below \$15 p\hr	0.473***	(0.10)	0.155***	(0.01)	2.447***	(0.48)	8.437***	(0.43)
Total Observations	77,344		55,374		6,841		77,344	
Psuedo R²	0.314		0.319		0.199		0.325	

Exponentiated coefficients

Fixed effects for year and distance to the income transition line are not shown

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

Table 3: Income transitions: 2001-2005, 2003-2007, & 2005-2009 Study Periods

| | Favorable income transitions | | | | Unfavorable income transitions | | | |
| | Move into high | | Move out of low | | Move out of high | | Move into low | |
	b	se	b	se	b	se	b	se
Personal characteristics:								
White	1.500**	(0.22)	1.246*	(0.13)	0.814	(0.17)	0.797*	(0.09)
Male	1.035	(0.12)	0.974	(0.11)	1.180	(0.21)	1.206	(0.14)
Age >= 35	0.919	(0.13)	0.877	(0.10)	0.821	(0.18)	0.838	(0.10)
Less than HS	1.535	(0.44)	0.716*	(0.10)	1.069	(0.58)	0.990	(0.16)
More than HS	1.266	(0.16)	1.334*	(0.16)	0.529***	(0.10)	0.871	(0.10)
Family characteristics:								
Got married	2.748***	(0.64)	2.264***	(0.56)	0.788	(0.36)	0.881	(0.29)
Never married	0.873	(0.13)	0.891	(0.11)	3.046***	(0.72)	2.304***	(0.28)
Got divorced	0.363	(0.20)	1.417	(0.46)	3.352*	(1.40)	3.636***	(0.87)
Have kids	0.432*	(0.17)	0.624	(0.29)	0.491	(0.20)	0.473*	(0.17)
Never have kids	1.085	(0.14)	2.359***	(0.32)	0.484***	(0.09)	0.606***	(0.08)
Lose kids	2.510***	(0.52)	2.583***	(0.67)	0.126***	(0.07)	0.472**	(0.12)
Economic characteristics:								
Gain FT job	1.693*	(0.36)	2.225***	(0.40)	1.903	(0.70)	0.905	(0.25)
Never have FT job	0.990	(0.14)	0.724*	(0.09)	1.763**	(0.36)	3.072***	(0.42)
Lose FT job	1.048	(0.22)	0.286***	(0.07)	2.661***	(0.72)	3.946***	(0.69)
Gain worker	6.002***	(1.71)	1.551*	(0.29)	0.854	(0.49)	0.974	(0.28)
Lose worker	0.628	(0.23)	0.583*	(0.14)	2.044*	(0.67)	1.132	(0.22)
Rise above $15 p\hr	0.074*	(0.08)	1.720***	(0.26)	0.347	(0.42)	1.183	(0.30)
Always low < $15p\hr	0.994	(0.33)	0.210***	(0.03)	1.394	(0.54)	4.938***	(0.69)
Fall below $15 p\hr	0.471	(0.27)	0.206***	(0.05)	2.199	(0.98)	13.804***	(2.30)
Total Observations	7,898		3,988		1,455		7,898	
Psuedo R²	0.283		0.301		0.208		0.374	

Exponentiated coefficients

Fixed effects for distance to the income transition line are not shown

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

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Examining the family characteristics suggests that children and marriage have offsetting effects on income transitions. Getting decreases the probability of making unfavorable income transitions and increases the probability of favorable transitions as compared to being married throughout the study period. Becoming divorced increases the likelihood of unfavorable income transitions, reduces the likelihood of moving into high-income, but also increases the likelihood of moving out of low-income; being single has a similar effect to getting a divorce. The presence of children decreases the probability of a favorable income transition and increases the probability of an unfavorable one as compared to not having children. While marriage is a stabilizing force, protecting against any kind of income transition, children are a destabilizing force, reducing a family's economic standard of living based on higher costs of raising children (Agriculture, 2011).

Economic characteristics are more uniform in their effect on income transitions. A full-time job or gaining one during the study period increases the likelihood of a favorable income transition and decreases the likelihood of an unfavorable one as compared to not having a one or losing one during the study period. Gaining an additional worker in the family has a positive effect on making favorable income transitions while losing a worker in the family has a positive effect on making unfavorable income transitions. Falling below $15 per hour increases the probability of an unfavorable transition while rising above $15 per hour increases the probability of moving out of low-income, but not moving into high-income.

Table 3 isolates the three study periods in the 2000s. With two exceptions, the results are largely the same. Post-2000, adding a worker greatly increases the likelihood of moving into high income while falling below $15 per hour greatly increases the likelihood of moving into low-income as compared to the average across all study periods. The signs of the coefficients for all other variables are the same even if the

coefficients themselves vary a little bit. Economic characteristics have increased in importance in explaining income transitions over time while the explanatory power of personal and family characteristics remain unchanged.

In sum, our results suggest that there are large differences in mobility between the market income distribution and the post-tax and transfer distribution. The net effects of taxes and transfers are to mitigate changes in market income mobility in ways that enhance longer run income stability and maintains middle class status for a large minority of households, including the first stages of the GR. While the evidence on the anti-poverty effects of GR policy have been examined (Short and Smeeding, 2012), their effect on longer run intragenerationl mobility have not been examined before. In future work we hope to further exploit the ways in which these patterns differ due to the GR.

7   Conclusion

Examining intra-generational mobility in the United States between 1970 and 2009 using 4-year study periods reveals two basic findings. First, overall income mobility has changed little between 1970 and 2009. Regardless of whether one uses a relative or absolute measure of income mobility or pre- or post-tax and transfer income, the surface look suggest that mobility has stagnated, but, within that stasis, there is change. The probability of moving down, out of high-income, down, out of mid-income, and up, out of low-income has changed little over time while the probability of moving up, into high-income up from the middle increased a great deal up until 1999. However, since 2000, it does appear that the probability of moving up, into high-income from the middle has stagnated while the probability of moving down, into low-income from the middle has increased.

Second, there are clear and large differences in the probability of making an income transition by personal, family, and economic characteristics. Whites and those with a college degree are more likely to experience favorable income transitions and less likely to experience unfavorable income transitions. Families who are married with children are less likely to make an income transition of any kind. Further, families who gain a worker, work more hours, and earn more in wages are more likely to experience a favorable income transition and less likely to experience an unfavorable one.

Further, taxes and transfers play a critical role in stemming the decline of middle class mobility. In light of the current budget debates in Washington, it seems particularly relevant to highlight the importance of taxes and transfers not only in helping the poor, but also the middle class. While work on the importance of taxes and transfers in income maintenance is a well worn topic, less understood is its impact on mobility. Future work will explore that empirical point in greater detail.

While poverty dynamics has long explored the full composition of movements into and out of poverty, such analyses miss movements further up the income spectrum. Research that examines dynamics across the entire income spectrum distinguishes between mobility and volatility, but overlooks the direction of those movements. A comprehensive approach that focuses on the dynamics of middle- and upper-income individuals, distinguishes between upward and downward movements, and examines the characteristics of the movers and stayers like what we have provided here is needed.

8   Bibliography

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