ECONOMIC COMMENTARY

An Update on Wealth Mobility

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We measure wealth mobility in the United States. Using the latest wave of the Panel Study of Income Dynamics (PSID), we update Carroll and Hoffman (2017), who document a decreasing trend in wealth mobility over the past 30 years. We confirm another of their findings that large upward movements in wealth are associated with families' owning businesses and real estate other than a primary residence. Finally, we turn to the much larger Survey of Income and Program Participation (SIPP) data and document that these "large mover" households are evident even over three-year periods.

In recent decades, US data have indicated that family wealth has displayed less mobility than previously, meaning that, overall, a family's relative position within the wealth distribution has become more fixed. This decline in wealth mobility has occurred over a period of rising income and wealth inequality. In a 2017 *Economic Commentary*, Carroll and Hoffman examined the evolving state of relative wealth mobility using data from the Panel Study of Income Dynamics (PSID). They found that since the 1980s, a family's place in the wealth distribution has become increasingly rigid: more families are staying in the same region of the wealth distribution, and among those families that do move, those movements are smaller on average than in the past. This is true even after controlling for the widening of the wealth distribution over that time.

Understanding why wealth mobility has declined requires an inspection of the various assets and debts that comprise family wealth. Carroll and Hoffman (2017) looked at families that made considerable jumps both upward and downward in the wealth distribution ranking over a 10-year period and found that those families were more likely to own riskier asset classes such as businesses, stocks, and real estate other than a primary residence.

In this *Commentary*, we examine wealth mobility over one-year and three-year intervals. While the data are noisier over short horizons, examining wealth mobility at a higher frequency can contribute to understanding its overall nature. Measures of mobility over periods of one to three years are unlikely to be much affected by slow-moving trends in the wealth distribution from factors such as demographic changes and greater wealth concentration. For our higher-frequency analysis, we depart from the PSID, which has a relatively small sample size and infrequent timing of wealth supplements, and turn instead to the Survey of Income and Program Participation (SIPP). The SIPP is better suited for studying short-term wealth mobility because it is much larger than the PSID and has annual wealth data.

In keeping with Carroll and Hoffman's results for 10-year intervals, we find that ownership of businesses and real estate tends to be associated with greater mobility over shorter intervals, particularly greater upward mobility.

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Wealth Mobility in the PSID: An Update

To facilitate comparisons to mobility measures from the SIPP, we begin by updating the findings of Carroll and Hoffman (2017) to use the most recent (2019) PSID data.[1] The PSID is one of only a few comprehensive economic surveys that track participants throughout their lifetimes, making it a valuable source for studying long-term movements within the wealth distribution. Carroll and Hoffman (2017) observed mobility in 10-year increments from 1984 to 2013, finding that mobility between wealth quintiles decreased over time, in large part because of changes in the wealth distribution, notably, rising wealth inequality. Furthermore, they pinpointed several types of asset ownership that were associated with large movements in the wealth distribution over 10-year periods: "Real estate other than primary home," "Investments," and "Farm or business."

To assess mobility, we denote as "large movers" families that end up three or more quintiles away from their starting quintile over a fixed horizon. Figure 1 displays the likelihood that a family owns each of these assets based on whether the family was a large upward mover, a large downward mover, or neither. Consistent with the results from Carroll and Hoffman (2017), ownership of each of these assets was significantly more common among large movers over a 10-year horizon (Panel A).

Over the two-year horizon in Figure 1 Panel B,[2] we see a similar relative tendency among the movers to own assets in the real estate and farm or business categories, though not in the investments category. One potential explanation is simply market timing as the stock market regained lost ground from the financial crisis. Alternatively, the value of a business or real estate may be more volatile than the value of stock portfolios ("Investments") over short horizons. If ownership of these assets is more concentrated than it is for stock portfolios, large movers would be more likely to arise from among this group.

Transition Matrices: SIPP versus PSID

The wealth supplements in the 2014 SIPP contain information on household holdings of a broad set of assets. These assets include deposits at a bank (for example, funds in savings accounts, certificates of deposit, money market accounts), stocks and mutual funds, government and corporate bonds, a primary residence, rental property and real estate apart from one's primary residence, business equity, retirement accounts, vehicles, educational accounts, trusts, and life insurance. Unlike the PSID, the SIPP does not follow participants over their lifetimes. Instead, it tracks participants for only a short period of time. Despite this seeming drawback, the SIPP offers two notable advantages over the PSID for studying short-term wealth mobility. First, it provides annual measures of wealth, whereas the modern PSID is biennial. Second, the SIPP has a significantly larger sample size that allows the user to drill down into asset ownership classes with enough participant observations to maintain sufficiently reliable precision in the estimates.

Figure 1: Percent of PSID Families Owning Risky Assets by "Large Mover" Status

Panel A: 2009–2019

Panel B: 2013–2015
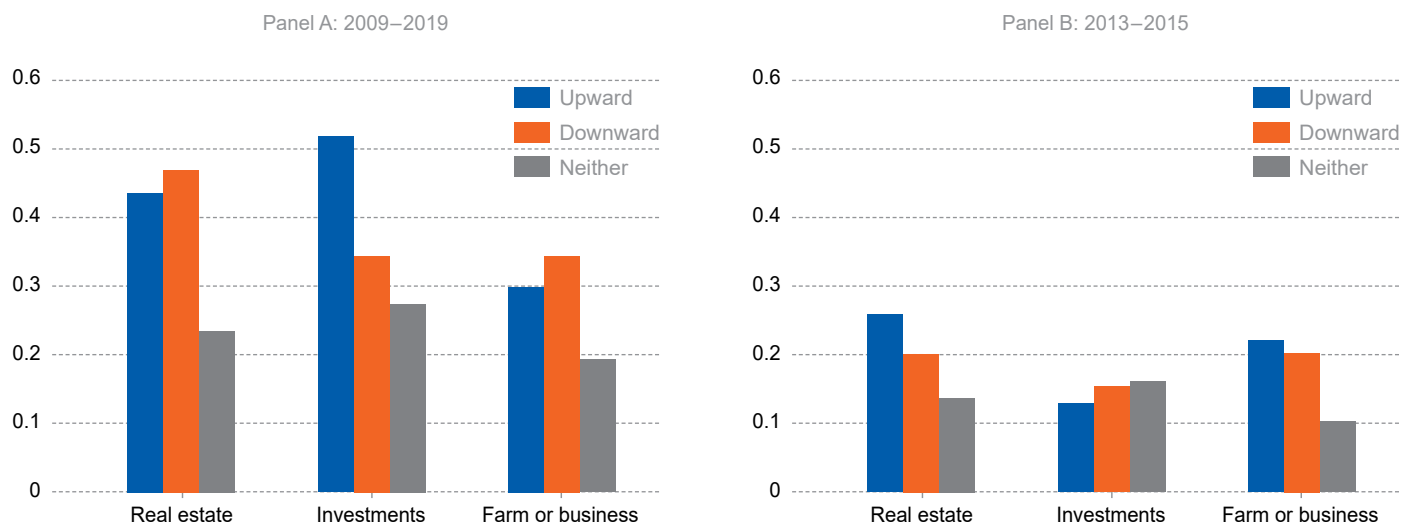
Sources: Panel Study of Income Dynamics (PSID) and authors' calculations

Note: Because we consider a family to own an asset if it indicates ownership in at least one PSID sample over the sample period, there are more opportunities to be classified as owning the asset over longer horizons. This is why ownership percentages are greater in Figure 1 Panel A than in Figure 1 Panel B.

Table 1: Transition Matrices for 2013–2015

(a) PSID

Starting quintile	Ending quintile				
	1st	2nd	3rd	4th	5th
1st	0.65	0.23	0.08	0.03	0.01
2nd	0.28	0.54	0.14	0.03	0.01
3rd	0.09	0.21	0.53	0.15	0.02
4th	0.03	0.05	0.22	0.57	0.13
5th	0.01	0.01	0.02	0.17	0.79

Percent

(b) SIPP

Starting quintile	Ending quintile				
	1st	2nd	3rd	4th	5th
1st	0.62	0.24	0.09	0.04	0.01
2nd	0.29	0.46	0.17	0.06	0.02
3rd	0.07	0.21	0.48	0.20	0.04
4th	0.03	0.06	0.23	0.50	0.18
5th	0.01	0.02	0.05	0.21	0.70

Percent

Sources: Panel Study of Income Dynamics (PSID), Survey of Income and Program Participation (SIPP), and authors' calculations

The 2014 SIPP panel contains data starting in 2013 and ending in 2016. Because some of these dates overlap with those in the PSID over 2013–2015, we can test whether the SIPP gives a similar picture of wealth mobility as the PSID for that period. Some care does need to be taken when comparing the two surveys. In the SIPP, the primary unit of observation is a household, while in the PSID it is a family. Generally, a household is the broader of the two definitions, so to make direct comparisons between the two surveys, we first convert the SIPP to family-level variables by grouping members of a household who have the same family numbers.[3] Then we calculate transition matrices in the respective surveys from 2013 to 2015, shown in Table 1. These transition matrices show the frequency with which families moved positions in the wealth distribution over that period of time.

Transition matrices are constructed by first assigning families into one of five equally sized wealth bins. The first bin, or quintile, is composed of the least wealthy 20 percent of families. The second quintile is the next lowest 20 percent group (that is, 21 percent to 40 percent), and so on. The rows of the transition matrix indicate the wealth quintile a family belonged to in 2013, and the columns show where the same family was observed three years later.[4] Focusing on a row of the matrix (wealth quintile in 2013), the numbers along the row show what fraction of families from that specific 2013 quintile transitioned to each 2015 wealth quintile. For instance, in the PSID (Table 1a), the proportion of families that transitioned from the fifth quintile, the least wealthy, in 2013 to the first quintile, the most wealthy, in 2015 was 1 percent. Notice that the largest values in

the transition matrix lie along the diagonal of the matrix (where the row number and the column number are equal), meaning that most families did not change wealth quintiles over those three years. Likewise, moving across more than one quintile over that period was quite uncommon.

Overall, the two matrices are similar. Both illustrate the general tendency to stay in one's starting quintile in the short term, with most readings on the diagonal hovering near or above 50 percent.[5] The families in the SIPP were a little more likely than those in the PSID to move out of their initial quintile. Moreover, the net worth values at the quintile cutoffs skew higher in the 2014 SIPP. Nevertheless, the two surveys are broadly reporting the same story.

Transitions by Subgroup in the SIPP

Since the SIPP and PSID are comparable, we can exploit the SIPP's large sample size to focus on subgroups while maintaining reasonably precise estimates. This allows us to explore the relationship between wealth mobility and specific asset ownership characteristics. Conditioning on a set of asset-ownership criteria, we can compare how the mobility of families that meet those criteria compares to the mobility of the general survey population.[6] Moreover, because the SIPP contains readings on the same three "risky" assets identified by Carroll and Hoffman (2017), namely, businesses, real estate, and stocks/mutual funds, we can focus on families that own these asset types.

Table 2: Transition Matrices for 2013–2016

(a) Business Owners

Starting quintile	Ending quintile				
	1st	2nd	3rd	4th	5th
1st	0.41	0.28	0.16	0.08	0.06
2nd	0.12	0.51	0.24	0.10	0.02
3rd	0.06	0.15	0.47	0.25	0.08
4th	0.02	0.03	0.17	0.50	0.28
5th	0.02	0.01	0.03	0.14	0.79

Percent

(b) Real Estate Owners

Starting quintile	Ending quintile				
	1st	2nd	3rd	4th	5th
1st	0.41	0.10	0.29	0.15	0.05
2nd	0.13	0.25	0.45	0.10	0.06
3rd	0.04	0.08	0.54	0.27	0.08
4th	0.03	0.02	0.12	0.59	0.25
5th	0.04	0.03	0.04	0.13	0.86

Percent

(c) Stock and Mutual Fund Owners

Starting quintile	Ending quintile				
	1st	2nd	3rd	4th	5th
1st	0.53	0.23	0.15	0.08	0.02
2nd	0.12	0.49	0.24	0.10	0.05
3rd	0.03	0.07	0.53	0.29	0.09
4th	0.01	0.02	0.11	0.58	0.29
5th	0.00	0.00	0.01	0.12	0.86

Percent

(d) Other Families

Starting quintile	Ending quintile				
	1st	2nd	3rd	4th	5th
1st	0.69	0.22	0.06	0.02	0.00
2nd	0.26	0.55	0.15	0.04	0.01
3rd	0.07	0.20	0.55	0.16	0.02
4th	0.03	0.06	0.25	0.55	0.11
5th	0.02	0.03	0.08	0.27	0.60

Percent

Sources: Survey of Income and Program Participation (SIPP) and authors' calculations

Unlike for the PSID, wealth in the SIPP panel can be tracked at an annual frequency. There are three one-year subperiods in the 2014 SIPP: 2013 to 2014, 2014 to 2015, and 2015 to 2016. We calculate the one-year transition matrices for business owners (a), real estate owners (b), stock/mutual fund owners (c), and other families (d) in all three one-year subperiods.[7] Table 2 displays the results. To reduce noise, the matrices for each ownership group are averaged across the three subperiods.

Owning a business is correlated with moving to a higher wealth quintile regardless of which quintile the family starts in. As indicated in the upper left entry in Panel (a), only 41 percent of business-owning families in the lowest income quintile remained there after one year. Meanwhile 44 percent moved up into the second and third quintiles. And a full 6 percent of business owners in the bottom quintile jumped to the top quintile, far greater than the corresponding 1 percent in the overall sample. The estimates in Panel (b) indicate that real estate ownership correlated with strong upward movement. Families that did not own any of the three asset categories were somewhat less likely overall to change quintiles over a one-year period, particularly those families that started in the bottom three quintiles. For example, among those families without holdings in any of the three asset categories, only 60 percent of those initially observed in the highest wealth quintile remained there one year later, meaning 40 percent exited the top quintile. This transition rate out of the highest wealth region is far greater for this group than it is for the other asset groups and suggests that there is an important directional component to wealth mobility. We will examine this further in the next section.

Comparing mobility matrices

To quantify mobility, we use the Bartholomew index, which tells us both if families are moving and also if their movements tend to be large or small.[8] The Bartholomew index of social mobility adds up the numbers not on the diagonal of the transition matrix and attaches relatively high weight to large wealth movements. Generally, an index value around 1 indicates a high degree of mobility, while a value of 0 signifies complete immobility. Another useful feature of Bartholomew's index is that it can be decomposed into upward and downward mobility.

Figure 2. Bartholomew Index of Social Mobility by Subgroup and Period (Starting in 2013)
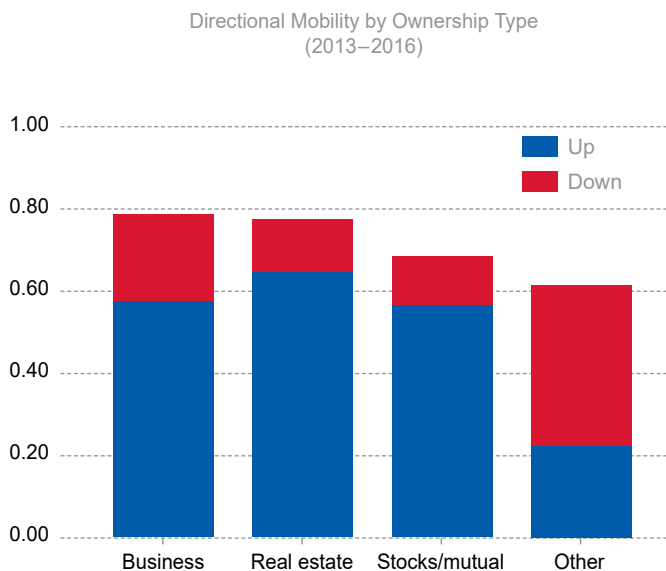
Directional Mobility by Ownership Type
(2013–2016)

Sources: Survey of Income and Program Participation (SIPP) and authors' calculations

Figure 3. Differences in the Bartholomew Index by Subgroup and Period (Starting in 2013)

Differences in Directional Mobility
(2013–2016)

Sources: Survey of Income and Program Participation (SIPP) and authors' calculations

Figure 2 displays the Bartholomew mobility indices of the transition matrices over the years 2013 to 2016 for families reporting wealth in at least one of the three asset classes from Carroll and Hoffman (2017) along with that for other families that do not report having holdings in any of the three types of asset categories.[9] First, the Bartholomew index is consistent with the findings from Carroll and Hoffman (2017) and with the pattern from the shorter time horizons reported in the tables shown previously: ownership in these three asset categories is associated with greater wealth mobility overall. Figure 2 also shows that the bulk of this high mobility comes from a considerably higher frequency of upward mobility relative to downward mobility. Families that were not owners of any of these assets were about twice as likely to move down rather than up.

Real estate owners and business owners had the highest upward mobility over the period, but while both groups had relatively high upward mobility, downward mobility was greater for business owners.

Ownership in one asset category is positively correlated to ownership in another. For example, families that own a business are also more likely than nonbusiness owners to own real estate and stocks. The mobility induced by one type of asset ownership may spill over into the reported mobility of other assets. To disentangle the joint effect from owning multiple types of risky assets, we compute the directional mobility of families that own only one of the three types of risky assets and compare it to the mobility of other families that also own that asset type but may own one of both of the other two, as well.
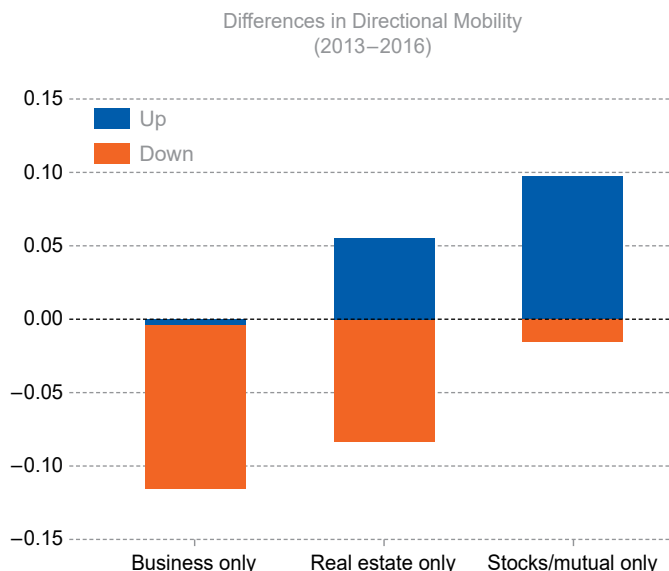
Figure 3 plots the difference in upward and downward mobility of these two types of families. Families that report business wealth but not ownership of real estate or stocks are much more mobile than general business owners, but this is driven entirely by much greater downward mobility. Among real estate owners, the differences roughly cancel out, while families that only owned stocks were more mobile than those that also owned a business or real estate.

Conclusion

Wealth mobility is generally thought of as a long-term measure: how likely it is that a family will improve its economic standing in, say, a decade. However, in this *Commentary*, we take advantage of a unique data set, the Survey of Income and Program Participation, to look at wealth mobility over shorter horizons. There is a substantial amount of mobility in just a single year, and families that have business or nonprimary home real estate assets are associated with positive upward movement over the 2013–2016 period.

Idiosyncratic differences also play a big role in determining the wealth mobility experienced by families over time. There is vast heterogeneity in families' financial characteristics, a situation which can impact transition probabilities, especially at the tails of the wealth distribution, here captured by the first and fifth quintiles. This finding points to a need for more research into the causes of wealth mobility, both for economic policymaking and to better inform models for research.

Endnotes

1. The collection of data used in this study was partly supported by the National Institutes of Health under grant number R01 HD069609 and R01 AG040213 and the National Science Foundation under award numbers SES 1157698 and 1623684.

2. Because we consider a family to own an asset if it indicates ownership in at least one PSID sample over the sample period, there are more opportunities to be classified as owning the asset over longer horizons. This is why ownership percentages are greater in Figure 1 Panel A than in Figure 1 Panel B.

3. Our results differ only slightly when using household units instead of constructed family variables.

4. To mitigate the effect that location to a quintile border can have on transition probability, we trim a family if it sits within 0.5 percentage points of a quintile cutoff.

5. Diagonal probabilities are greater for the first and fifth quintiles since families starting in these quintiles can only transition in one direction.

6. We keep fixed quintile dollar cutoffs according to the full sample. As a consequence, starting quintiles will not be equally represented in the restricted samples. For instance, business owners tend to skew richer: only 6 percent start in the first quintile.

7. We define "real estate wealth" as the combination of rental property and other real estate. To be counted as an owner, a respondent must report more than $100 of wealth in this asset.

8. An alternative measure is the Shorrocks index, which adds up the numbers along the diagonal running from the upper left to the bottom right. These cells contain all the families that did not change relative position over the period. Thus, the Shorrocks index can be thought of as a measure of "stickiness."

9. When we restrict the sample to ownership of a particular category of asset, the sample size drops greatly and becomes concentrated in higher quintiles, thereby adding noise to the lower-quintile observations.

References

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