

Family, Education, and Sources of Wealth among the Richest Americans, 1982–2012[†]

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It is well known that inequality in earned income has risen around the world and, particularly, in the United States. The share of income accruing to the top 1 percent of households in the United States increased from 10 percent in 1979 to 21.5 percent in 2000. Since 2000 it has fluctuated between 16 percent and 24 percent and stood at 19.8 percent in 2010, according to data from Piketty and Saez (2012). Income inequality increased over the same period in a number of other countries.

Inequality in wealth has followed inequality in earnings only to some extent. Using data from the Survey of Consumer Finances (SCF), Wolff (2010, 2012) document that the top 1 percent of US households held 33.8 percent of total net worth in 1983, rising to a peak of 38.5 percent in 1995, falling back to 34.6 percent in 2007 and increasing slightly to 35.4 percent in 2010. However, over the same time period there was an increase in the number of very rich households, and some evidence that intergenerational wealth and income mobility have declined. Wolff (2010) and Wolff (2012) show that the share of households with more than \$1 million in wealth measured in constant 1995 dollars increased from 3.0 percent in 1995 to 6.3 percent in 2007 and to 6.5 percent in 2010. The wealth distribution also has widened around the world.

The sources of rising inequality have been long debated. Theories include trade or globalization; increasing returns to generalists rather than specialists (Murphy and Zabojnik 2004), theories of managerial power (Bebchuk and Fried 2006), social norms (Piketty and Saez 2006), greater scale (Gabaix and Landier 2008), skill-biased technological change (Katz and Murphy 1992), and superstars (Rosen 1981). As pointed out in Kaplan and Rauh (2010), theories of rising inequality must explain why the rise has been broad-based across professions.

We examine the top 400 wealthiest individuals in the US economy as tabulated by Forbes magazine and analyze which of these theories are more consistent with the patterns in the data. In contrast to other studies, we look not just at the present, but also at the 1980s, 1990s, and early 2000s. These 400 people represent the very top of the distribution, the top 0.0003 percent of 132 million US households and the top 0.0001 percent of 311.5 million US individuals.

We focus on three primary factors. First, we test the extent to which the individuals made money on their own as opposed to inheriting it. Second, we examine the industrial activities through which the wealth was made, and the extent to which technology played a role. Third, we consider the educational backgrounds of the top earners, and specifically the importance of having a college education. We investigate how these factors have changed over time, and we also compare the results in the United States to the changes in the composition of billionaires from other countries, also drawing on data from Forbes.

The Forbes 400 in recent years did not grow up as advantaged as in decades past. Those in the Forbes 400 today are less likely to have inherited their wealth or to have grown up wealthy. They are more likely to have started their businesses having grown up with some wealth, what we consider to be the equivalent of upper middle

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class. The Forbes 400 of today also are those who were able to access education while young and apply their skills to the most scalable industries: technology, finance, and mass retail.

I. Data

The Forbes 400 is a list of the wealthiest individuals in the United States by net worth. It has been published annually since 1982. The list presents an estimate of wealth as of August of each year. A candidate set of somewhat more than 400 individuals is used as a starting point (570 in 2011). Interviews are sought with all candidates as well as “employees, handlers, rivals, peers, attorneys and ex-spouses.” Magazine staff then use SEC documents, probate records, and public financial disclosures to estimate net worth, in addition to information provided by the honorees themselves when they are willing to disclose it.

We collected these lists approximately every ten years, in 1982, 1992, 2001, and 2011. For each individual, we used *Who’s Who* and Internet searches to collect and code certain biographical details. We identified the founding date of the business that generated the individual’s wealth and then determined the generation the individual is in the family of the founder of that business. The generation is usually an integer but if the individual inherited a relatively small business and built it into a much larger one we coded it as a 1.5, as, for example, David and Charles Koch of Koch Industries.

We separately code the extent to which the individual grew up wealthy, defining three categories: little or no wealth in the family, some wealth in the family, or wealthy. For example, the Koch brothers grew up wealthy. Bill Gates, whose father cofounded a successful law firm, grew up with some wealth, as did, for example, sons and daughters of US Congressmen (Warren Buffett), factory owners (James Simons), newspaper publishers (Philip Knight), retail owners (Stephen Schwarzman), and psychiatrists (Dustin Moskowitz). We view the “some wealth” category as the equivalent of an upper middle class upbringing. We then code industries of the wealth-generating firms into three broad categories: industrial, finance/investments, and real estate. We further subdivide the first two into 11 categories, assigning firms to the precise business activity.

We also create an indicator variable for whether the business had a technology component. Certainly any business that is actually a technology business has a technology component, but being a technology business is not a necessary condition for having a technology component. Other businesses that we code as having a technology component include pharmaceuticals, energy firms that develop new extraction technologies (such as fracking), financial firms that exploit new technologies (such as online brokerage), and venture capitalists who invest heavily in technology firms.

There is some history of using Forbes 400 data in economic research. Kennickell (2009) tabulates total wealth of the Forbes 400 over 1989–2008, with the goal of measuring how much total wealth is missing from the Survey of Consumer Finances (SCF), a survey that excludes the Forbes 400. He finds that the \$1.54 trillion of wealth in the Forbes 400 represented approximately 2.3 percent of total household wealth as of 2007, up from 1.7 percent in 1992. Klass et al. (2006) examines the statistical distribution of wealth within the Forbes 400 and find that it follows power law properties. Wealth distributions were the fundamental object of inquiry for Pareto (1896), who posited that the distribution of the number of people with income or wealth above a certain level followed a power law (see also Gabaix (2009)).

II. Results

The US Forbes 400 represent \$92 billion of wealth in 1982, \$301 billion in 1992, \$943 billion in 2001, and \$1.525 trillion in 2011. In constant 2011 dollars, the wealth amounted to \$214 billion in 1982, \$483 billion in 1992, \$1.197 trillion in 2001, and \$1.525 trillion in 2011.

Figure 1 shows that the share of Forbes 400 individuals who are the first generation in their family to run their businesses has risen dramatically from 40 percent in 1982 to 69 percent in 2011.

Figure 2 illustrates that the percent that grew up wealthy fell from 60 percent to 32 percent, while the percent that grew up with some money in the family rose by a similar amount. The share that grew up poor remained constant at roughly 20 percent. The Forbes 400 of recent years therefore did not grow up nearly as advantaged as those in decades past. Those who grew up

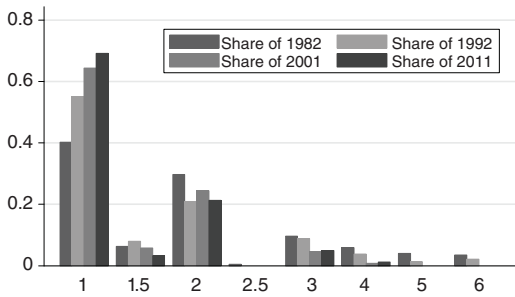


FIGURE 1. GENERATIONS IN THE FORBES 400

Note: 1 indicates Forbes 400 member founded business, 2 indicates parent of Forbes 400 member founded business, etc.

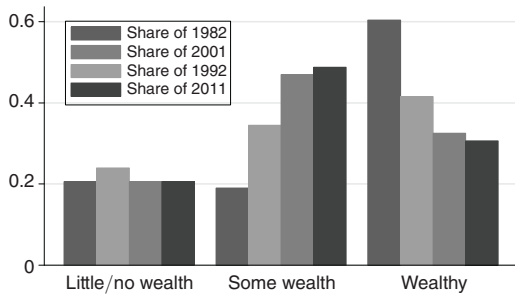


FIGURE 2. DID THE FORBES 400 GROW UP WEALTHY?

with some wealth in the family were far more likely to start their own businesses rather than inherit family businesses. These results suggest that there has been an increase, not a decrease, in wealth mobility at the very top.

The figures also show that these changes largely occurred between 1982 and 2001. From 2001 to 2011, the percentage of Forbes 400 that started their businesses increased only slightly while the percentage that grew up wealthy declined only slightly.

Access to education is of increasing importance. Figure 3 shows that the share of the Forbes 400 that graduated from college rose from 77 percent to 87 percent. However, the share of college dropouts also rose from 6 percent to 8 percent, while the share of those without college dropped markedly from 17 percent to 5 percent. The results are very similar when the observations are weighted by wealth.

Table 1 documents the industries of the wealth-generating businesses of the Forbes

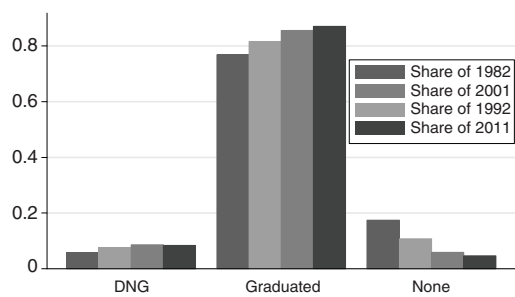


FIGURE 3. HIGHER EDUCATION OF THE FORBES 400

Note: DNG = Did Not Graduate.

400 members in each year of our sample. The industries for which representation among the US Forbes 400 increased the most are retail and restaurants, computer technology, and private finance including hedge funds and private equity. The representation of real estate and energy declined the most. Finance overall grew in representation by around 16 percentage points, technology by 11 percentage points, and retail by 10 percentage points. Energy shrank by 12 percentage points, real estate shrank by 10 percentage points, and the remaining groups that lost share were the nontechnology industrial businesses.

Even in the businesses started by the Forbes 400 that are not computer technology business per se, technology has become more important. The share of these businesses that had some technology component rose from 7.3 percent in 1982 to 17.8 percent in 2011. On a value-weighted basis, businesses with a technology component grew from 7.1 percent in 1982 to 25.5 percent in 2011, over one-quarter of the total wealth in the 2011 Forbes 400. This growth in the importance of technology occurred mostly in the 1990s. The share of computer and medical technologies in the businesses behind the Forbes 400 peaked in 2001 at 15.1 percent, falling back to 14.6 percent in 2011. The growth in private equity, hedge funds, and venture capital, on the other hand, occurred largely in the 2000s, at the expense of media, consumer, and diversified businesses during that decade.

We interpret these findings as most consistent with theories of technological change that favors skill in scalable areas (Gabaix and Landier 2008, Kaplan and Rauh 2010). Entering the elite group of the wealthiest individuals no longer requires

TABLE 1—SHARES OF INDUSTRIES OF THE WEALTH-CREATING BUSINESSES BEHIND THE FORBES 400

	1982	1992	2001	2011	Change 1982 to 2011
Industrial					
Retail/restaurant	0.053	0.118	0.132	0.150	+0.097
Technology—computer	0.033	0.053	0.130	0.123	+0.090
Technology—medical	0.005	0.018	0.021	0.023	+0.017
Consumer	0.131	0.174	0.125	0.108	−0.023
Media	0.136	0.132	0.164	0.100	−0.036
Diversified/other	0.207	0.205	0.156	0.123	−0.084
Energy	0.214	0.089	0.062	0.098	−0.117
Finance and investments					
Hedge funds	0.005	0.011	0.018	0.075	+0.070
Private equity / LBO	0.018	0.034	0.039	0.068	+0.050
Money management	0.018	0.055	0.062	0.045	+0.027
Venture capital	0.003	0.005	0.008	0.015	+0.012
Real estate	0.179	0.105	0.081	0.075	−0.104

having grown up rich, but having some wealth confers advantages, particularly in access to education. The wealthiest individuals increasingly comprise individuals who accessed this education while young and then implemented their skills in the most scalable industries, where increasing technology and returns to skill allow for the greatest generation of wealth. The findings are less consistent with the rise in inequality being the result of broken governance or cultural changes.

As we show in Kaplan and Rauh (forthcoming), some of these patterns are reflected globally, but others are not. The share of global billionaires who are first generation in the business rose by a similar amount abroad as in the United States. The technology component has become more important globally, but nowhere has it become as important as in the United States. Computer technology and money management are increasingly represented among billionaires globally, but the category that gained the most is mining/metals. Energy also saw substantial gains globally, whereas it fell in the United States. There is clearly a greater increase in wealth being derived from natural resources outside than within the United States.

Perhaps the most striking difference between the wealthiest individuals in the United States and around the world is that the share of non-US billionaires who grew up without any wealth at all has risen from under 30 percent in 1987 to over 50 percent in 2012. The share that grew up with some but not large wealth has hovered

around 20 percent, whereas the share that grew up wealthy plummeted. While the share that grew up wealthy also fell in the United States, the rise of the poorest group globally as opposed to the middle group in the United States is striking. We can only speculate about the sources of these differences. Most likely is that in the United States there is better access to education when the family has some wealth, and such access is increasingly important to success in the United States.

III. Conclusion

With the large improvements in information technology and the substantial increase in value of the securities markets over the last 30 years, skilled individuals can now apply their talent to much larger blocks of capital and pools of assets. Evidence from the composition of the wealthiest individuals in the United States is supportive evidence of these trends. Having extensive wealth and inheriting family businesses have become much less important. Having access to education has become more important. Future research should aim to understand what facet of educational access is driving its increasing importance for wealth generation. Specifically, education provides skills, but it also provides access to networks.

The rise in the college wage premium may have flattened somewhat in the past decade, but our evidence from the identity of the super-rich suggests that the premium for technological skill

has continued to rise in the right tail of wealth outcomes. These findings are most consistent with Goldin and Katz (2010), in which technological progress widens inequality among skill groups. Such widening inequality can possibly be countered by the continuing broad-based accumulation of human capital, particularly (as pointed out by Acemoglu and Autor 2012) when there are deep interactions between skills and technologies in accomplishing job tasks.

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