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# Are today's inequalities limiting tomorrow's opportunities?

A review of the social sciences literature on economic inequality and intergenerational mobility

October 2018 By Elisabeth Jacobs and Liz Hipple





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# Contents

<b>6</b>	Fast facts
<b>8</b>	Overview
<b>13</b>	Definitions and metrics
<b>14</b>	Absolute or relative?
<b>15</b>	What does "high" mobility look like?
<b>24</b>	Which resources should we measure?
<b>26</b>	Does high inequality today mean low mobility tomorrow?
<b>32</b>	How does economic inequality limit the development of human potential?
<b>34</b>	Health inequalities
<b>38</b>	Parental investment
<b>44</b>	Education
<b>52</b>	Conclusion to "how does economic inequality limit the development of human potential"
<b>54</b>	How does economic inequality limit the deployment of human potential?
<b>55</b>	Changing structure of the labor market
<b>62</b>	Persistent discrimination
<b>65</b>	Household balance sheets and intergenerational mobility
<b>68</b>	Conclusion to "how does economic inequality limit the deployment of human potential"
<b>70</b>	Conclusion
<b>72</b>	About the authors
<b>73</b>	Acknowledgements
<b>74</b>	Bibliography
<b>87</b>	Endnotes

## Fast facts

Intergenerational mobility is the technical concept at the heart of the American Dream. An individual's place on the economic distribution is supposed to reflect individual effort and talent, not parental resources and privilege. Yet this perspective ignores the mounting evidence of the myriad ways that poverty and economic inequality foreclose equality of opportunity for far too many Americans now and in the future. This paper explores how economic inequality could be impeding the development of human potential and the effective deployment of that human potential, and therefore depressing upward mobility.

- Comparing the relationship between inequality and intergenerational mobility across developed economies, City University of New York economist Miles Corak found that in countries where inequality is high such as the United Kingdom and United States, there is a strong relationship between a parent and a child's economic outcomes. Conversely, in countries where inequality is lower such as Norway and Denmark, the relationship between a parent and child's economic outcomes was not as strong.<sup>1</sup>
- Comparing the relationship between inequality and intergenerational mobility across different parts of the United States, Harvard University economist Raj Chetty found that mobility varied dramatically across the United States and that high inequality was one of the factors correlated with low mobility. Some cities such as Salt Lake City have rates of mobility similar to countries with high rates of mobility such as Denmark. Other cities such as Atlanta and Milwaukee have rates of mobility lower than other developed countries.<sup>2</sup>
- Metrics matter for making sense of the relationship between inequality and mobility. Relative (or rank) mobility compares a child's rank in the economic distribution to the child's parents' place in the distribution at a similar point in the life cycle. Imagine a child born into a family with a total household income in the bottom 20th percentile of the distribution of all household incomes. As a young adult, that now-adult-child's household income at a comparable point in life is in the 75th percentile of the distribution of all household incomes. This is relative upward mobility. Relative mobility is, by definition, a zero-sum proposi-

tion: If a particular child moves up in rank from childhood to adulthood, then someone else, by definition, must move down.

- Absolute mobility compares a child's economic well-being to his parents' economic well-being at a similar point in the life cycle. Imagine a baby boy born into a family with an inflation-adjusted total household income of \$30,000. If his inflation-adjusted total household income is \$50,000 at a comparable point in his own adult life, then that child has experienced absolute mobility in household income.
- While a number of studies find that relative mobility has remained fairly stable—and low—in the United States over recent decades, Harvard's Chetty and his co-authors have found that absolute mobility has declined since 1940 across the household income distribution. More than 90 percent of children born in 1940 earned more than their parents at age 30, compared to 50 percent of children born in 1984.<sup>3</sup>
- Traditionally, researchers seeking to understand how inequality could limit mobility have studied how inequality could hamper the development of human capital. While there are myriad ways to examine the impact of inequality on the acquisition of human capital, this report follows the research to focus on how inequality affects access to the key dimensions of health, parental investments of time and money in children, and in the quality of early childhood education, as well primary and secondary schooling—all of which are critical pathways for the development of the human potential necessary for upward mobility.
- The development of human potential is insufficient on its own to power upward mobility. Individuals must also be able to fully deploy their human potential by efficiently and effectively matching opportunities in the labor market. Yet structural changes to the labor market, persistent discrimination, and the importance of parental financial resources in young adulthood prevent the full and effective deployment of human potential.

# Overview

Intergenerational mobility is a concept core to the unique American identity. A nation of immigrants, the United States is supposed to be free of the constraints of Europe's historic calcified class system, as well as the stark economic inequality in many developing countries. The United States is supposed to be a place where, with a little bit of luck and a lot of hard work, your future is in your hands. It is supposed to be a country where, regardless of who your parents are, you control your own destiny, pull yourself up by your proverbial bootstraps, and make good on your talents. In this idealized version of the American Dream, each generation can expect to experience a better life than the one before them.

This idealized version obviously ignores and obfuscates the reality of centuries of enslavement of black Americans, displacement of Native Americans, and persistent legal barriers to equal rights. Women have only recently been incorporated into this conceptualization of the promises of the American Dream. Even a cursory look at U.S. history reveals the promise of equal opportunity to be a blurry one.

Despite these longstanding historic refutations to the core mythology of the American Dream, its promise still encapsulates what the United States is supposed to be uniquely able to offer. If you work hard and play by the rules, you can expect to enjoy a standard of living that surpasses that of your parents. And it is precisely this promise of intergenerational mobility that has been evoked as justification for persistently high rates of poverty and high economic inequality in the largest market economy in the world. In the United States, policymakers and the public alike prefer a focus on equality of opportunity—not on equality of outcomes. Yet this perspective ignores the mounting evidence of the myriad ways that poverty and economic inequality foreclose equality of opportunity for far too many Americans now and in the future.

In the pages that follow, we examine these complicated economic relationships over time and place, and tease out how they inhibit economic mobility in the United States. We start with the empirical observation that being in the bottom of



the income distribution in the United States is particularly “sticky” compared to other advanced economies, meaning that children born to the poorest families are far more likely to remain poor themselves as adults compared to children born in other countries. From there, we offer an overview of other ways that the basic relationships between poverty, economic inequality, and economic mobility show up in the data, and then provide a framework for understanding the ways that today’s economic inequalities may be hampering tomorrow’s opportunities.

Research seeking explanations for the drivers of intergenerational mobility typically focuses on the transmission channels that emphasize the individual as the central unit of analysis for understanding why some people experience more upward mobility than others. An important body of scholarship, for example, focuses on the importance of prenatal health for intergenerational mobility. Poor prenatal health predicts low birthweight, which, in turn, predicts poor long-term educational performance, which, in turn, predicts poor long-term labor market success. While undoubtedly important, this perspective ignores how inequalities in access to health care are baked into what may appear to be individual “choices” among mothers seeking prenatal health care and obfuscates the structural factors that influence the degree to which individuals can control their accumulation of human capital.

Focusing on the individual also ignores how persistent discrimination and other structural forces mean that supposedly equally “human capitalized” individuals can enter the labor market and be rewarded very differently for the same skills. In this paper, we provide a new framework for making sense of economic mobility that takes into account both individual and structural factors that enhance or impede the potential of individuals to develop and deploy their human capital. This widening of the lens brings a new set of research questions into focus, as well as a new set of policy implications for those seeking to pave a new pathway that makes the American Dream less of a myth and more of a reality.

This paper is divided into four sections. In the first, we lay out terms and definitions for the concepts that will be discussed throughout and present some big-picture trends in economic mobility that have been observed within the United States between different racial groups and between the United States and other developed economies. In the second section, we review the potential connections between economic inequality and economic mobility based on the broad-brush relationships observed. These empirical relationships are correlations, however, and therefore cannot offer conclusions about exactly why high levels of inequality tend to exist alongside low levels of mobility. To understand this relationship, we need a framework for making sense of the channels connecting the two concepts.

That's why, in the remainder of the paper, we explore those channels of transmission from parental advantages and disadvantage to child outcomes as newborns, toddlers, primary and secondary students, and young adults. Our third section explores channels related to the *development* of human potential—the traditional lens through which channels driving mobility have been studied. We explore how economic and societal inequalities baked into those channels prevent too many American children from acquiring and cultivating similar levels of human capital. The importance of parental resources for helping children acquire and cultivate human capital cannot be overstated.

In the fourth and final section, we explore channels related to the *deployment* of human potential. It is here that structural factors outside of an individual's control emerge as particularly important and underappreciated. We examine the importance of parental resources but at a later stage of children's lives than is usually studied by researchers interested in intergenerational mobility, specifically the transition from childhood to young adulthood—that stage when people are beginning to interact independently with the world but are still often dependent on parents for guidance and financial support to be able to enter and complete college and enter and navigate the labor market.

Inequalities in access to parental wealth and support can shape how individuals are able to deploy their potential in the economy in many important ways, with telling implications for long-term economic success. In addition, this section explores how the persistence of discrimination amid structural changes in the nature of employment over the past 30 years mean that equally “human capitalized” people entering the labor market today can be very differently compensated for their skills, both compared to one another as well as to their parents' generation.

It is this focus on the potential implications of parental resources in the transition to adulthood and structural labor market conditions that we hope to push researchers to pursue in future research into the drivers of intergenerational mobility. Much research has already focused on the importance of developing human potential at an early age, with clear policy implications coming out of that research such as the importance of maternal health care and high-quality early care and learning, as well as Kindergarten through 12th grade and postsecondary education. The scholarship exploring how conditions later in life could have implications for long-term mobility is far less developed. An empirically driven policy agenda that rehabilitates the American Dream will require a focus on both individual and structural factors across individuals' life cycles; thus, remedying this research gap is paramount.

A better understanding of the drivers of economic mobility is needed to ensure not only that today's inequalities do not hamper tomorrow's opportunities but also that broad-based economic growth and prosperity can be renewed in the United States. Thomas Piketty's seminal 2013 book, *Capital in the 21st Century*, provides a helpful touchpoint for understanding how economic inequality, mobility, and growth are inextricably linked.<sup>4</sup> The Paris School of Economics economist's crucial insight is that profits and other types of income from capital tend to grow faster than income from wages, which, in turn, means that the rate of return on capital exceeds the rate of economic growth, driving economic inequality higher. This is the plain English explanation of his " $r > g$ " equation that showed up on t-shirts and coffee mugs following publication of his bestseller.

Rising economic inequality because of the persistently higher returns to capital has important implications for economic mobility, as it implies an increasingly calcified economic structure in which wealth begets wealth. Indeed, as research from University of California, Berkeley economists (and Equitable Growth Steering Committee member and grantee, respectively) Emmanuel Saez and Gabriel Zucman already shows, the share of wealth held by the top 0.1 percent is already nearly back at Roaring Twenties levels.<sup>5</sup> An economy in which wealth is nearly mechanically passed along from generation to generation is one in which not only one's destiny is dictated by the circumstances of one's birth, but also one in which human potential, innovation, and dynamism are left by the wayside.

A few notes for readers to keep in mind before turning to the body of our paper:

First: We highlight policy implications throughout this report, but this is not a policy brief. Our goal for this paper is to provide an overview of relevant literature to set up a framework for further exploration of these issues, a framework that we hope will lend itself to more explicit policy recommendations as the research develops. Research exploring the channels shaping intergenerational mobility is much further along in some areas than others, so our policy analysis of this research is similarly unevenly distributed.

Second: In general, we use "they" as a singular, gender-neutral pronoun or try to alternate the use of male and female pronouns. When a study uses a male-only sample, however, we use male pronouns to discuss the study's findings and in any discussion of broader implications of that research. Much of the economic mobility literature specifically analyzes father-son earnings due to measurement

challenges stemming from changes in women's labor force participation and earnings over the second half of the 20th century. Women create complications for average mobility calculations in two important and related ways. First, women's labor force participation grew dramatically over the second half of the 20th century, and the gender gap in earnings has grown smaller over time as well. As a result, including information for women's earnings in mobility calculations may result in higher mobility rates for children because mothers' earnings were lower earlier in the century due to lower labor force participation and higher gender pay gaps. Yet, secondly, women's labor force participation and persistent gender pay gaps remain thorny empirical issues, due to variation in trends and levels both across the life cycle and across the income distribution. For instance, a substantial share of women in higher-income households in the United States and other Anglosphere countries continue to reduce work hours or drop out of the labor force completely in order to care for young children. For further explanation, see Stanford University sociologist Florencia Torche's excellent 2014 article, "Analyses of Intergenerational Mobility: An Interdisciplinary Review."<sup>6</sup>

## Definitions and metrics

The definitions and metrics of equal opportunity for success are central to understanding whether the heart of the story of who we are as a nation—that belief that everyone can climb the ladder of economic opportunity to achieve a secure, stable future—is supported by the economic data. This story has buoyed the United States for centuries, with upward intergenerational economic mobility as the key technical concept at the heart of the American Dream. These mobility metrics compare a child’s economic well-being to that of their parents at a similar age.<sup>7</sup> In this section, we detail some of these measures to provide a set of baseline definitions that inform the remainder of the report. While the details differ in terms of the precise phenomena that each type of metric captures—and thus in their relative utility for making sense of the relationship between poverty, economic inequality, and economic mobility—they all share one common dynamic: Higher correlations between the economic position of parents and their children’s economic outcomes indicate lower levels of mobility.

One challenge to measuring mobility is that statistics on it are, by definition, backward-looking. Measures of mobility necessarily compare adult children’s outcomes to their parents’ outcomes at a similar time period such as how childrens’ household incomes when their parents were 30 years old compares to those same now-grown childrens’ household income when they themselves are 30 years old. This particular feature of mobility metrics has implications for understanding what specific factors drive upward mobility today—especially given the importance of early human capital development—because the factors shaping human potential in the 1980s and 1990s, when today’s young adults were children, may have changed substantially over time. As a result, using mobility estimates to make predictions about the future and to craft policy recommendations for today requires careful thought.

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## Absolute or relative?

Relative (or rank) mobility compares a child's rank in the economic distribution to his parents' place in the distribution at a similar point in their adult life cycle. Imagine a child born into a family with a total household income that places him in the bottom 20th percentile of the distribution of all household incomes. As a young adult, that now-adult-child's household income at a comparable point in his life is in the 75th percentile of the distribution of all household incomes. This is relative upward mobility. Relative mobility is, by definition, a zero-sum proposition: If a particular child moves up in rank from childhood to adulthood, then someone else, by definition, must move down.

Relative mobility is a critically important concept for capturing whether the United States is living up to the promise of equal opportunity for all, regardless of birth status. Even if children grow up to be better-off than their parents in absolute terms—meaning they earn more or are more wealthy than their parents at a similar stage in their lives, after accounting for inflation—if the rank order of relative well-being is fully determined by one's family of origin, then America is not living up to its meritocratic promise. Relative mobility tells us important information about the relative fluidity of economic fortunes, but it cannot tell us how changes to the economy as a whole over time are affecting economic well-being at different points in the income and wealth distributions or how those changes are impacting the rank order.

This is where absolute mobility comes in, comparing a child's absolute economic well-being to his parents' absolute economic well-being at a similar point in the life cycle. Imagine a baby boy born into a family with an inflation-adjusted total household income of \$30,000. If his inflation-adjusted total household income is \$50,000 at a comparable point in his own adult life, then that child has experienced absolute mobility in household income.

Absolute mobility and relative mobility are complementary concepts, but they are distinct in key ways. A society with high relative mobility is one where your position is determined by your own efforts (and perhaps random luck) rather than predetermined by the circumstances of your birth and your family's resources. A society with high absolute mobility is one where, regardless of whether your relative economic rank in the distribution of your peers has changed compared to the rank of your parents, your absolute level of economic resources (measured variously by household income, individual or household earnings, or wealth) is higher than that of your

parents at a similar point in their life cycle. In short: Absolute and relative mobility are independent concepts that do not mechanically move in the same direction.

Economic growth has typically raised standards of living such that rising rates of absolute mobility have long been assumed to be the norm. That is, the assumption has been that children's incomes across the economic distribution are higher than their parents' incomes for mechanical reasons of economic growth, even after taking into account cost of living adjustments by adjusting for inflation. This is partly why the long sociological tradition of mobility studies focuses on relative rather than absolute mobility; relative mobility begins with the premise that comparisons of relative position matter, not just absolute economic resources.

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### What does "high" mobility look like?

Regardless of whether one is working with absolutes or relatives, these metrics tell us about whether mobility is "low" or "high" in a given society. Yet the abstract nature of the concept of mobility makes it difficult to know how to evaluate these numbers in meaningful terms. Social scientists typically refer to the amount of mobility as the intergenerational elasticity of income, or IGE, which ranges from 0 (no relationship between parents' and children's outcomes) to 1 (children's outcomes are perfectly predicted by their parents' outcomes). Other metrics include more easily interpretable statistics such as transition matrices, which capture the percent change of moving up or down an income quintile (for relative mobility), and the percent change of earning more than one's parents (for absolute mobility).

Regardless of the statistic used to measure economic mobility, the question remains: How much mobility is the "right" amount? Zero mobility, where parents' and children's economic circumstances move in lock step, flies in the face of the American promise of economic freedom and opportunity. Total mobility, where parents' and children's economic circumstances have no relation to each other whatsoever, is almost certainly unattainable, probably undesirable, and, at a minimum, unrealistic. What, then, is the right amount of mobility? This is a obviously a judgement call, but it also is a key empirical question when examining whether the American Dream is delivering on its promise.

As a result, public debates over economic mobility often use comparisons to understand whether current levels of mobility are too low. Comparisons include cross-



national comparisons of mobility levels such as mobility rates in the United States compared to other developed nations or trends in mobility rates over time in the United States, or comparisons of mobility levels across different populations such as mobility rates for whites versus blacks in the United States. In the remainder of this section, we provide a brief overview of some of the most salient comparisons.

### Across countries

Despite the promise of equal opportunity in the United States, rates of upward economic mobility are substantially lower in our nation than in a range of other comparable nations. A variety of recent studies show the same basic results, which suggest that the Nordic countries of Finland, Sweden, Norway, and Denmark have the highest levels of mobility in relative economic status across generations, while rates in the United Kingdom are somewhat lower, and rates in the United States are the lowest. In a comprehensive review of recent work, economists Sandra Black at the University of Texas at Austin and Paul Devereux at University College Dublin suggest that intergenerational elasticity of incomes in the United States are at about 0.5 to 0.6, while the United Kingdom's IGE is about 0.3, and the Nordic nations all have IGEs under 0.3.<sup>8</sup>

More intuitive measures of relative mobility tell the same story. Stockholm University economist Markus Jäntti and his co-authors, for example, estimate mobility across quintiles for the United States, the United Kingdom, and the four Nordic countries. The authors note that while all of the countries look relatively similar in terms of mobility up and down from the middle quintiles, the United States exhibits a distinct pattern of low upward mobility for children (especially boys) who begin life in the bottom quintile. More than 40 percent of sons born into the lowest income quintile in the United States remain in the bottom quintile as adults, compared to 30 percent in the United Kingdom and between 24 percent and 28 percent for the Nordic countries.<sup>9</sup> The “stickiness” at the bottom of the income ladder in the United States suggests that persistent poverty is a unique feature of the United States. (See Figure 1.)



**FIGURE I**

**Economic status is particularly sticky for low-income families in the United States**

Probabilities that the son of a low-income father rises into each quintile of income, separated by country.



Source: Markus Jäntti and others, "American Exceptionalism in a New Light: A Comparison of Intergenerational Earnings Mobility in the Nordic Countries, the United Kingdom, and the United States." Discussion Paper Series No. 1938 [IZA, 2006].



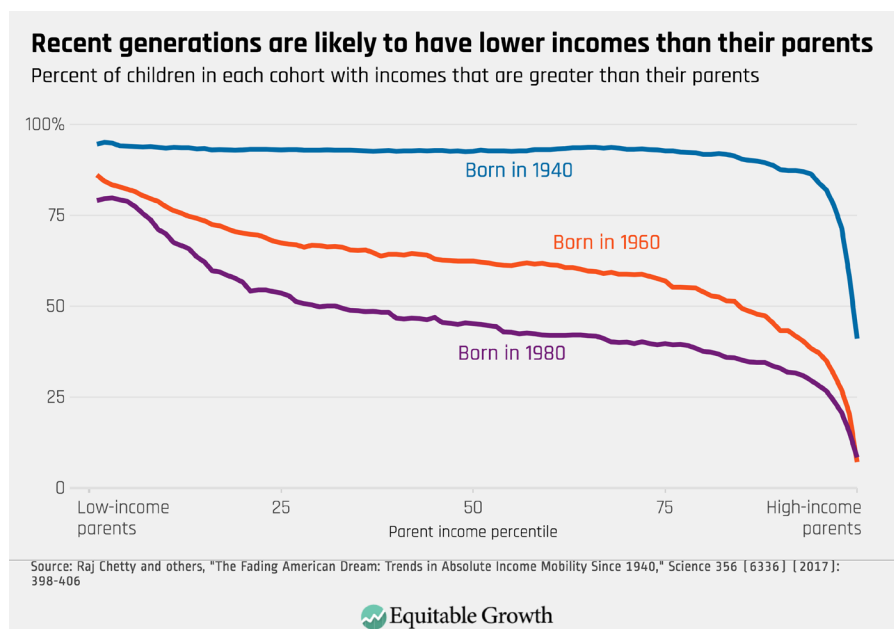
## Over time

Long-term trends in mobility over time in the United States have been difficult to estimate due to data limitations. In an ideal world, an analyst would measure mobility with data on household income and/or earnings over many years for a very large number of parent-child matches. These rich, long-term longitudinal datasets remain rare in the United States, but panel surveys and advances in the use of administrative data—data collected in the normal course of the government or another organization performing administrative tasks such as the IRS collecting taxes—have pushed the field toward new horizons.

The bulk of the intergenerational mobility research looking at trends over time rely on two survey datasets: the Panel Study of Income Dynamics, or PSID, housed at the University of Michigan, and the National Longitudinal Survey of Youth, or NLSY, housed at the Bureau of Labor Statistics at the U.S. Department of Labor. A recent illustrative example comes from economists Chul-In Lee at Seoul National University and Gary Solon at the University of Arizona, who utilize the PSID to estimate absolute mobility for cohorts of children born between 1952 and 1975 in the United States and find minimal evidence of changes to mobility over the time period. At the same time, the two authors note “a large body of new research has documented that the intergenerational transmission of economic status in the United States is much stronger than had been suggested by earlier sociological and economic analyses.”<sup>10</sup> This means that the relationship between a parent and child’s economic status is much stickier than appreciated.

A second recent illustrative example of trends in intergenerational mobility comes from economists David Levine at the University of California, Berkeley, and Bhashkar Mazumder at the Federal Reserve Bank of Chicago, who analyze trends in the relationship between childhood family income and adult men’s earnings in the 1980s and 1990s using multiple data sources, including the NLSY, and find variation in results across the datasets. Levine and Mazumder cautiously conclude that “the rate of inheritability of income may have increased in recent decades, but this evidence is not yet definitive.”<sup>11</sup> Similarly, in her 2015 review of the scholarship on intergenerational mobility, Stanford University sociologist Florencia Torche notes that “the evidence is mixed and inconclusive, with findings from diverse datasets differing widely.”<sup>12</sup>

The most important recent study of trends over time in absolute mobility in the United States comes from Harvard University economist (and former Equitable Growth Steering Committee member) Raj Chetty and his co-authors, who document mobility in U.S. household incomes since 1940.<sup>13</sup> The authors overcome longstanding data challenges by matching longitudinal administrative data from income-tax filers with cross-sectional data from the U.S. Census Bureau to come up with comprehensive estimates of trends in household income mobility for cohorts of children born in the 1940s, 1950s, 1960s, 1970s, and 1980s. They find that absolute mobility has declined since the 1940 cohort across the household income distribution. More than 90 percent of children born in 1940 earned more than their parents at age 30, compared to 50 percent of children born in 1984. (See Figure 2.)

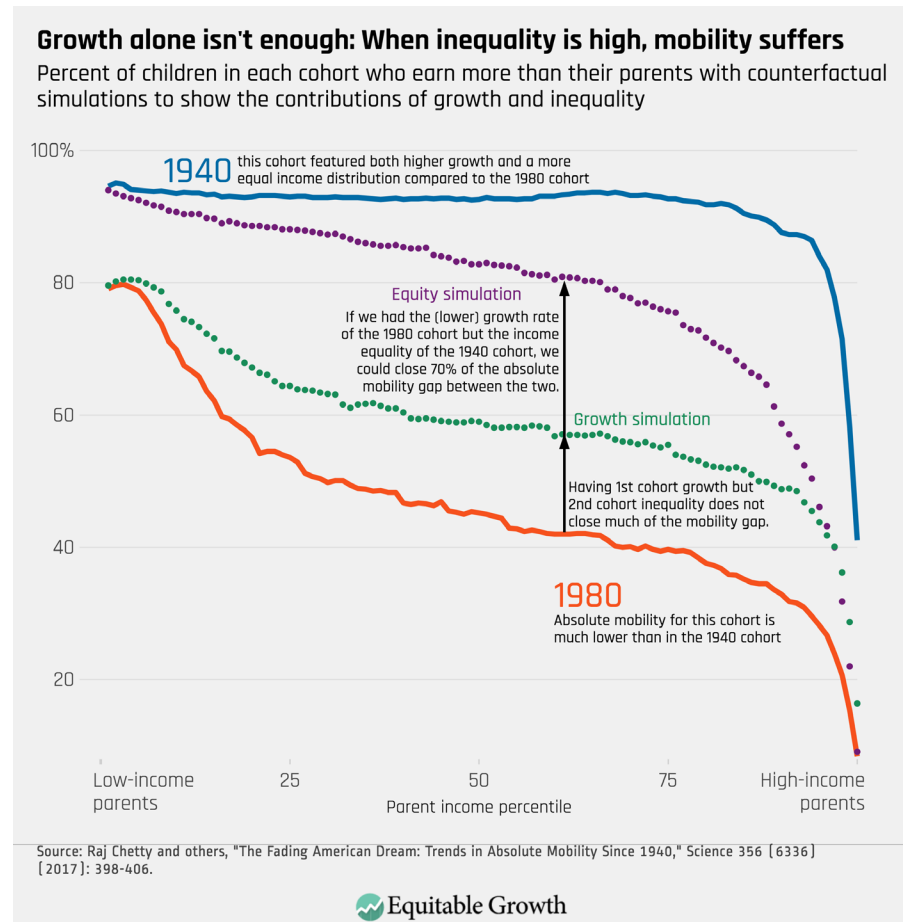
**FIGURE 2**

In order to address concerns that the downward mobility trends in household income are due to the changing role of women's labor force participation over time, as well as changes in family structure over time, they conduct a separate analysis looking only at father-son earnings comparisons. The results are even more striking: 95 percent of men born in 1940 had higher earnings than their fathers, compared to just 41 percent of men born in 1984. These results strongly suggest that changes in absolute household income mobility are not driven by changes in women's labor participation, family size, or family structure.

What explains the decrease in absolute mobility in the United States since 1940? Two important trends characterize the U.S. economy over the latter half of the 20th century: declining rates of economic growth and rising income inequality in the distribution of that growth. Chetty and his co-authors consider two counterfactual scenarios in order to shed light on the relative role of each in driving down absolute mobility rates. In the first scenario, they assume that economic growth (measured by GDP) remains at 1940s levels throughout the 20th century but allow the distribution of that growth to change over time. In the second scenario, they assume that the distribution of growth (measured across quintiles as household incomes as a share of total GDP) remains at 1940s levels for subsequent birth cohorts but allow GDP to grow. The goal of the exercise is to separate out the impact of absolute economic growth, and the impact of the distribution of that growth. In the first scenario, where growth stays constant at 1940s levels, the

share of children born in 1984 who earn more than their parents increases from 50 percent to 62 percent. In the second scenario, where the distribution of gains from growth stay constant at 1940s levels, the share of children born in 1984 who earn more than their parents increases even more, to 80 percent. The authors conclude that “reviving the ‘American dream’ of high rates of absolute mobility would require more broadly shared economic growth rather than just higher GDP growth rates.”<sup>14</sup> (See Figure 3.)

**FIGURE 3**



Chetty and his co-authors have also utilized their administrative data to provide estimates of relative economic mobility over time. Based on their analysis of birth cohorts from the 1970s, 1980s, and 1990s, they find that children’s chances of moving up the relative economic ranks have remained stable—and remarkably low. For instance, the probability that a child reached the top fifth of the income distribution given parents in the bottom fifth of the income distribution is 8.4

percent for children born in 1971, compared to 9 percent for those born in 1986.<sup>15</sup> Moreover, as the authors note, the increase in income inequality over the same period of time studied suggests that the consequences of what they refer to as “the birth lottery” (the parents to whom a child is born) have grown larger than in the past. Chetty and his co-authors offer the following helpful visual: “Envision the income distribution as a ladder, with each percentile representing a different rung. The rungs of the ladder have grown further apart (inequality has increased), but children’s chances of climbing from lower rungs to higher rungs have not changed (rank-based mobility has remained stable).”<sup>16</sup>

## Between groups

Rates of both relative and absolute intergenerational mobility vary substantially across race and income in the United States, with black Americans in particular experiencing unusually high rates of downward mobility and low rates of upward mobility.

For instance, economist Greg Acs at the Urban Institute examines the probability that a child raised in a middle-class family in the late 1970s falls out of the middle class in adulthood, using the 1979 National Longitudinal Survey of Youth.<sup>17</sup> He finds that, on average, about a third of middle-class children (28 percent) have slipped down the economic ladder by the time they reach their early 40s, and in general 19 percent have real incomes that are 20 percent or more below their parents’ incomes. In other words, he finds downward mobility in both relative and absolute terms. Those probabilities differ sharply by race and ethnicity. Black children raised in middle-class families are significantly more likely than their white peers to fall down the economic ladder. He finds that 37 percent of black children will drop out of the middle class as adults, compared to 25 percent of whites. In absolute terms, he finds that more than one-quarter of black children will have real incomes that are 20 percent or more below their parents’ incomes, compared to 17 percent of whites. Acs finds similar patterns for Hispanics, though the gap between whites and Hispanics is less stark.

More recent research matches survey data to administrative data and finds similar racial gaps in opportunity. Mazumder matches the U.S. Census Bureau’s Survey of Income and Program Participation to administrative earnings records from the Social Security Administration to look at intergenerational mobility in sons’ earnings in relative terms.<sup>18</sup> Using two different measures of relative mobility, he finds that black male Americans have experienced substantially less upward mobility and

substantially more downward mobility than whites over the past several decades.<sup>19</sup> Based on his analysis, Mazumder concludes that these patterns of mobility have “alarming” implications for the future. Unlike some traditional measures of mobility, which imply regression to the mean over time, he says that “these results imply that black Americans would make no further relative progress” in the absence of significant narrowing of the black-white gap in mobility rates.<sup>20</sup>

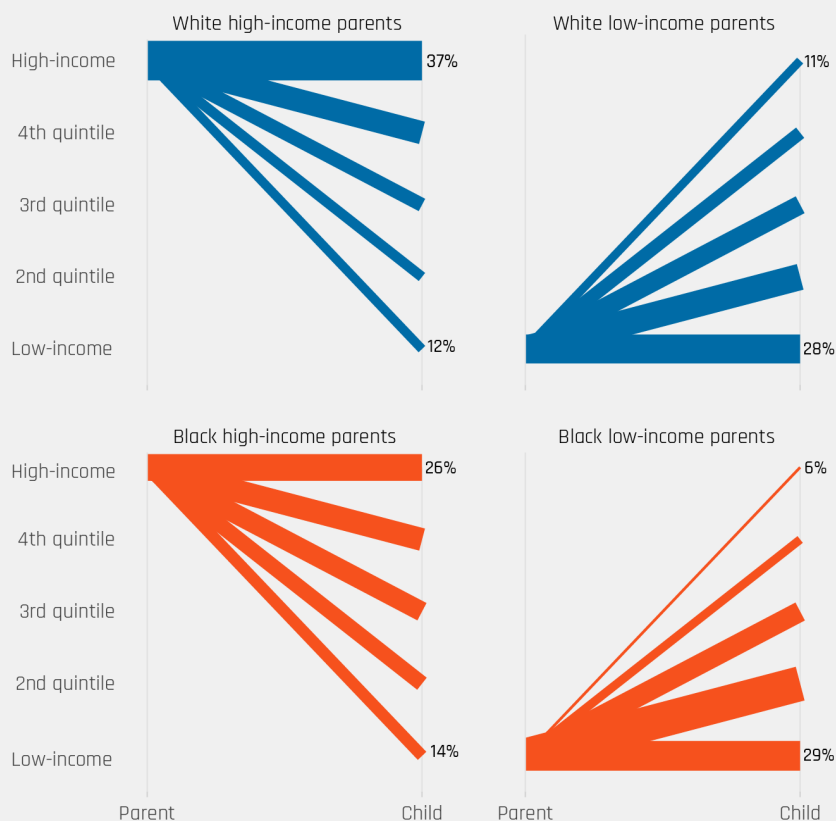
Recent work from Chetty and his co-authors analyze mobility for the cohort of Americans born in the 1980s, utilizing U.S. Census data linked to data on federal tax returns and the American Community Survey to generate the most comprehensive snapshot of the state of intergenerational mobility available to date.<sup>21</sup> The combination of Census data with administrative tax data allows for a detailed analysis of racial differences in mobility, utilizing a relative rank mobility measure that ranks children based on their incomes relative to all other children in their birth cohort and ranks the parents of those children relative to all other parents with children in their birth cohort.

Chetty and his co-authors find stark differences in mobility by race and ethnicity. Over the past generation, from 1989–2015, Hispanics have moved up the income ladder significantly due to relatively small mobility gaps across percentiles as compared to whites, as have Asians. In contrast, the intergenerational gaps between whites and both blacks and Native Americans are large and persistent. Across the entire distribution, the relationship between parents’ and children’s rank in the income distribution is shifted down by about 13 percentiles for black children and Native American children. This finding holds even for children born into the top 1 percent of the income ladder. This means that children born into high-income black families have substantially higher rates of downward mobility than whites across generations. A black child born to parents in the top quintile is roughly as likely to fall to the bottom quintile by adulthood as she is likely to remain in the top quintile. White children are nearly five times as likely to remain in the top quintile as they are to fall to the bottom quintile by adulthood. (See Figure 4.)

**FIGURE 4**

**Black children of high-income parents more likely to fall down the income ladder**

Probability of falling to lower income brackets or rising to higher income brackets for children of high- and low-income parents, separated by race



Source: Raj Chetty and others "Race and Economic Opportunity in the United States: An Intergenerational Perspective." Working Paper No. 24441 [National Bureau of Economic Research, 2018].



The differences between racial groups' mobility prospects mean that earnings disparities by race are persistent across generations, and that reducing those earnings gaps requires reducing the mobility gaps.<sup>22</sup> Chetty and his co-authors find that the "steady-state" white-black income gap is 19 percentiles, and the comparative white-Native American income gap is 18 percentiles.<sup>23</sup> Based on this finding, the authors of the study conclude that "reducing racial disparities going forward will require reducing *intergenerational* gaps for blacks and American Indians [the naming convention used by the U.S. Census Bureau]. Transient programs that do not affect intergenerational mobility directly, such as temporary cash transfers, are insufficient to reduce black-white gaps in income ranks because income distributions will revert back to their steady-states in future generations."<sup>24</sup>

While earlier work from Chetty and other collaborators notes significant geographic differences in economic mobility, new work from University of Chicago's Jonathan Davis and the Federal Reserve Bank of Chicago's Bhashkar Mazumder suggests that race consistently proves to be a more powerful predictor of mobility across generations than does geography.<sup>25</sup> Utilizing the National Longitudinal Survey of Youth to assess the relative weight of race versus region in determining mobility prospect, the two authors find that there is no region in the United States where it is better to be poor and black than to be poor and white.<sup>26</sup>

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### Which resources should we measure?

Just as there are many ways to capture economic mobility across generations, there are also many ways to measure economic resources. Different resource measures capture different elements of economic well-being, and the choice of which resource to use when measuring mobility across generations depends on both theory and the availability of data. Below are a few different ways that analysts typically measure resources.

**Household income.** This is the sum of all cash resources available to a given family and, depending on the data used, may include any or all of the following component parts:

- ***Pretax earnings*** from each worker in the household. Earnings are the main source of income for the vast majority of U.S. households. Studies of earnings mobility sometimes focus on individual earnings rather than household earnings because tracking one person over time is a considerably simpler task than tracking a household over time.
- ***Post-tax and transfer income*** includes the value of benefits from public programs, such as the Supplemental Nutrition Assistance Program, and subtracts taxes.
- ***Capital income*** is from interest and dividends income. Most U.S. households have no capital income with the exception of those at the very top of the income distribution, where capital income becomes an important source with potentially large implications for economic mobility across generations.



**Poverty.** This is another way of talking about household income, with a focus on the bottom of the distribution. The persistence of poverty across generations flies in the face of the American Dream and thus is of particular interest to both researchers and policymakers alike. Poverty can be defined in a variety of different ways:

- **Absolute poverty** measures families living above or below the poverty line. The official poverty measure was developed as part of President Lyndon Johnson's War on Poverty in the 1960s by Social Security Administration economist Molly Orshansky, who calculated that a barebones shopping basket of food comprised one-third of a family's spending and multiplied the cost of that basic shopping basket of food by three to compute the official poverty measure. That same calculation is used today to compute official poverty levels, which are commonly defined as the threshold at which families lack the resources (measured in pretax cash income) to meet basic needs. The weighted average poverty threshold for a family of four in 2017 was \$25,094.<sup>27</sup>
- **Absolute poverty including tax and transfer income.** In the early 1990s, the U.S. Congress commissioned an expert panel from the National Academies of Science to update the poverty measure in order to develop a poverty measure based on a more accurate assessment of the total economic resources available to families, including tax and transfer income, as well as in-kind government support such as subsidized housing. Beginning in 2010, the U.S. Census began reporting data on this Supplemental Poverty Measure alongside the official measure.<sup>28</sup> The supplemental poverty measure in 2017 for a two-adult, two-child household ranged from \$23,261 to \$27,085.<sup>29</sup>

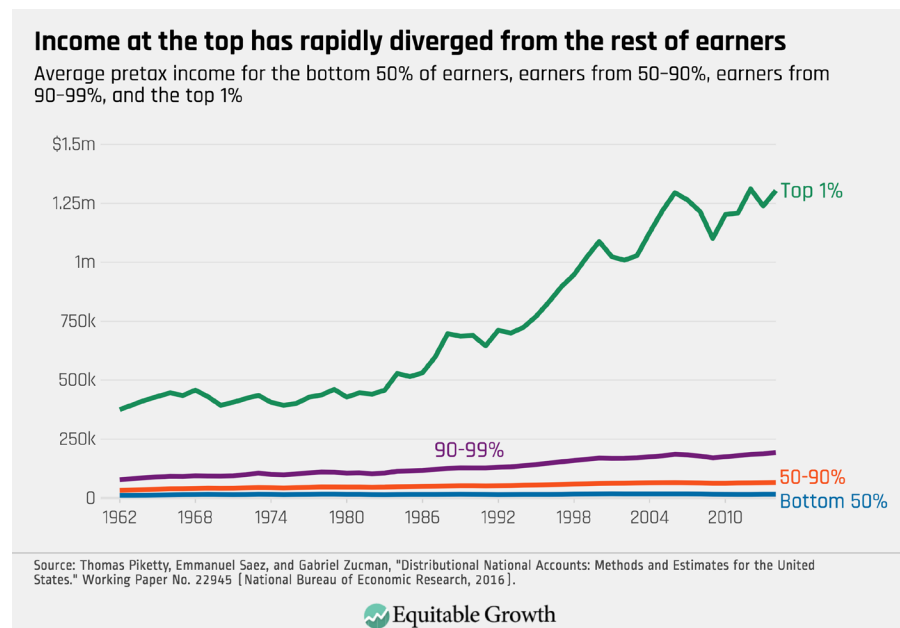
**Wealth.** This is another metric for understanding economic resources. Wealth is distinct from income in that it measures a stock, rather than a flow. Wealth can be negative, as well as positive—debt, for instance, is essentially negative wealth. An example of wealth is if an individual owns a house outright, the house is wealth (sometimes called capital). If that individual rents the house to someone else, the rent flows to the owner as capital income.

Traditional studies of economic mobility tend to focus on income rather than wealth, largely because so few American families have positive net wealth beyond the value of their homes. Yet wealth may play a significant role in economic well-being and in economic mobility because it can provide security and stability. For instance, wealth can be liquidated or borrowed against to serve as a buffer against income shocks or provide a springboard for facilitating economic mobility such as to pay for a college degree.<sup>30</sup>

# Does high inequality today mean low mobility tomorrow?

Inequality in the United States is at its highest in nearly a century. If the income distribution is a ladder, and each percentile represents a different rung, then the rungs have grown further and further apart, particularly in the decades following the 1980s. Research from the Organisation for Economic Co-operation and Development argues that income inequality “can stifle upward social mobility, making it harder for talented and hard-working people to get the rewards they deserve.”<sup>31</sup> While many questions remain about the specific causal mechanisms driving the relationship between economic inequality and opportunity, the basic empirical picture supports the common-sense theory that inequality hampers opportunity. (See Figure 5.)

FIGURE 5

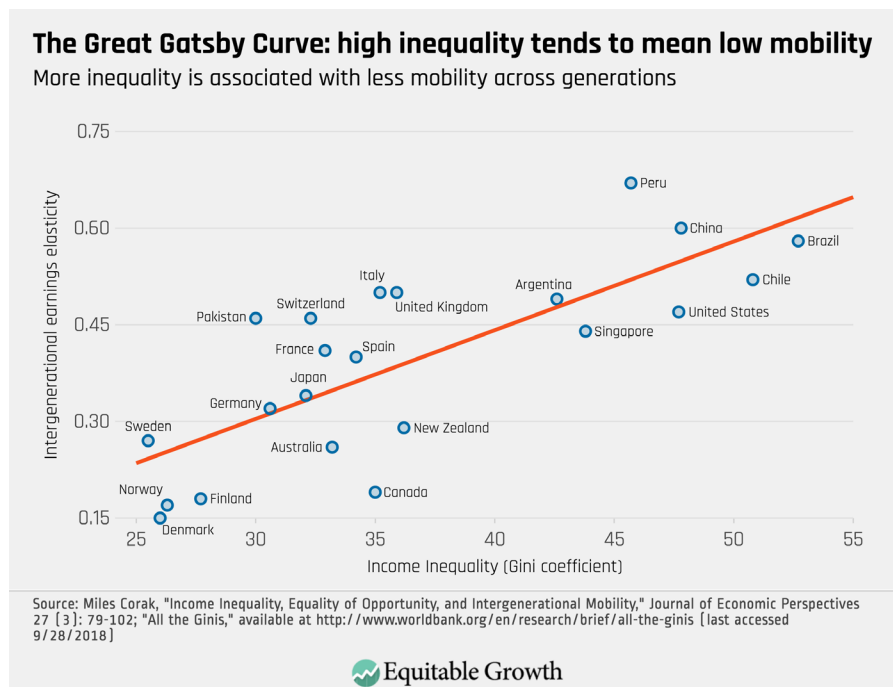


Recent groundbreaking research from Chetty and his co-authors provides strong evidence suggesting that the rise in economic inequality has hampered upward economic mobility in the United States.<sup>32</sup> But Chetty’s work is not the only

research bolstering the idea that inequality hampers mobility. An earlier line of research aimed to quantify the relationship between inequality and mobility by using variations in mobility across places rather than across time.

Perhaps the most influential of these studies comes from the City University of New York economist Miles Corak, who maps the relationship between income inequality and intergenerational mobility for children born in the mid-1960s and their adult outcomes in the 1990s across advanced economies.<sup>33</sup> He finds that countries with low income inequality (measured by the Gini coefficient for disposable household incomes) have higher rates of economic mobility (measured by intergenerational earnings elasticity, or the stickiness of the relationship between a parent and child's incomes).<sup>34</sup> Less than one-fifth of a parent's economic status is passed on to children in low-inequality countries such as those in Scandinavia, compared to high-inequality countries, including the United States and the United Kingdom, where roughly half of a parent's economic status is passed on to children.<sup>35</sup> In a widely cited speech in 2012, then-Council of Economic Advisers chair Alan Krueger termed this high inequality/low mobility relationship the "Great Gatsby Curve."<sup>36</sup> (See Figure 6.)

**FIGURE 6**



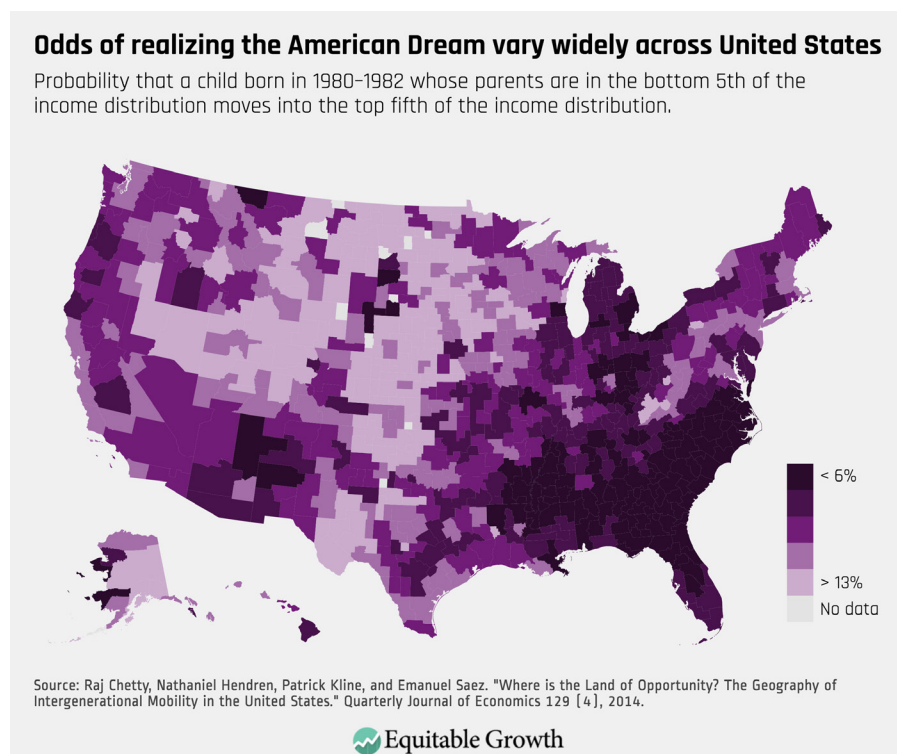
The geography of the Great Gatsby Curve varies across countries, but it also varies within the United States. Economic inequality, mobility, and the relationship between the two concepts vary across regions, states, and smaller geographic units such as commuting zones (a spatially based measure of labor markets designed by the U.S. Census to capture both rural and urban economic geography). In an analysis of these relationships over time across states, University of Michigan sociologist Deirdre Bloome assesses how a child's exposure to income inequality shapes intergenerational mobility outcomes by exploiting the variation in inequality across the states and across time.<sup>37</sup> Using two survey datasets, she finds little relationship between state-level inequality and intergenerational mobility, hypothesizing that the relationship between the two concepts may be clouded by interactions and countervailing forces, including policy efforts aimed at promoting economic well-being and opportunity such as through federal safety net spending.

Bloome adds, however, that while the net relationship between inequality and mobility does not appear to be statistically significant, the pathways that shape mobility matter a great deal, and inequality may be hampering those routes to upward mobility in important ways that are masked by the broad-brush analysis of the relationship between inequality on the one hand and mobility on the other. For instance, she suggests that we ought to be concerned if economic inequality is affecting low-income children's likelihood of college completion—even if inequality also is increasing low-income students' college attendance rates due to the perceived need among this group of young adults to obtain a college degree to beat the odds of remaining on the lower rungs of the U.S. income ladder. In other words, the “means” can be as important as the “ends.”

A second possibility for the absence of a clear empirical relationship between cross-state variations in inequality and mobility outcomes is the level of geographic aggregation. How and why place-based data matter depend on the mechanisms through which inequality translates into opportunity. States may not be the right unit of analysis if the place-based factors shaping the transmission of economic outcomes happens at a more local basis. A long sociological literature suggests that this may be the case.<sup>38</sup> Most recently, Chetty and his team have made waves with their detailed examination of the geography of opportunity by commuting zone, a geographic unit used to define a common labor market area that allows for the study of both cities and rural communities.<sup>39</sup> They find that both relative and absolute mobility vary substantially across commuting zones. For instance, looking at absolute mobility, they find that the probability that a child whose parents' income was in the lowest income quintile when she was between

ages 15 and 20 reaches the top quintile of the national income distribution by the time she is about 30 years old is 4.4 percent in Charlotte, North Carolina, compared to 12.9 percent in San Jose, California.<sup>40</sup> Looking at relative mobility in the 50 largest commuting zones, they find that mobility is highest in Salt Lake City, Utah (where the average child growing up at the 25th percentile reaches the 46th percentile) and lowest in Charlotte, North Carolina (where the average child growing up at the 25th percentile reaches the 35th percentile). (See Figure 7.)

**FIGURE 7**



Chetty's team has yet to provide a causal analysis of the factors explaining the variations in economic mobility across commuting zones, but they point to several factors that are strongly correlated with intergenerational mobility, one of which is income inequality. Inequality, as measured by the Gini coefficient, has a strong negative relationship with intergenerational mobility at the commuting zone level—a finding consistent with the cross-national Great Gatsby Curve. Children growing up in commuting zones with high levels of inequality have low levels of mobility compared to peers growing up in otherwise-similar commuting zones with low levels of inequality.

As with the Great Gatsby Curve, the empirical relationship between economic inequality and mobility documented in Chetty and his team's work is correlation, not causation. The researchers find four other factors that are strongly related to mobility outcomes: racial and economic segregation, the quality of Kindergarten through 12th grade education, social capital, and the share of single parents. Their work raises a host of interesting questions regarding the relationship between all of these factors, on an individual and geographic level. And their findings suggest that place may matter, above and beyond individual characteristics. For instance, white individuals in areas with large black populations have lower rates of mobility than do whites in areas with fewer blacks. (Whites, however, have higher mobility rates than blacks in every commuting zone in America.<sup>41</sup>) Moreover, the variation in mobility across commuting zones is quite large. Some commuting zones, such as Salt Lake City and San Jose, have mobility rates comparable to highly mobile countries such as Denmark, while other commuting zones, such as Milwaukee and Atlanta, have mobility rates well below any developed nation.

What explains these large gaps in mobility, and how do they relate to the variation in inequality? And how should we make sense of mobility measures today (which necessarily look back at the experiences of children growing up in the 1980s, who are now young adults) as predictive of relationships going forward? A preliminary step to understanding whether the relationship between the two concepts is causal (versus simply correlational) is identifying whether the relationship between economic inequality and mobility varies depending on where in the economic distribution one starts. If we think of inequality as creating bottlenecks where opportunities for mobility are limited, then understanding where in the economic distribution those bottlenecks occur is a critical first step.<sup>42</sup>

CUNY's Corak digs into this issue by comparing the United States and Canada, where differences in mobility are concentrated at the so-called tails of the distribution. In the United States, sons raised in the top and bottom of the income distribution are more likely to occupy the same position in the distribution as their fathers than are their Canadian peers.<sup>43</sup> More than half of American sons raised in the top decile fall no further than the eighth decile, and about half of those raised in the bottom decline rise no further than the third decile. In Canada, the top and bottom are both far less sticky.

Chetty and his co-authors attack the same question from another angle. They use different metrics for inequality to capture different types of distributional issues. They find that the share of income in a given commuting zone accruing to the top

1 percent has no relationship with relative mobility, “suggesting that the factors that erode the middle class may hamper intergenerational mobility more than the factors that have led to income growth at the top tail.”<sup>44</sup>

Clearly, more empirical work is needed to tease apart the causal relationships that could explain the observed correlations between high economic inequality and low economic mobility. In the next section of this report, we turn to an overview of the research exploring the most common explanation connecting the dots between inequality and mobility—the development of human capital. Examples of how human capital development could be the transmission channel connecting high inequality and low mobility are offered by Corak and Mazumder, both of whom emphasize the relevance of the high returns of skills in countries with high inequality and low mobility. Corak points out that mobility is lower in countries where the returns from a college education are higher,<sup>45</sup> and Mazumder finds that in countries with a high return on skills, there is low mobility because, he posits, unequal opportunity for human capital development leads to lower mobility.<sup>46</sup> The human capital channel is an important starting point for understanding how today’s inequalities may be hampering tomorrow’s opportunities, but, as we will see, it offers an incomplete explanation for differences in mobility outcomes.





# How does economic inequality limit the development of human potential?

Conventional approaches to understanding intergenerational economic mobility focus on the ways that economic inequalities in opportunity during an individual's childhood shape that same person's outcomes across the economic distribution. On a basic level, every individual is born with a certain amount of human potential, but the opportunity to develop that potential to its fullest varies dramatically based on the circumstances of family, community, institutional factors, and myriad other structural constraints. The many types of inequalities in access to developing that human potential ultimately hamper upward economic mobility. These inequalities are often compounded across multiple realms, with major lines of research demonstrating the links between inequality and access to health, parental investments of time and money in their children, and in the quality of early childhood education, as well primary and secondary schooling—all of which are critical pathways for the development of the human potential necessary for upward mobility.

Economists generally think of human capital as the stock of skills held by a population, and a long line of research argues that human capital is not only central for individual economic well-being but also to macroeconomic growth. In an influential 1976 study, George Washington University economist John Kendrick estimated that more than half of the United States' total capital stock in the 1960s was held in human capital.<sup>47</sup> In recent years, the concept of what “counts” as human capital has expanded from formal classroom education and academic test scores to “softer” concepts such as noncognitive skills, including social and emotional faculties.<sup>48</sup> Research also identifies an economic role for the sociological concept of social capital, which builds on human capital to argue that relationships and social networks serve as their own form of human potential, with important economic implications.<sup>49</sup> Taken together, this more robust concept of human potential allows for a richer understanding of how early life experiences add up later in life to different economic outcomes and how inequalities across this set of experiences may thus be hampering economic mobility.



A human potential approach to understanding economic mobility also provides a useful way of escaping the trap of “genetic destiny,” or the idea that some people are born less able than others. Of course, raw genetic material varies, and not everyone has the same potential. But an overwhelming array of research from the social and biological sciences demonstrates that genes are not destiny, and that the ways that raw potential expresses itself over time is fundamentally shaped by structural forces over the course of a lifetime.

Consider the famous Stanford Marshmallow Experiment of the late 1960s: Children were offered a choice between one small reward (an Oreo, pretzel stick, or marshmallow, hence the study’s name) provided immediately, or two small rewards if they waited for approximately 15 minutes while the tester left the room and then returned. Researchers tracked the children over many years and found that those who were able to defer gratification as 4- to 6-year-old children (those who waited for 15 minutes to receive two treats) had better life outcomes on average, including SAT scores, educational attainment, and various health-related outcomes.<sup>50</sup> Yet in 2012, cognitive scientists revisited the study and found that environment and other structural factors shape what first appeared to be biological in the marshmallow test, which has become a standard test for an individual’s ability to delay gratification.<sup>51</sup> The University of California, Berkeley psychologist Celeste Kidd and her team find that a child’s ability to defer gratification is strongly conditional on whether the child is in a reliable or unreliable environment.<sup>52</sup> New York University psychologist Tyler Watts and his co-authors find that a child’s socioeconomic status has far more to do with a child’s ability to delay gratification than any innate ability.<sup>53</sup>

In short, if children experience scarcity or insecurity, they are far less likely to demonstrate deferred gratification than children who experience security and trust. Economist Sendhil Mullainathan at Harvard University and cognitive scientist Eldar Shafir at Princeton University compellingly demonstrate the impacts of resource scarcity on cognitive processing and decision-making, not only for children but also for adults.<sup>54</sup> Traits that were once understood to be firmly biological are now widely understood to be conditioned by circumstance and social structure, hence the need for a focus on how human potential is developed (or underdeveloped) based on access to resources.<sup>55</sup>

In this section of our report, we provide an overview of the most prominent research examining how inequality is holding back the development of human potential. We organize that research into three key channels: health, parental

investments of time and money, and education. Human capital and related lines of research typically focus on childhood, and this forms a substantial share of what we review in the pages to come. But the development of human potential begins before birth (in the prenatal environment, as we describe below) and continues across the course of one's life—it is a lifelong project, and inequalities across the life cycle amass for many Americans to inhibit upward mobility. As we show in this section, and, critically, in the following section on the deployment of human potential, the connection between economic inequality and mobility builds over the course of an individual's lifetime.

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## Health inequalities

Inequalities in health begin before birth and accumulate across the course of one's life, with the consequences of these inequalities directly shaping people's abilities to meet their full potential in adulthood. A growing body of research ties economic inequality directly to health inequalities, and a complementary line of scholarship from both the biological and social sciences links health inequalities early in life to long-term economic and social outcomes. Economists sometimes refer to this as “health capital.”<sup>56</sup> While the prenatal and early childhood environments stand out as particularly important periods in the life cycle for long-term health, the research also suggests important feedback loops between parental health (especially maternal health) and child well-being.

The fetal origins hypothesis established the importance of prenatal health for long-term health outcomes in the early 1990s, and a growing body of evidence now illustrates that chronic, degenerative disease conditions in adulthood may well be triggered by circumstances many decades earlier, *in utero*.<sup>57</sup> By the late 1990s, economists had begun exploring whether the prenatal environment might shape long-term human capital outcomes, as well as long-term health outcomes.<sup>58</sup> In a wide-ranging review of the scholarship on the economic effects of a broad range of fetal shocks and varying prenatal environments, economists Douglas Almond at Columbia University and Equitable Growth Steering Committee member Janet Currie at Princeton University conclude that the nine months *in utero* are a critical period in an individual's economic life, impacting a wide spectrum of human capital metrics ranging from test scores and educational attainment to physical and mental health.<sup>59</sup>

More recent studies focus on the analysis of within-family and within-twin-pair differences in birth outcomes to more precisely identify a causal link between prenatal health and long-term outcomes.<sup>60</sup> The results are striking. For instance, one recent study from University of Texas at Austin economist Sandra Black and her colleagues finds that a 10 percent increase in birth weight increases high school graduation by a little less than 1 percentage point and earnings by about 1 percent.<sup>61</sup> Other studies find similar effects of infant health on human capital outcomes, including high school test scores and graduation rates, as well as social assistance take-up rates in adulthood.<sup>62</sup>

The distribution of prenatal health varies dramatically by where one sits in the economic distribution.<sup>63</sup> For instance, low birth weight is strongly negatively correlated with income in the United States. University of Washington School of Social Work professor Melissa Martinson and her colleagues compare the odds of low birth weight by income quintile in the United States, the United Kingdom, Canada, and Australia. They find that while socioeconomic gradients in birth weight were clear across all four countries, the United States exhibited a clear linear relationship between income quintile and the probability that a child is born underweight: Low-income American mothers were 2.41 times more likely than those in the top income quintile to give birth to an underweight baby.<sup>64</sup>

Indeed, Martinson and her co-authors find that 8 percent of low-income mothers give birth to low birth weight infants, even after controlling for a host of other confounding factors, including maternal age.<sup>65</sup> They conclude that the more generous social safety nets and health care systems in the United Kingdom, Canada, and the Australia play a buffering role in mitigating the relationship between a mother's socioeconomic status and her prenatal environment and highlight the roles of food insecurity, economic volatility, and residential segregation in magnifying the relationship between a mother's economic circumstances and a child's birth outcomes in the United States.

A key takeaway from the economic consequences of health inequalities in the prenatal environment is the critical role of maternal health as a central mechanism for ensuring the development of human potential for the next generation of Americans. Research from Columbia's Almond and the Chicago Fed's Mazumder suggests that the key time for healthy fetal development may be so early in the gestational period that the mother is not yet aware of her pregnancy.<sup>66</sup> As Almond and Princeton's Currie note in their 2011 review of the literature and its implications: "[P]re-emptive targeting would constitute a radical departure from

the current policies that steer nearly all healthcare resources to the sick, i.e. the ‘pound of cure’ approach.”<sup>67</sup> Studies show that a wide range of policies designed to provide broad support to women of childbearing age boast quantifiable benefits on fetal health, including the Supplemental Nutrition Assistance Program, the Supplemental Feeding Program for Women, Infants, and Children, and Medicaid and other affordable, accessible, quality health insurance programs.<sup>68</sup>

The importance of access to quality, affordable health insurance is of particular interest in the United States, given the systemic changes in the wake of the passage of the Affordable Care Act into law in 2010, the subsequently uneven expansions of Medicaid coverage across U.S. states, and the high degree of policy uncertainty going forward. The introduction of public health insurance in Canada was associated with a 1.3 percent decline in low birth weights for all parents and an 8.9 percent decline for single mothers.<sup>69</sup> In the United States, the expansion of Medicaid to pregnant women and children reduced low birth weights for the poorest women and further reductions of barriers to Medicaid enrollment for low-income women increased usage of prenatal care, resulting in positive outcomes on a range of infant health indicators.<sup>70</sup>

Prenatal and early infancy health inequalities are not the only key connections between health and long-term economic performance. Indeed, the findings from the prenatal health inequality literature are echoed across a range of other health outcomes across the life course. Only 70 percent of poor children are reported to be in excellent or good health, compared to 86.9 percent of higher-income children. That gap grows from 15.5 percentage points among children ages 2 and 3 to 19.2 percentage points among adolescents ages 13 to 17, suggesting that health disparities compound with age.<sup>71</sup> Low-income children are both more likely to experience mental health challenges and more likely to have those conditions impact educational attainment.<sup>72</sup> Scholarship in the biological and other social sciences suggests a causal relationship between poverty and mental health problems, with many hypothesizing that economic scarcity or insecurity may act as a stressor.<sup>73</sup> Myriad other studies examine the relationship between economic and health conditions, including asthma (the leading chronic condition among children and a leading cause of pediatric emergency room utilization, hospitalization, and school absence), gastrointestinal illnesses, obesity, diabetes, high blood cholesterol, severe injuries, respiratory allergies, chronic ear infections, and severe dental problems.<sup>74</sup>

The health gradient across the economic distribution provides strong indication that inequality of access to economic resources affects long-term economic outcomes in important ways, including intergenerational mobility. But what about the existence of economic inequality itself? Epidemiology and public health professor Michael Marmot at University College, London provides a compelling case for the role of economic inequality itself fueling poor health and, in turn, perpetuating economic inequality across generations.<sup>75</sup> His argument is echoed in later work by behavioral economists, suggesting that health inequalities may be a consequence of the absence of control over and participation in society for those on the lower rungs of the economic ladder.<sup>76</sup> This means that differential access to economic resources across the economic spectrum is exacerbated by the stress effect created by the status differentials inherent in a highly unequal society—inequality itself is a pivotal driving force, not just poverty.

A critical open question remains how large the overall impact of health is on intergenerational mobility. While research provides a compelling case for the links between parent socioeconomic status, child health, and long-term economic outcomes, determining the magnitude of the total effect remains a challenge, as does identifying what share of intergenerational transmission of economic status can be explained through the health channel. In a review of the literature on health capital, Princeton's Currie notes that "health is inherently multi-dimensional and difficult to summarize in a single index."<sup>77</sup> Studies thus typically focus on a single dimension of health such as chronic conditions or low birth weight, which are often relatively rare, low-frequency events or have relatively small individual impacts. Moreover, a growing body of scholarship suggests that the consequences of health disparities on long-term economic outcomes, including intergenerational mobility, are cumulative over time. For example, research by economists Phillip Levine at Wellesley College and Diane Whitmore Schanzenbach at Northwestern University shows that educational outcomes are not well-predicted by access to health care at the time of testing, but rather by access at birth and especially by a mother's access to prenatal care.<sup>78</sup> Future research, including the use of more sophisticated data that links complete life cycle health histories with life cycle economic outcomes, is necessary to fully unpack the effects of health inequalities on intergenerational mobility and broader economic growth.

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## Parental investments

Families serve as the incubator for human potential. A key element of parenthood is helping children develop into their best selves. Parents are their children's first teachers, and they know it—a vast array of opinion polls indicate that parents across the economic spectrum are deeply invested in their children's economic futures.<sup>79</sup> Yet the quantity and the quality of investments that parents are able to make in their children vary sharply across the economic spectrum, with implications for the effective development of human potential for low- and middle-income children. In this subsection of our report, we outline two key different sets of investments that play a key role in cultivating human potential and long-term economic outcomes: money and time. For each, we overview the ways that inequality layers on top of these two investment channels to hamper mobility across generations.

### Money

Income from earnings, savings, and wealth all shape how parents are able to invest in their children's development. The relationship between families' socioeconomic backgrounds and their children's educational achievement and attainment is well-documented. Numerous rigorous meta-analyses of the research literature on this relationship confirm that parent's socioeconomic status is one of the strongest determinants of student achievement, with an average correlation of 30 percent.<sup>80</sup> Sociologist Sean Reardon at the Stanford Graduate School of Education and other scholars estimate that the math and literacy scores of children from low-income families are, on average, three to six years behind those of wealthy children, with only slight variations throughout the school pipeline from Kindergarten through high school graduation.<sup>81</sup>

A growing body of evidence suggests that more money does, in fact, lead to better long-term outcomes, including education and earnings, that, in turn, foster upward intergenerational mobility. For instance, recent research from Jacob Bastian at the University of Chicago's Harris School of Public Policy and Katherine Micheltore at Syracuse University demonstrates that the infusion of \$1,000 in additional income from the Earned Income Tax Credit for adolescents ages 13 to 16 had significant impacts on children's later-life outcomes, increasing the probability of high school graduation by 1.3 percent, the probability of college completion by 4.2 percent, the probability of employment as a young adult by 1 percent, and increas-

ing earnings by 2.2 percent.<sup>82</sup> Related research from economists Gordon Dahl at the University of California, San Diego and Lance Lochner at Western University finds that a \$1,000 increase in income from the EITC results in a significant increase in children's reading and math scores.<sup>83</sup> Other research, however, suggests that the link between income and children's outcomes is more complicated than it first appears. For instance, Susan Mayer at the University of Chicago's Harris School of Public Policy notes that the types of goods that families buy as their incomes increase—such as cars and restaurant meals—seldom relate to educational or economic outcomes in the long-run, while many of the things that do benefit children such as books or educational outings cost so little that their consumption depends on factors other than income.<sup>84</sup>

A promising new line of research asks whether income stability affects the development of children's potential, independent of the impact of the level of income itself. Research from American University economist Bradley Hardy illustrates how the childhood experience of family income volatility—measured as year-to-year income swings of 25 percent—affects adult outcomes and finds that volatility is associated with lower levels of educational attainment, as well as lower levels of adult household income.<sup>85</sup> Hardy's results are starkest for moderate-income families, suggesting that economic insecurity may operate on a separate axis from resource poverty.

Just the threat of economic insecurity from the loss of a parent's job can trigger a cascade effect of poor academic performance and mental health difficulties for children, according to research from Columbia University economist Elizabeth Ananat and her colleagues. In Ananat and her co-authors' research, local job losses predicted poor short- and long-term child achievement outcomes, including test scores, high school graduation rates, and college completion—regardless of whether the individual family in question had actually lost a job or incurred a shock to its earnings.<sup>86</sup>

Savings and wealth also play a role in shaping families' time horizon for investments in their children's potential. As Thomas Piketty's *Capital in the 21st Century* made clear, wealth inequality has grown dramatically across the developed world, with the majority of the growth in the United States coming in the post-1970s period, when income inequality also rose.<sup>87</sup> Sociologist Fabian Pfeffer, who studies the impact of family wealth at the University of Michigan, notes: "Over the last decades, family wealth may have become even more important to support direct investments in educational opportunity—in the form of good neighborhoods, secondary schools, and colleges—and to insure against the risks entailed in these investments, for instance, when families rely on student loans to finance costly



college careers.”<sup>88</sup> Indeed, recent work from sociologist Emily Rauscher at the University of Kansas shows that parental wealth transfers account for between 5 percent to 29 percent of the parent-child association in socioeconomic status, and that financial support from parents is associated with higher educational attainment, wealth, and household incomes for adult children.<sup>89</sup>

How does the wealth channel work to stall (or accelerate) the development of human potential across generations? One hypothesis is that parents’ limited access to liquid savings or wealth can put the stable, long-term investments in their children out of reach. For instance, Pfeffer and Stockholm University’s Martin Hällsten point to the importance of wealth and purchasing power in relationship to a family’s ability to invest in a child’s education, noting that in the United States the purchase of a home in a high-performing school district is one of the most common ways that parents invest in their children’s potential.<sup>90</sup> Indeed, a recent study from the Federal Reserve Bank of St. Louis suggests that the relationship between housing prices and school quality is nonlinear—that is, the price premium parents pay for a home in an area associated with a better school increases as school quality increases—and it persists even after controlling for many other neighborhood characteristics, including racial composition.<sup>91</sup>

A growing body of work also traces the empirical path between parental wealth and children’s access to and completion of postsecondary education, a key mechanism for the development of human capital and thus to upward mobility. Work by Pfeffer shows a large and rapidly increasing wealth gap in college attainment for cohorts born in the 1970s and 1980s, concurrent with a steep rise in wealth inequality across those same cohorts’ parents.<sup>92</sup> Research from Princeton University sociologist Dalton Conley demonstrates the strong, nonlinear impact of parental wealth (as measured by net worth) on children’s postsecondary educational attainment, net of income and other socioeconomic factors.<sup>93</sup> Indeed, scholars are now taking a multigenerational approach to the study of wealth on educational attainment and other related outcomes, recognizing that wealth transfers often skip a generation—with grandparent-grandchild wealth transfers possibly a key channel through which intergenerational inequalities are perpetuated.<sup>94</sup> A host of recent multigenerational studies finds a strong relationship between grandparents’ financial resources and grandchildren’s educational outcomes, independent of parental resources.<sup>95</sup>



As economic inequality has grown, parental transfers for educational purposes have increased and are now more dependent on parental wealth levels.<sup>96</sup> Young adults in the top income quartile received nearly three times as much financial support from their parents as those in the bottom half of the income distribution.<sup>97</sup> The wealth gap in parental support is even more dramatic: Young adults from families in the top wealth quartile received 11 times more support for school than those below the median. Even after excluding those who received no parental help, those in the top quartile still received more than triple the amount received by the median.<sup>98</sup> As economist Jonathan Fisher at the Stanford Center on Poverty and Inequality and his co-authors demonstrate in their recent research, wealth may increasingly be acting as a buffer to cushion income changes, which could reduce mobility across time, given the high levels of wealth inequality characterizing the U.S. economy today.<sup>99</sup>

A host of open questions persist, however, regarding the relationship between money and the development of human potential. First and foremost, understanding precisely *why* having money matters is critical for developing actionable, effective policies designed to put resources in families' wallets. Second, understanding *when* money matters is key as well. For instance, money may be especially important for families with very young children because of the strong associations between income, children's school readiness, and long-term educational and earnings outcomes.<sup>100</sup> Money may be equally important in adolescence, when families are making critical decisions about postsecondary education. As Pfeffer and Harvard University sociologist Alexandra Killewald demonstrate, wealth transmission across generations typically occurs early in life, namely through the provision of educational advantage, while bequests and other *inter vivo* transfers play a far smaller role. More research is needed that investigates the role of *in vivo* transfers (those made while both parties are still living) in order to better understand the pathways through which advantage is confirmed and opportunity begins to calcify. Third, researchers and policymakers alike need to better understand the distinctions between the role of resource levels at a given point in time and resource volatility over time. Does economic insecurity and instability in childhood impact long-term economic outcomes? At what points in childhood? And how do resource volatility and resource scarcity relate?

## Time

Mounting evidence suggests that income gaps alone are not sufficient to explain the gaps in children's skills and educational attainment.<sup>101</sup> As any parent knows, time is a critical resource—the investment of high-quality time with children is paramount, and the stress created when work or other caregiving obligations compromise that time can have ripple effects for the well-being of parents and children. Research on the time dimension to economic inequality is a critically important one for scholars seeking to better understand the channels through which inequality is impacting the development of human potential. A growing body of work illustrates that both the quantity and quality of the time spent with children is immensely important for child development and, in turn, has significant impacts on long-term economic outcomes as well. High-quality time investments in children pay enormous human capital dividends later in life, which illustrates how economic inequalities are transmitted via this channel in important ways that fundamentally undermine low- and middle-income children's abilities to maximize their potential. Research suggests that low- and middle-income parents face fundamental pressures that hamper their ability to make high-quality, secure investments of time with their children, especially in comparison to families with greater economic resources.

The disparity in parental time begins at birth and continues across children's lives. Sociologist Amy Hsin at City University of New York's Queens College investigates the relationship between low birth weight and maternal time investments and finds that socioeconomic status strongly predicts the amount of time a new mother spends with her underweight baby.<sup>102</sup> Jonathan Guryan at Northwestern University's Institute for Policy Research and his colleagues find that mothers with a college education or more spent roughly 4.5 more hours per week interacting with their children, compared to mothers with a high school degree or less.<sup>103</sup> This relationship is especially noteworthy, given that mothers with more education report spending more time working outside of the home, in addition to more time interacting with their children.<sup>104</sup>

The disparities in parents' time with their children extend not only to the quantity of time spent with children, but also to the quality of that time. A variety of studies dig into the specifics of income-based differences in parenting investments. Perhaps the best-known evidence comes from psychologists Betty Hart at the University of Kansas and Todd Risley at the University of Alaska, whose intense observations of both professional and working-class families with young children

found that children in professional families hear nearly twice as many words per hour as those in working-class families.<sup>105</sup> By age 4, before entering a formal school environment, a child from a working-class family may have heard 19 million fewer words than a classmate from a professional family.<sup>106</sup>

Other research from Ariel Kalil at the University of Chicago's Harris School of Public Policy and her colleagues investigating how parents spend time with their children suggests that college-educated mothers are more able to effectively shift the composition of their time to match their children's developmental needs at different life stages, which translates into more effective development of human capital.<sup>107</sup> They find, for example, that college-educated mothers are more likely than their less-educated peers to focus their time with preschool-aged children on basic literacy and problem-solving and then shift their emphasis to planning and monitoring their academic and social networks, as their children's lives move outside the home as they age into their middle childhoods.<sup>108</sup> In each case, college-educated families are more able to match what developmental psychologists typically point to as the most critical skills for a given developmental life stage.

The parenting gap in quality-time investments in children has grown alongside income inequality. Between 1988 and 2012, the gap between the probability that a parent of a young child in the bottom-quintile and her peer in the top-quintile reads to that child daily increased from 18 percentage points to 30 percentage points.<sup>109</sup> While low-income parents were far more likely to read to their children in 2012 than they were in 1988, the increase in daily reading among parents at the top quintile grew more rapidly than did that at the bottom.<sup>110</sup> At the same time that the income gap in daily reading increased, the income gap in book ownership decreased. Between 1988 and 2012, the gap in the probability that a child growing up in the bottom quintile owned 10 or more books compared to a peer in a top quintile family decreased from 33 percentage points to 20 percentage points.<sup>111</sup> The increase in the family income gap for daily reading compared to the decrease in the family income gap for book ownership suggests that differences in time-use may, in some cases, be even more critical than material differences.

Why are higher-income, higher-educated parents better able to invest quality time with their children, compared to those with lower incomes and less education? A wide range of research suggests that the labor market and economic pressures on low-income, less-educated families make quality-time investments in their children difficult. Unpredictable work schedules and shift work (night shifts or other nonstandard work schedules) make reliable, stable investments of time in

children a continuous challenge for families at the bottom of the income spectrum.<sup>112</sup> In contrast, high-income families with high levels of education are more likely to have greater autonomy at work. The demands for total hours at work may be higher, but their probability of flexibility in terms of when and where they complete their work is often substantially greater than their low-income peers, which allows for more effective use of their time with their children in ways that enrich human capital. Substantially more research remains to be done to better understand how inequalities in parents' use of time flows into human capital development, yet a growing body of evidence suggests that high-income families are substantially more able to capitalize on their time in ways that allow them to replicate advantages by cultivating their children's potential. In contrast, time pressures and other factors place stresses on low-income families that replicate disadvantages across generations.<sup>113</sup>

The growing body of evidence on the interaction of rising economic inequality and inequalities in parental time-use suggest an important nuance for understanding the ways that today's inequality may be squelching tomorrow's opportunity. Broader categories of inequality—not just income inequality—matter for understanding parents' relative ability to fully invest in their children's potential. For starters, a growing body of research suggests that status anxiety—especially among middle- and upper-middle-income families—has resulted in an arm's race in investing time and money in children's education.<sup>114</sup> Status anxiety coupled with the increasingly serious consequences of not “making it” (stagnant or downward mobility across generations) means that well-resourced families are stretching further and further to give their kids a leg up in an increasingly winner-take-all society.<sup>115</sup> The result is a world where the necessary investments for children's upward mobility may be growing ever-higher at the same time that the resources available to moderate- and low-income families are increasingly tight.

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## Education

Education is a central focus for scholars and policymakers focused on intergenerational mobility for several key reasons. First, as one of the key channels through which human potential develops, education plays a central role in mitigating the role of family circumstances and equalizing opportunity, providing a springboard to upward mobility. At the same time, however, education is also a channel for status reproduction. Too often, education is a locus via which economic and other types of inequality interact to accrete, layer by layer, compounding existing differences in family resources to hamper mobility across generations.

Second, important structural changes to the labor market over the period of rising inequality mean that economic fortunes are increasingly stratified by education. Globalization and technological change mean that the wage premium conferred by a college education is substantially higher today than in the past.<sup>116</sup> Researchers now understand that a variety of institutional forces beyond so-called skill-biased technological change—the shift in production technologies that increasingly favor skilled labor over unskilled labor—and educational inequalities shape both economic inequality and mobility outcomes, which we discuss later in this paper.<sup>117</sup> But the evolving role of education, inequality, and mobility over the past half-century means that educational inequalities have indeed played an important role in shaping intergenerational mobility, which means that education-focused policies remain an important part of any solutions aimed at promoting opportunity tomorrow by mitigating inequality today.

Inequalities in educational opportunity begin before the start of formal schooling, in early care and learning settings that vary dramatically across the income spectrum. They continue through secondary schooling, as the opportunities available to families even in the context of the public school system are rife with inequality. And they flow into college and other postsecondary educational opportunities as well. In the sections that follow, we provide a brief overview of the ways that inequalities shape the development of human capital through the education channel.

## Early childhood

The majority of children in the United States spend many hours of their early lives with caregivers who are neither their parents nor formal school teachers. These early-life experiences are formative for the development of cognitive and non-cognitive skills, both of which provide the foundation for later human capital and ultimately for economic outcomes including employment and earnings.<sup>118</sup>

The evidence on the importance of the development of noncognitive skills in particular is perhaps one of the most critical advances in the research over the past several decades for several reasons. First, the early development of noncognitive skills plays a central role in building the cognitive skills that have long been viewed as key to later success in the labor market.<sup>119</sup> Second, changes in the labor market suggest that noncognitive skills are increasingly important predictors of economic success in their own right, particularly as advances in automation and artificial intelligence mean technology is increasingly capable of taking on both routine

and nonroutine tasks.<sup>120</sup> As Nobel Laureate James Heckman notes, “It is common knowledge outside of academic journals that motivation, tenacity, trustworthiness, and perseverance are important traits for success in life.”<sup>121</sup>

Quality early care and learning settings provide an important environment for the development of both noncognitive and cognitive skills, and substantial inequalities persist across the economic distribution in families’ abilities to invest in these quality care and learning settings for their young children. Low-income families are far more likely to use informal care for young children compared to higher-income families, which rely more heavily on center-based care.<sup>122</sup> The quality of informal care, including care provided by family and care provided in the home in family-run settings, varies far more dramatically than does center-based care.<sup>123</sup> Research suggests that behavioral problems are far more prevalent among children in informal care settings. Importantly, though, the acquisition of cognitive skills does seem to vary across these settings substantially, which points to the importance of the care environment for cultivating effective noncognitive skills.<sup>124</sup>

Access to quality care is not just a struggle for families at the bottom of the economic ladder. Middle-income families also face significant challenges accessing high-quality care for their children. Research suggests that the quality of care received by both low- and high-income families in center-based settings is substantially higher than the quality of care received by middle-income families utilizing center-based care.<sup>125</sup> Why might middle-income families be struggling to obtain quality care for their children, as compared to low- and high-income families? Cost is likely a central factor, as the cost of childcare rivals the cost of rent in many areas of the country, and middle-income families are ineligible for means-tested childcare subsidies.<sup>126</sup> While low-income families with access to center-based care are typically able to obtain such care through public childcare subsidies that can only be utilized at regulated, accredited programs, and high-income families are able to buy their way into high-quality centers, middle-income families have no public support for meeting their care needs.<sup>127</sup>

The past two decades have seen significant growth in access to pre-Kindergarten programs for 3- and 4-year-olds, in response to both a growing recognition of the importance of early learning as the foundation for long-term success and to the inequalities in access to quality early education for low-income families. Yet the income-based inequalities in access to quality preschool is substantial, mirroring that of the gap in access to high-quality childcare settings for younger children. Marist College social policy professor Jay Bainbridge and his co-authors find a

strong link between family income and early education enrollment for 3- and 4-year-olds, especially when comparing families in the bottom two quartiles of income with the top two income quartiles. The effect of income persists even after holding constant parental education, marital status, maternal employment, and race and ethnicity. And the effect is strongest for 3-year-olds, who have been the least likely to benefit from the expansions in public preschool programs, which have largely focused on 4-year-olds.<sup>128</sup> The gap in enrollment has slowly been diminishing over time for 4-year-olds, as public pre-K programs have expanded, and has virtually disappeared for 5-year-olds due to near-universal attendance at public Kindergarten.<sup>129</sup> The patterns here suggest that public policy can have an impact on closing access gaps for children born into different economic circumstances, which, in turn, can have meaningful impacts on long-term human capital outcomes and ultimately may promote upward mobility.

It is worth noting that a rich literature documents the enormous differences that access to high-quality early care and learning settings can make for the long-term socioeconomic outcomes of disadvantaged children. Unlike some areas, where the outcomes are relatively uncertain, the evidence on long-term economic benefits of investing in young children is comprehensive and compelling. For instance, return-on-investment estimates for two of the best-known high-impact interventions—the Perry Preschool and the Carolina Abecedarian Project—conclude that every dollar spent on the program saved taxpayers between 4 percent and 19 percent, depending on the types of returns included in the calculation. By providing high-quality, wrap-around early care and learning programs to young children, the programs, in turn, played a central role in developing young adults with the necessary skills to succeed in society, with participants in those two studies going on to achieve higher educational attainment, higher probabilities of employment, higher earnings, and far lower crime rates than peers who did not participate.<sup>130</sup>

Furthermore, a large and growing literature provides evidence that universal pre-K for children ages 3 and 4 pays long-term dividends in human capital outcomes. For instance, Georgetown University public policy professor William Gormley and the Brookings Institution’s Ted Gayer’s study of universal pre-K in Oklahoma—which is run through the public school system and is generally recognized as a high-quality program—finds a 53 percent gain in pre-reading skills, a 27 percent gain in pre-writing skills, and a 21 percent gain in pre-math skills for low-income children, adding to the body of evidence showing the role of quality pre-K as a leveler for cognitive skills development.<sup>131</sup> Research from Dartmouth College economist Elizabeth Cascio provides evidence that the gains from universal



early childhood programs for children from low-income families are substantially greater than are those for children from high-income families, even though children from all backgrounds benefit in important ways from these programs.<sup>132</sup> Just as the introduction of universal Kindergarten in the United States played a significant role in improving human capital indicators such as increased rates of high school graduation and decreased rates of incarceration for low-income children, the expansion of high-quality universal pre-K has the potential to boost the potential of the next generation in ways that may help “unstick” opportunity from family background.<sup>133</sup>

### Kindergarten through 12th grade

By the time children enter Kindergarten, the economic achievement gap is already present.<sup>134</sup> Education can, and sometimes does, serve as what the 19th century educator Horace Mann once called “the Great Equalizer.” In the United States today, however, inequality-driven gaps that begin in early childhood come into sharp focus over the course of the elementary, middle, and high school years. For decades, the gaps in test scores between black and white children served as a glaring reminder of the persistent inequities in the U.S. education system—and the ways that those inequities, in turn, contradict the promise of equal opportunity and access to opportunity in the United States.

While racial progress remains an incomplete project, the racial achievement gap in test scores among school-aged children is now smaller than the income-based gap, suggesting that economic inequality is playing a crucial role in shaping how children are developing their potential across childhood. The difference in test scores for children from families at the top of the income distribution (in the 90th income percentile) and those at the bottom (in the 10th income percentile) is twice that of the gap between black and white children, holding incomes constant.<sup>135</sup> As economic inequality has grown, so have income gaps in achievement. The test score gap between children from low- and high-income families is roughly 30 percent to 40 percent larger among children born in 2001 than it was among children born a quarter-century ago.<sup>136</sup> Income-based achievement gaps persist across racial and ethnic groups as well. The within-group gap between low- and high-income white and Hispanic children, for example, began to widen in the 1970s, while the within-group gap between low- and high-income black children has been widening since the 1940s.<sup>137</sup>



Much of the growth in the gap in test scores for elementary-school aged children is driven not by downward mobility among low-income, lower-performing students, but rather from the skyrocketing achievements of children from high-income families. Research by Stanford's Reardon suggests that a given difference in family incomes for children born in 2001 corresponds to a 30 percent to 60 percent larger difference in achievement than it did for children in the 1970s, and that at least part of this gap is driven by the differential growth in cognitive skills for advantaged children as compared to disadvantaged children.<sup>138</sup> As noted earlier, one source of these disparate cognitive growth paths may be that higher-income families have substantially more ability to invest time and money in their children to advance their educational outcomes above and beyond what the standard public investments in education are able to provide.<sup>139</sup>

One promising area for future research is an agenda that moves beyond investigating individual factors such as parental background and children's outcomes, and instead turns to institutional settings to better understand what might be shaping academic performance and cognitive development for school-aged children. As discussed at length above, parental income is highly correlated with investments in children's cognitive and noncognitive skills from birth via out-of-school care, enrichment activities, and other parent-driven investments in human potential. Yet structural factors are also critical for shaping human potential—everything from neighborhood quality to public goods such as schools and libraries.

Take rising residential segregation by income, which has accompanied the rise in economic inequality. Researchers are now investigating how these concurrent trends may be shaping opportunity for the next generation of U.S. workers. Research from Reardon and sociologist Kendra Bischoff at Cornell University—and other work from sociologists Robert Sampson at Harvard and Patrick Sharkey at New York University—shows that high-income families are increasingly likely to live lives that are spatially isolated from low- and middle-class families.<sup>140</sup> Because school attendance and residential patterns are so closely linked in the United States, the rise in residential economic segregation may be a driving force behind the rise in school segregation and achievement gaps by income. Research from economists Mary Burke, at the Federal Reserve Bank of Boston, and Tim Sass, at Georgia State University, suggests that the socioeconomic background of one's peers affects achievement, with particularly important impacts at the classroom level (as opposed to the district, school, or even grade levels).<sup>141</sup>

Other researchers have investigated the role of school finance in the context of increasingly segregated economic geography. Economist Julian Lafortune at the University of California, Berkeley and his co-authors find that increases in public funding per student for students in low-income districts has roughly double the impact of a similarly resourced reduction in class size, and they argue that school funding reforms may be an important policy tool for mitigating inequalities in order to boost opportunity.<sup>142</sup>

These two strands of research—one investigating the role of peer effects, and the other investigating the role of financial resources on the income-driven test score gap—both hold a great deal of promise for better understanding the mechanisms that are holding back the U.S. education system from fulfilling its promise as Horace Mann’s Great Equalizer. At the same time, education gaps cannot explain the entirety of the relationship between income inequality and long-term economic mobility outcomes. For instance, research from UC Berkeley’s Jesse Rothstein focuses specifically on areas where the test score gap between high- and low-income families is relatively small.<sup>143</sup> If education is a key driving force for intergenerational mobility, then one would expect to see the children from low-income families in those communities with low gaps in test scores to grow up to have substantially better long-term mobility outcomes, compared to those children from areas characterized by high levels of test score gaps by income. Rothstein finds that this is not the case. He finds that the mobility outcomes for children from low- and high-income families are not appreciably different, regardless of whether a child grew up in a low or high test score gap area. This research suggests that factors beyond educational equity are critical to explaining the relationship between childhood inequalities and adult outcomes. Rothstein points to the local labor market and how it rewards education, as well as marriage patterns, as key drivers. We return to some of these themes in the following section.

## College and beyond

Access to college and the attainment of a college degree have taken on heightened salience in the wake of decades of research quantifying the college wage premium and unraveling its role in rising economic inequality.<sup>144</sup> College entry, persistence, and graduation rates are all strongly predicted by family income. University of Michigan economists Martha Bailey and Susan Dynarski track inequality in post-secondary educational outcomes over the past 70 years and find that the income-based gaps in attainment are growing.<sup>145</sup> They compare college completion rates

for children born in the 1980s to children born in the 1960s and find that while rates of college graduation grew by just 4 percentage points over the decades for children from low-income families, the rates of college graduation grew by 18 percentage points for children from high-income families.<sup>146</sup>

A growing body of research highlights the ways that economic inequality may be hampering college entry, persistence, and completion. The accumulation of inequalities in attainment mean that students from low-income families are less likely to be college-ready than their more advantaged peers by the time they complete high school.<sup>147</sup> Rising tuition costs have made college unaffordable for many.<sup>148</sup> Even high-achieving students from disadvantaged and middle-income backgrounds face substantial financial burdens to higher education because paying for college often necessitates balancing work and school.<sup>149</sup> The resulting college experience for young adults from advantaged families often bears little resemblance to the experience of those from disadvantaged families. Those economic pressures drag down the likelihood of college persistence and the probability of college graduation for promising young adults from low- and moderate-income families.

Despite growing income-based inequalities, higher education continues to play an important role in generating human capital for the U.S. economy as a whole and is a potentially powerful force mitigating the intergenerational transmission of economic status. Research from Harvard's Chetty and his colleagues shows that colleges vary dramatically in their role as equalizers, with some colleges performing far better than others at breaking the link between family background and children's long-term economic outcomes.<sup>150</sup> They find that while elite "Ivy Plus" schools are the most successful colleges at promoting intergenerational mobility among their low-income students—60 percent of students from families in the bottom income quintile reach the top income quintile as adults—even though children from the top 1 percent are 77 percent more likely than children from the bottom quintile to attend these schools. Students from the top 1 percent of the income distribution account for more of the share of the student bodies at Ivy Plus schools (14.5 percent), compared to those from the entire bottom half of the income distribution, who represent 13.5 percent of the student body. Because so few low- to moderate-income students attend these elite schools, they play a far less important role in facilitating upward economic mobility than do the most successful but less-selective public universities such as the City University of New York and the State University of New York-Stony Brook.<sup>151</sup>

But it's not just differences in college preparedness between higher- and lower-income students that account for differences in attendance at elite colleges. Richard Reeves at The Brookings Institution argues it is not simply because children from high-income families are more likely to have been given education and training that set them up for the best chances of admission to an elite college. Their advantages also stem from the persistence of athletic recruitment and legacy preferences in admissions decisions by elite colleges. This is just one example of the deliberate gatekeeping on the part of elites that Reeves highlights in his work.<sup>152</sup> Another policy that represents "opportunity hoarding" by those at the top of the economic distribution is local zoning laws that keep lower-income families out of the best public school districts, which is related to the growth in residential income segregation discussed above and takes on added salience in the face of the legacy of racial segregation and its persistence today.<sup>153</sup> Reeves' work points to explanations for the stickiness of economic positions and outcomes at the top of the economic distribution that are not simply due to differences in resources allowing higher-income parents to better cultivate their children's human capital, but also to deliberate policy choices that erect barriers to opportunity. This perspective is especially important to keep in mind when considering explanations for intergenerational mobility that emphasize the importance of acquiring human capital, as it challenges the underlying assumption that access to opportunities to develop human capital are truly equal or reflect unintentional realities.

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### Conclusion to "how does economic inequality limit the development of human potential?"

An inclusive society is one that effectively cultivates the potential of every child from birth through adulthood, affording all the ability to surmount family background and climb the ladder of opportunity. Decades of economic inequality in the United States means that the country is dramatically underperforming in this realm. Inequalities begin at birth and accumulate over the course of a lifetime in ways that result in children born into privilege amassing additional privilege, while children born into modest circumstances repeatedly have their ability to flourish chipped away. While the research reviewed in this section of our report focuses on health, parental investments of time and money, and education as central channels for understanding the accumulation of disadvantage over time, myriad other forces overlap with these key channels.

Decades of sociological research, for example, demonstrates that social networks play a key role in fostering human potential and creating economic opportunity. The role of social capital may be just as important as human capital in fostering the development of human potential for the purposes of creating upward mobility across generations.<sup>154</sup> Recent work from economist Steven Durlauf at the University of Chicago's Harris School of Public Policy and others suggests that economic inequality has been accompanied by (and perhaps caused by) isolated social networks that may be further undermining our nation's ability to invest in the human potential of those at the bottom of the economic ladder and artificially promoting those born into privilege ever-higher on the ladder.<sup>155</sup> Future work seeking to better understand how inequalities in the development of human potential would do well to focus on such lines of inquiry, in addition to honing our understanding of the mechanisms through which inequalities hamper opportunity through the channels discussed at length above.

# How does economic inequality limit the deployment of human potential?

The equitable cultivation of human potential, regardless of family background, is a necessary component of an inclusive economy that fully promotes economic opportunity for all. Yet the development of human potential is insufficient on its own if individuals are not able to fully deploy their talents. In economic terms, the raw material of human capital must be efficiently and effectively matched to opportunities in the labor market to maximize both individual economic well-being and macroeconomic growth. In the United States, multiple factors continue to hold back too many people from deploying their full potential over the course of a lifetime, meaning that the promise of equality of opportunity sputters out and mobility stalls.

In this section of the report, we provide an overview of three key roadblocks that are holding back opportunity in the United States. First, over the past three decades, structural changes to the U.S. labor market have thrown sand in the gears of the efficient deployment of human potential. Second, persistent sexual, racial, and ethnic discrimination continues to prevent a large swath of the U.S. labor force from being equitably rewarded for its talents. Third, the importance of parental financial resources persists well beyond childhood, not only shaping human potential (as described at length in the section above), but also influencing too many adults from fully deploying their human potential in the labor market and beyond.

Media stories highlighting the challenges faced by today's young adults appear on a near-daily basis, elevating the many ways that millennials are struggling to meet traditional markers of adulthood.<sup>156</sup> For instance, marriage rates and home ownership rates among 25- to 34-year-olds today lag behind those of the previous generation.<sup>157</sup> These are visible symptoms of the decline in intergenerational mobility, driven by the lack of financial resources among today's young adults to achieve those milestones in the same timeframe as their parents did a generation before.<sup>158</sup> These disadvantages accumulate over time and across generations. Just as inequalities in the development of human potential shape adult outcomes, so too do inequalities in the deployment of human potential. As today's young adults

contemplate parenthood, their delayed accumulation of those financial resources have implications for their own children's development of human potential. The result is a vicious cycle, where inequalities perpetuate inequalities, and the opportunity for upward mobility slows to a crawl.

It is worth re-elevating that any study of intergenerational mobility is inherently a backward-looking exercise. By definition, in order to compare adult outcomes, one must wait until children reach adulthood to have a comparison to make. Any analysis of intergenerational mobility, whether causal or descriptive, traces circumstances over the past generation. As a result, drawing predictive conclusions from analyses of mobility is always a somewhat-speculative exercise. This is the case for the lines of inquiry involving the development of human capital (as discussed in the previous section of this report), but it is even more true for lines of inquiry involving the deployment of human capital, as examined in this section below. Because a great deal of human capital development happens over the course of childhood, many of the related outcomes can be seen in early adulthood. But understanding the ways that the barriers to the full deployment of human potential impact mobility over the course of a lifetime requires longer-term time horizons, tracing individuals from early childhood all the way through to later in their careers.

A preponderance of evidence suggests that the investigation of whether and how the channels explored below are influencing opportunity is critical in the here and now—not just for the current generation of young adults but also for generations to come. The evidence for how economic inequality is shaping the development of human potential is strong and provides the main bulk of the motivation for policymakers seeking to address the challenge of declining intergenerational mobility in the United States.<sup>159</sup> The evidence for how inequality is shaping the deployment of human potential remains less well-understood, yet no less important for those who wish to reclaim the promise of the American Dream.

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## Changing structure of the labor market

The vast majority of American families depend on earnings from jobs as their primary source of economic support, which means the labor market is the main arena for upward intergenerational mobility.<sup>160</sup> Yet upstaging one's parents is all the more difficult in a labor market characterized by decades of stagnant wages for the middle class.<sup>161</sup> Young adults who replicate their parents' educational and occupational backgrounds and end up in the same type of work and in the same



relative place in the economic distribution earn less in inflation-adjusted terms than their parents did a generation ago.<sup>162</sup> Research from University of Minnesota economist Fatih Guvenen and his co-authors suggests that the median lifetime labor income of men who entered the labor market in 1967 declined by between 10 percent and 19 percent, and they identify the early career period as an especially critical point of departure because young workers' earnings are increasingly lower than their parents' generation's were.<sup>163</sup> It is beyond the scope of this paper to assess relative weight of the myriad causal factors that have contributed to wage stagnation—from the consequences of globalization and automation to policy responses (or lack thereof), as well as the rise of the service and retail sectors and the decline of American manufacturing.<sup>164</sup> Instead, we focus on two key trends, both of which have a theoretical connection and emerging empirical evidence connecting today's inequalities to tomorrow's opportunities: the fissuring of the workplace and the breakdown of traditional job ladders.

## Fissuring

When the baby boomers entered the labor market beginning in the 1960s, relationships between employers and employees looked very different from those that characterize the labor market today. Six decades ago, regardless of one's place in the earnings distribution, an employee typically enjoyed a direct relationship with their employer, including wages and benefits such as a pension and health insurance.<sup>165</sup> By the 1980s, this employee-employer relationship had fundamentally shifted, such that an increasing share of employees no longer have a straightforward relationship with their employer.<sup>166</sup> This fissuring of the workplace into increasingly complex structures of employment has had major implications for earnings, as well as for economic security in the form of employer-based benefits.

In geology, a fissure in a once-solid rock deepens and spreads. In the same way, businesses also fissure as they shed secondary functions—think The Goldman Sachs Group Inc. outsourcing its janitorial and security services to a contract firm—and those fissures often deepen and spread, as the secondary businesses doing the work often shift some of their activities to yet another company.<sup>167</sup> Research by Brandeis University economist David Weil on the fissuring of the U.S. labor market has opened up new lines of research that seek to better understand how changes to the structure of employment affect earnings and holds a great deal of promise for those seeking to better understand why the labor market today no longer functions as an adequate engine of opportunity. “By shedding



direct employment,” Weil explains, “lead business enterprises select from among multiple providers of those activities and services formerly done inside the organization, thereby substantially reducing costs and dispatching the many responsibilities connected to being the employer of record.”<sup>168</sup>

A growing body of evidence suggests that fissuring depresses wages. Companies once shared profits with their internal workforce, including both low- and high-wage workers within the same firm. Fissuring has allowed “primary” employers to outsource their lower-wage work to temp agencies, subcontractors, and other “secondary” forms of employment, which has led to “growing inequality in how the value created in the economy is distributed,” says Weil.<sup>169</sup> Platform and “gig” work—such as Uber, AirBnB, and other modern forms of piece-work—are extreme versions of fissuring, where the relationship between the worker and the employer is so attenuated that even the courts remain divided as to the nature of the legal employee-employer relationship.<sup>170</sup>

A wealth of recent research indicates that much of the earnings inequality in today’s U.S. labor market occurs between, rather than within, firms. Social Security Administration researcher Jae Song and his co-authors find that virtually all of the growth in earnings inequality between 1978 and 2012 can be explained by the growth in the dispersion of average wages paid by employers in different firms. Pay differences within a given firm remain virtually unchanged.<sup>171</sup> Other work by UC Berkeley economist David Card and his co-authors provides additional empirical evidence for the role of firm-specific effects on earnings inequality, suggesting that firm pay-setting accounts for about 20 percent of the overall variation in wages in today’s labor market.<sup>172</sup>

The evidence on between-firm inequality is fully consistent with an increasingly fissured labor market, where some firms pay high wages and others pay low wages. It is also fully consistent with a labor market that sorts “types” of employees across firms, resulting in lower-skill workers becoming concentrated in certain firms while higher-skill workers are concentrated in others. Research by economists Arindrajit Dube at the University of Massachusetts Amherst and Ethan Kaplan at the University of Maryland, College Park assesses the wages of security guards and janitorial staff, two occupations at the heart of the domestic outsourcing trend over the past several decades. They find that fissuring led to a wage penalty of 4 percent to 7 percent for janitors and 8 percent to 24 percent for security guards.<sup>173</sup>

Sorting workers across firms means that lower-skilled employees are less likely to enjoy the rewards from growth than were their peers a generation ago, when firms were far more heterogeneous and workers up and down the ladder benefited. While cultivating human capital and encouraging more workers to obtain higher skills levels is an attractive solution to the problem, it remains an incomplete answer. Weil explains:

*Fissured employment changes the boundaries of firms—whether through subcontracting, third-party management, or franchising. By shifting work from the lead company outward ... the company transforms wage-setting into a price-setting problem. ... [T]his pushes wages down for workers in the businesses now providing services to the lead firm, while lowering the lead businesses' direct costs. Fissuring results in redistribution away from workers and towards investors.*<sup>174</sup>

The jobs performed by lower-skilled workers remain fundamental to the production process. Structural changes to the labor market that disadvantage those jobs pose a challenge to anyone who sees employment as the main engine of economic mobility.

One of the best real-world examples of the consequences of fissuring and its implications for mobility comes from an article in *The New York Times* in September 2017 profiling two janitors. One cleans the offices at the headquarters of Apple Inc. in Cupertino, California today.<sup>175</sup> The other cleaned the offices of Eastman Kodak's headquarters in Rochester, New York in the early 1980s. Both Apple and Eastman Kodak are the corporate behemoths of their times—innovative, highly profitable, and generally recognized as all-around superstar firms. Yet the experiences of the two janitors is strikingly different, despite their near-identical humble beginnings.

Both janitors began at their respective firms earning about the same amount in inflation-adjusted terms. But the similarities in their experiences end there. The Eastman Kodak janitor is a full-time employee of the firm and enjoys benefits such as paid vacation, tuition reimbursements, and annual bonuses. When the facility she cleans shuts down, the company finds another job for her in a new department, and she eventually moves up the internal career ladder to a professional-track job in information technology. By the end of her career with Eastman Kodak, she is the chief of information technology for the company. She eventually leaves Eastman Kodak to go on to a future career in the C-Suite at a host of other firms. In stark contrast, the Apple janitor is an employee of a contractor that Apple uses to provide cleaning services. She receives no benefits, no educational sup-

ports, no on-the-job training, and no bonuses. The prospect of another job with Apple is nonexistent because she does not actually work for the company.

Working as a janitor in the 1980s was a plausible start to a career characterized by upward mobility, one that allowed an individual to fully deploy their human capital and climb up the economic ladder within one firm. In contrast, working as a janitor in today's economy—even in the most successful company in the world—is a dead-end job.<sup>176</sup> This example shows how changes in the labor market mean that an equally human-capitalized worker today faces far more daunting odds in climbing the income distribution and experiencing economic mobility.

### Broken job ladders

As the example of the two janitors in *The New York Times* story illustrates, the relationship between the structure of the U.S. labor market and the presence of upward career ladders is a critical one. More generally, trends in labor mobility over the past 30 years have potential implications for economic mobility. A fluid labor market is a key engine of opportunity for upward mobility because it enables workers to change jobs for higher pay, better benefits and work-life balance, and more opportunity for advancement.<sup>177</sup> In other words, fluid labor markets are what allow for the effective deployment of human potential.

The decline in an array of indicators of labor mobility has been well-documented: Job-to-job transitions, new firm creation, the labor force participation rate, and geographic mobility have all decreased over the past several decades. This reduced labor market fluidity is cause for concern about the health of the U.S. economy and for mobility prospects. For instance, economists Steven Davis at the University of Chicago Booth School of Business and John Haltiwanger at the University of Maryland, College Park suggest that reduced labor mobility leads to lower wages and lower employment rates, drawing on early work from Davis' colleague at the University of Chicago, economist Robert Shimer, whose research focused more explicitly on the role of young workers and concluded that the “engine of opportunity” may be stalling out.<sup>178</sup> Federal Reserve Board economist Ryan Decker and his co-authors find that the share of U.S. employment accounted for by young firms has declined by nearly 30 percent over the past 30 years, and that high-growth young firms are also increasingly rare, suggesting that the incentives for entrepreneurship and innovation may have declined.<sup>179</sup>

What's more, overall labor force participation rates for prime-age workers have stalled since the early 1990s, with men's labor force participation starting to decline as early as the late 1960s.<sup>180</sup> Federal Reserve Board economist Raven Molloy and her co-authors document the decline in geographic mobility over the same period, finding that interstate migration has steadily decreased since the 1980s and linking this decline in geographic mobility to a decline in labor market transitions.<sup>181</sup> Taken together, Molloy points out, "less fluidity in the labor market leads to fewer opportunities for workers to renegotiate their current employment arrangements using outside options for leverage."<sup>182</sup>

Looking at the most recent economic downturn, labor economists have asked whether the nature of the Great Recession of 2007–2009 was such that the U.S. labor market may be operating in fundamentally different ways than in the past. Their research suggests this may be the case, with important implications for economic mobility going forward. For instance, Haltiwanger and his co-authors find that the job ladder from low- to high-wage firms virtually disappears during recessions, with particularly stark effects on the ability of low-income workers to move up the earnings ladder to better jobs. Even workers who make the transition to new work in the midst of a recession do not see the positive wage increases of that job-to-job transition that typically exist outside of a recession. Haltiwanger and his co-authors calculate that the decline in job-to-job transitions during the Great Recession lead to a 40 percent decline in earnings.<sup>183</sup> While job-to-job transitions have recovered to some extent, economists Giuseppe Moscarini at Yale University and Fabien Postel-Vinay at University College London find that they remain below the levels before the Great Recession.<sup>184</sup>

Research from University of Toronto economist Philip Oreopoulos and his co-authors investigate the consequences of recession on young adults' employment outcomes, noting that past work suggests that entering the labor market during a recession has lifetime "scarring" impacts on an individual's career trajectory, even for highly educated young workers. Oreopoulos and his co-authors find that the long-term consequences of beginning work in the midst of a recession has deep and persistent effects for those at the bottom of the wage ladder, including recent college graduates, because recessions lead workers to start their careers at less attractive firms.<sup>185</sup> Their analysis suggest that the inequalities in earnings trajectories created by recessions endure for a lifetime, which has particularly chilling implications for the mobility prospects of millennials who entered the workforce during the most severe economic downturn since the Great Depression.

Other research by Haltiwanger's team finds that some of these shifts in job-to-job transitions may be structural, rather than secular, meaning these changes may reflect fundamental shifts to the way the labor market works rather than the temporary impact of shocks from an economic downturn. Haltiwanger's research shows that when individual workers move up the job ladder from lower- to higher-paying jobs, they also are moving from lower- to higher-productivity firms.<sup>186</sup> This move from lower- to higher-productivity firms may be one of the main forces driving workers' upward wage trajectories when they change jobs. This research suggests that job-to-job moves disproportionately reallocate younger and less-educated workers up the job ladder, implying that career transitions are particularly important for upward mobility. As Haltiwanger and his co-authors note, their findings underscore the role job-to-job moves play in matching workers to higher-productivity and better-paying employers.<sup>187</sup> Yet the probability that a worker moves from low- to a high-productivity firm has slowed over the past several decades.<sup>188</sup> This finding is consistent with Weil's fissured workplace theory and may reflect that workers are increasingly segregated across types of firms.

Weaker job-to-job mobility implies that the labor market ladders to opportunity are flimsier than they were in the past because upward mobility over the course of one's career becomes less and less feasible. This also means that one's starting place in the labor market is more important for lifetime earnings today, compared to in the past. Research from economist Guvenen at the University of Minnesota and his co-authors suggests that the bulk of earnings growth happens during the first decade of one's career, and that only the highest-paid workers see continued earnings growth in later decades. Indeed, the lowest-paid workers are more likely to see a decline in total wage income in the latter decades of their careers, likely because they tend to work in high-stress physical jobs that are difficult to maintain at older ages.<sup>189</sup>

Indeed, Fed economist Molloy and her co-authors find that initial conditions have become more important for lifetime wage trajectories and point to the decline in labor mobility as a key culprit. "If workers have limited mobility across firms, then wages are set at the start of a new worker-firm relationship, and wages should reflect labor market conditions at the time a worker was hired," they write. "By contrast, if workers have perfect mobility across firms, then the contract is reset ... to the best labor market conditions since the worker was hired."<sup>190</sup> In other words, the decline in job-to-job mobility undercuts worker bargaining power and, in turn, may be eroding the opportunity to advance in the labor market.

Both these structural and secular trends are fundamentally important to understanding how human potential is deployed in the labor market, and further research that disentangles the deployment story from the human capital story is a critical element of any research agenda focused on clarifying the breakdown of intergenerational mobility in the United States. For example, recent research by UC Berkeley's Rothstein digs into the widely cited work of Harvard's Chetty and his team on relative intergenerational mobility to better understand the role that school quality (a key channel for the development of human capital) plays, relative to other factors in shaping economic mobility across generations. Chetty's work identifies high levels of variation in economic mobility across geographic areas (commuting zones, which are roughly analogous to the economic geography of labor markets). Rothstein's analysis finds that human capital factors reflecting school quality across commuting zones, such as test scores and educational attainment, account for only 11 percent of the difference in economic mobility outcomes for the different geographic areas. His conclusion: "Much of this variation [in economic mobility] appears to reflect differences in adult earnings of children *with similar skills*, perhaps due to labor market institutions ... or differences in access to good jobs."<sup>191</sup> In short, human capital is not the only determinant of mobility across generations—the deployment of human potential matters as well.

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## Persistent discrimination

At the same time that the structure of the U.S. labor market has fundamentally shifted, the country has seen important shifts in the treatment of minorities and women. On the one hand, the years since the civil rights movement of the 1960s have been a period of substantial progress, and myriad studies point to the enduring importance of anti-discriminatory policy in reshaping opportunity for minorities.<sup>192</sup> On the other hand, discrimination persists in ways that continue to fundamentally undermine the ability of racial minorities and women to fully deploy their human potential in the U.S. economy. The persistence of discrimination is a fact that belongs front and center in the minds of both researchers and policymakers seeking to address stalled intergenerational economic mobility in the United States. Race and gender are fundamentally intertwined with economic status in ways that hinder the full deployment of human potential in critically important ways.

Economists William Darity Jr. at Duke University and Patrick Mason at Florida State University provide a summary of the way that economists have parsed the relative role of the development of human potential versus roadblocks to the

deployment of human potential in the form of discrimination. They write:

*The position typically taken by economists is that some part of the racial or gender gap in earnings or occupation is due to average group differences in productivity-linked characteristics (a human capital gap) and some part is due to average group differences in treatment (a discrimination gap). The more of the gap that can be explained by human capital differences, the easier it becomes to assert that labor markets function in a nondiscriminatory manner; any remaining racial or gender inequality in employment outcomes must be due to differences between blacks and whites or between men and women that arose outside of the labor market.*<sup>193</sup>

Building on that work, more recent research from Darity, as well as a long line of research in sociology, suggests that the interplay between human capital acquisition and labor market discrimination may be less straightforward than traditional economic decomposition implies. The reason: Early experiences with discrimination can, in turn, shape human capital acquisition, which, in turn, interacts with later labor market discrimination to have multiplicative impacts on long-term economic outcomes, including mobility.<sup>194</sup>

A growing research literature documents the persistence of racial discrimination, with some of the most compelling work coming from audit studies that match individuals on all characteristics except for the one being tested for discrimination. Research from University of Chicago's Booth School of Business economist Marianne Bertrand and Harvard University's Sendhil Mullainathan finds that assigning "white-" or "black-sounding" names—say, Emily or Greg, compared to Lakisha or Jamal—to identical resumes resulted in statistically significant differences in which resume submissions were selected by employers for a call back. Fifty percent of the difference in callback rates between the "white" and "black" resumes can be explained solely by the difference in the name, a finding that holds across occupations, industries, and firm sizes.<sup>195</sup> Using a similar methodology, Harvard University sociologist Devah Pager and her co-authors find that black job applicants were half as likely as equally qualified white job applicants to receive a call back or a job offer, and that black and Latino applicants with no criminal record fared no better than a white applicant who had just been released from prison.<sup>196</sup> Taken together, this scholarship suggests a preponderance of evidence pointing toward persistent racial discrimination that fundamentally undermines racial minorities' ability to get ahead in the labor market, regardless of their potential.



The persistence of gender discrimination also plays a key role in undermining economic mobility, although the dynamics of women's labor force participation mean that using the past to understand potential future trends is especially thorny. Women's labor market participation has increased dramatically over the past generation, as have their earnings.<sup>197</sup> While young women today make significantly more than their mothers did, on average, they still are underpaid relatively to their similarly situated male peers. The gender pay gap in the United States stands at about 80.5 percent (comparing average wages of full-time, year-round female workers to those of full-time, year-round male workers), and the average female worker loses more than \$400,000 in lifetime earnings relatively to a similarly situated male worker.<sup>198</sup> Research from economists Francine Blau and Lawrence Kahn at Cornell University's School of Industrial and Labor Relations decomposes the gender wage gap into component parts in an effort to partial out the portion of the gap due to human capital differences, institutional factors, and "unexplained" factors such as discrimination. They find that 38 percent of the gender wage gap remains unexplained and thus attributable to persistent discrimination against women in the labor market.<sup>199</sup> Women have out-performed their male peers in educational attainment over the past three decades, yet equally well-educated men and women continue to see differential opportunities for maximizing their potential.<sup>200</sup>

While discrimination by gender plays an important role in holding back women from achieving their full potential in the labor market, other structural factors play a pivotal role as well. Blau and Kahn's research highlights the importance of "family friendly" workplace policies for women's participation in the labor market and for their earnings, including childcare, flexible-hours policies, and access to paid family and medical leave. Their work shows that women's labor force participation rates fell from sixth among OECD nations in 1990 to 17th out of 22 OECD nations in 2010, and they find that more than a quarter (28 percent to 29 percent) of that decline is attributable to the absence of family friendly policies in the United States, compared to our global competitors.<sup>201</sup> Research along these lines points to the importance of considering factors beyond "pure" discrimination that shape women's work and earnings over time, especially in light of the growing importance of women's incomes for family economic security. As wages have stagnated over the past several decades, the families that have experienced real, inflation-adjusted income growth are those that are married couples in which the wife works.<sup>202</sup> Shortchanging women in the labor market means shortchanging families, and, in turn, may have important implications for economic mobility across generations going forward.



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## Household balance sheets and intergenerational mobility

Parental resources are key to the development of human potential, but their value extends beyond the cultivation of human capital. Family finances matter immensely for a worker's ability to make good on their investments in their own human capital, which is why the dramatic inequalities that characterize household balance sheets today also have important implications for intergenerational economic mobility. Assets and debt—both one's own and one's family's—have consequences for how young adults are able to deploy their skills in the labor market. We focus on two particularly compelling lines of research illustrating the way that household balance sheets impact young adults' ability to fully deploy their potential. First, we highlight a growing body of research detailing how household balance sheets affect the ways that young adults are able to fully deploy their investments in higher education. Second, and relatedly, we examine the research showing how parental household balance sheets can provide economic security in ways that have longstanding impacts on adult children's economic outcomes and, in turn, on intergenerational economic mobility.

### Putting human capital to work among young adults

Parental resources matter a great deal for the acquisition of human capital, including access to and completion of a postsecondary degree, especially a college degree. As detailed earlier, the roughly parallel trends in the rise in economic inequality and the rise in the return to education mean that a college credential (or other postsecondary degree) is arguably more important now than ever for upward mobility. Intergenerational inequalities in household balance sheets, including assets and debt, may have consequences that reverberate beyond the development of human potential, or the attendance and completion of postsecondary education in this case. Access to wealth can also shape how an individual is able to get the most out of a college education and make use of that investment in education. Family wealth may provide an insurance function, allowing those with greater access to the cushion of family assets (and the absence of debt) to take risks that ultimately pay off with greater rewards. Wealth inequalities among families also may play an increasingly important role in the absence of a universally accessible public safety net.<sup>203</sup> We look at the impact of wealth on these different ways people deploy their human potential in this section of the report.

Parental financial investments may lead a college student to satisfice—meet only the basic adequacy criteria, rather than truly work to excel—because students with more financial support have less to lose if they fail. To a certain extent, this hypothesis bears out in recent research. For instance, research from sociologist Laura Hamilton at the University of California, Merced and others finds that parental aid decreases students’ grade point averages, but it increases the odds of graduation, net of explanatory variables and accounting for alternative funding sources. Hamilton suggests that students receiving parental aid “meet the criteria for adequacy on multiple fronts, rather than optimizing their chances for a particular outcome.”<sup>204</sup>

In contrast, students without parental support and from middle- and lower-income backgrounds typically balance employment and coursework, and many face daunting student loan debt after graduation, both of which may limit their employment options following graduation.<sup>205</sup> This means that wealthier students may be more able to focus on a balanced mix of coursework, social activities, and other extracurriculars, all of which may add up to stronger social networks and thus greater employment prospects, while those without parental support face substantially greater pressure to narrow their focus and thus may have a less-diversified, riskier human capital portfolio upon graduation.<sup>206</sup>

Parental financial support may benefit a young adult’s life course well beyond his or her education, serving as a cushion in an increasingly volatile labor market. The period between adolescence and adulthood is now characterized by demographers as a distinct life stage, sometimes called “emerging adulthood” or “extended adolescence.” Research from economist Sheldon Danziger at the Russell Sage Foundation and economist Cecilia Rouse at Princeton University illustrates how this new life stage may be the result of structural changes to the economy, which mean that the transition to adulthood occurs more slowly and in increasingly varied ways, depending on parental resources.<sup>207</sup> And ethnographic work by Bucknell University’s Jennifer Silva illustrates vividly how young adults are struggling to establish themselves in the current economic context and suggests that scholars ought to be paying careful attention to the ways that inequalities in family resources are shaping young adults’ ability to deploy their human potential.<sup>208</sup>

One key channel through which parental wealth may shape the deployment of human potential is through its role as an insurance function. Sociologist Fabian Pfeffer at the University of Michigan and economist Martin Hällsten at Stockholm University generate a model of the insurance function of parental wealth that highlights two key benefits from that wealth. First, parental wealth

provides a purchasing function for investing in their children through financial assistance in the purchase of a home in a “good” neighborhood with good schools, the financing of education, and other financial assistance. This is the “development of human potential” argument from the section above. Second—and critical to the argument here about the deployment of that potential—is the insurance function that wealth may play in transmitting advantage to the next generation. They explain: “[C]hildren who are able to fall back on their parents’ wealth when, for example, they drop out of college, or experience prolonged school-to-work transition period, or have early episodes of unemployment, are more likely to opt for long-term human capital investments, such as college attendance, or choose particularly competitive or protracted career paths that they may be able to sustain even in the face of early set-backs.”<sup>209</sup> These findings show that wealth may shape the behavioral choices of the next generation, thereby shaping opportunity by providing some with a soft cushion for a slip down the economic ladder and others with no cushion at all.

Recent research demonstrates some of the ways that the structure of debts and assets may be affecting opportunity by shaping risk preferences. In an analysis of different student loan repayment options, University of Maryland economist Katherine Abraham and her co-authors find that students with only an income-based repayment option (as opposed to a choice between income-based repayment or a standard fixed-repayment schedule) sought out riskier but higher-paying jobs and raised their net incomes over time. “Emotions such as regret over a choice that turns out to be suboptimal ex post and relief at being unburdened from having to make a choice that could turn out badly play significant roles in borrowers’ career choices,” they conclude.<sup>210</sup> They find that once young college graduates knew that the relationship between their career choice and their debt obligations would vary together, they were able to make “better” career choices and ultimately had better economic outcomes. Other research into the relationship between how college is financed (with debt or not) and career choices of graduates by economist Stephanie Chapman at Cornerstone Research found that “graduates with large amounts of loans seek out jobs that have greater financial compensation, whereas graduates with a higher amount of scholarships seek out jobs that have lower financial compensation but (presumably) greater non-pecuniary benefits.”<sup>211</sup> It is worth exploring further whether parental wealth plays a similar role in young adults’ postgraduate career choices to see whether the insurance function of parental wealth translates into a similar decoupling.

Parental wealth provides an insurance function in other important ways as well, including the option to move back home if career choices don't work out. University of Chicago economist Greg Kaplan finds that the ability to live with one's parents allows young people to search longer for jobs that have better prospects for future earnings growth. Efficient matching of skills to jobs is key not only for individual economic outcomes but also for broader economic growth via the productivity increases that result from high-quality job matches.<sup>212</sup> To the extent that household balance sheets are influencing match quality in the labor market, inequalities in both wealth and debt are an important area for future investigation for those concerned with intergenerational economic mobility.

More work is needed to understand how wealth transfers made both during a person's life, as well as after their parents pass away, shape the way they are able to make the most of their human capital investments in the labor market and elsewhere. Much of the best research on the link between inequalities in household balance sheets today and opportunity for the next generation is based on relatively old data.<sup>213</sup> And limits to the availability of linked, high-quality administrative data on both parents (and, ideally, their parents) and their children means that the necessarily lengthy time periods required for an analysis of intergenerational mobility make this work all the more challenging. Nonetheless, this kind of research is of paramount importance for understanding the barriers to mobility that today's inequality may be creating.

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### Conclusion to "how does economic inequality limit the deployment of human potential?"

Much of the existing focus on economic mobility in both the research and policy communities is on equalizing human capital attainment early in life, a perspective that fails to incorporate a growing body of evidence from across the social sciences, suggesting that this approach may be a necessary but not sufficient step toward reinvigorating the promise of opportunity in the United States. Even in the face of equally well-developed human potential, massive economic inequalities persist for these children as young adults when they seek to make the most of their potential in the economy. The section above provides an overview of some of the myriad roadblocks that exist in the U.S. economy and society today that seriously inhibit upward mobility for many—if, indeed, not most—workers. The structure of the U.S. labor market has changed in ways that fundamentally disempower workers, advantaging some and disadvantaging others, and thwarts upward

mobility. Discrimination, particularly racial discrimination, persists in ways that run afoul of basic principles of equity. And inequalities in household balance sheets are shaping behavior and risk preferences that may allow those advantaged by being born into wealth to accumulate additional advantages over a lifetime while those who enter the labor market further down the economic ladder face limited pathways upward. None of these dynamics are inherently natural. Many have the potential to be fundamentally reshaped by policy.

## Conclusion

Climbing the ladder of economic opportunity in the United States is markedly more challenging than in other advanced economies, despite the widespread belief in America's exceptional potential for upward mobility. While relative mobility hasn't dramatically worsened in recent decades, a combination of stagnant relative mobility and declining absolute mobility mean that economic opportunity looks dramatically different for today's young adults than it did for those of prior generations.

While a comprehensive explanation of all of the relevant descriptive trends and concurrent explanations of all the possible drivers of economic mobility is beyond the scope of any one paper, our hope is that this report organizes the existing literature in a way that is mappable to meaningful life stages and highlights where more study and inquiry are required. We also believe our report will pique the interest of policymakers looking to research as a guide for how best to rehabilitate the American Dream.

More specifically, in the “development of human potential” section, we offer an overview of the extensive literature exploring how early childhood conditions prime children for the accumulation of a diverse set of skills that will set them up for success in the U.S. labor market. In particular, we highlight the role of health, parental resources of both time and money, and education. Our intent is to elevate how inequalities baked into these channels choke off the possibility of equality of opportunity because the focus on human capital development is, by its nature, one that focuses attention on individuals. This individual focus sometimes means a narrow view of individual children and the actions—or lack thereof—of their individual parent (and, too often, solely of their mother). Too often, by highlighting the importance of how many words a child hears early in life, for example, readers are left with a takeaway that robust human capital development is a matter of individual choices and responsibility. This understanding ignores the realities of how inequality is inherently baked into the ability of parents to help their children acquire human capital and chokes off the possibility of equality of opportunity.

In the “deployment of human potential” section, we turn our focus to a life stage less often explored in the literature on the drivers of economic mobility—adulthood, especially early adulthood—and also to areas of potential policy relevance such as the U.S. labor market. Both are far less well-examined in the context of intergenerational mobility than is early childhood development. Our hope is this section both encourages more research into areas such as labor market conditions that, for many reasons, have logical implications for economic mobility, and to once again emphasize the role of structural forces beyond the control of individuals. It is here where we see the most potential for a robust future research agenda and for new policy approaches designed to promote economic mobility.

The plethora of channels via which parents’ advantages can turn into their childrens’ leg-up on economic opportunity can make it daunting for policymakers contemplating how to ensure that today’s inequalities do not foreclose tomorrow’s opportunities. From another angle, however, the diversity of pathways also represents a variety of ways for policymakers to approach and tackle the challenge. There will be no silver bullets or quick fixes, and some policy interventions will be more productive than others. Our hope is that the transmission channels of economic inequality highlighted in this paper point to ways in which family economic well-being can be improved in the short term, while simultaneously improving the chances that a child’s full contribution to the economy can be realized.

## About the author

**Elisabeth Jacobs** is Senior Director for Family Economic Security at the Washington Center for Equitable Growth. She oversees a broad array of work exploring the role of family economic well-being in creating stable, strong, broadly shared economic growth. Her research agenda focuses on economic inequality and mobility, family economic security, poverty, employment, social policy, social insurance, and the politics of inequality. Her writing and commentary have been featured on National Public Radio, and in *The Economist*, *The New York Times*, *The New Republic*, *The Atlantic*, and other major media outlets.

Prior to joining Equitable Growth, she was a Fellow in Governance Studies at The Brookings Institution and a co-founder of Brookings' popular Social Mobility Memos blog. Earlier in her career, she served as Senior Policy Advisor to the Joint Economic Committee of the U. S. Congress and as an advisor to the U.S. Senate Committee on Health, Education, Labor and Pensions. She holds a Ph.D. and an A.M. from Harvard University, where she was a Fellow in the Multidisciplinary Program in Inequality and Social Policy at the Kennedy School of Government, and a B.A. from Yale University, where she served on the Board of Directors of Dwight Hall, the Center for Public Service and Social Justice.

**Liz Hipple** is Senior Policy Advisor at the Washington Center for Equitable Growth. She leads Equitable Growth's work to explore the relationship and connections between inequality and economic mobility. Her analysis and writing focuses on translating and synthesizing academic research for a policy audience.

Prior to joining Equitable Growth, she was Manager for Government Affairs at the Economic Innovation Group, a research and advocacy organization focusing on geographic inequality. She previously worked at the U.S. Department of the Treasury as a Policy Advisor in the Office of Domestic Finance and as a Special Assistant in the Office of the Chief of Staff. She graduated from Swarthmore College with a degree in political science and public policy.



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# Bibliography

- Abraham, Katharine G., and others. 2018. "Behavioral Effects of Student Loan Repayment Plan Options on Borrowers' Career Decisions: Theory and Experimental Evidence." Working Paper. National Bureau of Economic Research.
- Acemoglu, Daron, and David Autor. 2010. "Skills, Tasks and Technologies: Implications for Employment and Earnings." Working Paper. National Bureau of Economic Research.
- Acemoglu, Daron, and Pascual Restrepo. 2017. "Robots and Jobs: Evidence from US Labor Markets." Working Paper. National Bureau of Economic Research.
- Acemoglu, Daron, and James Robinson. 2012. *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*. New York: Crown Publishers.
- Acevedo, Deepa Das. 2016. "Regulating Employment Relationships in the Sharing Economy." *Employee Rights and Employment Policy Journal* 20 (1).
- Acs, Gregory. 2011. "Downward Mobility from the Middle Class: Waking Up from the American Dream." Washington: Economic Mobility Project, Pew Charitable Trusts.
- Almond, Douglas, and Janet Currie. 2011. "Killing Me Softly: The Fetal Origins Hypothesis." *Journal of Economic Perspectives* 25 (3): 153–72.
- Almond, Douglas, Janet Currie, and Valentina Duque. 2017. "Childhood Circumstances and Adult Outcomes: Act II." Working Paper. National Bureau of Economic Research.
- Almond, Douglas, Hilary W. Hoynes, and Diane Whitmore Schanzenbach. 2011. "Inside the War on Poverty: The Impact of Food Stamps on Birth Outcomes." *The Review of Economics and Statistics* 93 (2): 387–403.
- Almond, Douglas, and Bhashkar Mazumder. 2011. "Health Capital and the Prenatal Environment: The Effect of Ramadan Observance During Pregnancy." *American Economic Journal: Applied Economics* 3 (4): 56–85.
- Ananat, Elizabeth O., and others. 2017. "Linking Job Loss, Inequality, Mental Health, and Education." *Science* 356 (6343): 1127–28.
- Andrews, Dan, and Andrew K. Leigh. 2009. "More Inequality, Less Social Mobility." *Applied Economic Letters* 16 (15): 1489–92.
- Autor, David H., and David Dorn. 2013. "The Growth of Low-Skill Service Jobs and the Polarization of the US Labor Market." *American Economic Review* 103 (5): 1553–97.

- Bailey, Martha, and Susan Dynarski. n.d. "Inequality in Postsecondary Education." In *Whither Opportunity? Rising Inequality, Schools, and Children's Life Chances*. New York: Russell Sage Foundation.
- Bainbridge, Jay, and others. 2005. "Who Gets an Early Education? Family Income and the Enrollment of Three- to Five-Year-Olds from 1968 to 2000." *Social Science Quarterly* 86 (3): 724–45.
- Barker, D.J.P, and others. 1993. "Fetal Nutrition and Cardiovascular Disease in Adult Life." *The Lancet* 341 (8850): 938–41.
- Bastian, Jacob, and Katherine Micheltore. 2018. "The Long-Term Impact of the Earned Income Tax Credit on Children's Education and Employment Outcomes." *Journal of Labor Economics* 36 (14).
- Bertrand, Marianne, and Sendhil Mullainathan. 2004. "Are Emily and Greg More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination." *The American Economic Review* 94 (4): 991–1013.
- Bivens, Josh, and Lawrence Mishel. 2013. "The Pay of Corporate Executives and Financial Professionals as Evidence of Rents in Top 1 Percent Incomes." *Journal of Economic Perspectives* 27 (3): 57–78.
- Bjorklund, Anders, and Markus Jantti. 2009. "Intergenerational Income Mobility and the Role of Family Background." In *The Oxford Handbook of Economic Inequality*. Oxford, England: Oxford University Press.
- Black, Sandra E., and Paul J. Devereux. 2011. "Recent Developments in Intergenerational Mobility." In *Handbook of Labor Economics*, 4B:1487–1541. New York: Elsevier.
- Black, Sandra E., Paul J. Devereux, and Kjell G. Salvanes. 2007. "From the Cradle to the Labor Market? The Effect of Birth Weight on Adult Outcomes." *The Quarterly Journal of Economics* 122 (1): 409–39.
- Blanden, Jo. 2013. "Cross-Country Rankings in Intergenerational Mobility: A Comparison of Approaches from Economics and Sociology." *Journal of Economic Surveys* 27 (1): 38–73.
- Blau, David, and Janet Currie. 2004. "Pre-School, Day Care, and after-School Care: Who's Minding the Kids?" Working Paper. National Bureau of Economic Research.
- Blau, Francine D., and Lawrence M. Kahn. 2005. "Changes in the Labor Supply Behavior of Married Women: 1980-2000." Cambridge, MA: National Bureau of Economic Research.
- . 2013. "Female Labor Supply: Why Is the US Falling Behind?" *The American Economic Review* 103 (3): 251–56.
- . 2016. "The Gender Wage Gap: Extent, Trends, and Explanations." Working Paper. National Bureau of Economic Research.
- Bloome, Deirdre. 2015. "Income Inequality and Intergenerational Income Mobility in the United States." *Social Forces* 93 (3): 1047–80.
- Bluestone, Barry, and Bennett Harrison. 1990. *The Great U-Turn: Corporate Restructuring And The Polarizing Of America*. New York: Basic Books.

- Bosler, Canyon, and Petrosky-Nadeau. 2016. "Job-to-Job Transitions in an Evolving Labor Market." San Francisco: Federal Reserve Bank of San Francisco.
- Boushey, Heather. 2016. *Finding Time: The Economics of Work-Life Conflict*. Cambridge, MA: Harvard University Press.
- Browne, Irene, and Joya Misra. 2003. "The Intersection of Gender and Race in the Labor Market." *Annual Review of Sociology* 29: 487–513.
- Burke, Mary A., and Tim R. Sass. 2013. "Classroom Peer Effects and Student Achievement." *Journal of Labor Economics* 31 (1): 51–82.
- Card, David, and John DiNardo. 2002. "Skill-Biased Technological Change and Rising Wage Inequality: Some Problems and Puzzles." *Journal of Labor Economics* 20 (4): 733–83.
- Card, David, and Alan Krueger. 1994. "Minimum Wage and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania." *American Economic Review* 84 (4): 772–93.
- Card, David, and others. 2018. "Firms and Labor Market Inequality: Evidence and Some Theory." *Journal of Labor Economics* 36 (S1): S13–70.
- Cascio, Elizabeth U. 2009. "Do Investments In Universal Early Education Pay Off? Long-Term Effects of Introducing Kindergartens into Public Schools." Working Paper. National Bureau of Economic Research.
- Cascio, Elizabeth, and Diane Whitmore Schanzenbach. 2013. "The Impacts of Expanding Access to High-Quality Preschool Education." Washington: Brookings Institution.
- Case, Anne, Angela Fertig, and Christina Paxson. 2005. "The Lasting Impact of Childhood Health and Circumstance." *Journal of Health Economics* 24 (2): 365–89.
- Chapman, Stephanie. 2016. "Student Loans and the Labor Market: Evidence from Merit Aid Programs." Washington: Washington Center for Equitable Growth.
- Cherlin, Andrew J. 2014. *Labor's Love Lost: The Rise and Fall of the Working-Class Family in America*. New York: Russell Sage Foundation.
- . 2010. *The Marriage-Go-Round: The State of Marriage and the Family in America Today*. New York: Vintage.
- Cherlin, Andrew J., Elizabeth Talbert, and Suzumi Yasutake. 2014. "Changing Fertility Regimes and the Transition to Adulthood: Evidence from a Recent Cohort." Baltimore, MD: Johns Hopkins University.
- Chetty, Raj, and Nathaniel Hendren. 2018. "The Impacts of Neighborhoods on Intergenerational Mobility II: County-Level Estimates." *The Quarterly Journal of Economics* 133 (3): 1163–1228.
- Chetty, Raj, and others. 2014. "Where Is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States." *The Quarterly Journal of Economics* 129 (4): 1553–1623.
- Chetty, Raj, and others. 2014. "Is the US Still a Land of Opportunity? Recent Trends in Intergenerational Mobility." *The American Economic Review* 104.

- Chetty, Raj, and others. 2017. “The Fading American Dream: Trends in Absolute Income Mobility since 1940.” *Science* 356 (6336): 398–406.
- Chetty, Raj, and others. 2017. “Mobility Report Cards: The Role of Colleges in Intergenerational Mobility.” Cambridge, MA: National Bureau of Economic Research.
- Chetty, Raj, and others. 2018. “Race and Economic Opportunity in the United States: An Intergenerational Perspective.” Working Paper. National Bureau of Economic Research.
- Chiodo, Abigail J., Ruben Hernandez-Murillo, and Michael T. Owyang. 2010. “Nonlinear Effects of School Quality on House Prices.” *Federal Reserve Bank of St. Louis Review* May/June: 185–204.
- Choi, Jung Hyun, and others. 2018 “Millennial Homeownership.” Washington: Urban Institute.
- Clawson, Dan, and Naomi Gerstel. 2014. *Unequal Time: Gender, Class, and Family in Employment Schedules*. New York: Russell Sage Foundation.
- Coleman, James S. 1988. “Social Capital and the Creation of Human Capital.” *American Journal of Sociology* 94 (Supplement: Organizations and Institutions: Sociological and Economic Approaches to the Analysis of Social Structure): S95–120.
- Collier, Michael. n.d. “Middle-Class Families Get Little Help in Paying for Early Care.” EdSource (<https://edsource.org/2015/middle-class-families-get-little-help-in-paying-for-early-care/75477> [August 23, 2018]).
- Congressional Budget Office. 2018. “Factors Affecting the Labor Force Participation of People Ages 25 to 54.” Washington.
- Conley, Dalton. 2001. “Capital for College: Parental Assets and Postsecondary Schooling.” *Sociology of Education* 74 (1): 59–72.
- Conley, Dalton, Kate W. Strully, and Neil G. Bennett. 2003. *The Starting Gate: Birth Weight and Life Chances*. Berkeley, CA: University of California Press.
- Corak, Miles. 2013. “Income Inequality, Equality of Opportunity, and Intergenerational Mobility.” *Journal of Economic Perspectives* 27 (3): 79–102.
- Corak, Miles, Matthew J. Lindquist, and Bhashkar Mazumder. 2014. “A Comparison of Upward and Downward Intergenerational Mobility in Canada, Sweden and the United States.” *Labour Economics* 30: 185–200.
- Cunha, Flavio, and James J. Heckman. 2008. “Formulating, Identifying and Estimating the Technology of Cognitive and Noncognitive Skill Formation.” *Journal of Human Resources* 43 (4): 738–82.
- Currie, Janet. 2009. “Healthy, Wealthy, and Wise: Economic Status, Poor Health in Childhood, and Human Capital Development.” *Journal of Economic Literature* 47 (1): 87–122.
- Currie, Janet, Sandra Decker, and Wanchuan Lin. 2008. “Has Public Health Insurance for Older Children Reduced Disparities in Access to Care and Health Outcomes?” *Journal of Health Economics* 27 (6): 1567–81.
- Currie, Janet, and Jeffrey Grogger. 2002. “Medicaid Expansions and Welfare Contractions: Offsetting Effects on Prenatal Care and Infant Health?” *Journal of Health Economics* 21 (2): 313–35.

- Currie, Janet, and Jonathan Gruber. 1994. "Saving Babies: The Efficacy and Cost of Recent Expansions of Medicaid Eligibility for Pregnant Women." Cambridge, MA: National Bureau of Economic Research.
- Currie, Janet, and Rosemary Hyson. 1999. "Is the Impact of Health Shocks Cushioned by Socioeconomic Status? The Case of Low Birthweight." *American Economic Review* 89 (2): 245–50.
- Currie, Janet, and Wanchuan Lin. 2007. "Chipping Away at Health: More on the Relationship Between Income and Child Health." *Health Affairs* 26 (2): 331–44.
- Dahl, Gordon B., and Lance Lochner. 2012. "The Impact of Family Income on Child Achievement: Evidence from the Earned Income Tax Credit." *American Economic Review* 102 (5): 1927–56.
- Danziger, Sheldon, and Cecilia Elena Rouse. 2008. *The Price of Independence: The Economics of Early Adulthood*. New York: Russell Sage Foundation.
- Darity Jr., William A., and Patrick L. Mason. 1998. "Evidence on Discrimination in Employment: Codes of Color, Codes of Gender." *The Journal of Economic Perspectives* 12 (2): 63–90.
- Darity, Jr., William A., Darrick Hamilton, and James B. Stewart. 2015. "A Tour de Force in Understanding Intergroup Inequality: An Introduction to Stratification Economics." *Review of Black Political Economy* 42 (1–2): 1–6.
- Davis, John B. 2015. "Stratification Economics and Identity Economics." *Cambridge Journal of Economics* 39 (5): 1215–29.
- Davis, Jonathan, and Bhashkar Mazumder. 2018. "Racial and Ethnic Differences in the Geography of Intergenerational Mobility." Scholarly Paper. Social Science Research Network.
- Davis, Steven J., and John Haltiwanger. 2014. "Labor Market Fluidity and Economic Performance." Working Paper. National Bureau of Economic Research.
- Decker, Ryan A., and others. 2015. "Where Has All The Skewness Gone? The Decline In High-Growth (Young) Firms In The U.S." Working Paper. National Bureau of Economic Research.
- Decker, Ryan, and others. 2014. "The Role of Entrepreneurship in US Job Creation and Economic Dynamism." *Journal of Economic Perspectives* 28 (3): 3–24.
- Dohrenwend, Bruce P., and others. 1992. "Socioeconomic Status and Psychiatric Disorders: The Causation-Selection Issue." *Science* 255 (5047): 946–51.
- Donahue, John J., and James Heckman. 1991. "Continuous Versus Episodic Change: The Impact of Civil Rights Policy on the Economic Status of Blacks." *Journal of Economic Literature* 29 (4): 1603–43.
- Donovan, Sarah A., Marc Labonte, and Joseph Dalaker. 2016. "The U.S. Income Distribution: Trends and Issues." Washington: Congressional Research Service.
- Dube, Arindrajit, and Ethan Kaplan. 2010. "Does Outsourcing Reduce Wages in the Low-Wage Service Occupations? Evidence from Janitors and Guards." *ILR Review* 63 (2): 287–306.

- Duncan, Greg J., Katherine Magnuson, and Elizabeth Votruba-Drzal. 2014. "Boosting Family Income to Promote Child Development." *Future of Children* 24 (1): 99–120.
- Duncan, Greg J., Pamela A. Morris, and Chris Rodrigues. 2011. "Does Money Really Matter? Estimating Impacts of Family Income on Young Children's Achievement With Data From Random-Assignment Experiments." *Developmental Psychology* 47 (5): 1263–79.
- Duncan, Greg J., and others. 1998. "How Much Does Childhood Poverty Affect the Life Chances of Children?" *American Sociological Review* 63 (3): 406–23.
- Duncan, Greg J., and others. 2011. "The Importance of Early Childhood Poverty." *Social Indicators Research* 108 (1): 87–98.
- Durlauf, Steven N., and Marcel Fafchamps. 2005. "Social Capital." In *Handbook of Economic Growth*, 1st ed. New York: Elsevier.
- Durlauf, Steven N., and Ananth Seshadri. 2017. "Understanding the Great Gatsby Curve." Working Paper. National Bureau of Economic Research.
- Durlauf, Steven N., and Irina Shaorshadze. 2015. "Intergenerational Mobility: Class, Status and Power Social Stratification." In *Emerging Trends in the Social and Behavioral Sciences*. Hoboken, NJ: John Wiley & Sons.
- Edin, Kathryn, and Maria J. Kefalas. 2005. *Promises I Can Keep: Why Poor Women Put Motherhood Before Marriage*. 1st ed. Berkeley, CA: University of California Press.
- Elkins, Kathleen. 2018. "A Growing Percentage of Millennials Have Absolutely Nothing Saved." *CNBC*. February 12, sec. Money.
- Farber, Henry S., and others. 2018. "Unions and Inequality Over the Twentieth Century: New Evidence from Survey Data." Working Paper. National Bureau of Economic Research.
- Fisher, Jonathan, and others. 2016. "Inequality in 3D: Income, Consumption, and Wealth." Working Paper. Washington Center for Equitable Growth.
- Fishkin, Joseph. 2014. *Bottlenecks: A New Theory of Equal Opportunity*. Oxford, England: Oxford University Press.
- Frank, Robert H., and Philip J. Cook. 1996. *The Winner-Take-All Society*. New York: Penguin Books.
- Gershgorn, David. 2018. "Apple Just Became America's First Trillion-Dollar Company." *Quartz*, August 2.
- Glaeser, Edward L., David Laibson, and Bruce Sacerdote. 2002. "An Economic Approach to Social Capital." *The Economic Journal* 112: F437–58.
- Glynn, Sarah Jane. 2018. "Gender Wage Inequality: What We Know and How We Can Fix It." Washington: Washington Center for Equitable Growth.
- Goldin, Claudia. 2014. "A Grand Gender Convergence: Its Last Chapter." *American Economic Review* 104 (4): 1091–1119.
- . 2004. "From the Valley to the Summit: The Quiet Revolution That Transformed Women's Work." Working Paper. National Bureau of Economic Research.



- Goldin, Claudia, and Lawrence Katz. 2010. *The Race between Education and Technology*. Cambridge, MA: The Belknap Press of Harvard University Press.
- Goldin, Claudia, Lawrence F. Katz, and Ilyana Kuziemko. 2006. "The Homecoming of American College Women: The Reversal of the College Gender Gap." *Journal of Economic Perspectives* 20 (4): 133–56.
- Gormley, William T., and Ted Gayer. 2005. "Promoting School Readiness in Oklahoma: An Evaluation of Tulsa's Pre-K Program." *Journal of Human Resources* XL (3): 533–58.
- Gottschalk, Peter. 1997. "Inequality, Income Growth, and Mobility: The Basic Facts." *Journal of Economic Perspectives* 11 (Spring): 21–40.
- Granovetter, Mark S. 1973. "The Strength of Weak Ties." *American Journal of Sociology* 78 (6): 1360–80.
- Guryan, Jonathan, Erik Hurst, and Melissa Kearney. 2008. "Parental Education and Parental Time with Children." *Journal of Economic Perspectives* 22 (3): 23–46.
- Guvener, Fatih, and others. 2015. "What Do Data on Millions of U.S. Workers Reveal about Life-Cycle Earnings Risk?" New York: Federal Reserve Bank of New York.
- Guvener, Fatih, and others. 2017. "Lifetime Incomes in the United States over Six Decades." Working Paper. National Bureau of Economic Research.
- Hacker, Jacob S. 2002. *The Divided Welfare State: The Battle over Public and Private Social Benefits in the United States*. New York: Cambridge University Press.
- . 2008. *The Great Risk Shift: The New Economic Insecurity and the Decline of the American Dream*. New York: Oxford University Press.
- Hacker, Jacob S., and Elisabeth Jacobs. 2008. "The Rising Instability of American Family Income, 1969-2004: Evidence from the Panel Study of Income Dynamics." Washington: Economic Policy Institute.
- Hallsten, Martin, and Fabian T. Pfeffer. 2017. "Grand Advantage: Family Wealth and Grandchildren's Educational Achievement in Sweden." *American Sociological Review* 82 (2): 328–60.
- Haltiwanger, John, Henry Hyatt, and Erika McEntarfer. 2017. "Who Moves Up the Job Ladder?" *Journal of Labor Economics* 36 (S1): S301–36.
- Haltiwanger, John C., and others. 2018. "Cyclical Job Ladders by Firm Size and Firm Wage." *American Economic Journal: Macroeconomics* 10 (2): 52–85.
- Hamilton, Laura T. 2013. "More Is More or More Is Less? Parental Financial Investments during College." *American Sociological Review* 78 (1): 70–95.
- Hanratty, Maria J. 1996. "Canadian Health Insurance and Infant Health." *American Economic Review* 86 (1): 276–84.
- Hardy, Bradley L. 2014. "Childhood Income Volatility and Adult Outcomes." *Demography* 51 (5): 1641–65.
- Hart, Betty, and Todd R. Risley. 1995. *Meaningful Differences in the Everyday Experience of Young American Children*. Baltimore, MD: P.H. Brookes.

- Havnes, Tarjei, and Magne Mogstad. 2015. "Is Universal Child Care Leveling the Playing Field?" *Journal of Public Economics* 127: 100–114.
- . 2009. "No Child Left Behind: Universal Child Care and Children's Long-Run Outcomes." Discussion Paper. Statistics Norway Research Department.
- Heckman, James J., Alan B Krueger, and Benjamin M Friedman. 2005. *Inequality in America: What Role for Human Capital Policies?* Cambridge, MA: MIT.
- Heckman, James J., and Yona Rubinstein. 2001. "The Importance of Noncognitive Skills: Lessons from the GED Testing Program." *American Economic Review* 91 (2): 145–49.
- Heckman, James J., and others. 2010. "The Rate of Return to the HighScope Perry Pre-school Program." *Journal of Public Economics* 94 (1–2): 114–28.
- Henly, Julia R., and Sandra Lyons. 2000. "The Negotiation of Child Care and Employment Demands Among Low-Income Parents." *Journal of Social Issues* 56 (4): 683–706.
- Houle, Jason N. 2014. "Disparities in Debt: Parents' Socioeconomic Resources and Young Adult Student Loan Debt." *Sociology of Education* 87 (1): 53–69.
- Hout, M. 2015. "A Summary of What We Know about Social Mobility." *The ANNALS of the American Academy of Political and Social Science* 657 (1): 27–36.
- Hoynes, Hilary W., Diane Whitmore Schanzenbach, and Douglas Almond. 2012. "Long Run Impacts of Childhood Access to the Safety Net." Working Paper. National Bureau of Economic Research.
- Hsin, Amy. 2012. "Is Biology Destiny? Birth Weight and Differential Parental Treatment." *Demography* 49 (4): 1385–1405.
- Intrator, Jake, Jonathan Tannen, and Douglas S. Massey. 2016. "Segregation by Race and Income in the United States 1970–2010." *Social Science Research* 60: 45–60.
- Irwin, Neil. 2017. "To Understand Rising Inequality, Consider the Janitors at Two Top Companies, Then and Now." *The New York Times*. September 3, sec. The Upshot.
- ISSWorld. 2013. "ISS Retains Contract with Goldman Sachs." November 20.
- Jacob, Anupama. 2012. "The Supplemental Poverty Measure: A Better Measure for Poverty in America?" Davis, CA: University of California, Davis Center for Poverty Research.
- Jantti, Markus, and others. 2006. "American Exceptionalism in a New Light: A Comparison of Intergenerational Earnings Mobility in the Nordic Countries, the United Kingdom, and the United States." Bonn, Germany: Institute for the Study of Labor.
- Kalil, Ariel, Rebecca Ryan, and Michael Corey. 2012. "Diverging Destinies: Maternal Education and the Developmental Gradient in Time with Children." *Demography* 49 (4): 1361–83.
- Kalil, Ariel, and others. 2016. "Changes in Income-Based Gaps in Parent Activities With Young Children From 1988 to 2012." *AERA Open* 2 (3): 1–17.

- Kalleberg, Arne L. 2011. *Good Jobs, Bad Jobs: The Rise of Polarized and Precarious Employment Systems in the United States, 1970s to 2000s*. New York: Russell Sage Foundation.
- Kaplan, Greg. 2012. "Moving Back Home: Insurance against Labor Market Risk." *Journal of Political Economy* 120 (3): 446–512.
- Kendrick, John. 1976. *The Formation and Stocks of Total Capital*. New York: National Bureau of Economic Research.
- Kidd, Celeste, Holly Palmeri, and Richard N. Aslin. 2013. "Rational Snacking: Young Children's Decision-Making on the Marshmallow Task Is Moderated by Beliefs about Environmental Reliability." *Cognition* 126 (1): 109–14.
- Krueger, Alan. 2012. "The Rise and Consequences of Inequality." Washington: Center for American Progress.
- Krueger, Alan B., and Orley Ashenfelter. 2017. "Theory and Evidence on Employer Collusion in the Franchise Sector." Cambridge, MA: National Bureau of Economic Research.
- Lafortune, Julien, Jesse Rothstein, and Diane Whitmore Schanzenbach. 2018. "School Finance Reform and the Distribution of Student Achievement." *American Economic Journal: Applied Economics* 10 (2): 1–26.
- Lambert, Susan J., and Julia R. Henly. 2014. "Unpredictable Work Timing in Retail Jobs: Implications for Employee Work-Life Conflict." *Industrial & Labor Relations Review* 67 (3): 986–1016.
- Lee, Chul-In, and Gary Solon. 2009. "Trends in Intergenerational Income Mobility." *The Review of Economics and Statistics* 91 (4): 766–72.
- Lerner, Michele. 2017. "Report: Student Loan Debt Delays Homeownership by Seven Years." *The Washington Post*. October 19, sec. Where We Live.
- Levine, David L., and Bhashkar Mazumder. 2002. "Choosing the Right Parents: Changes in the Intergenerational Transmission of Inequality Between 1980 and the Early 1990s." Chicago: Federal Reserve Bank of Chicago.
- Levine, Phillip B., and Diane Whitmore Schanzenbach. 2009. "The Impact of Children's Public Health Insurance Expansions on Educational Outcomes." In *Frontiers in Health Policy Research*, Vol. 12. Berkeley, CA: The Berkeley Electronic Press.
- Levy, Frank, and Peter Temin. 2007. "Inequality and Institutions in 20th Century America." Working Paper. National Bureau of Economic Research.
- Loeb, Susanna, and others. 2004. "Child Care in Poor Communities: Early Learning Effects of Type, Quality, and Stability." *Child Development*, no. January/February.
- Mare, Robert D. 2011. "A Multigenerational View of Inequality." *Demography* 48 (1): 1–23.
- Marmot, Michael. 2004. *The Status Syndrome: How Social Standing Affects Our Health and Longevity*. London: Bloomsbury Press.
- Martinson, Melissa L., and Nancy E. Reichman. 2016. "Socioeconomic Inequalities in Low Birth Weight in the United States, United Kingdom, Canada, and Australia." *American Journal of Public Health* 106 (4): 748–54.

- Masse, Leonard N., and W. Steven Barnett. 2002. "A Benefit-Cost Analysis of the Abecedarian Early Childhood Intervention." New Brunswick, NJ: National Institute for Early Education Research.
- Mayer, Susan E. 1998. *What Money Can't Buy: Family Income and Children's Life Changes*. Cambridge, MA: Harvard University Press.
- Mazumder, Bhashkar. 2014. "Black-White Differences in Intergenerational Mobility in the United States." *Economic Perspectives* 38 (1).
- . 2015. "Inequality in Skills and the Great Gatsby Curve." Chicago: Federal Reserve Bank of Chicago.
- McLeod, Jane D., and Michael J. Shanahan. 1993. "Poverty, Parenting, and Children's Mental Health." *American Sociological Review* 58 (3): 351–66.
- Mishel, Lawrence. 2015. "Causes of Wage Stagnation." Washington: Economic Policy Institute.
- Mischel, Walter, and Ebbe B. Ebbesen. 1970. "Attention in Delay of Gratification." *Journal of Personality and Social Psychology* 16 (2): 329–37.
- Mischel, Walter, Yuichi Shoda, and Monica L. Rodriguez. 1989. "Delay of Gratification in Children." *Science* 224 (4907): 933–38.
- Mollegard, Stine, and Mads Meier Jaeger. 2015. "The Effect of Grandparents' Economic, Cultural, and Social Capital on Grandchildren's Educational Success." *Research in Social Stratification and Mobility* 82 (42): 11–19.
- Molloy, Raven, Christopher L. Smith, and Abigail Wozniak. 2014. "Declining Migration within the U.S.: The Role of the Labor Market." Working Paper. National Bureau of Economic Research.
- Molloy, Raven, and others. 2016. "Understanding Declining Fluidity in the U.S. Labor Market." Discussion Paper. Brookings Institution.
- Morrissey, Taryn. n.d. "Why Child Care Costs More than College Tuition – and How to Make It More Affordable." The Conversation (<http://theconversation.com/why-child-care-costs-more-than-college-tuition-and-how-to-make-it-more-affordable-92396> [August 23, 2018]).
- Moscarini, Giuseppe, and Fabien Postel-Vinay. 2016. "Did the Job Ladder Fail after the Great Recession?" *Journal of Labor Economics* 34 (S1): 55–93.
- . 2018. "The Cyclical Job Ladder." *Annual Review of Economics* 10 (1): 165–88.
- Mullainathan, Sendhil, and Eldar Shafir. *Scarcity: Why Having Too Little Means So Much*. New York, NY: Times Books, 2013.
- Naidu, Suresh, Eric A. Posner, and E. Glen Weyl. 2018. "Antitrust Remedies for Labor Market Power." Scholarly Paper. Social Science Research Network.
- Organisation for Economic Co-operation and Development. 2011. "An Overview of Growing Income Inequalities in OECD Countries." Paris.
- Oreopoulos, Philip, Till von Wachter, and Andrew Heisz. 2012. "The Short- and Long-Term Career Effects of Graduating in a Recession." *American Economic Journal: Applied Economics* 4 (1): 1–29.

- Oreopoulos, Philip, and others. 2014. “Short-, Medium-, and Long-Term Consequences of Poor Infant Health: An Analysis Using Siblings and Twins.” *Journal of Human Resources* XLIII (1): 88–138.
- Osterman, Paul. 1996. *Broken Ladders: Managerial Careers in the New Economy*. Oxford, England: Oxford University Press.
- Pager, Devah, Bart Bonikowski, and Bruce Western. 2009. “Discrimination in a Low-Wage Labor Market: A Field Experiment.” *American Sociological Review* 74 (5): 777–99.
- Papay, John P., Richard J. Murnane, and John B. Willett. 2015. “Income-Based Inequality in Educational Outcomes: Learning From State Longitudinal Data Systems.” *Educational Evaluation and Policy Analysis* 37 (1): 29S–52S.
- Pew Research Center. 2015. “Parenting in America.” Washington.
- Pfeffer, Fabian T. 2018. “Growing Wealth Gaps in Education.” *Demography* 55 (3): 1033–68.
- Pfeffer, Fabian T., and Martin Hällsten. 2012. “Mobility Regimes and Parental Wealth: The United States, Germany, and Sweden in Comparison.” Working Paper. Deutsches Institut für Wirtschaftsforschung.
- Pfeffer, Fabian T., and Alexandra Killewald. 2015. “How Rigid Is the Wealth Structure and Why? Inter- and Multigenerational Associations in Family Wealth.” Ann Arbor, MI: University of Michigan Population Studies Center.
- Phillips, D.A., and others. n.d. “Child Care for Children in Poverty: Opportunity or Inequity?” *Child Development* 65 (2): 472–92.
- Piketty, Thomas. 2014. *Capital in the 21st Century*. Translated by Arthur Goldhammer. Cambridge, MA: The Belknap Press of Harvard University Press.
- Rabin, Roni Caryn. 2018. “Put a Ring on It? Millennial Couples Are in No Hurry.” *New York Times*. May 29, sec. Mind.
- Ramey, Garey, and Valerie Ramey. 2011. “The Rug Rat Race.” *Brookings Papers on Economic Activity* 41 (1): 121–99.
- Rauscher, Emily. 2016. “Passing It On: Parent-to-Adult Child Financial Transfers for School and Socioeconomic Attainment.” *RSF* 2 (6): 172–96.
- Reardon, Sean F. 2011. “The Widening Academic Achievement Gap Between the Rich and the Poor: New Evidence and Possible Explanations.” In Greg J. Duncan and Richard J. Murnane, eds., *Whither Opportunity? Rising Inequality, Schools, and Children’s Life Chances*. New York: Russell Sage Foundation.
- Reardon, Sean F., and Kendra Bischoff. 2011. “Income Inequality and Income Segregation.” *American Journal of Sociology* 116 (4): 1092–1153.
- Reeves, Richard V., 2017. *Dream Hoarders: How the American Upper Middle Class Is Leaving Everyone Else in the Dust, Why That Is a Problem, and What to Do about It*. Washington: Brookings Institution Press.
- Rothstein, Jesse. 2018. “Inequality of Educational Opportunity? Schools as Mediators of the Intergenerational Transmission of Income.” Working Paper. Washington Center for Equitable Growth.

- Russell Sage Foundation. “Cradle to Kindergarten | RSF.” (<https://www.russellsage.org/publications/cradle-kindergarten> [August 23, 2018]).
- Rutter, Sir Michael J. 2006. *Genes and Behaviour: Nature-Nurture Interplay Explained*. Malden, MA: Blackwell Publishing.
- Sampson, Robert, and Patrick Sharkey. 2008. “Neighborhood Selection and the Social Reproduction of Concentrated Racial Inequality.” *Demography* 45.
- Saez, Emmanuel. 2015. “Striking It Richer: The Evolution of Top Incomes in the United States.” Berkeley, CA: University of California, Berkeley.
- Saez, Emmanuel, and Gabriel Zucman. 2016. “Wealth Inequality in the United States Since 1913: Evidence From Capitalized Income Data.” *The Quarterly Journal of Economics* 131 (2): 519–578.
- Schneider, Daniel, and Kristen Harknett. 2016. “Schedule Instability and Unpredictability and Worker and Family Health and Wellbeing.” Working Paper. Washington Center for Equitable Growth.
- Schneider, Daniel, Orestes P. Hastings, and Joe LaBriola. 2018. “Income Inequality and Class Divides in Parental Investments.” *American Sociological Review* 83 (3): 475–507.
- Schoeni, Robert F., and Karen E. Ross. 2005. “Material Assistance from Families during the Transition to Adulthood.” In *On the Frontier of Adulthood: Theory, Research, and Public Policy*. Chicago: University of Chicago Press.
- Setterstein Jr., Richard, Frank F. Furstenberg, and Ruben G. Rumbaut. 2005. *On the Frontier of Adulthood: Theory, Research, and Public Policy*. Chicago: University of Chicago Press.
- Shambaugh, Jay, and Ryan Nunn, eds. *Revitalizing Wage Growth: Policies to Get American Workers a Raise*. Washington: Brookings Institution, 2018.
- Sharkey, Patrick. 2009. “Neighborhoods and the Black-White Mobility Gap.” Washington: Pew Charitable Trusts.
- Shimer, Robert. 2001. “The Impact of Young Workers on the Aggregate Labor Market.” *Quarterly Journal of Economics* 116 (3): 969–1007.
- Silva, Jennifer M. 2013. *Coming Up Short: Working-Class Adulthood in an Age of Uncertainty*. Cambridge, UK: Oxford University Press.
- Sirin, Selcuk R. 2005. “Socioeconomic Status and Academic Achievement: A Meta-Analytic Review of Research.” *Review of Educational Research* 75 (3): 417–53.
- Snellman, K., and others. 2015. “The Engagement Gap: Social Mobility and Extracurricular Participation among American Youth.” *The ANNALS of the American Academy of Political and Social Science* 657 (1): 194–207.
- Song, Jae, and others. 2015. “Firming Up Inequality.” Cambridge, MA: National Bureau of Economic Research.
- Torche, F. 2015. “Analyses of Intergenerational Mobility: An Interdisciplinary Review.” *The ANNALS of the American Academy of Political and Social Science* 657 (1): 37–62.



- Votruba-Drzal, Elizabeth, Rebekah Levine Coley, and P. Lindsay Chase-Lansdale. 2004. "Child Care and Low-Income Children's Development: Direct and Moderated Effects." *Child Development* 75 (1): 296–312.
- Watts, Tyler W., Greg J. Duncan, and Haonan Quan. 2018. "Revisiting the Marshmallow Test: A Conceptual Replication Investigating Links Between Early Delay of Gratification and Later Outcomes." *Psychological Science* 29 (7): 1159–1177.
- Weil, David. 2014. *The Fissured Workplace: Why Work Became So Bad for So Many and What Can Be Done to Improve It*. Cambridge, MA: Harvard University Press.
- Wong, Vivian C., and others. 2008. "An Effectiveness-Based Evaluation of Five State Pre-Kindergarten Programs." *Journal of Policy Analysis and Management* 27 (1): 122–54.
- Zhao, Nellie, Henry Hyatt, and Isabel Cairo. 2016. "The U.S. Job Ladder and the Low-Wage Jobs of the New Millennium." 2016 Meeting Papers. Society for Economic Dynamics.



# Endnotes

- 1 Miles Corak, "Income Inequality, Equality of Opportunity, and Intergenerational Mobility," *Journal of Economic Perspectives* 27 (3) (2013): 79–102.
- 2 Raj Chetty and others, "Where Is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States," *The Quarterly Journal of Economics* 129 (4) (2014): 1553–1623, available at <https://doi.org/10.1093/qje/qju022>.
- 3 Raj Chetty and others, "The Fading American Dream: Trends in Absolute Income Mobility since 1940," *Science* 356 (6336) (2017): 398–406, available at <https://doi.org/10.1126/science.aal4617>.
- 4 Thomas Piketty, *Capital in the 21st Century*. Translated by Arthur Goldhammer (Cambridge, MA: The Belknap Press of Harvard University Press, 2014).
- 5 Emmanuel Saez and Gabriel Zucman, "Wealth Inequality in the United States Since 1913: Evidence From Capitalized Income Data," *The Quarterly Journal of Economics* 131 (2) (2016): 519–578.
- 6 F. Torche, "Analyses of Intergenerational Mobility: An Interdisciplinary Review," *The ANNALS of the American Academy of Political and Social Science* 657 (1) (2015): 37–62, available at <https://doi.org/10.1177/0002716214547476>.
- 7 While intergenerational mobility necessarily hinges on generational comparisons of economic well-being, economic mobility need not be defined solely in terms of generational comparisons. In contrast to intergenerational mobility, intragenerational mobility captures changes to an individual's economic well-being across different points of time, providing an important set of metrics for understanding lifetime career trajectories (e.g., intragenerational earnings mobility from young adulthood through retirement), economic security (e.g., family income volatility on a month-to-month basis), and other critical concepts for understanding economic well-being. Mobility also is sometimes used in the economic literature to refer to geographic mobility or the fluidity of labor markets. While intragenerational and geographic mobility dynamics are of critical importance, for purposes of brevity and conceptual clarity, this report addresses only intergenerational mobility. Unless explicitly noted otherwise, all references to "mobility" in this paper imply intergenerational mobility.
- 8 Sandra E. Black and Paul J. Devereux, "Recent Developments in Intergenerational Mobility," In *Handbook of Labor Economics*, vol. 4B (New York: Elsevier, 2011), p. 1487–1541, available at <https://ideas.repec.org/h/eee/labchp/5-16.html>.
- 9 Markus Jantti and others, "American Exceptionalism in a New Light: A Comparison of Intergenerational Earnings Mobility in the Nordic Countries, the United Kingdom, and the United States" (Bonn, Germany: Institute for the Study of Labor, 2006), available at [https://www.researchgate.net/publication/28364502\\_American\\_Exceptionalism\\_in\\_a\\_New\\_Light\\_A\\_Comparison\\_of\\_Intergenerational\\_Earnings\\_Mobility\\_in\\_the\\_Nordic\\_Countries\\_the\\_United\\_Kingdom\\_and\\_the\\_United\\_States](https://www.researchgate.net/publication/28364502_American_Exceptionalism_in_a_New_Light_A_Comparison_of_Intergenerational_Earnings_Mobility_in_the_Nordic_Countries_the_United_Kingdom_and_the_United_States).
- 10 Chul-In Lee and Gary Solon, "Trends in Intergenerational Income Mobility," *The Review of Economics and Statistics* 91 (4) (2009): 766–72.
- 11 David L. Levine and Bhashkar Mazumder, "Choosing the Right Parents: Changes in the Intergenerational Transmission of Inequality Between 1980 and the Early 1990s" (Chicago: Federal Reserve Bank of Chicago, 2002), p.2, available at <https://www.chicagofed.org/publications/working-papers/2002/2002-08>.
- 12 Torche, "Analyses of Intergenerational Mobility," p.5, available at <https://doi.org/10.1177/0002716214547476>.
- 13 Chetty and others, "The Fading American Dream."
- 14 Ibid, p.2.
- 15 Raj Chetty and others, "Is the US Still a Land of Opportunity? Recent Trends in Intergenerational Mobility," *The American Economic Review* 104 (2014), available at <https://doi.org/10.1257/aer.104.5.141>.
- 16 Ibid, p. 141.
- 17 Acs defines "middle class" as the 30th to 70th percentile of the household income distribution. See Gregory Acs, "Downward Mobility from the Middle Class: Waking Up from the American Dream" (Washington: Pew Charitable Trusts, 2011).
- 18 Mazumder's choice to focus exclusively on men's mobility is due to the limitations of the Social Security Administration's data, which contains administrative records on individual earnings and thus makes it impossible to match individual earners to other earners within their households. Because he cannot deal with selection of which daughters enter the labor force, Mazumder looks at sons for the purposes of generating more easily interpretable and accurate estimates. In a separate analysis, he utilizes the National Longitudinal Survey of Youth to look at a combined sample of sons' and daughters' household income mobility and finds similar results. The advantage of the matched survey administrative dataset is the size and precisions of the estimates due to the limits in measurement error in reported earnings from the Social Security Administration's records, as compared to self-reported earnings and income in the survey data. See Bhashkar Mazumder, "Black-White Differences in Intergenerational Mobility in the United States," *Economic Perspectives* 38 (1) (2014), available at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1966690](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1966690).

- 19 Mazumder uses transition matrices and directional rank mobility metrics. Transition matrices capture a son's probability of moving up or down earnings quintiles as compared to his father. Directional rank mobility compares whether the rank of the son is lower or higher than his father's rank. Both transition matrices and directional rank mobility allow for the distinction between upward and downward mobility, and can be measured at different parts of the earnings distribution. Directional rank mobility allows for a "natural yardstick" of one's own parents' rank in the earnings distribution, rather than the arbitrary cut-points of quintiles. See *Ibid.*, p.2.
- 20 *Ibid.*, p.2.
- 21 Raj Chetty and others, "Race and Economic Opportunity in the United States: An Intergenerational Perspective." Working Paper (National Bureau of Economic Research, 2018), available at <https://doi.org/10.3386/w24441>.
- 22 *Ibid.*
- 23 Chetty and his co-authors do not make predictions about the trajectory of mobility based on their analysis, which is necessarily backward looking (as all empirical studies of mobility must be). They note, however, that their observations of current gaps in household income ranks are very close to steady-state values, given currently observed levels of mobility, a finding that is consistent with Mazumder's 2014 study. See Mazumder, "Black-White Differences in Intergenerational Mobility in the United States."
- 24 Chetty and others, "Race and Economic Opportunity in the United States," p.3.
- 25 Raj Chetty and others, "Where Is the Land of Opportunity?"
- 26 Jonathan Davis and Bhashkar Mazumder, "Racial and Ethnic Differences in the Geography of Intergenerational Mobility." Scholarly Paper (Social Science Research Network, 2018), available at <https://papers.ssrn.com/abstract=3138979>. Note that Davis and Mazumder find variation in mobility rates across regions by race. For example, the low mobility in the Southeast documented by Chetty and others is driven by low mobility of whites, and that blacks who grew up in the Southeast actually experience higher mobility than blacks growing up in the Northeast and Midwest.
- 27 Bureau of the Census, *Income and Poverty in the United States: 2017* (Department of Commerce, 2018), p.47, Appendix B.
- 28 Anupama Jacob, "The Supplemental Poverty Measure: A Better Measure for Poverty in America?" (University of California, Davis: Center for Poverty Research, 2012), available at <https://poverty.ucdavis.edu/policy-brief/supplemental-poverty-measure-better-measure-poverty-america>.
- 29 Bureau of the Census, *The Supplemental Poverty Measure: 2017* (Department of Commerce, 2018), p.23, Table A-3.
- 30 Giulio Fella, Serafin Frache, and Winfried Koeniger, "Buffer-Stock Saving and Households' Response to Income Shocks." Working Paper (Center for Financial Studies, 2016); Heather Boushey, J. Bradford DeLong, and Marshall Steinbaum, eds. *After Piketty: The Agenda for Economics and Inequality* (Cambridge, MA: Harvard University Press, 2017).
- 31 Organisation for Economic Co-operation and Development, "An Overview of Growing Income Inequalities in OECD Countries" (2011), p.40, available at <https://www.oecd.org/els/soc/dividedwestandwhyinequalitykeep-rising.htm>.
- 32 Chetty and others, "The Fading American Dream."
- 33 Other studies drawing similar conclusions include: Jo Blanden, "Cross-Country Rankings in Intergenerational Mobility: A Comparison of Approaches from Economics and Sociology," *Journal of Economic Surveys* 27 (1) (2013): 38–73, available at <https://doi.org/10.1111/j.1467-6419.2011.00690.x>; Anders Bjorklund and Markus Jantti, "Intergenerational Income Mobility and the Role of Family Background." In *The Oxford Handbook of Economic Inequality* (Oxford, England: Oxford University Press, 2009); Dan Andrews and Andrew K. Leigh, "More Inequality, Less Social Mobility," *Applied Economic Letters* 16 (15) (2009): 1489–92.
- 34 Corak, "Income Inequality, Equality of Opportunity, and Intergenerational Mobility."
- 35 Corak notes that economic status can include advantage or disadvantage. In other words, cross-country differences could reflect differences in the degree of upward mobility for those born to low-income families or differences in the stickiness of intergenerational status for those born to very high-income families. See *Ibid.*, p.83.
- 36 Alan Krueger, "The Rise and Consequences of Inequality" (Washington: Center for American Progress, 2012), available at <https://cdn.americanprogress.org/wp-content/uploads/events/2012/01/pdf/krueger.pdf>.
- 37 Deirdre Bloome, "Income Inequality and Intergenerational Income Mobility in the United States," *Social Forces* 93 (3) (2015): 1047–80, available at <https://doi.org/10.1093/sf/sou092>.
- 38 Robert Sampson and Patrick Sharkey, "Neighborhood Selection and the Social Reproduction of Concentrated Racial Inequality," *Demography* 45 (2008), available at [https://scholar.harvard.edu/files/sampson/files/2008\\_sharkey\\_neighborhood\\_selection.pdf](https://scholar.harvard.edu/files/sampson/files/2008_sharkey_neighborhood_selection.pdf); Patrick Sharkey, "Neighborhoods and the Black-White Mobility Gap" (Washington: Pew Charitable Trusts, 2009), available at [http://www.pewtrusts.org/~media/legacy/uploaded-files/wwwpewtrustsorg/reports/economic\\_mobility/pewsharkeyv12pdf.pdf](http://www.pewtrusts.org/~media/legacy/uploaded-files/wwwpewtrustsorg/reports/economic_mobility/pewsharkeyv12pdf.pdf).
- 39 Chetty and others, "Where Is the Land of Opportunity?"
- 40 *Ibid.*
- 41 *Ibid.*
- 42 For a thoughtful theory of mobility and opportunity that introduces the bottleneck metaphor, see Joseph Fishkin, *Bottlenecks: A New Theory of Equal Opportunity* (Oxford, England: Oxford University Press, 2014).
- 43 Corak, "Income Inequality, Equality of Opportunity, and Intergenerational Mobility"; Miles Corak, Matthew J. Lindquist, and Bhashkar Mazumder, "A Comparison of Upward and Downward Intergenerational Mobility in Canada, Sweden and the United States," *Labour Economics* 30 (2014): 185–200, available at <https://doi.org/10.1016/j.labeco.2014.03.013>.
- 44 Chetty and others, "Where Is the Land of Opportunity?," p.1557.
- 45 Corak, "Income Inequality, Equality of Opportunity, and Intergenerational Mobility."
- 46 Bhashkar Mazumder, "Inequality in Skills and the Great Gatsby Curve" (Chicago: Federal Reserve Bank of Chicago, 2015).
- 47 John Kendrick, *The Formation and Stocks of Total Capital* (New York: National Bureau of Economic Research, 1976).

- 48 James J. Heckman, Alan B. Krueger, and Benjamin M. Friedman, *Inequality in America: What Role for Human Capital Policies?* (Cambridge, MA: MIT, 2005).
- 49 Edward L. Glaeser, David Laibson, and Bruce Sacerdote, "An Economic Approach to Social Capital," *The Economic Journal* 112 (2002): F437–58; James S. Coleman, "Social Capital and the Creation of Human Capital," *American Journal of Sociology* 94 (Supplement: Organizations and Institutions: Sociological and Economic Approaches to the Analysis of Social Structure) (1988): 595–120.
- 50 Walter Mischel and Ebbe B. Ebbesen, "Attention in Delay of Gratification," *Journal of Personality and Social Psychology* 16 (2) (1970): 329–37, available at <https://doi.org/10.1037/h0029815>; Walter Mischel, Yuichi Shoda, and Monica L. Rodriguez, "Delay of Gratification in Children," *Science* 224 (4907) (1989): 933–38.
- 51 Celeste Kidd, Holly Palmeri, and Richard N. Aslin, "Rational Snacking: Young Children's Decision-Making on the Marshmallow Task Is Moderated by Beliefs about Environmental Reliability," *Cognition* 126 (1) (2013): 109–14, available at <https://doi.org/10.1016/j.cognition.2012.08.004>.
- 52 Ibid.
- 53 Tyler W. Watts, Greg J. Duncan, and Haonan Quan, "Revisiting the Marshmallow Test: A Conceptual Replication Investigating Links Between Early Delay of Gratification and Later Outcomes," *Psychological Science* 29 (7) (2018), available at <https://doi.org/10.1177/0956797618761661>.
- 54 Sendhil Mullainathan and Eldar Shafir, *Scarcity: Why Having Too Little Means So Much* (New York: Times Books, 2013).
- 55 Sir Michael J. Rutter, *Genes and Behaviour: Nature-Nurture Interplay Explained* (Malden, MA: Blackwell Publishing, 2006).
- 56 Anne Case, Angela Fertig, and Christina Paxson, "The Lasting Impact of Childhood Health and Circumstance," *Journal of Health Economics* 24 (2) (2005): 365–89; Janet Currie, "Healthy, Wealthy, and Wise: Economic Status, Poor Health in Childhood, and Human Capital Development," *Journal of Economic Literature* 47 (1) (2009): 87–122.
- 57 D.J.P. Barker and others, "Fetal Nutrition and Cardiovascular Disease in Adult Life," *The Lancet* 341 (8850) (1993): 938–41, available at [https://doi.org/10.1016/0140-6736\(93\)91224-A](https://doi.org/10.1016/0140-6736(93)91224-A).
- 58 Janet Currie and Rosemary Hyson, "Is the Impact of Health Shocks Cushioned by Socioeconomic Status? The Case of Low Birthweight," *American Economic Review* 89 (2) (1999): 245–50, available at <https://doi.org/10.1257/aer.89.2.245>.
- 59 Douglas Almond and Janet Currie, "Killing Me Softly: The Fetal Origins Hypothesis," *Journal of Economic Perspectives* 25 (3) (2011): 153–72, available at <https://doi.org/10.1257/jep.25.3.153>.
- 60 Dalton Conley, Kate W. Strully, and Neil G. Bennett, *The Starting Gate: Birth Weight and Life Chances* (Berkeley, CA: University of California Press, 2003).
- 61 Sandra E. Black, Paul J. Devereux, and Kjell G. Salvanes, "From the Cradle to the Labor Market? The Effect of Birth Weight on Adult Outcomes," *The Quarterly Journal of Economics* 122 (1) (2007): 409–39, available at <https://doi.org/10.1162/qjec.122.1.409>.
- 62 Philip Oreopoulos and others, "Short-, Medium-, and Long-Term Consequences of Poor Infant Health: An Analysis Using Siblings and Twins," *Journal of Human Resources* XLIII (1) (2014): 88–138.
- 63 Ibid.; Currie and Hyson, "Is the Impact of Health Shocks Cushioned by Socioeconomic Status?"; Almond and Currie, "Killing Me Softly"; Douglas Almond, Janet Currie, and Valentina Duque, "Childhood Circumstances and Adult Outcomes: Act II," Working Paper (National Bureau of Economic Research, 2017), available at <http://www.nber.org/papers/w23017>.
- 64 Melissa L. Martinson and Nancy E. Reichman, "Socioeconomic Inequalities in Low Birth Weight in the United States, United Kingdom, Canada, and Australia," *American Journal of Public Health* 106 (4) (2016): 748–54.
- 65 Ibid.
- 66 Douglas Almond and Bhashkar Mazumder, "Health Capital and the Prenatal Environment: The Effect of Ramadan Observance During Pregnancy," *American Economic Journal: Applied Economics* 3 (4) (2011): 56–85.
- 67 Almond and Currie, "Killing Me Softly," p.167.
- 68 Douglas Almond, Hilary W. Hoynes, and Diane Whitmore Schanzenbach, "Inside the War on Poverty: The Impact of Food Stamps on Birth Outcomes," *The Review of Economics and Statistics* 93 (2) (2011): 387–403; Almond and Currie, "Killing Me Softly"; Hilary W. Hoynes, Diane Whitmore Schanzenbach, and Douglas Almond, "Long Run Impacts of Childhood Access to the Safety Net," Working Paper (National Bureau of Economic Research, 2012), available at <http://www.nber.org/papers/w18535>.
- 69 Maria J. Hanratty, "Canadian Health Insurance and Infant Health," *American Economic Review* 86 (1) (1996): 276–84.
- 70 Janet Currie and Jonathan Gruber, "Saving Babies: The Efficacy and Cost of Recent Expansions of Medicaid Eligibility for Pregnant Women" (Cambridge, MA: National Bureau of Economic Research, 1994), available at <http://www.nber.org/papers/w4644>; Janet Currie and Jeffrey Grogger, "Medicaid Expansions and Welfare Contractions: Offsetting Effects on Prenatal Care and Infant Health?," *Journal of Health Economics* 21 (2) (2002): 313–35, available at [https://doi.org/10.1016/S0167-6296\(01\)00125-4](https://doi.org/10.1016/S0167-6296(01)00125-4).
- 71 Currie, "Healthy, Wealthy, and Wise."
- 72 Janet Currie and Wanchuan Lin, "Chipping Away at Health: More on the Relationship Between Income and Child Health," *Health Affairs* 26 (2) (2007): 331–44.
- 73 Jane D. McLeod and Michael J. Shanahan, "Poverty, Parenting, and Children's Mental Health," *American Sociological Review* 58 (3) (1993): 351–66; Bruce P. Dohrenwend and others, "Socioeconomic Status and Psychiatric Disorders: The Causation-Selection Issue," *Science* 255 (5047) (1992): 946–51.
- 74 Currie, "Healthy, Wealthy, and Wise."
- 75 Michael Marmot, *The Status Syndrome: How Social Standing Affects Our Health and Longevity* (London, England: Bloomsbury Press, 2004).
- 76 Mullainathan and Shafir, *Scarcity: Why Having Too Little Means So Much*.
- 77 Currie, "Healthy, Wealthy, and Wise," p. 88.
- 78 Phillip B. Levine and Diane Whitmore Schanzenbach, "The Impact of Children's Public Health Insurance Expansions on Educational Outcomes," In *Frontiers in Health Policy Research*, vol. 12 (Berkeley, CA: The Berke-

- ley Electronic Press, 2009); Janet Currie, Sandra Decker, and Wanchuan Lin, "Has Public Health Insurance for Older Children Reduced Disparities in Access to Care and Health Outcomes?," *Journal of Health Economics* 27 (6) (2008): 1567–81.
- 79 Pew Research Center, "Parenting in America" (2015).
- 80 Selcuk R. Sirin, "Socioeconomic Status and Academic Achievement: A Meta-Analytic Review of Research," *Review of Educational Research* 75 (3) (2005): 417–53, available at <https://doi.org/10.3102/00346543075003417>.
- 81 Sean F. Reardon, "The Widening Academic Achievement Gap Between the Rich and the Poor: New Evidence and Possible Explanations." In Greg J. Duncan and Richard J. Murnane, eds., *Whither Opportunity? Rising Inequality, Schools, and Children's Life Chances* (New York: Russell Sage Foundation, 2011).
- 82 Jacob Bastian and Katherine Micheltore, "The Long-Term Impact of the Earned Income Tax Credit on Children's Education and Employment Outcomes," *Journal of Labor Economics* 36 (14) (2018).
- 83 Gordon B. Dahl and Lance Lochner, "The Impact of Family Income on Child Achievement: Evidence from the Earned Income Tax Credit," *American Economic Review* 102 (5) (2012): 1927–56.
- 84 Susan E. Mayer, *What Money Can't Buy: Family Income and Children's Life Chances* (Cambridge, MA: Harvard University Press, 1998).
- 85 Bradley L. Hardy, "Childhood Income Volatility and Adult Outcomes," *Demography* 51 (5) (2014): 1641–65.
- 86 Elizabeth O. Ananat and others, "Linking Job Loss, Inequality, Mental Health, and Education," *Science* 356 (6343) (2017): 1127–28.
- 87 Piketty, *Capital in the 21st Century*.
- 88 Fabian T. Pfeffer, "Growing Wealth Gaps in Education," *Demography* 55 (3) (June 2018): 1034–1068, available at <https://doi.org/10.1007/s13524-018-0666-7>.
- 89 The variation in the magnitude of the association depends on the measure of parental wealth used. See Emily Rauscher, "Passing It On: Parent-to-Adult Child Financial Transfers for School and Socioeconomic Attainment," *RSF* 2 (6) (2016): 172–96, available at <https://doi.org/10.7758/RSF.2016.2.6.09>.
- 90 Fabian T. Pfeffer and Martin Hallsten, "Mobility Regimes and Parental Wealth: The United States, Germany, and Sweden in Comparison." Working Paper (Berlin, Germany: Deutsches Institut für Wirtschaftsforschung, 2012).
- 91 Abbigail J. Chiodo, Ruben Hernandez-Murillo, and Michael T. Owyang, "Nonlinear Effects of School Quality on House Prices," *Federal Reserve Bank of St. Louis Review* (2010): 185–204.
- 92 Pfeffer, "Growing Wealth Gaps in Education."
- 93 Dalton Conley, "Capital for College: Parental Assets and Postsecondary Schooling," *Sociology of Education* 74 (1) (2001): 59–72.
- 94 Robert D. Mare, "A Multigenerational View of Inequality," *Demography* 48 (1) (2011): 1–23.
- 95 Fabian T. Pfeffer and Alexandra Killewald, "How Rigid Is the Wealth Structure and Why? Inter- and Multigenerational Associations in Family Wealth" (Ann Arbor, MI: University of Michigan Population Studies Center, 2015); Martin Hallsten and Fabian T. Pfeffer, "Grand Advantage: Family Wealth and Grandchildren's Educational Achievement in Sweden," *American Sociological Review* 82 (2) (2017): 328–60; Stine Mollegard and Mads Meier Jaeger, "The Effect of Grandparents' Economic, Cultural, and Social Capital on Grandchildren's Educational Success," *Research in Social Stratification and Mobility* 82 (42) (2015): 11–19.
- 96 Rauscher, "Passing It On."
- 97 Robert F. Schoeni and Karen E. Ross, "Material Assistance from Families during the Transition to Adulthood." In *On the Frontier of Adulthood: Theory, Research, and Public Policy* (Chicago: University of Chicago Press, 2005), p.396–416, available at <http://chicago.universitypressscholarship.com/view/10.7208/chicago/9780226748924.001.0001/upso-9780226748894-chapter-12>.
- 98 Rauscher, "Passing It On."
- 99 Jonathan Fisher and others, "Inequality in 3D: Income, Consumption, and Wealth." Working Paper (Washington Center for Equitable Growth, 2016), available at <http://equitablegrowth.org/working-papers/inequality-3d-income-consumption-wealth/>.
- 100 Greg J. Duncan, Katherine Magnuson, and Elizabeth Votruba-Drzal, "Boosting Family Income to Promote Child Development," *Future of Children* 24 (1) (2014): 99–120; Greg J. Duncan and others, "The Importance of Early Childhood Poverty," *Social Indicators Research* 108 (1) (2011): 87–98, available at <https://doi.org/10.1007/s11205-011-9867-9>; Greg J. Duncan, Pamela A. Morris, and Chris Rodriguez, "Does Money Really Matter? Estimating Impacts of Family Income on Young Children's Achievement With Data From Random-Assignment Experiments," *Developmental Psychology* 47 (5) (2011): 1263–79, available at <https://doi.org/10.1037/a0023875>; Greg J. Duncan and others, "How Much Does Childhood Poverty Affect the Life Chances of Children?," *American Sociological Review* 63 (3) (1998): 406–23, available at <https://doi.org/10.2307/2657556>.
- 101 Ariel Kalil and others, "Changes in Income-Based Gaps in Parent Activities With Young Children From 1988 to 2012," *AERA Open* 2 (3) (2016): 1–17, available at <https://doi.org/10.1177/2332858416653732>.
- 102 Amy Hsin, "Is Biology Destiny? Birth Weight and Differential Parental Treatment," *Demography* 49 (4) (2012): 1385–1405.
- 103 Jonathan Guryan, Erik Hurst, and Melissa Kearney, "Parental Education and Parental Time with Children," *Journal of Economic Perspectives* 22 (3) (2008): 23–46, available at <https://doi.org/10.1257/jep.22.3.23>.
- 104 Ibid.
- 105 Betty Hart and Todd R. Risley, *Meaningful Differences in the Everyday Experience of Young American Children* (Baltimore, MD: P.H. Brookes, 1995).
- 106 Ibid.
- 107 Ariel Kalil, Rebecca Ryan, and Michael Corey, "Diverging Destinies: Maternal Education and the Developmental Gradient in Time with Children," *Demography* 49 (4) (2012): 1361–83.
- 108 Ibid.
- 109 Kalil and others, "Changes in Income-Based Gaps in Parent Activities With Young Children From 1988 to 2012."
- 110 Ibid.

- 111 Dan Clawson and Naomi Gerstel, *Unequal Time: Gender, Class, and Family in Employment Schedules* (New York: Russell Sage Foundation, 2014).
- 112 Susan J. Lambert and Julia R. Henly, "Unpredictable Work Timing in Retail Jobs: Implications for Employee Work-Life Conflict," *Industrial & Labor Relations Review* 67 (3) (2014): 986–1016.
- 113 Daniel Schneider and Kristen Harknett, "Schedule Instability and Unpredictability and Worker and Family Health and Wellbeing," Working Paper (Washington Center for Equitable Growth, 2016), available at <http://equitablegrowth.org/working-papers/schedule-instability-and-unpredictability/>; Daniel Schneider, Orestes P. Hastings, and Joe LaBriola, "Income Inequality and Class Divides in Parental Investments," *American Sociological Review* 83 (3) (2018): 475–507.
- 114 Garey Ramey and Valerie Ramey, "The Rug Rat Race," *Brookings Papers on Economic Activity* 41 (1) (2011): 121–99; Richard V. Reeves, *Dream Hoarders: How the American Upper Middle Class Is Leaving Everyone Else in the Dust, Why That Is a Problem, and What to Do about It* (Washington: Brookings Institution Press, 2017).
- 115 Robert H. Frank and Philip J. Cook, *The Winner-Take-All Society* (New York: Penguin Books, 1996).
- 116 Claudia Goldin and Lawrence Katz, *The Race between Education and Technology* (Cambridge, MA: The Belknap Press of Harvard University Press, 2010); David H. Autor and David Dorn, "The Growth of Low-Skill Service Jobs and the Polarization of the US Labor Market," *American Economic Review* 103 (5) (2013): 1553–97.
- 117 Frank Levy and Peter Temin, "Inequality and Institutions in 20th Century America," Working Paper (National Bureau of Economic Research, 2007), available at <http://www.nber.org/papers/w13106.pdf>; Josh Bivens and Lawrence Mishel, "The Pay of Corporate Executives and Financial Professionals as Evidence of Rents in Top 1 Percent Incomes," *Journal of Economic Perspectives* 27 (3) (2013): 57–78, available at <https://doi.org/10.1257/jep.27.3.57>; Daron Acemoglu and James Robinson, *Why Nations Fail: The Origins of Power, Prosperity, and Poverty* (New York: Crown Publishers, 2012); Alan B. Krueger and Orley Ashenfelter, "Theory and Evidence on Employer Collusion in the Franchise Sector" (Cambridge, MA: National Bureau of Economic Research, 2017), available at [http://conference.nber.org/confer/2017/SI2017/LS/Krueger\\_Ashenfelter.pdf](http://conference.nber.org/confer/2017/SI2017/LS/Krueger_Ashenfelter.pdf); Henry S. Farber and others, "Unions and Inequality Over the Twentieth Century: New Evidence from Survey Data," Working Paper (National Bureau of Economic Research, 2018), available at <https://doi.org/10.3386/w24587>; Suresh Naidu, Eric A. Posner, and E. Glen Weyl, "Antitrust Remedies for Labor Market Power," Scholarly Paper (Social Science Research Network, 2018), available at <https://papers.ssrn.com/abstract=3129221>.
- 118 David Blau and Janet Currie, "Pre-School, Day Care, and after-School Care: Who's Minding the Kids?" Working Paper (National Bureau of Economic Research, 2004).
- 119 Flavio Cunha and James J. Heckman, "Formulating, Identifying and Estimating the Technology of Cognitive and Noncognitive Skill Formation," *Journal of Human Resources* 43 (4) (2008): 738–82.
- 120 Ibid.; Daron Acemoglu and David Autor, "Skills, Tasks and Technologies: Implications for Employment and Earnings," Working Paper (National Bureau of Economic Research, 2010), available at <https://doi.org/10.3386/w16082>; Daron Acemoglu and Pascual Restrepo, "Robots and Jobs: Evidence from US Labor Markets," Working Paper (National Bureau of Economic Research, 2017), available at <https://doi.org/10.3386/w23285>.
- 121 James J. Heckman and Yona Rubinstein, "The Importance of Noncognitive Skills: Lessons from the GED Testing Program," *American Economic Review* 91 (2) (2001): p.145.
- 122 Julia R. Henly and Sandra Lyons, "The Negotiation of Child Care and Employment Demands Among Low-Income Parents," *Journal of Social Issues* 56 (4) (2000): 683–706, available at <https://doi.org/10.1111/0022-4537.00191>.
- 123 Elizabeth Votruba-Drzal, Rebekah Levine Coley, and P. Lindsay Chase-Lansdale, "Child Care and Low-Income Children's Development: Direct and Moderated Effects," *Child Development* 75 (1) (2004): 296–312; Susanna Loeb and others, "Child Care in Poor Communities: Early Learning Effects of Type, Quality, and Stability," *Child Development* 75 (1) (2004).
- 124 Loeb and others, "Child Care in Poor Communities."
- 125 D.A. Phillips and others, "Child Care for Children in Poverty: Opportunity or Inequity?," *Child Development* 65 (2) (n.d.): 472–92.
- 126 Means-tested childcare subsidies are limited, and many eligible families are waitlisted. In other words, our existing public system does a poor job of serving the lowest-income families and has no capacity to support those higher up the economic ladder who also face serious constraints to quality care.
- 127 Michael Collier, "Middle-Class Families Get Little Help in Paying for Early Care," *EdSource*, May 4, 2015; Taryn Morrissey, "Why Child Care Costs More than College Tuition – and How to Make It More Affordable," *The Conversation*, March 9, 2018; Ajay Chaudry and others, *Cradle to Kindergarten: A New Plan to Combat Inequality* (New York: Russell Sage Foundation, 2017).
- 128 Jay Bainbridge and others, "Who Gets an Early Education? Family Income and the Enrollment of Three- to Five-Year-Olds from 1968 to 2000," *Social Science Quarterly* 86 (3) (2005): 724–45.
- 129 Ibid.
- 130 William T. Gormley and Ted Gayer, "Promoting School Readiness in Oklahoma An Evaluation of Tulsa's Pre-K Program," *Journal of Human Resources* XL (3) (2005): 533–58, available at <https://doi.org/10.3368/jhr.XL.3.533>; Vivian C. Wong and others, "An Effectiveness-Based Evaluation of Five State Pre-Kindergarten Programs," *Journal of Policy Analysis and Management* 27 (1) (2008): 122–54.
- 131 Gormley and Gayer, "Promoting School Readiness in Oklahoma An Evaluation of Tulsa's Pre-K Program"; Wong and others, "An Effectiveness-Based Evaluation of Five State Pre-Kindergarten Programs."
- 132 Elizabeth Cascio, "Does Universal Preschool hit the target? Program access and preschool impacts," Working Paper (National Bureau of Economic Research, 2017).
- 133 Ibid.; Elizabeth Cascio and Diane Whitmore Schanzenbach, "The Impacts of Expanding Access to High-Quality Preschool Education" (Washington: Brookings Institution, 2013), available at <http://www.brookings.edu/~media/Projects/BPEA/Fall%202013/2013b%20cascio%20preschool%20education.pdf>; Tarjei Havnes and Magne Mogstad, "No Child Left Behind: Universal Child Care and Children's Long-Run Outcomes," Discussion Paper (Statistics Norway Research Department, 2009).
- 134 Kalil and others, "Changes in Income-Based Gaps in Parent Activities With Young Children From 1988 to 2012."



- 135 Reardon, "The Widening Academic Achievement Gap Between the Rich and the Poor."
- 136 Ibid.
- 137 Ibid.
- 138 Ibid.
- 139 Ibid.
- 140 Sean F. Reardon and Kendra Bischoff, "Income Inequality and Income Segregation," *American Journal of Sociology* 116 (4) (2011): 1092–1153, available at <https://doi.org/10.1086/657114>; Robert Sampson and Patrick Sharkey, "Neighborhood Selection and the Social Reproduction of Concentrated Racial Inequality."
- 141 Mary A. Burke and Tim R. Sass, "Classroom Peer Effects and Student Achievement," *Journal of Labor Economics* 31 (1) (2013): 51–82.
- 142 Julien Lafortune, Jesse Rothstein, and Diane Whitmore Schanzenbach, "School Finance Reform and the Distribution of Student Achievement," *American Economic Journal: Applied Economics* 10 (2) (2018): 1–26.
- 143 Jesse Rothstein, "Inequality of Educational Opportunity: Schools as Mediators of the Intergenerational Transmission of Income." Working Paper (Washington Center for Equitable Growth, 2018), available at <https://equitablegrowth.org/working-papers/inequal-education-opportunity/>.
- 144 Goldin and Katz, *The Race between Education and Technology*.
- 145 Martha Bailey and Susan Dynarski, "Inequality in Postsecondary Education." In *Whither Opportunity? Rising Inequality, Schools, and Children's Life Chances* (New York: Russell Sage Foundation, n.d.).
- 146 Ibid.
- 147 John P. Papay, Richard J. Murnane, and John B. Willett, "Income-Based Inequality in Educational Outcomes: Learning From State Longitudinal Data Systems," *Educational Evaluation and Policy Analysis* 37 (1) (2015): 295–525, available at <https://doi.org/10.3102/0162373715576364>.
- 148 Mark Huelsman, *The Unaffordable Era: A 50-State Look at Rising College Prices and the New American Student* (New York: Demos, 2018).
- 149 Sara Goldrick-Rab and others, "Reducing Income Inequality in Educational Attainment: Experimental Evidence on the Impact of Financial Aid on College Completion," *American Journal of Sociology* 121 (6) (2016): 1762–1817, available at <https://doi.org/10.1086/685442>.
- 150 Raj Chetty and others, "Mobility Report Cards: The Role of Colleges in Intergenerational Mobility" (Cambridge, MA: National Bureau of Economic Research, 2017), available at <https://doi.org/10.3386/w23618>.
- 151 Ibid.
- 152 Reeves, *Dream Hoarders*.
- 153 Jake Intrator, Jonathan Tannen, and Douglas S. Massey, "Segregation by Race and Income in the United States 1970–2010," *Social Science Research* 60 (2016): 45–60, available at <https://doi.org/10.1016/j.ssresearch.2016.08.003>.
- 154 Mark S. Granovetter, "The Strength of Weak Ties," *American Journal of Sociology* 78 (6) (1973): 1360–80.
- 155 Steven N. Durlauf and Marcel Fafchamps, "Social Capital." In *Handbook of Economic Growth*, 1st ed., vol. 1 (New York: Elsevier, 2005), p.1639–99; Steven N. Durlauf and Ananth Seshadri, "Understanding the Great Gatsby Curve." Working Paper (National Bureau of Economic Research, 2017), available at <http://www.nber.org/chapters/c13915.pdf>; Steven N. Durlauf and Irina Shaorshadze, "Intergenerational Mobility: Class, Status and Power Social Stratification." In *Emerging Trends in the Social and Behavioral Sciences* (New Brunswick, NJ: John Wiley & Sons, 2015).
- 156 Roni Caryn Rabin, "Put a Ring on It? Millennial Couples Are in No Hurry," *The New York Times*, May 29, 2018, available at <https://www.nytimes.com/2018/05/29/well/mind/millennials-love-marriage-sex-relationships-dating.html>; Michele Lerner, "Report: Student Loan Debt Delays Homeownership by Seven Years," *The Washington Post*, October 19, 2017, available at [https://www.washingtonpost.com/news/where-we-live/wp/2017/10/19/report-student-loan-debt-delays-homeownership-by-seven-years/?utm\\_term=.4f919fa23399](https://www.washingtonpost.com/news/where-we-live/wp/2017/10/19/report-student-loan-debt-delays-homeownership-by-seven-years/?utm_term=.4f919fa23399); Kathleen Elkins, "A Growing Percentage of Millennials Have Absolutely Nothing Saved," *CNBC*, February 12, 2018, available at <https://www.cnn.com/2018/02/09/a-growing-percentage-of-millennials-have-absolutely-nothing-saved.html>.
- 157 Andrew J. Cherlin, *The Marriage-Go-Round: The State of Marriage and the Family in America Today* (New York: Vintage, 2010); Andrew J. Cherlin, Elizabeth Talbert, and Suzumi Yasutake, "Changing Fertility Regimes and the Transition to Adulthood: Evidence from a Recent Cohort" (Baltimore, MD: Johns Hopkins University, 2014); Andrew J. Cherlin, *Labor's Love Lost: The Rise and Fall of the Working-Class Family in America* (New York: Russell Sage Foundation, 2014); Jung Hyun Choi and others, "Millennial Homeownership" (Washington: Urban Institute, 2018).
- 158 Cultural changes and shifting attitudes toward both marriage and home ownership may also play a role in the delayed transition to adulthood, of course. But economic circumstances can shape culture, and vice versa. For instance, research from Kathryn Edin and Maria Kefalas and from Andrew Cherlin suggests that young adults view marriage as a "capstone," a goal that requires economic stability and one that is increasingly unachievable in the face of highly unequal chances in the labor market. In the absence of a clear causal role for cultural change and the presence of substantial evidence on millennials' finances, we are willing to run with the hypothesis that economic circumstances are a major driving force here, over and above any cultural shifts. See Cherlin, *The Marriage-Go-Round*; Kathryn Edin and Maria J. Kefalas, *Promises I Can Keep: Why Poor Women Put Motherhood Before Marriage*, 1st ed. (Berkeley, CA: University of California Press, 2005).
- 159 Raj Chetty and Nathaniel Hendren, "The Impacts of Neighborhoods on Intergenerational Mobility II: County-Level Estimates," *The Quarterly Journal of Economics* 133 (3) (2018): 1163–1228.
- 160 Sarah A. Donovan, Marc Labonte, and Joseph Dalaker, "The U.S. Income Distribution: Trends and Issues" (Washington: Congressional Research Service, 2016).
- 161 Jay Shambaugh and Ryan Nunn, eds., *Revitalizing Wage Growth: Policies to Get American Workers a Raise* (Brookings Institution, 2018), available at [http://www.hamiltonproject.org/papers/revitalizing\\_wage\\_growth\\_policies\\_to\\_get\\_american\\_workers\\_a\\_raise](http://www.hamiltonproject.org/papers/revitalizing_wage_growth_policies_to_get_american_workers_a_raise).
- 162 Chetty and others, "Is the US Still a Land of Opportunity?"; M. Hout, "A Summary of What We Know about Social Mobility," *The ANNALS of the American Academy of Political and Social Science* 657 (1) (2015): 27–36, available at <https://doi.org/10.1177/0002716214547174>.

- 163 Fatih Guvenen and others, "Lifetime Incomes in the United States over Six Decades." Working Paper (National Bureau of Economic Research, 2017), available at <https://doi.org/10.3386/w23371>. While the authors find that lifetime labor income for women increased by approximately 22 percent across generations, they note that this increase is largely driven by the fact that women started at a very, very low base due to women's low levels of labor force participation in the 1960s. Once accounting for the rise in women's labor market income, the authors find substantial inequality in the trajectory of lifetime incomes, with high earners pulling away from the top.
- 164 Lawrence Mishel, "Causes of Wage Stagnation" (Washington: Economic Policy Institute, 2015), available at <https://www.epi.org/publication/causes-of-wage-stagnation/>; David Card and John DiNardo, "Skill-Biased Technological Change and Rising Wage Inequality: Some Problems and Puzzles," *Journal of Labor Economics* 20 (4) (2002): 733–83; Acemoglu and Autor, "Skills, Tasks and Technologies"; Autor and Dorn, "The Growth of Low-Skill Service Jobs and the Polarization of the US Labor Market."
- 165 Barry Bluestone and Bennett Harrison, *The Great U-Turn: Corporate Restructuring And The Polarizing Of America* (New York: Basic Books, 1990); Arne L. Kalleberg, *Good Jobs, Bad Jobs: The Rise of Polarized and Precarious Employment Systems in the United States, 1970s to 2000s* (New York: Russell Sage Foundation, 2011).
- 166 Jacob S. Hacker, *The Great Risk Shift: The New Economic Insecurity and the Decline of the American Dream* (New York: Oxford University Press, 2008); Jacob S. Hacker, *The Divided Welfare State: The Battle over Public and Private Social Benefits in the United States* (New York: Cambridge University Press, 2002); Jacob S. Hacker and Elisabeth Jacobs, "The Rising Instability of American Family Income, 1969-2004: Evidence from the Panel Study of Income Dynamics" (Washington: Economic Policy Institute, May 2008).
- 167 ISSWorld, "ISS Retains Contract with Goldman Sachs," November 20, 2013, available at <https://www.issworld.com/press/news/2013/11/20/iss-retains-contract-with-goldman-sachs>.
- 168 David Weil, *The Fissured Workplace: Why Work Became So Bad for So Many and What Can Be Done to Improve It* (Cambridge, MA: Harvard University Press, 2014), p.4.
- 169 Ibid., p.9.
- 170 Deepa Das Acevedo, "Regulating Employment Relationships in the Sharing Economy," *Employee Rights and Employment Policy Journal* 20 (1) (2016).
- 171 Jae Song and others, "Firming Up Inequality" (Cambridge, MA: National Bureau of Economic Research, 2015), available at <https://doi.org/10.3386/w21199>.
- 172 David Card and others, "Firms and Labor Market Inequality: Evidence and Some Theory," *Journal of Labor Economics* 36 (S1) (2018): S13–70.
- 173 Arindrajit Dube and Ethan Kaplan, "Does Outsourcing Reduce Wages in the Low-Wage Service Occupations? Evidence from Janitors and Guards," *ILR Review* 63 (2) (2010): 287–306, available at <https://doi.org/10.1177/001979391006300206>.
- 174 Weil, *The Fissured Workplace*, p.20.
- 175 Neil Irwin, "To Understand Rising Inequality, Consider the Janitors at Two Top Companies, Then and Now," *The New York Times*, September 3, 2017, available at <https://www.nytimes.com/2017/09/03/upshot/to-understand-rising-inequality-consider-the-janitors-at-two-top-companies-then-and-now.html>.
- 176 David Gershgorin, "Apple Just Became America's First Trillion-Dollar Company," *Quartz*, August 2, 2018, available at <https://qz.com/1345748/apple-just-became-americas-first-trillion-dollar-company/>.
- 177 Canyon Bosler and Petrosky-Nadeau, "Job-to-Job Transitions in an Evolving Labor Market" (San Francisco: Federal Reserve Bank of San Francisco, 2016).
- 178 Robert Shimer, "The Impact of Young Workers on the Aggregate Labor Market," *Quarterly Journal of Economics* 116 (3) (2001): 969–1007; Steven J. Davis and John Haltiwanger, "Labor Market Fluidity and Economic Performance." Working Paper (National Bureau of Economic Research, 2014), available at <http://www.nber.org/papers/w20479>.
- 179 Ryan Decker and others, "The Role of Entrepreneurship in US Job Creation and Economic Dynamism," *Journal of Economic Perspectives* 28 (3) (2014): 3–24, available at <https://doi.org/10.1257/jep.28.3.3>; Ryan A. Decker and others, "Where Has All The Skewness Gone? The Decline In High-Growth (Young) Firms In The U.S." Working Paper (National Bureau of Economic Research, 2015), available at <http://www.nber.org/papers/w21776>.
- 180 Had women's labor force participation rates not increased steadily from the 1960s through the 1980s, the overall labor force participation rate would have begun falling much earlier. See Congressional Budget Office, "Factors Affecting the Labor Force Participation of People Ages 25 to 54" (2018), available at <https://www.cbo.gov/publication/53452>.
- 181 Raven Molloy, Christopher L. Smith, and Abigail Wozniak, "Declining Migration within the U.S.: The Role of the Labor Market." Working Paper (National Bureau of Economic Research, 2014), available at <http://www.nber.org/papers/w20065>.
- 182 Raven Molloy and others, "Understanding Declining Fluidity in the U.S. Labor Market" (Washington: Brookings Institution, 2016), p.223, available at <https://www.brookings.edu/wp-content/uploads/2016/03/molloy-textspring16bpea.pdf>.
- 183 John C. Haltiwanger and others, "Cyclical Job Ladders by Firm Size and Firm Wage," *American Economic Journal: Macroeconomics* 10 (2) (2018): 52–85, available at <https://doi.org/10.1257/mac.20150245>.
- 184 Giuseppe Moscarini and Fabien Postel-Vinay, "Did the Job Ladder Fail after the Great Recession?," *Journal of Labor Economics* 34 (S1) (2016): 55–93; Giuseppe Moscarini and Fabien Postel-Vinay, "The Cyclical Job Ladder," *Annual Review of Economics* 10 (1) (2018): 165–88, available at <https://doi.org/10.1146/annurev-economics-080217-053425>.
- 185 Philip Oreopoulos, Till von Wachter, and Andrew Heisz, "The Short- and Long-Term Career Effects of Graduating in a Recession," *American Economic Journal: Applied Economics* 4 (1) (2012): 1–29, available at <https://doi.org/10.1257/app.4.1.1>.
- 186 John Haltiwanger, Henry Hyatt, and Erika McEntarfer, "Who Moves Up the Job Ladder?," *Journal of Labor Economics* 36 (S1) (2017): S301–36, available at <https://doi.org/10.1086/694417>.
- 187 Ibid., p.S301.
- 188 Haltiwanger, Hyatt, and McEntarfer, "Who Moves Up the Job Ladder?"; Nellie Zhao, Henry Hyatt, and Isabel Cairo, "The U.S. Job Ladder and the Low-Wage Jobs of the New Millennium." 2016 Meeting Papers (Society for Economic Dynamics, 2016); Paul Osterman, *Broken Ladders: Managerial Careers in the New Economy* (Oxford, England: Oxford University Press, 1996).



- 189 Fatih Guvenen and others, "What Do Data on Millions of U.S. Workers Reveal about Life-Cycle Earnings Risk?" (New York: Federal Reserve Bank of New York, 2015).
- 190 Molloy and others, "Understanding Declining Fluidity in the U.S. Labor Market," p.224–25.
- 191 Rothstein, "Inequality of Educational Opportunity? Schools as Mediators of the Intergenerational Transmission of Income." Working Paper (National Bureau of Economic Research, 2018), p.4.
- 192 John J. Donahue and James Heckman, "Continuous Versus Episodic Change: The Impact of Civil Rights Policy on the Economic Status of Blacks," *Journal of Economic Literature* 29 (4) (1991): 1603–43; Peter Gottschalk, "Inequality, Income Growth, and Mobility: The Basic Facts," *Journal of Economic Perspectives* 11 (1997): 21–40; David Card and Alan Krueger, "Minimum Wage and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania," *American Economic Review* 84 (4) (1994): 772–93.
- 193 William A. Darity Jr. and Patrick L. Mason, "Evidence on Discrimination in Employment: Codes of Color, Codes of Gender," *The Journal of Economic Perspectives* 12 (2) (1998): 67.
- 194 Irene Browne and Joya Misra, "The Intersection of Gender and Race in the Labor Market," *Annual Review of Sociology* 29 (2003): 487–513; John B. Davis, "Stratification Economics and Identity Economics," *Cambridge Journal of Economics* 39 (5) (2015): 1215–29; William A. Darity, Jr., Darrick Hamilton, and James B. Stewart, "A Tour de Force in Understanding Intergroup Inequality: An Introduction to Stratification Economics," *Review of Black Political Economy* 42 (1–2) (2015): 1–6.
- 195 Marianne Bertrand and Sendhil Mullainathan, "Are Emily and Greg More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination," *The American Economic Review* 94 (4) (2004): 991–1013.
- 196 Devah Pager, Bart Bonikowski, and Bruce Western, "Discrimination in a Low-Wage Labor Market: A Field Experiment," *American Sociological Review* 74 (5) (2009): 777–99, available at <https://doi.org/10.1177/000312240907400505>.
- 197 Claudia Goldin, "From the Valley to the Summit: The Quiet Revolution That Transformed Women's Work." Working Paper (National Bureau of Economic Research, 2004); Francine D. Blau and Lawrence M. Kahn, "Changes in the Labor Supply Behavior of Married Women: 1980–2000" (Cambridge, MA: National Bureau of Economic Research, 2005).
- 198 Sarah Jane Glynn, "Gender Wage Inequality: What We Know and How We Can Fix It" (Washington: Washington Center for Equitable Growth, 2018).
- 199 Francine D. Blau and Lawrence M. Kahn, "The Gender Wage Gap: Extent, Trends, and Explanations." Working Paper (National Bureau of Economic Research, 2016), available at <http://www.nber.org/papers/w21913>.
- 200 Claudia Goldin, "A Grand Gender Convergence: Its Last Chapter," *American Economic Review* 104 (4) (2014): 1091–1119; Claudia Goldin, Lawrence F. Katz, and Ilyana Kuziemko, "The Homecoming of American College Women: The Reversal of the College Gender Gap," *Journal of Economic Perspectives* 20 (4) (2006): 133–56.
- 201 Francine D. Blau and Lawrence M. Kahn, "Female Labor Supply: Why Is the US Falling Behind?," *The American Economic Review* 103 (3) (2013): 251–56.
- 202 Heather Boushey, *Finding Time: The Economics of Work-Life Conflict* (Cambridge, MA: Harvard University Press, 2016), available at <http://www.hup.harvard.edu/catalog.php?isbn=9780674660168>.
- 203 Arne L. Kalleberg, *Good Jobs, Bad Jobs*; Hacker and Jacobs, "The Rising Instability of American Family Income, 1969–2004"; Hacker, *The Great Risk Shift*.
- 204 Laura T. Hamilton, "More Is More or More Is Less? Parental Financial Investments during College," *American Sociological Review* 78 (1) (2013): 70–95.
- 205 Jason N. Houle, "Disparities in Debt: Parents' Socioeconomic Resources and Young Adult Student Loan Debt," *Sociology of Education* 87 (1) (2014): 53–69.
- 206 K. Snellman and others, "The Engagement Gap: Social Mobility and Extracurricular Participation among American Youth," *The ANNALS of the American Academy of Political and Social Science* 657 (1) (2015): 194–207, available at <https://doi.org/10.1177/0002716214548398>
- 207 Sheldon Danziger and Cecilia Elena Rouse, *The Price of Independence: The Economics of Early Adulthood*, Multi-City Study of Urban Inequality (New York: Russell Sage Foundation, 2008).
- 208 Jennifer M. Silva, *Coming Up Short: Working-Class Adulthood in an Age of Uncertainty* (Cambridge, England: Oxford University Press, 2013).
- 209 Pfeffer and Hällsten, "Mobility Regimes and Parental Wealth," p.6.
- 210 Katharine G Abraham and others, "Behavioral Effects of Student Loan Repayment Plan Options on Borrowers' Career Decisions: Theory and Experimental Evidence." Working Paper (National Bureau of Economic Research, 2018), p.1, available at <https://doi.org/10.3386/w24804>.
- 211 Stephanie Chapman, "Student Loans and the Labor Market: Evidence from Merit Aid Programs" (Washington: Washington Center for Equitable Growth, 2016), p.33, available at <http://equitablegrowth.org/equitableblog/student-loans-and-the-labor-market-evidence-from-merit-aid-programs/>.
- 212 Greg Kaplan, "Moving Back Home: Insurance against Labor Market Risk," *Journal of Political Economy* 120 (3) (2012): 446–512, available at <https://doi.org/10.1086/666588>.
- 213 Rauscher, "Passing It On."



# Equitable Growth

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