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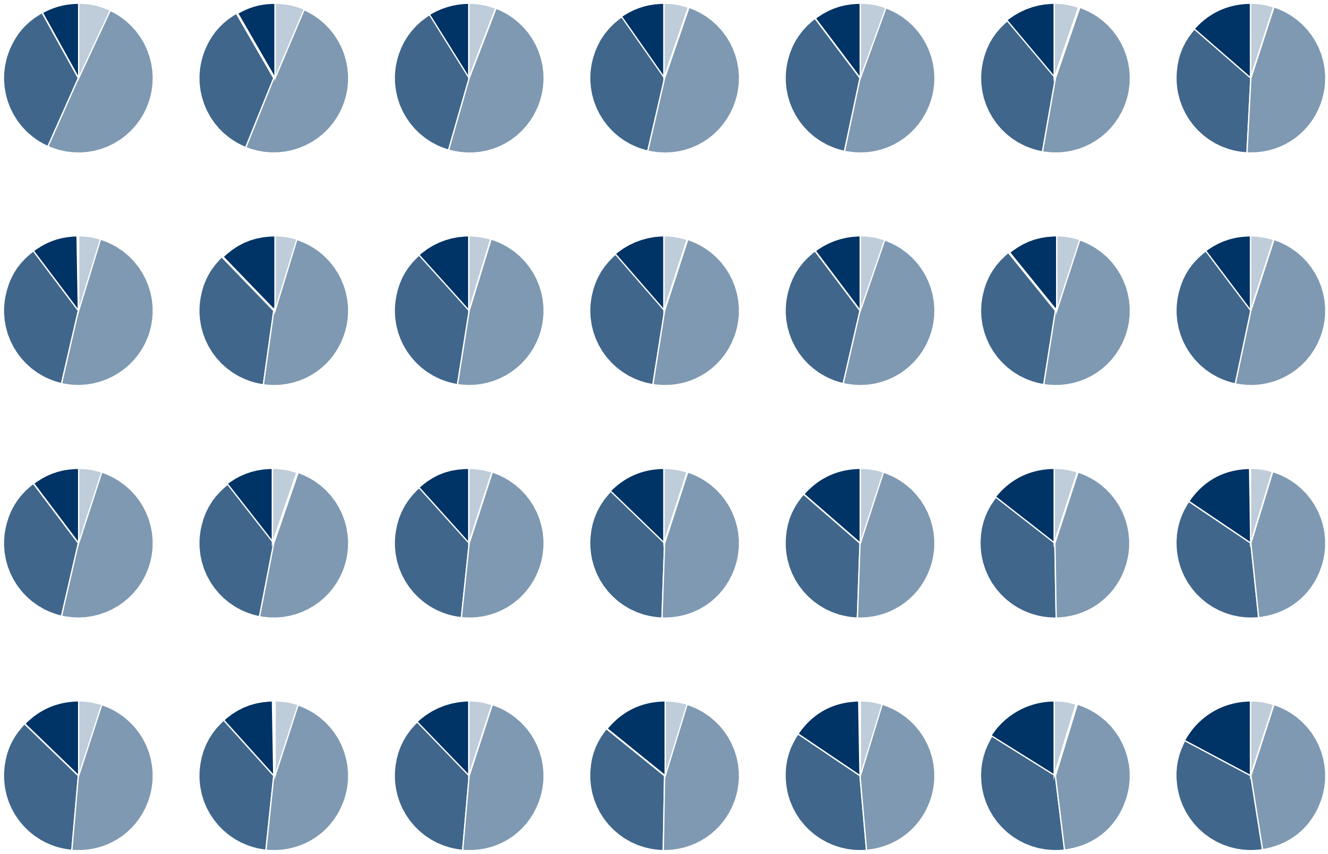

The American Middle Class, Income Inequality, and the Strength of Our Economy

New Evidence in Economics

Heather Boushey and Adam S. Hersh May 2012

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Contents

Introduction and summary

To say that the middle class is important to our economy may seem noncontroversial to most Americans. After all, most of us self-identify as middle class, and members of the middle class observe every day how their work contributes to the economy, hear weekly how their spending is a leading indicator for economic prognosticators, and see every month how jobs numbers, which primarily reflect middle-class jobs, are taken as the key measure of how the economy is faring. And as growing income inequality has risen in the nation's consciousness, the plight of the middle class has become a common topic in the press and policy circles.

For most economists, however, the concepts of "middle class" or even inequality have not had a prominent place in our thinking about how an economy grows. This, however, is beginning to change. One reason for the change is that the levels of inequality and the financial stress on the middle class have risen dramatically and have reached levels that motivate a closer investigation. The interaction and concurrence of rising inequality with the financial collapse and the Great Recession have, in particular, raised new issues about whether a weakened middle class and rising inequality should be part of our thinking about the drivers of economic growth.

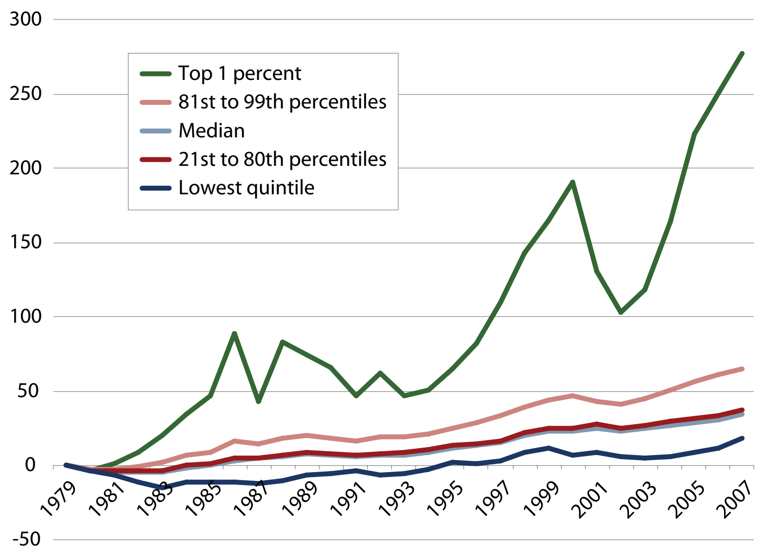
Over the past several decades, the United States has undergone a remarkable transformation, with income growth stalling for the middle class while the incomes of those at the top continued to rise dramatically compared to the rest of the working population. Between 1979 and 2007, the last year before the Great Recession, median family income rose by 35 percent, while incomes for those at the 99th percentile rose by 278 percent. (see Figure 1) Families in the middle class have also pulled away from those at the bottom, but achieved these modest income gains only by working longer hours, increasing their labor supply—particularly among wives and mothers—and increasing household debts to maintain consumption as wages failed to keep pace with inflation.

In 1979 the middle three household income quintiles in the United States—that is, the population between the 21st and 80th percentiles on the income scale—earned 50 percent of all national income. But by 2007 the income share of those in the middle shrank to just 43 percent. Evolution of the Gini coefficient, which measures how much a distribution deviates from complete equality, also shows a similar pattern of rising inequality. Between 1979 and 2007 the Gini coefficient including capital gains, in the United States climbed from 48 to 59, ranking the United States in the top quarter of the most unequal countries in the world.[1]

FIGURE 1

Cumulative growth in average after-tax income, by income group, 1979-2007

Between 1979 and 2007, the last year before the Great Recession, median family income rose by 35 percent, while incomes for those at the 99th percentile rose by 278 percent



Source: Congressional Budget Office, "Trends in the Distribution of Household Income from 1979-2007," (2011).

Theories of economic growth, however, do not typically include models for investigating the implications of changes in the strength of the middle class. If you ask an economist "what makes an economy grow?", they will almost certainly begin their answer by pointing to an economy's level of knowledge about how to produce goods and services (knowledge and technology), the skills of the potential labor force (human capital) and the number of workers, and the stock of physical capital (factories, office buildings, infrastructure). The economy grows when technological improvements or investments in human or physical capital boost productivity, when the labor force increases, or when investment in physical capital adds to the economy's productive stock—and thus total output expands.

But this begs the question: What boosts productivity or creates incentives to invest? Economists differ in their specific answers to these questions, but the different theories point to five primary factors:

- The **level of human capital** and whether talent is encouraged to boost the economy's productivity

- **Cost of and access to financial capital**, which allow firms and entrepreneurs to make real investments that create technological progress to use in the economy

- **Strong and stable demand**, which creates the market for goods and services and allows investors to plan for the future

- The **quality of political and economic institutions**, including the quality of corporate governance as well as political institutions and a legal structure that enforces contracts

- **Investment in public goods, education, health, and infrastructure**, which lays the foundation for private-sector investment[2]

Strong empirical evidence in economics and other social sciences suggests that the strength of the middle class and the level of income inequality have an important role to play for each of these five factors boosting productivity and spurring investment.

The research for this project began with a series of interviews and a national conference with leading U.S. economists to learn their views about the mechanisms through which income inequality and the strength of the middle class affect economic growth and economic stability.[3] This paper summarizes what we have learned from these conversations, alongside our analysis of the economic research in the academic arena. We have identified four areas where literature points to ways that the strength of the middle class and the level of inequality affect economic growth and stability:

- A strong middle class promotes the development of human capital and a well-educated population.
- A strong middle class creates a stable source of demand for goods and services.
- A strong middle class incubates the next generation of entrepreneurs.
- A strong middle class supports inclusive political and economic institutions, which underpin economic growth.

We detail the evidence for these four points in the main pages of our paper, but briefly we encapsulate the economic research here. As we will demonstate, the ways in which a strong middle class is important for economic growth are both interrelated and mutually reinforcing.

A strong middle class promotes the development of human capital and a well-educated population

Economists agree that human capital—knowledge, skills, and the health to put those to work—is a key component of growth. To be most effective, opportunities to build human capital must be broadly available in the population. For the nation to make the most of its human potential, a child from a low- or moderate-income background needs his or her talents and abilities to be nurtured and matched to the most suitable occupation. The evidence is fairly clear that inequality and the strength of the middle class have direct effects on access and use of human capital:

- As the United States has grown more unequal in terms of income, there has been both a decrease in the rate of improvement in educational outcomes and these outcomes have become more unequal.

- The data point to the conclusion that human capital, and the higher incomes that go along with it, are increasingly passed from parents to offspring through social (not biological) channels. This means that individuals are being rewarded for privileges conveyed by their parents' socioeconomic status, not just their productivity characteristics, which will pull U.S. economic growth down.

- The contribution of human capital to growth is not only about access to education: Individuals also must be able to make use of their skills, matching talent to appropriate occupations. If inequality stands in the way of those matches, then it is having a pernicious effect on our nation's growth path.

A strong middle class creates a stable source of demand for goods and services

A strong middle class gives certainty to business investors that they will have a market for their goods and services. Supply-side thinkers argue that light tax and regulatory policies will lead to high investment, employment, and economic growth. But many economists acknowledge that an increase in supply does not automatically lead to an increase in aggregate demand. Rather, economies may have prolonged periods of unemployment and underutilized capital, which can be both the cause and the result of depressed and unstable demand.

If demand matters for economic growth, the question is then, how do high inequality and the strength of the middle class impact demand? Economists have developed a number of theories about how inequality affects demand:

- As more of the nation's economic gains go to those at the top of the income distribution—and if those families have a lower propensity to consume—then this will pull down demand from potentially higher levels given more equitable distribution.

- Heightened inequality and a squeezed middle class leads families to either consume less, lowering demand, or put in place short-term coping strategies, such as borrowing more, which has long-term implications for growth and stability.

A strong middle class incubates the next generation of entrepreneurs

Entrepreneurship is a matter of taking risks, and there are a variety of ways that a strong middle class and less inequality can create the kinds of conditions that reduce the risks of innovators and give them the skills to start up a business:

- Middle-class families can provide entrepreneurs with the financial security and access to credit so they have the time to nurture their ideas and take the risk to start a new business.

- An individual in a middle-class family is more likely than someone from a low-income background to have access to the kind of education that provides the training and skills necessary to start a business.

- As described in above, less inequality is associated with greater macroeconomic stability, which allows entrepreneurs to make informed investment decisions with greater confidence about economic conditions and the risks of starting a business.

A strong middle class supports inclusive political and economic institutions, which underpin economic growth

This dynamic of a strong middle class boosts efficient and honest governance of an economy's enterprises. In the U.S. context, less inequality and a stronger middle class support more inclusive political institutions and steer politics away from only responding to an economically powerful elite. This provides the foundation for more inclusive economic institutions, which, in turn, promote growth. This includes encouraging effective governance that supports broad-based economic growth through establishing secure property rights; investing in public goods and quasi-public goods, such as education, health, and infrastructure; and a level playing field, including transparent and accountable legal and regulatory structures. A strong middle class prevents the concentration and exploitation of power that led to entrenched privilege in aristocracies—the antithesis of dynamic societies throughout human history.

The evidence of the role of the middle class in economic growth

To be clear, we do not assert that the middle class is the only factor affecting economic growth. The price of capital, taxes, resource endowments, luck, chance, and other causes all have important roles to play. But after surveying the available theories and evidence, it is difficult to point to anything else so central to so many causes of economic growth as a strong middle class. This paper explains the most current, empirically grounded economic evidence showing how income distribution affects the efficient functioning and growth potential of our economy.

In this paper the concepts of "inequality" and "middle class" are broadly construed. When we say "middle class," we mean more than just families who are, broadly, in the middle of the income distribution. By middle class, we do not mean rich, but we do mean families with enough financial security to make ends meet, provide investments in the next generation's success, and have a little margin of safety to boot. A middle-class family has some economic security, be that a good job with health insurance and a retirement plan, or some savings in the bank to tide them over in an emergency, send a child to college, or even float a loan to a family member who wants to start up a business. This is consistent with individuals' perceptions: Surveys show that most Americans believe they are in the middle class, from those generally in the 20th or 30th percentile of the income distribution to the 80th and even above.[4] Our conception of inequality is tied mostly to income, although there is a high degree of overlap between individuals with very high incomes and individuals with high net worth.[5]

Throughout the paper we examine the ways that either category affects economic growth. There are distinct ways in which each can relate to the growth potential for an economy. The security that a middle-class family provides goes beyond wages to include a sense of a longer time horizon for economic decision making than a family hovering on the edge of poverty, or the way that a middle-class child may be able to pursue a field of study suited to their interests. Nevertheless, given the interrelationship and overlap between the two, it makes sense to include both in our thinking as we discuss causal relationships with macroeconomic performance.

Finally, we wish to make a note on our approach to the subject of the relationship of inequality and the strength of the middle class and U.S. economic growth. There is, of course, a rich literature on the relationship between inequality and growth. (see box on next page) Although there are many conflicting views, there is ample evidence that inequality can, in fact, hurt growth under many circumstances. But this literature focuses mostly on the experience of developing countries, and its applicability to the challenges currently facing the United States is not entirely clear.

The United States is a developed economy at the edge of the technological frontier, with the highest levels of income inequality it has ever seen. Panel data studies analyzing how inequality affects growth across a range of countries are unlikely to tell us much about this unique situation. Thus, we have taken a different approach in this investigation. Instead of looking broadly at analyses of inequality and growth in other countries, we have looked at the evidence regarding the specific ways in which inequality and the strength of the middle class might affect economic growth in the U.S. context. If, in fact, there are specific ways that growth is affected, then it is reasonable to assume that there is a relationship overall.

At the end of the day, the conclusions that economists come to about what makes an economy grow are important for how we understand the complexities of an economic system. Economists are often seen as the arbiters of credibility about what is good for the economy. Thus, sifting through how disparate pieces of the economic evidence fit together to tell a cohesive story about how inequality and the middle class affect economic growth is a critical and timely task. We turn now to examining in detail the leading channels through which the middle class impacts economic growth.

Inequality and growth: What have we learned?

Economists have long debated the effects of income inequality on economic growth. In 1975 Yale University economist Arthur Okun argued that income equity and economic efficiency are in tension because inequality provides incentives for work and investment, and additional inequality provides additional incentives. There is, in his words, a "big tradeoff" between the two. In his estimation income inequality is a force for economic good. However, empirical research over the past two decades looking across countries or across U.S. states shows a mix of results about exactly what effect inequality has on growth.

Much research conflicts with Okun's tradeoff hypothesis, instead showing that inequality is detrimental to long-term economic growth, although this is not a unanimous conclusion of the literature. Ultimately, data and methodological issues mean that analyses are too imprecise to deliver definitive answers to this old and central question in economics research. We believe a different approach that identifies direct causal mechanisms between inequality and the factors known to be critical to economic growth is needed to understand this relationship.

In an early attempt to summarize the research, Roland Benabou of Princeton University surveyed 23 studies analyzing the relationship between inequality and growth. Benabou found that about half (11) of studies showed inequality has a significant and strongly negative affect on growth; the other half (12) showed either a negative but inconsistently significant relationship or no relationship at all. None of the studies surveyed found a positive relationship between inequality and growth.[6]

Similarly, World Bank economists Klaus Deininger and Lyn Squire, as well as Nancy Birdsall and Juan Luis Londono, president of the Center for Global Development and an economist for the National University of Colombia, respectively, found asset inequality to be negatively related to economic growth.[7] And Danny Quah of the London School of Economics found no consistent statistical relationship between inequality and growth.[8]

Others find a more nuanced relationship. An oft-cited study by Harvard University's Robert Barro finds mixed evidence of a relationship between inequality and growth, including evidence of a nonlinear (quadratic) relationship such as that initially hypothesized by Nobel Prize winner Simon Kuznets.[9] This result could suggest that inequality may be negatively associated with growth in poor countries and positively associated with growth in rich countries. Francisco Rodriguez of Wesleyan University characterizes Barro's results as indicating that higher inequality may boost growth in the short run but is bad for economic growth in the long run.[10]

A number of studies specifically test the relationship between inequality and growth in the United States. States are not ideal units of observation because, among other things, the political boundaries do not necessarily coincide with regional economies. Still, much can be learned from such analysis. Ugo Panizza of the U.N. Conference on Trade and Development finds a negative relationship between inequality and growth.[11] In a separate study examining data for 48 states from 1960 to 2000, however, Mark Partridge of The Ohio State University finds that in the short run inequality is positively related to growth, while in the long run the income share of the middle class is positively associated with growth, seeming to confirm Rodriguez's observation from above.[12] Mark Frank and Donald Freeman of Sam Houston State University, using dynamic panel data methods and panel cointegration analysis, find a strong, negative relationship between inequality and growth.[13]

In a new book, *Just Growth: Inclusion and Prosperity in America's Metropolitan Regions*, Chris Benner, associate professor of community and regional development at University of California-Davis, and Manuel Pastor, professor of American studies and ethnicity at University of Southern California, show that economic equity within regional economies is linked to regional prosperity. They show with both quantitative and qualitative methods why and how regional economic growth is associated with greater equity across metropolitan regions in the United States, concluding that growth with equity is "not a contradiction but a necessity."[14]

Benner and Pastor's work is consistent with that of the Federal Reserve Bank of Cleveland where economists find that a skilled workforce, high levels of racial inclusion, and progress on income equality correlate strongly and positively with economic growth.[15]

Research using panel data faces concerns about data quality and statistical methodology. As Harvard's Dani Rodrik underscores, methods for analyzing cross-sectional time series data are ill-suited to address the fundamental questions about the relationship of government policy and inequality with growth outcomes.[16] For this, we need to understand the mechanisms through which inequality and the strength of the middle class affect the economy, both in terms of economic stability and economic growth. This is the subject of the main pages of this report.

The relationship between a strong middle class, the development of human capital, a well-educated citizenry, and economic growth

The economic literature is clear that human capital is one of the most important factors driving economic growth, primarily through its effects on productivity and innovation. Empirical evidence from multicountry analyses routinely finds that human capital investment indicators, such as the level of high school enrollment, are a leading correlate of growth.

In a widely regarded 1992 study, Harvard University economist Gregory Mankiw, University of California-Berkeley economist David Romer, and Brown University economist David Weil found that human capital investment had a roughly equivalent or larger effect on economic growth rates than did investment in physical capital.[17] Consistent with this, Harvard economist Robert Barro and Korea University economist Jong-Wha Lee found that among the developed nations in the Organisation for Economic Co-operation and Development, the positive effect of human capital on economic growth was three times larger than the effect for physical investment, concluding that "human capital, particularly attained through education, is crucial to economic progress."[18]

A well-educated population is critical to U.S. competitiveness. Economists have long argued that the United States has historically had a strong economy because the population is highly educated relative to other nations, because individuals have been able to match their skills and talents to opportunities, and because we have cultivated—and prized—innovators.[19] Harvard economists Claudia Goldin and Lawrence Katz observe that U.S. college graduation rates increased dramatically throughout the first half of the 20th century but have stagnated since the 1950s.[20] Yet McKinsey Consulting Group researchers conclude that gaps in access to education are seriously hurting the United States:

If the United States had in recent years closed the gap between its educational achievement levels and those of better-performing nations such as Finland and Korea, GDP in 2008 could have been $1.3 trillion to $2.3 trillion higher. This represents 9 to 16 percent of GDP.[21]

So what does economics tell us about how individuals build up human capital and how they use it? And what role does the level of inequality and the strength of the middle class play in this process?

First, rising inequality has indeed been associated with slower growth in educational attainment overall and increasing disparities in access to human capital. There is a growing body of research that shows that where a family sits on the income spectrum affects a child's ability to access and make use of human capital, and that this starts long before kindergarten and follows children throughout their academic careers.

The reasons why rising inequality and a shrinking middle class affect educational outcomes include the reality that strapped middle- and lower-class families do not have the same time or resources to invest in their children's human capital. Further, struggling middle-class families may be forced into thinking in terms of shorter financial time horizons and making choices between wage work and unpaid caring work at home. Making an investment in education requires not only the resources but also the ability to cope with the long time horizon of staying in school and building skills until the investment pays off.

Making an investment in education requires not only the resources but also the ability to cope with the long time horizon of staying in school and building skills until the investment pays off.

Second, heightened inequality also has been associated with an increasing tendency for human capital and a higher income to be passed down within families, which means that individuals are being rewarded for who their parents are, not their productivity characteristics or effort. This reduces the incentives for those from non-elite backgrounds to accumulate human capital and provide high effort. To the extent that income inequality and a weak middle class are leading to decreased economic mobility, this provides evidence that there may be a serious underutilization of talent due to the growing education gap between low-income and high-income children. It is clearly a problem if children's futures, and their ability to contribute to the economy, are being decided by their parents' economic status instead of the natural talents.

Third, the contribution of human capital to growth is not only about access to education, however. People with education must be able to make use of those skills, matching talent to appropriate occupations. Inequality or a weak middle class can mean that workers do not have the security to make career or even job switches that may be better matches. Inequality can reduce worker motivation and psychological well-being, reducing productivity. Management practices that support inequality or seek to weaken the middle class can erode social trust, which can reduce on-the-job productivity.

Limiting access to education or economic opportunity means that society fails to put this talent to work—and thus loses potential economic growth—that would have been created if there were truly equality of opportunity. According to data from the U.S. Department of Education, 70 percent of high-scoring students from low-income backgrounds and 50 percent of high-scoring students from middle-income backgrounds do not pursue a college degree, compared to only a quarter of high-scoring high-income students, indicating a massive waste of human potential.[22] This squandering of potential is especially pernicious since high levels of inequality in the United States have been associated with very high poverty rates, relative to other developed nations. Poor families in the United States get inadequate access to proper nutrition, health, and education, all of which affect their life chances as well as our nation's overall productivity and growth.

We now look more in-depth at the available evidence.

Rising inequality has been associated with slower growth in educational attainment overall and increasing inequality in access to human capital

There is empirical evidence that income inequality limits children's access to human capital both directly from their parents, as well as through public education institutions. To produce children with skills and human capital, parents have to make investments in their child's development and education and researchers are showing that what happens before a child even enters school is critical to future educational (and career) success.

University of Chicago economist and Nobel Laureate Gary Becker theorized that families invest in children based on the expected returns to these investments and that the returns differ across the income distribution. In Becker's formulation, poorer families have incentives to have more children but to invest less in child-rearing and subsequent human capital formation, while richer families have incentives to have fewer children but to invest more in their children's human capital.

This would mean that as inequality rises and the middle class weakens in a given society, there would be less investment in human capital overall.

Even if, however, families want to invest in their children's education, notwithstanding Becker's point, there are practical limits on the ability of many to do so. Education is expensive. Families have to pay for most of the expenses of early childhood and postsecondary education, and while kindergarten-through-12th-grade education is ostensibly free, the quality varies tremendously depending on a family's ability to live in a community with good schools.[23] University of Pennsylvania economist Flavio Cunha and University of Chicago economist and Nobel Laureate James Heckman have summarized these findings by saying, "The best documented market failure in the life cycle of skill formation in contemporary American society is the inability of children to buy their parents or the lifetime resources that parents provide."[24]

Yet many parents, especially single parents, and families where both parents work are strapped in terms of time and resources to invest in their children's human capital. Further, the public K-12 education system has inequality built into its financing structure, so children who live in the richest neighborhoods attend the best-funded schools.

Most low- and middle-income families do not have a full-time, stay-at-home parent and in many families, parents work nontraditional schedules, which mean they may not be able to be home when children are home from school. Mothers are now breadwinners or co-breadwinners (bringing home at least a quarter of the family's earnings) in approximately two-thirds of families with children.[25] This increase in paid hours of work has occurred across the income distribution. Between 1979 and 2000 annual combined hours of work for families with children increased by 18.4 percent for families in the second-lowest income quintile, by 13 percent for families in the top income quintile, and by 15.8 percent for all families.[26] The greater hours at work have left families struggling to cope with care issues, both for children, the sick, and the elderly.

In addition to more engagement in paid employment, low- and moderate-income working parents often struggle with conflicts between inflexible workplaces and their care responsibilities. Low- and moderate-income workers are less likely than higher-paid workers to be offered a flexible schedule or to have access to job-protected, paid time off for care giving. These workers are more likely to struggle with nontraditional work-shifts that do not allow them to be home in the evening to go over homework,[27] and jobs that do not provide paid sick days that they can use to care for sick children, which research shows speeds children's recovery and, in turn, means that children can get back into school, ready to learn faster.[28]

Further, low-income children may also be stuck in their own time-bind. Low-income children are more likely to need to work to help support their family or use their time to care for other family members while a parent works when a family cannot afford to purchase care. Even in the United States, for many children, working or caring for a sibling while a parent is at work prevents them from attending to their studies. Among families participating in state welfare programs, increased reliance on sibling care has been shown to hurt adolescent schooling outcomes.[29]

Yet there is a large and growing body of evidence that the quality of care for children in the first years of life is critical for their future academic (and career) success.[30] A series of new books from the Russell Sage Foundation documents the importance of income inequality on economic mobility, paying close to attention to the preschool years. In a volume of the series edited by economists Greg J. Duncan, University of California-Irvine, and Richard J. Murnane of Harvard, authors Duncan and Katherine Magnuson, professor at the School of Social Work at the University of Wisconsin–Madison, find that, on average, among kindergarteners, children from low-income families exhibit weaker academic and attention skills, as well as a higher probability of demonstrating antisocial behavior compared to children from high-income families. This disadvantage that is seen among kindergarteners is correlated with future academic success for these children. Duncan and Magnuson conclude that this pattern "suggests that differences in early skills and behaviors related to family income may be important mechanisms through which socioeconomic status is transmitted from one generation to the next."[31]

Perhaps most stunningly, there is evidence that low-income children who demonstrate aptitude for postsecondary education do not have the same access as children from higher-income backgrounds.

In a separate study, researchers at the Brookings Institution are tracking what they term the "social genome," mapping when and how children drop off the path to higher education. They have identified, among other things, that being born into a nonpoor, two-parent family; being ready for school at age 5; and mastering core academic and social skills by age 11 are all factors that predict a child's eventual economic success.[32] These benchmarks identified by Brookings economist Isabelle Sawhill and her colleagues are highly correlated with parental involvement and quality of child care, especially in the preschool years.

Getting children into high-quality early childhood education matters for their eventual educational success. James Heckman, Nobel laureate and University of

Chicago economist, has researched the effects of intensive pre-education pilot programs on low-income children through adulthood and finds that children who participate in these programs do better in school, are more likely to graduate and attend college, and are less likely to smoke, use drugs, be on welfare, or become teenage mothers.[33] Similarly, research conducted by the National Institute of Child Health and Human Development Early Childcare Research Network finds that the quality of early child care was the most consistent predictor of young children's behavior.[34] Other research also shows that children who receive high-quality child care have better developmental outcomes in early childhood, including better cognitive, language, and communication development, which, in turn, promotes learning.[35]

Low- and moderate-income families are much less likely, however, to have access to high-quality child care and preschool relative to higher-income families. The Center for American Progress, led by its Senior Economist Heather Boushey (a co-author of this report), conducted a detailed analysis of the Survey of Income and Program Participation, based on data from the late 2000s, finding that (all values are in March 2009 dollars):

- Low-income families pay around $2,300 a year per child for child care for children under age 6, or about 14 percent of their income.

- Middle-income families pan an average of $3,500 a year, or 6 percent to 9 percent of their income.

- Upper-income professional families pay about $4,800 a year, or just 3 percent to 7 percent of their income.

While low-income children may be eligible for subsidies, copayments can still be fairly high as a percentage of income and waiting lists are long and growing.[36] Further, lower-income families are more likely than high-income ones to rely on informal rather than formal care, which may not be as educationally enriching.[37] According to a report by the National Institute for Early Education Research, only 40 percent of 3-year-old children from low- and moderate-income families are enrolled in pre-kindergarten, while 80 percent of 3-year-old children from the top income quintile are enrolled in pre-K.[38]

This shows that two levels of effect are at play. First, low-income families tend to use child care that is less expensive and therefore likely of lower quality. Second, even at a lower price point, child care is a higher share of family incomes at lower income levels.

Inequality also affects the opportunities for quality K-12 education available to children from low- and middle-income families, and subsequent achievement. Although differences in education outcomes have long been shown to vary by family income levels, Stanford University education researcher Sean Reardon finds that the achievement gap between high- and low-income groups is 30 percent to 40 percent larger today than it was a generation ago.[39] Rising income inequality is the main, though not the only, culprit. This yawning achievement gap is present when children first enter kindergarten and persists as children progress through the educational ranks.

Political scientist David Madland and his colleague Nick Bunker of the Center for American Progress found that U.S. states with a larger share of income going to middle-class families exhibit higher achievement in mathematics on the National Assessment of Educational Progress.[40] Madland and Bunker's result is due in part to states with a stronger middle class providing more fiscal support for public education (characteristic support for institutions public goods investment, as discussed below), but also due to independent social factors related to the level of inequality.[41] This is consistent with other research, which finds that countries with lower levels of economic inequality do better academically than countries with greater levels of economic inequality.[42]

What is true for the United States seems to be true for other countries as well. Economists Ming Ming Chiu and Lawrence Khoo of the Chinese University of Hong Kong and the City University of Hong Kong, respectively, show that countries with higher levels of inequality fare worse in terms of test scores on academic achievement tests.[43] Oakland University sociologist Dennis Condron finds that countries with lower Gini coefficients (more income equality) tend to score higher on the Organisation for Economic Co-operation and Development's standardized Program for International Student Assessment, or PISA, tests.[44]

Further, while low- and moderate-income families struggle to find the time and resources to invest in their children's education, high-income families are able to keep upping the investment. Private tutors, music or dance lessons, sports teams, or college entrance exam preparation classes are all more common among high-income families who can afford such extras. Then, once high-income children are in high school or college, they can afford to take unpaid internships, which are increasingly the precursor to stable employment.[45] These extras up the ante for low- and middle-income students who find that they cannot compete.

There is also evidence that community or environmental factors associated with low-income status may constrain children's development. University of Southern California economist and political scientist Manuel Pastor documents that children of color in the Los Angeles Unified School District suffer from exposure to harmful air toxins—exposure that is associated with relatively poor test scores.[46]

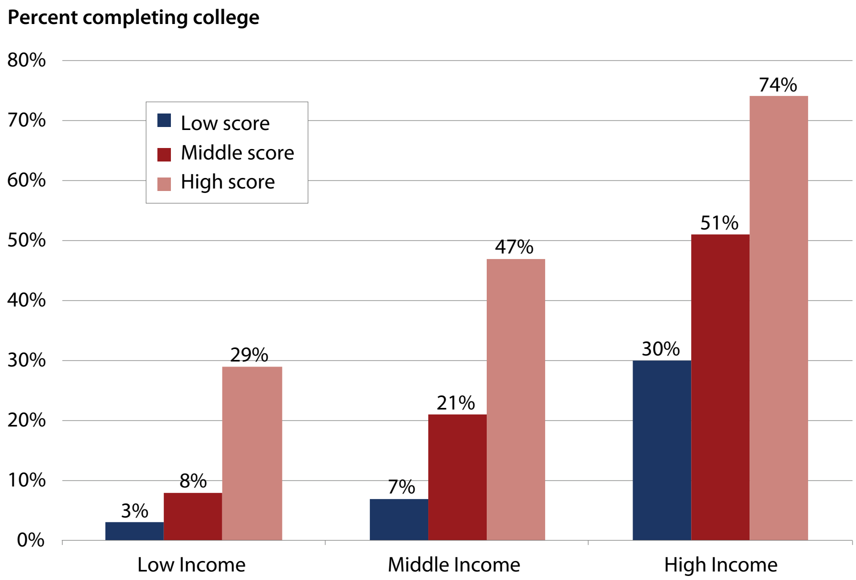
Perhaps most stunningly, there is evidence that low-income children who demonstrate aptitude for postsecondary education do not have the same access as children from higher-income backgrounds. The U.S. Department of Education reports that the probability that a top-scoring low-income student completes college is about the same as the probability that a low-scoring high-income student does, while the probability that a top-scoring middle-income student completes college is about as likely as a middle-scoring high-income student.[47] (see Figure 2)

There is also evidence that low- and moderate-income children's access to a college education has fallen relative to high-income children's. A new paper by two University of Michigan economists, Martha Bailey and Susan Dynarski, finds that the fraction of children attending college has risen markedly for children from high-income families, but far less so for children from low- and moderate-income families. While college completion rates for children in families in the top income quartile rose by 18 percentage points between birth cohorts born in 1961–

FIGURE 2

College completion by income status and 8th grade test scores

A top-scoring, low-income student has about the same chance of completing college as a low-scoring, high-income student



Note: Low income is defined as the bottom 25%, middle income middle 50%, and high income is top 25%.
Source: Elise Gould, "High-scoring, low-income students no more likely to complete college than low-scoring, rich students, " The Economic Policy Institute Blog, March 9, 2012, available at http://www.epi.org/blog/college-graduation-scores-income-levels/. See also Mary Ann Fox, Brooke A. Connolly, and Thomas D. Snyder, "Youth Indicators 2005: Trends in the Well-Being of American Youth," (Washington, DC: U.S. Department of Education, 2005).

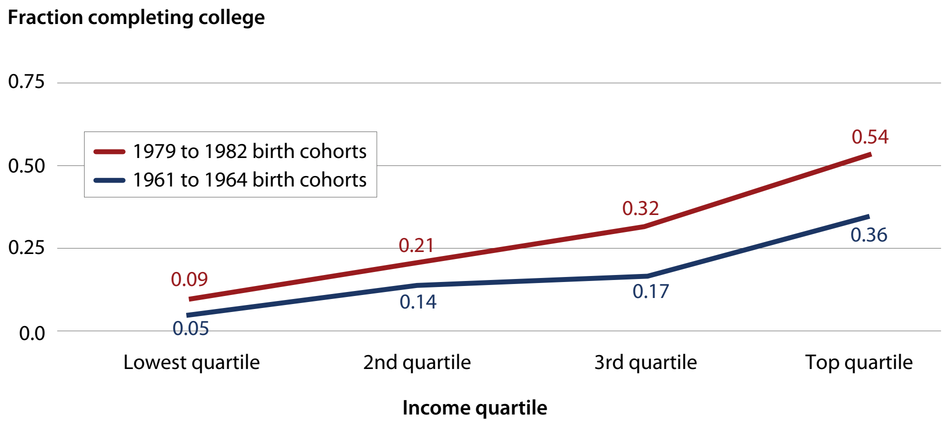
1964 and 1979–1982, the share completing college in all other income groups grew by less.[48] (see Figure 3)

A key factor in access to postsecondary education in the United States is cost, both in terms of the direct cost of school as well as the opportunity cost of not working and the ability to have the kind of long time horizon to make an investment in college. The high costs of college limit access for potentially college-bound children from low- and moderate-income families. Further, when children from nonwealthy backgrounds are able to attend college, they are more likely to have to take out loans.[49] Not all of those potential students see taking on such debt as worthwhile even though, on average, it is. Others, to cover their costs, have to work longer hours during the school year, which can limit their ability to concentrate on their studies or attend school full time.

FIGURE 3

Fraction of students completing college, by income quartile and birth year

The fraction of children from high-income families completing college has risen markedly, while the fraction of children from low- and moderate-income families has grown by much less



Source: Martha Bailey and Susan Dynarski, "Inequality in Postsecondary Education." In Greg Duncan and Richard Murnane, eds., Whither Opportunity? (New York: Russell Sage, 2011), p. 120.

This demonstrates the commitment among these students to getting a degree. But it also indicates how the combination of rising college costs and the shift in the composition of student aid toward loans rather than grants increases the relative cost burden for students from lower-income backgrounds.

Heightened inequality has also been associated with an increasing tendency for privileged access to human capital and higher incomes to be inherited

There is evidence that higher inequality and a weak middle class are creating a negative feedback loop in terms of access to education, which restrains development of human capital and therefore limits economic growth over the long term. Equality of opportunity is being diminished by the existence of highly unequal economic outcomes, which public educational institutions are increasingly not overcoming. Increasingly, there is evidence that one's family of origin, rather than talent, determines access to human capital. This is contrary to American tradition and values and dampens productivity. In a society where access is based on heredity, talented individuals may not invest in their human capital, as they see that only those who are well connected are able to move up, or may be unable to afford or access the kinds of opportunities that would make the most of their talent.

Equality of opportunity is being diminished by the existence of highly unequal economic outcomes, which public educational institutions are increasingly not overcoming.

The research described here finding that poor educational outcomes are closely related to parental income is consistent with a growing body of literature that shows income inequality is associated with less social mobility. Bhashkar Mazumder, a senior economist at the Chicago Federal Reserve, recently summarized the most recent evidence on U.S. economic mobility:

> *After staying relatively stable for several decades, intergenerational mobility appears to have declined sharply at some point between 1980 and 1990, a period in which both income inequality and the economic returns to education rose sharply. This finding is also consistent with theoretical models of intergenerational mobility that emphasize the role of human capital formation. There is fairly consistent evidence that intergenerational mobility has stayed roughly constant since 1990 but remains below the rates of mobility experienced from 1950 to 1980.*[50]

Another way of looking at the connection between today's income inequality and future economic mobility is through what has been called the Great Gatsby Curve, developed by Ottawa University economist Miles Corak. In Figure 4 the Gini coefficient, which is higher the more unequal a country's incomes are, is the x-axis. On the y-axis is the intergeneration earnings elasticity, which measures how important a parent's earnings are to predicting their child's future earnings (in this chart, Professor Corak only shows data for fathers and sons). A smaller elasticity means that father's and son's earnings are less correlated, which means there is greater economic mobility.[51] The curve shows that countries with higher income inequality today have less economic mobility—that is, income is more highly correlated across generations in highly unequal countries.

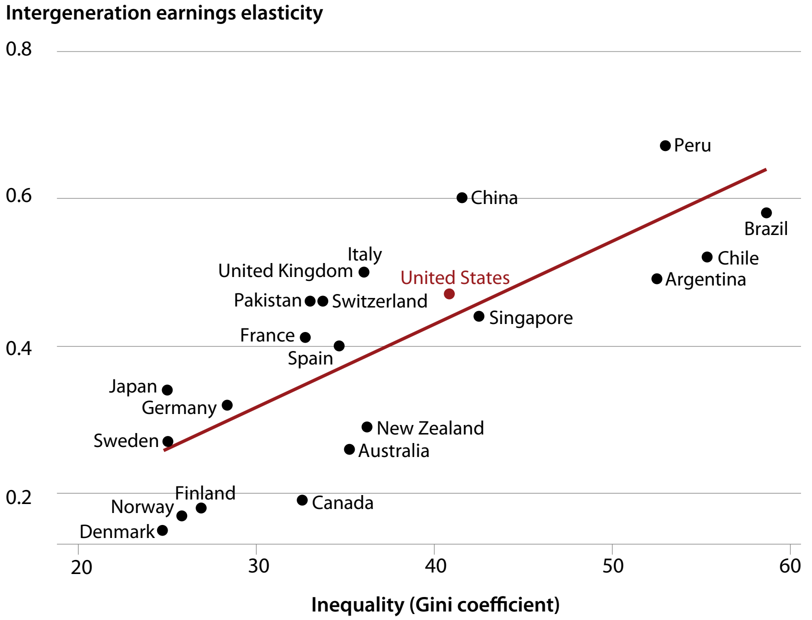
The United States is an outlier among developed nations in that we have higher inequality and, contrary to the myth, less social mobility. This chart suggests that equality of opportunity is undermined by high degrees of income inequality. In other words, an "equal opportunity" society is not compatible or consistent with a highly unequal society.

It is important to note that there is not solid empirical evidence showing that the poor are poor because of genetics. This was, for example, the argument of Charles Murray, fellow at the American Enterprise Institute, and Richard Herrnstein, behavioral economist at Harvard, in their 1994 book, *The Bell Curve*, which made the argument that the poor in the United States are poor because of low intelligence, not because they did not have access to education or job opportunities. That analysis was summarily rebutted by a special taskforce established by the American Psychological Association's Board of Scientific Affairs, which found no evidence of genetics determining differences in intelligence between groups.[52]

FIGURE 4

The Great Gatsby curve

An "equal opportunity" society is not compatible or consistent with a highly unequal society



Source: Miles Corak (2012), "Inequality from Generation to Generation: The United States in Comparison," in Robert Rycroft (editor), The Economics of Inequality, Poverty, and Discrimination in the 21st Century, ABC-CLIO, forthcoming.

Talented individuals must be able to make use of their skills

When New York Knicks point guard Jeremy Lin walked onto the basketball court in February 2012, he provided a much-needed productivity boost to the team. Lin became the first National Basketball Association player to score at least 20 points and have seven assists in each of his first five starts. The media quickly buzzed with questions about where he came from and why it had taken so long to identify his talent. Lin is the first U.S.-born Asian American to start for an NBA team, and the media quickly teased out a story of how racial bias had clouded the view of his talent. This Harvard-educated Asian American could be the most productive point guard for the Knicks. Yet up until that day in February, he had not been able to make the most of his skills and thus the teams he played for had been less productive than they could have been.

In most cases the underutilization of talent by an employer or talent insufficiently nurtured is not quite so obvious as it was in the case of Jeremy Lin. But it is a revealing case study that shows how boosting productivity largely depends on whether a firm—or society—can make the most of human skills and talent. Like the Knicks, when the U.S. economy fails to make the most of Americans' human capital potential, performance suffers. Even when individuals enjoy the opportunities to develop their human capital, there are a number of potential ways that inequality pressures—seen in an increasingly financially stressed middle class—can inhibit the ability of people and of the economy as a whole. A secure middle class, in contrast, can create an environment that accelerates the productivity of individuals and the economy overall. So let's review this dynamic briefly.

First, high inequality and a weak middle class means that many workers do not have the security to make the best career match and may be so insecure as to not job switch. For example, Massachusetts Institute of Technology economist Jonathan Gruber has documented how access to health insurance can create "job lock," whereby workers are less likely to change jobs for fear of not being able to access health insurance.[53] To the extent that middle-class jobs are associated with this kind of benefit, as the middle class is squeezed, this will lead to more of this kind of "lock."

Second, inequality may also distort the kinds of fields that students choose to study in ways that reduce long-term productivity. The extremely high incomes earned in the financial sector, for example, have created a strong incentive for an increasing share of the top students to enter that field, which means that fewer students are going into other occupations.[54] This may make sense for individual students, but for society overall it means that the most talented students are not entering fields that have a stronger, long-term impact on economic growth, such as basic science, engineering, education, public health, and research and development.[55] If inequality is taking the form of financial salaries rising disproportionate to other occupations and the best students choose finance, then this will affect the path our economy takes in the years to come as we see fewer bright minds focusing on, for example, medical or scientific breakthroughs.

Third, there is a growing body of behavior research that shows individuals tend to prefer more equitable outcomes; if that sense of fairness is regularly violated, it can reduce motivation. Although people have a sophisticated understanding of what is fair when it comes to assessing the causes of inequity, there is a growing body of experimental research indicating how high levels of income inequality can have perverse incentives on people's motivation to work and invest.

In one study, for example, when university employees learned that they were paid less than peers, their job satisfaction decreased and they looked for another job.[56] In an experiment modeling a tournament with differing levels of payout for winners, which the authors argue is akin to varying levels of income inequality, researchers found that tournaments with the highest levels of inequality produced less total output than tournaments with lower levels of inequality.[57] Similarly, Purdue University economists Timothy Cason and William Masters and Chapman University economist Roman Sheremeta have found that proportional prizes elicit more entry and more total achievement than the winner-take-all tournaments.[58]

What's more, economists have found that trust in the workplace, which is fostered by less inequality, incentivizes workers to do their best and be more productive.[59] Princeton economists Alan Krueger and Alexandre Mas examined whether a contentious strike and concessions for workers at Bridgestone/Firestone's Decatur, Illinois, plant reduced productivity and contributed to the recall of tires at its Firestone unit. Krueger and Mas find that when workers had to cooperate with replacement workers during the strike, errors on the production line increased.[60]

Economists have found that trust in the workplace, which is fostered by less inequality, incentivizes workers to do their best and be more productive.

This runs counter to the argument proposed by supply siders. Take former Bain Capital managing director Edward Conard's new book, *Unintended Consequences: Why Everything You've Been Told About the Economy Is Wrong*. In it he argues that we need even higher income inequality to motivate workers. In an interview for *The New York Times*, Conard said:

> *"When I look around, I see a world of unrealized opportunities for improvements, an abundance of talented people able to take the risks necessary to make improvements but a shortage of people and investors willing to take those risks. That doesn't indicate to me that risk takers, as a whole, are overpaid. Quite the opposite." The wealth concentrated at the top should be twice as large, he said.*[61]

Yet researchers are finding that this is not the case. Not only does high income inequality lead to distortions and reduced motivation, but there is also increasing evidence that equality of opportunity is incompatible with high income inequality.

The underutilization of talent can have serious economic effects. New work by Chicago Booth School economists Chang-Tai Hsieh and Erik Hurst and Stanford University economists Charles Jones and Peter Klenow finds that between 1960 and 2008, 16 percent to 20 percent of U.S. economic growth was due to women and people of color entering professional occupations and making use of their talent.[62] Thus occupational discrimination not only hurts women and minorities but also drags down the entire economy. Prior to the increased labor force participation of women and people of color, the economy suffered because talented women and minorities were being prevented from making the most of their abilities.

While this specific research focused on exclusions by race and gender, the increasingly limited access of low-income children to higher education will quite possibly have similar effects as there are clearly talented but low-income children, who are not attending college and presumably unable to make the most of their abilities. According to the McKinsey Consulting Group, the gaps in access to education by income in the United States impose "the economic equivalent of a permanent national recession."[63] McKinsey researchers argue that if the United States had closed the educational achievement gap between low-income students and the rest of the students in primary and secondary school, U.S. gross domestic product in 2008 would have been 3 percent to 5 percent higher.

A strong middle class provides a strong and stable source of demand

A key issue for any business is how they can develop, produce, and sell a good or service at a profit. If they see opportunities to profit by investing in new ideas or expanding their business, they will. At the most basic level, firms will invest when they expect that they will have customers to buy the goods and services they produce at a price that yields a bigger profit than alternative uses of the investment funds. A firm will not consider hiring more workers or expanding a production line until they see that they are likely to make money off of the investment. Simply put, demand matters—the consumption of goods and services by households leads businesses to invest, and business investment creates employment and incomes for households. When demand is low, businesses will invest less (and people may invest less in themselves) and the productivity gains and innovation this would generate will be lost to time.

Business owners understand this argument. Nick Hanauer, founder of Seattle-based venture capital firm Second Avenue Partners and original investor in Amazon.com, argues that having a clear sense of demand from a strong middle class is how businesses receive signals regarding profitable opportunities to invest. In a recent *Bloomberg Businessweek* column, he explained how the decision to invest is based on the belief in the ability to sell:

> *The conventional wisdom that the rich and businesses are our nation's 'job creators' is … false. [O]nly consumers can set in motion a virtuous cycle that allows companies to survive and thrive and business owners to hire. An ordinary middle-class consumer is far more of a job creator than I ever have been or ever will be.*[64]

But there is a contrasting view that demand is relatively unimportant for economic growth. Prior to the work of British economist John Maynard Keynes, many economists argued that under normal circumstance, inadequate demand was not a possibility because "supply creates its own demand." Hence the key challenge was thought to be how to incentivize capitalists to invest and produce, given that demand would automatically follow. After the contributions of Keynes and the experience of the Great Depression, economists came to understand that demand does not automatically adjust to supply, but in fact an economy can have prolonged periods of inadequate demand that causes unemployment and underutilized capacity.

The recent economic crisis has brought to the forefront the reality that, in the face of lower demand, investment is not automatically returning to a level that can sustain full employment. This has led economists and policymakers to focus their attention on demand. The heads of state at the summit for the Group of 20 leading developed and developing nations in Pittsburgh in 2009 concerned themselves with global demand "contracting at pace not seen since the 1930s" and how best to use public demand to support private demand and restore economic growth.[65] Martin Feldstein, Harvard economist and former chairman of President Ronald Reagan's Council of Economic Advisers, writing recently on why America's economic recovery had stalled, pointed to problems with demand: limits to debt- and income-constrained consumer demand, and inadequate public demand from fiscal stimulus policies.[66]

One clear question that has emerged is whether the strength of the middle class and the level of inequality affect economic stability through their effects on aggregate demand. Many are now pointing to the fact that the Great Depression and the Great Recession both followed decades of rising inequality and increased debt, and many are now questioning whether there is not a connection between inequality and economic instability.

This section explores what economic theory and evidence suggest about how a strong middle class and inequality affect aggregate demand. While investment—in equipment and factories, innovation, and people—is the primary driver of economic growth, as Nick Hanauer pointed out, businesses will only invest if they are confident that they will be able to sell their products at a profit. Yet families will not be able to consume or make investments in themselves and their children if they have insufficient incomes or are financially insecure. In an increasingly globalized economy, exports can drive demand, but most (86 percent) of the U.S. economy comes not from exports but from domestic demand.[67]

To be certain, regulation and taxation of the economy's supply side influence investment and growth. But these are not the only factors of substance, nor are they necessarily of primary importance. Demand, distribution, and the strength of the middle class matter, too. And demand and the middle class may be more important now than in the past.

There are three ways that inequality and the strength of the middle class affect demand:

- Different tendencies to spend—the "marginal propensity to consume"—at varying levels of income and wealth mean that high inequality weakens aggregate demand.
- Changes in the distribution of income—across households, and between profits and worker wages—affect the *stability* of aggregate demand.
- Having a large middle-class market creates business synergies and spillovers beneficial to economic growth.

If a financially stressed middle class and higher income inequality are associated with middle-class families coping in ways that increase economic fragility, then these trends are utlimately bad for economic growth. Economic instability disrupts investment planning. Recessions, jobless recoveries, and financial crises all reduce investors' optimism and confidence while creating more uncertainty that businesses will be able to sell their products and services. They also reduce bankers' confidence and may make them less likely to lend funds, especially to business ventures perceived to be more risky.

If a financially stressed middle class and higher income inequality are associated with middle-class families coping in ways that increase economic fragility, then these trends are ultimately bad for economic growth.

We now look at each of these in turn.

The rich consume less of their income: Recent evidence

As the rich get richer and the middle class is squeezed, this affects what and how much people buy in the marketplace, which affects economic growth. Legendary British economist John Maynard Keynes argued that rising incomes among those at the top of the income distribution will affect the economy very differently than will rising incomes at the bottom of the income distribution. He developed this idea into the concept of the marginal propensity to consume, writing in *The General Theory*:

> *… it is also obvious that a higher absolute level of income will tend, as a rule, to widen the gap between income and consumption. For the satisfaction of the immediate primary needs of a man and his family is usually a stronger motive than the motives towards accumulation, which only acquire effective sway when a margin of comfort has been attained. These reasons will lead, as a rule to a greater* ***proportion*** *of income being saved as real income increases (bold in original).*[68]

Keynes argued, "the stability of the economic system essentially depends on this rule prevailing in practice."[69] The marginal propensity to consume directly affects the size of what Keynes called the multiplier effect. This is the idea that increased spending, be it from consumers, government, greater exports, or investment, will be amplified as it works its way through the economy. If additional income goes into the hands of those with a high marginal propensity to consume, then the multiplier for consumption demand will be relatively larger; if additional income goes into the hands of those with a lower marginal propensity to consume, the multiplier on consumption demand will be relatively weaker. Arithmetically, those consuming less will save more, but this does not necessarily mean that savings will automatically translate to more investment as is sometimes assumed.

But University of Chicago economist and Nobel Laureate Milton Friedman argued against the proposition that "obviously" the rich will consume less of their income by hypothesizing that rich households only appear to consume less because they seek to maintain a stable level of consumption throughout their lives, despite unstable income levels.[70] While it is well-established that Keynes's hypothesis was true out of current income, determining the propensity to consume out of lifetime income turned out to be more challenging. In the first several decades to follow either economist's hypothesizing, researchers could not come to consensus on the relationship between lifetime income and saving rates.[71]

While the concept of lifetime income is certainly an important insight, Friedman's theory is clearly wrong at the extremes of the income distribution. Low-income families who stay low income their entire lives will spend all their income to survive. We know, for example, that those with a lifetime of lower incomes are much more likely to have inadequate savings to replace their income in retirement.[72] Further, the United States may now be in a situation where incomes at the top are so high that—to the extent it was ever true—Friedman's theory no longer applies to the wealthiest segment of households. It is inconceivable that those at the top of the U.S. income distribution can consume all their income, given that, for example, the top 0.1 percent of U.S. income earners had average incomes of $5 million in 2010 and captured 10 percent of all U.S. income.[73]

Two recent economic papers conclude that the rich appear to spend a lower proportion of their income than do other families over a longer time horizon. This body of work points in the direction of there being important implications of changes in the distribution of income for demand.

Using longitudinal data, Brookings Institution economist Karen E. Dynan, Dartmouth University economist Jonathan Skinner, and Columbia School of Business economist Stephen P. Zeldes developed a set of measures that approximate permanent income., including education, past and future earnings, the value of vehicles purchased, and food consumption. They measure how much individuals have saved out of their permanent income and find that savings rates range from less than 5 percent for individuals in the bottom 20 percent of the income distribution to more than 40 percent for those in the top 5 percent.[74] Significantly, Dynan, Skinner, and Zeldes found that this relationship was not due to high-income entrepreneurs saving at a greater rate than nonentrepreneurs as the positive correlation between income and saving rate remained even after they restricted their sample to nonentrepreneurs.

U.S. Census Bureau economist David S. Johnson, Northwestern University Kellogg School of Management economist Jonathan A. Parker, and Nicholas S. Souleles, economist at the University of Pennsylvania's Wharton School of Business, used the random variation in the timing of the 2001 tax rebates to separate the effect of a change in income from other factors that affect spending decisions.[75] They find that households spent on average 20 percent to 40 percent of their 2001 tax rebate on nondurable goods within the first three months after they received their check. Yet low-income households and households with few liquid assets spent a significantly greater share of their rebates than the typical household. This suggests that these households either expected to have a higher income in the near future, which is less likely, or that they have a high propensity to consume from one-time or highly liquid funds. In similar analysis of the 2008 rebates, the same authors, with Bureau of Labor Statistics economist Robert McClelland, found similar results, although the liquidity constraint findings were not statistically significant.[76]

Declining social mobility, increasing income inequality, and the tendency for consumption to fall relative to income all suggest mechanisms by which demand could fall and be less than that needed to maintain full employment and maximize economic growth.

Two countervailing forces to declining consumption in the face of slow income growth: More hours of work and more debt

The question of how changes in the distribution of income affected the level and composition of demand may have been less apparent in recent years in the United

States because of the ways households responded to these changes in income trends. As inequality rose, consumption should have declined.[77] Yet as growth in low- and middle-class incomes stalled in recent decades, consumption did not stall but rather outpaced wage and salary growth. In fact, real personal consumption expenditures as a share of GDP have grown from 59 percent in 1952 to 70 percent in 2012.[78]

This poses a conundrum: If the middle class is important for growth, but slow growth in middle-class incomes did not slow consumption growth commensurately, then does it really matter to consumption if middle-class incomes do not rise?

The answer is, "Yes." It is wrong to look only at consumption and conclude that slow income growth does not matter for overall economic growth. Over the past few decades, individual families maintained consumption growth in the face of slow income growth through increased labor supply—working more hours and more women entering the workforce full time—and increased borrowing. While both were clearly viable short-term responses of families to slower income growth, both have clear limits, which it appears have been reached. Further, both have negative effects on economic growth and stability.

Between 1969 and 2010 the percent of women on U.S. payrolls increased from 35.3 percent to 49.9 percent. Comparing the late 1970s to 2010, among married-couple families without a working wife, median family income has not increased at all in inflation-adjusted dollars. Thus, among married couples, for the typical family, income gains over the past few decades have been attributable entirely to the increased employment of wives. As discussed at length above, the greater hours at work have left families struggling to cope with care issues, both for children and the sick and the elderly, feeding into the productivity concerns discussed above and constraining the next generation from receiving human capital investments critical to future economic growth.[79]

As the middle class failed to keep up with the standard they experienced even in the recent past, families also turned to borrowing, which allowed total consumption to outpace total growth in wage and salary income. Up until the 1980s family debt was about 60 percent of annual income.[80] But as middle-class income growth stalled, the share of debt rose enormously, so much so that debt was a whopping 130 percent of income by December 2007, before the Great Recession.[81]

As middle-class incomes began falling, the share of debt rose enormously, so much so that debt was a whopping 130 percent of income by December 2007, before the Great Recession.

Debt rose fairly evenly across the income distribution, but families at the low end and middle of the income spectrum were more likely to get into trouble being able to repay their debts.[82] In their book *The Two-Income Trap*, Harvard Law School professor Elizabeth Warren and Amelia Warren Tyagi, chairman of Demos, a New York-based think tank, document how indebtedness rose among low- and moderate-income families.[83] They point out that families were more often entering bankruptcy due to a health emergency or family dissolution. Families were not overspending; they were borrowing to make ends meet.

Debt also grew among the upper middle class due to what economists call the "Veblen goods effect," where consumers engage in a "keeping-up-with-the-Joneses" escalation of consumption.[84] While this may take the form of families purchasing too many high-end stainless steel appliances that they really cannot afford, there are indications that some of the ramped-up consumption was due to productivity concerns. Cornell University economist Robert Frank argues that families higher up the income distribution were borrowing to maintain their place in the upper middle class through home purchases in neighborhoods with the best schools. As Frank documents, the hours that a median earner must work each month to earn the implicit rent for the median-priced house have more than doubled since 1970.[85] As those at the top have shifted the frame upwards, to get into the best schools, upper-class families increased their borrowing for home purchases.[86]

That many families borrowed to live in the best school districts also brings the middle class and growth story back to productivity and the importance of access to education, as discussed above. As home prices skyrocketed during the housing bubble, many families faced a tough choice: Borrow beyond their means or risk living in a home in a lower-quality school district, which would potentially lead to lifetime implications for their children's ability to move up the economic ladder.

Inequality and the stability of demand

There is an emerging body of economic research making the case that higher income inequality is associated with economic instability. International Monetary Fund economists Andrew G. Berg and Jonathan D. Ostry find that "countries with more equal income distributions tend to have significantly longer growth spells."[87] Inequality outweighed other factors in their analysis of the length of periods of positive economic growth across 174 countries. Income inequality was a stronger determinant of the quality of economic growth than many other commonly studied factors also included in their model, including external demand and price shocks, the initial income of the country (did it start out very poor or wealthy?), the institutional make-up of the country, its openness to trade, and its macroeconomic stability.[88]

Economists have been working to understand why income inequality and economic instability are linked. Many argue that indebtedness associated with inequality increases economic fragility—its susceptibility to financial crisis and growth disruption—especially in light of the lack of income growth. University of Chicago Booth School of Business economist Raghuram Rajan makes this argument in the book *Fault Lines: How Hidden Fractures Still Threaten the World Economy*.[89] Rajan points to rising inequality as a key fault line that led to the economic crisis precisely because it increased debt, mostly through mortgages.

International Monetary Fund economists Michael Kumhof and Romain Rancière point out that rising income inequality and higher indebtedness occurred in the years leading up to both the Great Depression and the Great Recession.[90] As described above, as middle-class incomes failed to grow in recent decades, families increasingly turned to borrowing to maintain consumption. In the short term this strategy was not destabilizing, but in the long term it has been. At the same time that low-income and middle-class families saw limited income growth, those at the top of the income distribution continued to see strong income and asset gains, which gave them both the wherewithal and incentives to expand credit. Financial investments became relatively more attractive as consumers needed additional borrowing to keep up their spending. Therefore, on the one hand, those with money can earn more by lending it out, but on the other hand this boosts purchasing power.

Economists refer to this as an endogenous credit market: As families saw their inflation-adjusted incomes fall or remain constant, they turned to increased credit to make up the difference in their family budgets.[91] As inequality grew and the demand for credit increased, the credit supply also expanded, particularly among low-income households. In the U.S. context, this was due mainly to three important developments: the standardization of mortgages and the introduction of mortgage-backed securities; financial innovations that increased the credit supply; and access to credit increased as financial competition intensified.[92]

Kumhof and Rancière develop an illustrative model of the mutually reinforcing trends of rising inequality and financial instability:

> *When—as appears to have happened in the long run-up to both crises—the rich lend a large part of their added income to the poor and middle class, and when income inequality grows for several decades, then debt-to-income ratios increase sufficiently to raise the risk of a major crisis.*[93]

The idea that those with money focused on loaning it to those without it is the conclusion of research conducted by University of California-Berkeley economist Atif Mian and University of Chicago Booth School of Business economist Amir Sufi. Their research found that in the mid-2000s, zip codes with high shares of subprime mortgages saw both an unprecedented expansion in mortgage credit and sharply declining relative (and in some cases absolute) income growth.[94]

Following a different, but related, line of argument, University of Texas-Austin economist James Galbraith argues in his new book *Inequality and Instability: A Study of the World Economy Just Before the Great Crisis* that increasing income inequality is inextricably linked to the financialization of the economy, which is itself destabilizing.[95] Galbraith finds that growth of nonwage income (capital gains, stock options realizations) being paid out to a very small number of people is closely associated with the up-and-down movement of the stock market. With increased volatility in financial markets and increased concentration of financial wealth, capital owners face increased incentives to actively trade in markets to defend and expand capital income, magnifying volatility and diverting attentions from making real, growth-enhancing investments in the productive economy.

Thus, as middle-class families faced more financial stress and slowing or stagnating incomes over the past several decades, they adapted by increasing their labor supply and borrowing more. If large numbers of families had not been able to turn to these kinds of strategies, U.S. consumption demand would have only grown in line with the earnings, slowing consumption growth.

As middle-class families faced more financial stress and slowing or stagnating incomes over the past several decades, they adapted by increasing their labor supply and borrowing more.

Composition of demand and economic growth

There is also a concern that as income shifts upward, the composition of demand changes in ways that are detrimental to economic growth. As incomes in the United States increasingly go to those at the very top of the income distribution, their spending patterns may affect overall demand and thus production.

A great deal of middle-class spending, for example, is on education and health, which are investments in human capital. According to the Consumer Expenditure

Survey, middle-class families in the United States typically spend about 8 percent to 10 percent of their income on education and health care.[96] Likewise, a not-insignificant share of investment by the very well-off does not, in fact, contribute to future growth, such as the purchase of a mansion, art purchases, and most stock purchases that are not part of an initial public offering. Yale School of Management economist William Goetzmann and Tilburg University economists Luc Renneboog and Christophe Spaenjers examined art prices over the past two centuries and found evidence that higher income inequality leads to higher art prices.[97] These are often "investments" on which buyers anticipate future capital gains, but clearly do little to boost productivity or innovation for economic growth.

The link between income inequality, demand, and economic growth may also be explained in part by unequal societies devoting more of their resources to economic activities that do not encourage economic growth. As inequality has risen, so too has demand for investment goods and labor that, technically speaking, allocate resources away from uses that expand the economy's production possibilities. For example, University of Massachusetts-Boston economist Arjun Jayadev and Santa Fe Institute economist Samuel Bowles show that more unequal societies devote more resources to "guard labor"—activities that protect people and property and protect against workers shirking within private firms, but are unproductive in that they do not contribute to economic growth—as well as to equipment and software deployed for similar purposes.[98] Jayadev and Bowles find that since 1890, the guard labor portion of the U.S. economy has quadrupled from 6 percent of total labor to more than 26 percent by 2002.[99]

The middle class incubates entrepreneurs

Entrepreneurship is at the heart of a capitalist economy. Entrepreneurs identify new ideas, develop them, and bring them to the marketplace. Vibrant entrepreneurship means that talent and new ideas are finding an outlet, which helps foster economic competitiveness and growth.

While not all entrepreneurs are innovators, many innovators do indeed start their own businesses. Encouraging innovation is important to economic growth. This was the key insight of Massachusetts Institute of Technology economist and Nobel Laureate Robert Solow, who first identified the crucial role of innovation in economic growth in 1956 when he showed that half of U.S. economic growth could not be attributed to capital accumulation and labor increases but was instead the result of other factors, such as technological innovation.[100]

While we may think of ourselves as a nation of small businesses, the United States has in fact one of the world's smallest small-business sectors relative to other industrialized nations, as well as the second-lowest share of self-employed workers. Importantly for innovation, the United States has one of the lowest shares of workers employed in small businesses in the important sectors of manufacturing, computer-related services, and research and development.[101]

The question is, what role does inequality and the strength of the middle class play in incubating the next generation of entrepreneurs?

In general, research on entrepreneurship concludes that the single most important factor in whether an individual becomes an entrepreneur is based on the idiosyncratic characteristics of the individuals.[102] But there are also clear indications that middle-class families tend to produce entrepreneurs. Recent research from the Kauffman Foundation finds that less than 1 percent of all entrepreneurs came from either extremely rich or extremely poor backgrounds.[103] The majority of entrepreneurs come from middle-class families, which they define as consisting of anyone from lower-paid white-collar workers with associates' degrees to professionals with graduate degrees.

Entrepreneurship is of course a matter of taking risks, and a strong middle class and less inequality create conditions more conducive to supporting nascent entrepreneurs. The two ways that the middle class is important for growth that were discussed above—for the development of human capital and strong and stable demand—are also important for fostering entrepreneurship. Broad access to education means that many potential entrepreneurs have access to the training and skills necessary to start a business and greater macroeconomic stability allows entrepreneurs to make informed investment decisions with greater confidence about economic conditions and the risks of starting a business.

But there are other ways that the middle class supports budding entrepreneurs. In particular, middle-class families can provide financial security and time for entrepreneurs to nurture their ideas and take the risk of starting a new business.[104] High inequality and a "winner-take-all" system can increase the risks of entrepreneurship in ways that may be a disincentive to many. While the rewards may be high, the probability of striking it big may be low and there may be many potential downsides.

One note is that a challenge in the research is to distinguish between entrepreneurs, small businesses, and the self-employed. In some cases these terms are interchangeable, but entrepreneurs—especially successful ones—may not be small businesses or the self-employed for long. Given the research literature, we focus both on research specifically about entrepreneurship but also consider small businesses and the self-employed as proxies, although certainly imperfect and incomplete, for measuring entrepreneurship.

Broad access to education that provides the training and skills necessary to start a business

A more highly educated population is associated with greater likelihood of entrepreneurship. Research that looks into why people choose to become entrepreneurs and who they are shows that education is an important factor. Of entrepreneurs in the U.S. workforce, roughly two-thirds have at least some college education, compared to about half among the workforce overall.[105] The probability that a worker will transition to becoming an entrepreneur at all levels of wealth is 1.5 times to 2 times higher for those with a college education than for noncollege-educated workers.[106]

In addition, the less income students and their families have, the more student debt follows them after graduation and can stymie entrepreneurship. Forty percent of individuals under age 30 have outstanding student loan debt. Financial aid researchers have determined that a manageable student loan burden is one in which the monthly payment is 7 percent or less of the student's monthly income, but in 2004, one-third of borrowers had a debt burden of 8 percent or more. Low-income graduates were more likely to have a debt burden of 13 percent or more, well above the threshold considered manageable.[107] As student debt levels have risen, the percentage of Americans ages 20 to 34 who are entrepreneurs has also declined.[108]

All of this means that there are many potential entrepreneurs already so indebted that starting a new business may not be possible.[109] Being saddled with education debts keeps one from saving the capital needed to take on entrepreneurial risk and limits the ability to take on added debt to start a business. This may deter people from becoming entrepreneurs.[110]

As student debt levels have risen, the percentage of Americans ages 20 to 34 who are entrepreneurs has also declined.

To the extent that the middle class supports strong and stable demand, this also supports entrepreneurship

Entrepreneurs, by definition, are taking a risk, developing a product or service for which they think there is unmet demand that will prove eventually profitable. Individuals with promising ideas who want to become entrepreneurs need to be confident that they will be able to successfully take their idea from conception to market and make a profit. For many, in order to draw up a business plan, they need to know that there will be a stable market for their product. While no one can guarantee a market for any new idea, an unstable or highly uncertain macroeconomic context creates a heightened degree of uncertainty, which can stifle entrepreneurship.

An unstable macroeconomic context not only affects how entrepreneurs think about their business plans but how the banks think about lending to them as well. One clear outcome of the U.S. financial crisis, as is common in financial crises, is that banks became unwilling to lend, especially to smaller firms and startup companies.[111] This meant that many entrepreneurs and small-business owners were unable to implement their plans because of a lack of access to credit, at a time when their access to home equity lines of credit, a common credit source for about one in five entrepreneurs, also dried up.[112] Economists Tullio Jappelli of the University of Naples, Steffen Pishcke of the London School of Economics, and Nicholas Souleles of the Wharton School of Business estimate that about one in five Americans face credit constraints, the largest determinants of which are their current levels of income, wealth, and age.[113]

In general, the success of any entrepreneurial venture will depend either as much or more on general economic developments that are out of the business owner's control as it does on the individual's business acumen and enterprise as an entrepreneur. Conditions of strong, stable demand made possible by middle-class consumers improve the probability and accuracy of entrepreneurs' expectations of success and profitability for a potential venture.

A strong middle class means that families have access to resources that can sustain entrepreneurs and reduce risk while their vision takes shape

The more secure a family is in the middle class, the more likely it is they have access to savings and economic stability, which can nurture entrepreneurs. A strong middle class not only means a more stable income in one's immediate family but in the extended family as well, who may be able to provide credit or act as a safety net in case of failure.

An entrepreneur who does not require external capital to launch or grow a business is the exception, not the rule. Most investment projects are beyond the means of what an individual entrepreneur can provide, and so credit truly is the lifeblood of entrepreneurship. About 20 percent of new businesses are started with a home equity loan or on a personal credit card.[114]

But credit, like education, is not doled out equitably. Studies of who gets access to credit and why routinely show the existence of "credit constraints," meaning that individuals receive less credit than they deserve based on their risk characteristics. These constraints often unduly limit access to credit to people with lower net worth who are disproportionately people in communities of color, women, and the young.[115] The size, scope, and structure of one's social network also often correlate with business success.[116] Access to these kinds of credit may be unavailable to the poor or a weakened middle class and thus an entrepreneur from that background may have to rely on more expensive credit instruments, such as payday lenders, check cashers, and refund anticipation loans, the cost and risk of which push their dream out of reach.[117]

Looked at broadly, middle-class households have access to more liquid wealth than lower-income households, who are actually in debt by an average of about $10,000.[118] By contrast, middle-class families own an average of anywhere from

$26,000 to $135,700 in nonhome wealth—depending on where they are financially within the middle class.[119] These resources make it more feasible for better-off middle-class Americans to take on the financial risks of entrepreneurship while still supporting themselves and their families. This is especially important because the majority of entrepreneurs are married with children.[120]

Entrepreneurs are born risk takers, but choosing to become an entrepreneur requires bearing economic risks that are independent of the production process and the individual's specific entrepreneurial abilities and, in particular, risks from macroeconomic conditions. Such risks pose individual insecurities to the would-be entrepreneur, with the prospect of varying income flows, shocks to wealth, and loss of health care coverage. Even in the most developed financial systems, such as in the United States, capital market imperfections fail to supply the means for potential entrepreneurs to insure against such risks, argues Yale economist Robert Shiller.[121] In the absence of such means, entrepreneurship is simply too risky for many people with potentially profitable projects and innovations to consider: Entrepreneurship will be undersupplied, crimping economic growth.[122]

A salient example of how these risks impact the supply of entrepreneurship can be seen with respect to health care. Evidence shows that people with a spouse with employer-provided health insurance, which is much more common in middle-class than low-income families, are more likely to become self-employed—14 percent more likely for husbands and 7 percent more likely for wives.[123] Along these lines, University of California-Santa Cruz economist Robert Fairlie and his co-authors found that gaining access to publicly provided health insurance through Medicare increased the probability of becoming an entrepreneur: Men just over the age of 65 were more likely to own a business than men just under the age of 65.[124] Removing the health care risk—independent of age and retirement—led to increased supply of entrepreneurship.

Inequality can limit entrepreneurship in a variety of other ways. For a would-be entrepreneur, the calculus will be weighing the potential rewards against the known costs and potential risks. If the probability of success is unknown but the costs of failure are extremely high, then many more will avoid investing in a startup even if the potential upside is rather lucrative. The lack of resources for many low-income and middle-class families means that even if the upside gain is high, the downside risk of starting one's own business could easily overwhelm a potential entrepreneur.[125]

The presence of inequality itself can also affect a would-be entrepreneur's weighing of the risk of failure in the choice to start a business. The potential to fall down the economic ladder in an unequal society in the event of an unsuccessful venture—particularly where social safety nets are ungenerous and porous—is a discouragement to entrepreneurial risk-taking. In contrast, middle-class families also tend to support public investments in social protections, which increase family economic security and decrease a would-be entrepreneur's potential loss from a failed investment project, as we discuss in the next section of this report.[126]

A strong middle class supports inclusive political and economic institutions, which underpin growth

The economics literature is clear that effective governance is critical for higher productivity and economic growth.[127] While private companies are the driving force of a capitalist economy, government lays the foundation for economic growth and enhanced productivity through, among other things, establishing a legal infrastructure that supports secure property rights; investing in public and quasi-public goods that facilitate private investment, such as education, health, social safety nets, infrastructure, and scientific research; and maintaining a fair and level playing field for market competition, including through transparent and accountable judicial and regulatory structures.

The importance of governance for economic growth is the focus of monumental new research by Massachusetts Institute of Technology economist Daron Acemoglu and Harvard political scientist James Robinson in their book *Why Nations Fail: The Origins of Power, Prosperity and Poverty*. The conclusion they reach is: "while economic institutions are critical for determining whether a country is poor or prosperous, it is politics and political institutions that determine what economic institutions a country has."[128]

In their view, inclusive political and economic institutions promote growth, while extractive political and economic institutions do not. It is worth quoting their thesis at length:

> *Inclusive economic institutions that enforce property rights, create a level playing field, and encourage investments in new technologies and skills are more conducive to economic growth than extractive economic institutions that are structured to extract resources from the many by the few and that fail to protect property rights or provide incentives for economic activity. Inclusive economic institutions are in turn supported by, and support, inclusive political institutions, that is, those that distribute political power widely in a pluralistic manner and are able to achieve some amount of political centralization so as to establish law and order, the*

foundation of secure property rights, and an inclusive market economy. Similarly, extractive economic institutions are synergistically linked to extractive political institutions, which concentrate power in the hands of a few, who will then have incentives to maintain and develop extractive economic institutions for their benefit and use the resources they obtain to cement their hold on political power.[129]

Acemoglu and Robinson conclude that political institutions that "distribute political power widely" are fundamental to the development and support of economic institutions that promote growth. This is consistent with the conclusion come to by University of Chicago Booth School of Business professor Raghuram Rajan:

We also have to recognize that good economics cannot be divorced from good politics: this is perhaps a reason why the field of economics was known as political economy. The mistake economists made was to believe that once countries and developed a steel frame of institutions, political influences would be tempered: countries would graduate permanently from developing-country status. We should now recognize that institutions such as regulators have influence only so long as politics is reasonably well balance. Deep imbalance such as inequality can create the political groundswell that can overcome any constraining institutions. Countries can return to developing-country status if their politics become imbalanced, no matter how well developed their institutions.[130]

In their research, Acemoglu and Robinson argue that extractive institutions can be associated with economic growth, but they argue that this kind of growth is necessarily self-limiting. China provides a good example. China has experienced remarkable economic growth under an extractive political regime but this growth will not be sustained unless institutions become more inclusive, they argue. Extractive regimes are by their nature stagnant and cannot support the "creative destruction"—in the words of economist Joseph Schumpeter—necessary for sustained economic growth.[131] Those who are controlling the resources will seek to maintain that control and without countervailing forces within a pluralistic set of institutions, this will mean that economic growth will eventually stall.

The conclusion that politics and political power matters for growth is increasingly prevalent in new economics scholarship. Interestingly, much of the recent scholarship examining the question of how inequality or the middle class affects the economy has been written by teams of scholars that include both economists and political scientists or has been authored by scholars who have worked or currently work for policy-focused institutions, such as the World Bank, the International Monetary Fund, and the United Nations.

With high and rising inequality, many observers suggest that the United States is evolving into an extractive society. Columbia University economist and Nobel Laureate Joseph Stiglitz, for example, last year wrote:

> *Of all the costs imposed on our society by the top 1 percent, perhaps the greatest is this: the erosion of our sense of identity, in which fair play, equality of opportunity, and a sense of community are so important. America has long prided itself on being a fair society, where everyone has an equal chance of getting ahead, but the statistics suggest otherwise: the chances of a poor citizen, or even a middle-class citizen, making it to the top in America are smaller than in many countries of Europe.*[132]

Taking the conclusion that inclusive political structures support growth as our starting point, the question for this paper, then, is, how does widening inequality and the weakening of the middle class affect political power?

Economic research confirms that investments in public goods promote economic growth. Research by economists David Aschauer and Alicia Munnell, for example, shows how public goods investments complement and "crowd in" investments from the private sector—boosting aggregate economic growth more than if such investments were left in private hands.[133] Unfortunately, as Joseph Stiglitz observes, "the more divided a society becomes in terms of wealth, the more reluctant the wealthy become to spend money on common needs."[134]

As Joseph Stiglitz observes, "the more divided a society becomes in terms of wealth, the more reluctant the wealthy become to spend money on common needs."

Evidence from economics, particularly development economics, and political science confirms that countries with a strong middle class and less inequality, especially with less of an entrenched, wealthy elite, is more likely to have the political will for making investments in public and quasi-public goods, such as basic research, infrastructure, and education, all of which improve productivity.[135] Economists Alberto Alesina of Harvard University and Roberto Perotti of Bocconi University find a strong positive association between the strength of the middle class and both public and private investments.[136] A middle class, they argue, helps ensure political stability conducive to investment while also driving the demand for public goods, a thesis also developed in a recent piece by Center for American Progress political scientist David Madland and his colleague Nick Bunker.[137]

The effect of inequality and the strength of the middle class on politics and political institutions

First of all, high inequality leads to political polarization, which can stymie political action. Political scientists find robust evidence that a strong middle class helps people find common ground in governance to take action on pressing policy issues and then make smart decisions about the economy. In new research Princeton University political scientist Nolan McCarthy, New York University political scientist Howard Rosenthal, and University of California-San Diego political scientist Keith T. Poole, document how, in the United States, increased income inequality has been associated with an increased polarization of U.S. politics, with the result that it's more challenging to get anything accomplished.[138]

Secondly, high inequality leads to lower social trust, which raises transaction costs and deters economic exchange. Political scientists also see evidence for the idea that a strong middle class and greater economic equity are also associated with greater social trust, which creates the conditions for greater productivity and good governance. Eric Uslaner, political scientist at the University of Maryland, shows that "economic equality is a strong determinant of trust. And trust leads to policies that create wealth and reduce inequalities."[139] Much recent pioneering research in behavioral and experimental economics shows how social trust is important for sustaining contracts and economic exchange and for how much effort (and productivity) individuals choose to supply to their work and team projects. This research shows how social trust lubricates the gears of the economy.[140]

Third, a rich elite can lead to excessive rent-seeking, which lowers productivity and growth. Widening income inequality is often associated with rent-seeking, a term that economists use to describe a situation where individuals (or corporations) seek to obtain economic gain by manipulating politics rather than by making new investments in productive activities. The argument is that concentrated wealth alongside a weak middle class can distort the political outcomes and policymaking processes so much so that politics becomes dysfunctional or government lines the pockets of the wealthy elites rather than focusing on improving overall economic performance.

For rent-seeking to occur, elites must be able to wield political power. That the elites have distorted economic policymaking to their own advantage is the thesis of *Winner Take All Politics: How Washington Made the Rich Richer and Turned Its Back on the Middle Class,* by political scientists Jacob Hacker from Yale University and Paul Pierson from the University of California-Berkeley. The authors argue that over the past 30 years, the high incomes enjoyed by an increasingly rich elite have led to a situation where "America's public officials have rewritten the rules of American politics and the American economy in ways that have benefited the few at the expense of the many."[141]

This process means that national economic resources are distorted from their most productive use to benefit elites at the expense of the broader economy. The financial sector in recent years provides the most clear-cut example where, as income and profits grew, the industry used its new economic clout to exert greater political pressure to reduce financial regulation. By the late 1990s the Depression-era banking regulatory structure had been eviscerated, capped off by the repeal of the Glass-Steagall Act of 1933, which had separated commercial and investment banking.

Massachusetts Institute of Technology economist Simon Johnson, who also served as chief economist at the International Monetary Fund, and University of Connecticut law professor James Kwak make the case in their book *13 Bankers: The Wall Street Takeover and the Next Financial Meltdown* that overconcentration of political power among a narrow band of elites is often associated with financial crises.[142] A key way this happens is that as the financial sector pulls in more national income, they can use this economic power to encourage a regulatory environment favorable to further financial innovation, which may lead to excessive and unwarranted risk-taking—a precursor to a financial crisis.

While the basic research for Johnson and Kwak's conclusions examines developing countries, they conclude that in fact in the United States the "financial sector and its political influence are a serious risk to our economic well-being."[143] This conclusion is supported by recent empirical research by University of California-Berkeley economist Atif Mian, University of Chicago Booth School of Business professor Amir Sufi, and University of British Columbia economist Francesco Trebbi, which shows that higher campaign contributions from the financial services industry are associated with an increased likelihood that representatives will vote for legislation that transfers wealth from taxpayers to that industry.[144]

Conclusion

What makes an economy grow or stop growing is one of the oldest questions in economics and will undoubtedly remain a leading concern for economic inquiry. As the United States and other countries struggle to pull out of recession and consider the impact of decades of rising inequality, the economic literature examined in this report should provide some indicators of where to focus our inquiries.

What is clear is that there is growing understanding among economists that a trade-off exists between high and growing levels of inequality and economic growth. Increasingly, economists are recognizing and focusing on exactly how and why this might be the case.

Nobel Laureate Paul Krugman captured the tenor of this conservation in a speech at the Luxembourg Income Study in June 2010 in which he posed the question of whether there is evidence to support the conclusion that the return of income inequality in the United States to levels of the 1920s was a causal factor in the financial crisis.[145] He started his speech by saying that prior to 2008, when audience members would ask him if we should be concerned that something like the Great Depression could happen again and if rising inequality indicated that was the path the United States was on, he would tell the questioner that the two were most likely unrelated. He then devoted his speech (along with much other writing) to examining the evidence for how inequality and growth are linked.

Placing the middle class at the core of what makes an economy grow is not a new idea. In 1914 Henry Ford announced that he would begin paying his workers the then-princely sum of $5 a day. He did this not out of altruism, but to boost productivity. At the time, working on the assembly line was not a good job and turnover was exceptionally high. The $5-a-day wage was a business strategy designed to lower costs and make production more efficient. By offering workers a better wage, Henry Ford was demonstrating that there could be a “high road” to economic development as the $5-a-day program increased both productive efficiency and the company’s profitability.[146]

It was not until years later that Ford embraced the idea that paying workers a living wage was also good for demand, as it meant that they could become his consumer base. This helped cement the notion that the middle class, businesses, and government can work together to create a vibrant and stable economy, which was a hallmark of the U.S. economy in the decades after the Depression and World War II. By the middle of the 1930s, the idea that the middle class was so important to our economy was so thoroughly embedded in the popular imagination that President Franklin D. Roosevelt was able to say that "a sounder distribution of buying power" was a key reason to enact the Fair Labor Standards Act, which established the minimum wage.[147] Today we know that policies such as raising the minimum wage can be good for families and good for local economies. In a 2009 study, three economists at the Chicago Federal Reserve—Daniel Aaronson, Sumit Agarwal, and Eric French—showed that by strengthening the purchasing power of worker incomes, a rise in the minimum wage helps create the demand for business sales, the environment conducive for investments, and therefore economic growth.[148]

But we also know that a strong middle class creates the conditions for families to invest in children, for workers to invest in their human capital, and for firms to get the most out of their workers. And there are increasingly indications that money and politics lead to outcomes that benefit the already rich, not the middle class. At an event at the Center for American Progress in March 2012, when Daron Acemoglu was asked what inequality meant for the growth trajectory of the United States, he flipped open his new book and quoted President Woodrow Wilson from his 1913 book, *The New Freedom*:

> *If monopoly persists, monopoly will always sit at the helm of government. I do not expect to see monopoly restrain itself. If there are men in this country big enough to own the government of the United States, they are going to own it.*[149]

A century later, it may be time for economists and policymakers in the United States to reconsider this nugget of wisdom.

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Endnotes

1 Calculations of income shares in this and the preceding paragraph are based on Congressional Budget Office estimates of after-tax income; the Gini coefficient income inequality measure also includes capital gains.

2 Economists define public goods as goods that are "non-rivalous"—that is, one person's enjoyment or use does not affect another's, such as listening to an FM radio station or inhaling clean air—and "non-excludable"—that is, individuals cannot be effectively excluded from use, which is not the case if a radio station can exclude nonbuyers, as is now done with satellite radio stations, but is the case with clean air. Quasi-public goods are typically thought of as goods provided by government, such as primary and secondary education or health care, which could be excludable, but society has determined everyone should have access.

3 The economists at the November 18, 2011 conference on the Middle Class and Growth, held at the Ford Foundation in New York City, identified and then ranked the most important mechanisms as follows: (1) increasing financialization of the economy has led to distortions of the economy and an increase in risky behavior; (2) rent-seeking by the wealthy and corporations are giving those groups more political power; (3) lack of support for public goods and the principles of good governance as the rich can increasingly opt out; (4) breakdown of the social contract has led to a risk shift to the most vulnerable; (5) inequality reduces consumption as those that the top have a lower marginal propensity to consume; (6) stagnant wages have led the middle class to assume great debt, which causes financial fragility; (7) there has been a decrease in trust and solidarity among the classes, and an increase in "short-termism"; (8) a lack of mobility makes it harder for those at the bottom to rise up and stems incentives for effort; (9) changes in family dynamics and the flow of women into the labor force mean less support at home; and (10) inequality leads to political paralysis and makes it harder to make changes to reduce inequality.

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