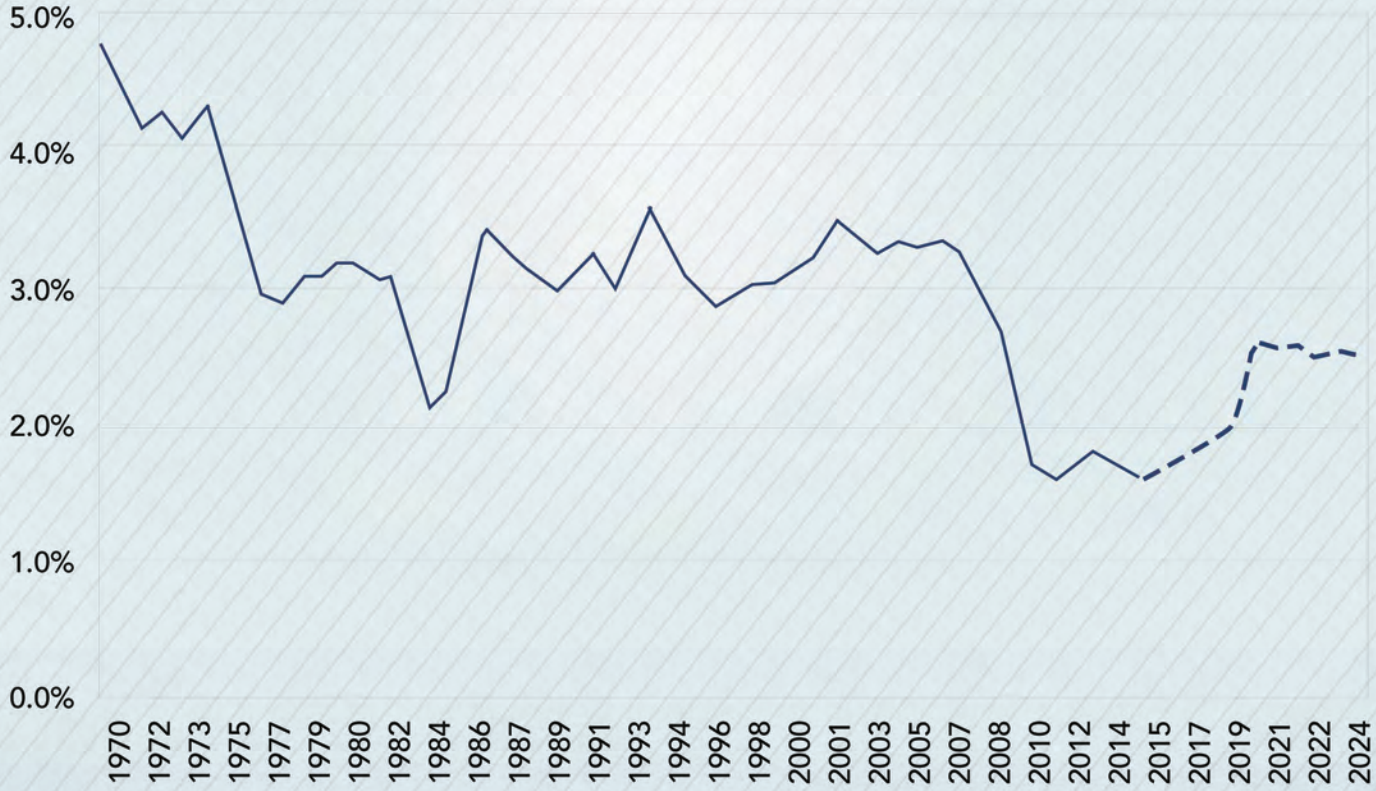
The Growth Imperative:

HOW SLOW GROWTH THREATENS OUR FUTURE AND THE AMERICAN DREAM

Analysis by Douglas Holtz-Eakin, Ph.D.
President, American Action Forum



U.S. CHAMBER OF COMMERCE FOUNDATION

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The U.S. Chamber of Commerce Foundation (USCCF) is a 501 (c)(3) nonprofit affiliate of the U.S. Chamber of Commerce dedicated to strengthening America's long-term competitiveness by addressing developments that affect our nation, our economy, and the global business environment.

THE CASE FOR GROWTH

The Honorable John R. McKernan Jr.
President, U.S. Chamber of Commerce Foundation

These are challenging times in America. With slow job creation and soaring debt, Americans now look to the future with worry rather than with hope. The American economy, which was once the most expansive, innovative, and inclusive in the world, is no longer keeping pace with the needs and dreams of the nation's workers and families. Our lagging economic growth is a threat to the American Dream and to sustainable government finances.

In a recent report, the Congressional Budget Office (CBO) forecast annual growth of under 2.5% through 2024. That is significantly lower than the 40-year historical average of more than 3% a year. CBO is not alone in offering that subpar forecast. Other leading economic experts, on both sides of the political aisle, have forecast mediocre growth in the years to come. The result of this combination of our existing fiscal realities and these sobering estimates are twofold: (1) depressed opportunity and job creation for America's middle class, (2) and a federal government that registers immense annual deficits as far as the eye can see. These challenging times call for the most American of solutions—stronger and faster economic growth.

As the U.S. Chamber's 501(c)(3) nonprofit affiliate, the U.S. Chamber of Commerce Foundation's mission is to strengthen long-term American competitiveness and to educate the public on the benefits of the free enterprise system to our economy and to our society. That is why the Foundation is sounding the alarm over America's growth prospects.

From kitchen tables and factory floors to boardrooms and trading floors, Americans of all walks of life have reason to be concerned about the future of our country's economic growth.

Americans should not accept 2% growth as the new normal. And we should not resign this country to being a nation of debtors. It's time that we get America back on the right track, and that direction is forged by economic growth. Policies that would increase economic growth by one percentage point a year would transform America's future.

Therefore, we believe that every policy decision in today's debate can be—and must be—evaluated through a single prism: Will it accelerate growth and create jobs? And because global competitiveness and continuous innovation are so essential to any growth strategy in the 21st century economy, policymakers must also ask if the policies will enhance America's competitiveness and unleash innovation, technology, and entrepreneurship.

The U.S. Chamber Foundation seeks answers to the broad range of issues we face—particularly relating to economic growth. We sponsor original research and programming not only to contribute to the debate

but to help shape and inform it. We identify emerging issues and start thinking about their implications and possible solutions in advance.

Our currently projected GDP growth trajectory is one of these issues. America's future and standard of living are in jeopardy if our country does not adopt pro-growth economic policies.

That is why we commissioned Douglas Holtz-Eakin, president of the American Action Forum and one of the nation's most esteemed economists, to study growth trends and the factors that can impact economic growth. His report, which follows, strongly demonstrates the differences that additional economic growth can make to addressing many of this country's most pressing challenges.

For generations, this country has enjoyed consistently high growth—until now. America's economy grew at an average of 3.3% annually from World War II to today, even reaching as high as 4% a year from 1947 to 1969. Look closely though and you will see the growth picture darken significantly after the Great Recession. Since 2008, America's growth rate has shrunk to an anemic 1.5% annually. The view hardly brightens in the years to come.

Stronger, faster growth is neither inevitable nor impossible. Growth is a choice. So is recovery from a deep recession, such as the one Americans recently endured. As this report shows, Americans are being deprived of opportunity, advancement, and economic security because poor policy choices have trapped us in a profoundly weak recovery and a protracted period of inadequate growth. This will not change until policies change.

Holtz-Eakin's report concludes by saying that returning America to its historical growth rate can create more than two million new jobs for the middle class and dramatically increase well-being over the next decade. The federal government, meanwhile, will add trillions of dollars less to the national debt. Rather than unsustainable deficits and constant borrowing year-in and year-out, we will see them drop and continue shrinking relative to the growing size of the economy. Holtz-Eakin demonstrates that one percentage point of additional annual economic growth can reverse many of America's economic challenges.

We believe that this report brings new clarity and pragmatism to an issue that is often confusing and complicated. With each step forward, the Foundation will seek to better inform the paths we take to achieve the additional economic growth and the shared benefits that will strengthen businesses, families, and our country. This report is an important and thought-provoking start of the dialogue.

So how do we achieve greater growth? Growth is not a simple prescription, but Holtz-Eakin suggests that a series of commonsense reforms can make a big difference in getting us there. These include reforms to America's taxation, immigration, regulation, and entitlement systems. We can also look to increased energy exploration and additional free trade agreements, as well as investments in infrastructure and education and workforce development to help build a future of opportunity for every American.

These areas of reform and investment would touch every American in every community. There would be new opportunities available for more of our citizens to take part in and share the rewards of a stronger economy. Growth cannot solve all problems, but without it, we cannot solve any of them.

Our policymakers and the public must understand that adding just one percentage point of average annual GDP growth on top of current projections would make an extraordinary difference in the well-being of our country.

The Foundation will continue to explore paths and policies that enable positive growth. We will be engaging experts, innovators, and other leaders to share their insights on how we can restart America's economic engine. Decision makers need pro-growth reforms that they can implement in leading our country back to prosperity. Opportunity and a vibrant American Dream are what each small business owner, entrepreneur, prospective employee, parent, and student wants to see when looking to the future.

At the U.S. Chamber Foundation, we're continually working to advance America's competitiveness and promote the free enterprise system that grows our economy and puts people to work. It is up to the business community to make the case for why economic growth matters, how average Americans will benefit from economic growth, and how much smaller our fiscal problems will become. We do not believe in a future burdened by depressed opportunity and narrowed ambitions.

We hope that you will join us in our efforts to strengthen our economy and ensure the promise of a better future for our country, a future the American people deserve.

The Growth Imperative:
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EXECUTIVE SUMMARY

America's future is in jeopardy. Over the entire postwar period from 1947 to 2013, the trend for economic growth in America was 3.3%. Unfortunately, looking at the period as a whole masks a marked deterioration in U.S. growth performance. Since 2007, the rate has downshifted to a mere 1.5%, which translates into a meager 0.7% in growth per capita in the United States. Even more troubling, the nonpartisan Congressional Budget Office (CBO) projects that growth will only average 2.5 % over the next 10 years and drop off to 2.0% at the end of the period.

Americans need faster economic growth. An additional one percentage point of faster growth has considerable positive impact on jobs, income, and opportunity.

Poor national growth is a personal disaster for every American. In 1947, the median family income (measured in 2012 dollars) was just under $30,000. Couples making $30,000 could experience 40 years of growth at the average postwar rate and earn $69,000 in 1987. If their children picked up at that point and experienced another 26 years of typical growth, their annual income could rise to $118,000.

Suppose, instead, that the entire postwar period had been condemned to growth as poor as the post-2007 period. Our couple would have only made $40,000 rather than $69,000, and their children would have earned a meager $48,000. The difference between $69,000 and $40,000 is the ability to put children through college. It is the ability to buy a larger home or an extra car.

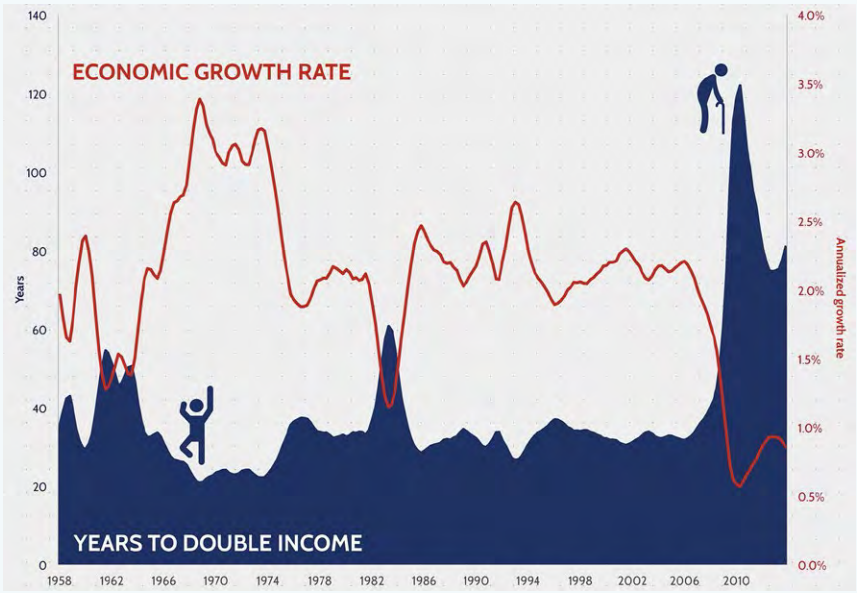
It is the freedom to take a family vacation each year. It is the security afforded by putting away a few dollars each week and building a nest egg for retirement.

The difference between $118,000 and $48,000 is even more dramatic. It is the ability to own a home instead of renting. It permits children to care for their elderly parents, start their own businesses, or both. It is the difference between an optimistic, hopeful society and a nation fearing its future.

Poor economic growth harms the present and undermines future generations. At the postwar pace of expansion, the standard of living can double in just over 30 years (see Chart 1). At the current pace of growth, it will take 99 years for incomes to double. The poor U.S. growth performance is a threat to American families and their futures.

Poor economic growth is a threat to the nation's solvency. CBO forecasts that growth will average only 2.5% over the next 10 years. At the same time, federal deficits will total another $7.6 trillion, and the federal

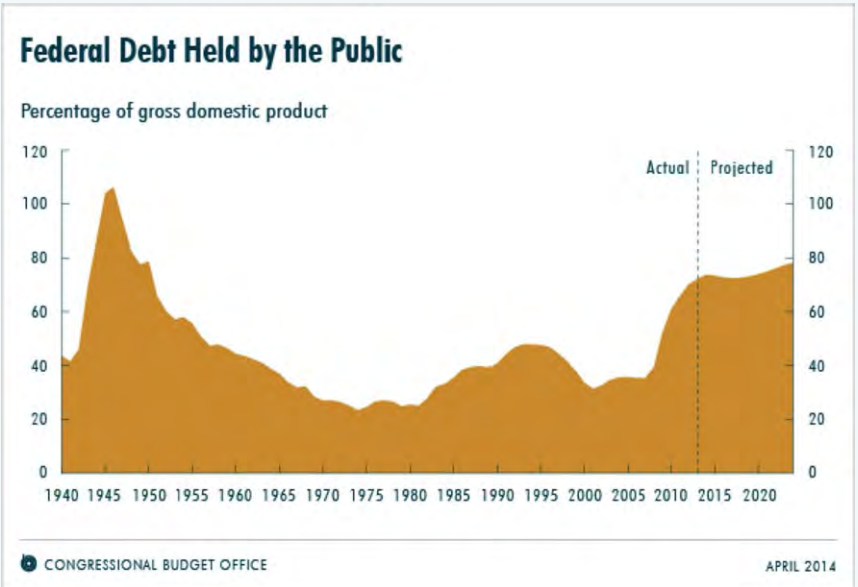
CHART 1



Source: Author's calculations.

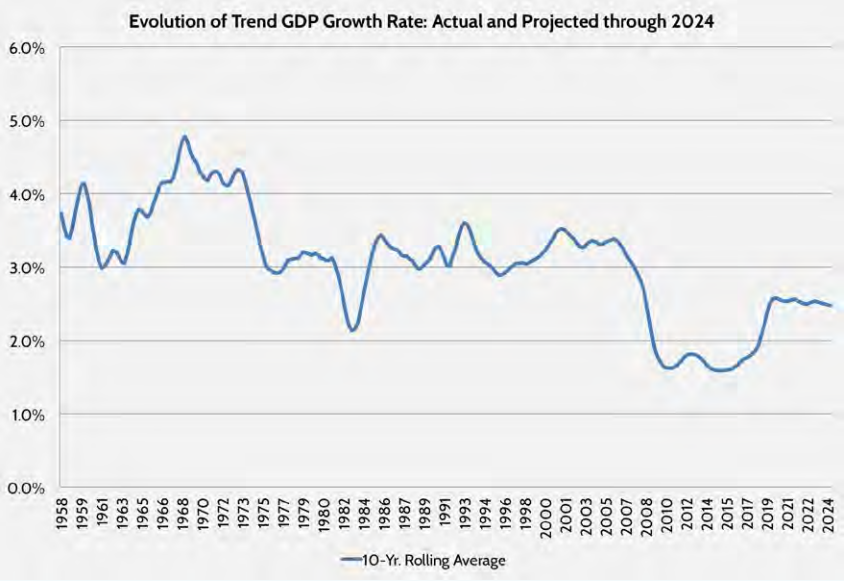
debt will continue to climb from $13 trillion to $21 trillion by 2024. Compared with the U.S. economy, debt will reach levels not seen since the immediate aftermath of World War II (see Chart 2).

CHART 2



Source: Congressional Budget Office, Updated Budget Projections: 2014 to 2024. Federal Debt Held by the Public. ("Public" includes the U.S. public, businesses, state and local governments, foreign governments, foreign businesses, and foreign citizens.)

CHART 3



Source: Author's calculations.

Imagine that growth averages instead 3.3%—just one percentage point higher—for the next 10 years. CBO anticipates that a single tenth (0.1) of a percentage point of faster growth would reduce deficits by $300 billion over the next decade. A full percentage point would eliminate $3 trillion in debt and slow the growth of the national debt.

Poor economic growth is a threat to the nation. It fuels federal debt, and debt is the biggest threat to U.S. national security, according to Admiral Mike Mullen, former chairman of the Joint Chiefs of Staff, "I've said many times that I believe the single, biggest threat to our national security is our debt, so I also believe we have every responsibility to help eliminate that threat."

Importantly, the longer-term growth potential of the U.S. economy is not set in stone. It has varied greatly over time (see Chart 3), which suggests that Americans need not be condemned to a barren economic future. Instead, improved federal policies may generate an environment for improved growth, which translates the potential for a better future into reality.

Improving economic growth is the great opportunity of this age. As seen in Chart 4, faster economic growth means jobs for Americans, many of whom have been out of work for years. Growing at a 3%

rate means 1.2 million more jobs, and 1.3 million more if growth escalated to 3.5% for the next 10 years.

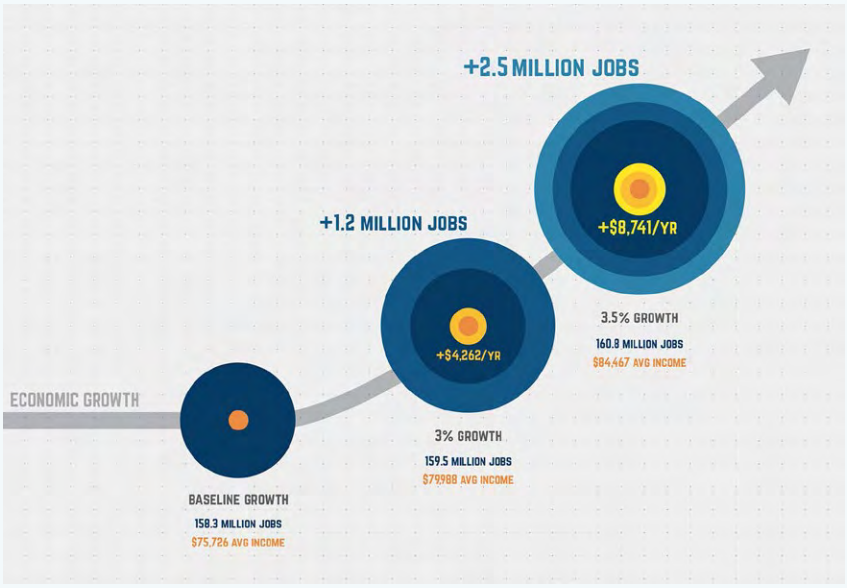
Better growth would mean more income for those who already have a job but have been waiting in vain for a raise. Three percent growth would mean another $4,200 in average incomes, while 3.5% growth would boost this an additional $4,500 to nearly $9,000.

Importantly, these gains in income and lifestyles would be widely shared. That is, faster economic growth would improve the future for the poor, the middle class, and the affluent alike (see Chart 5).

For these reasons, it is the obligation of every policymaker to pursue policies that raise economic growth. Faster growth means greater opportunity for families, a more secure fiscal future, and a safer United States. Poor policies of onerous regulation, high taxes, massive debts, and restrictive energy exploration can be reversed. A program of entitlement reform, tax reform, regulation reform, immigration reform, energy reform, and other improvements can reverse the growth decline.

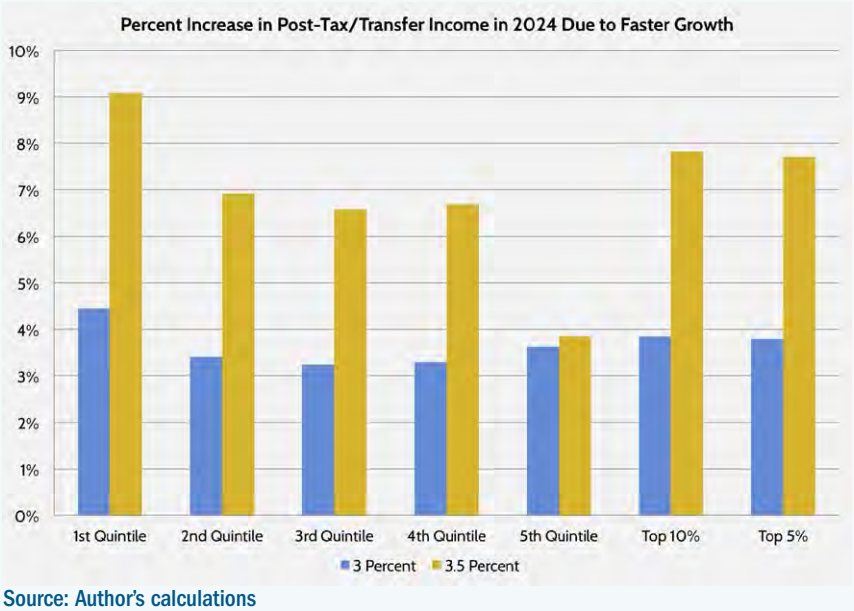
Pro-growth reforms are the best hope for America's future.

CHART 4
THE GROWTH OPPORTUNITY: 2015–2024



Source: Author's calculations.

CHART 5



Source: Author's calculations

A program of entitlement reform, tax reform, regulation reform, immigration reform, energy reform, and other improvements can reverse the growth decline.

INTRODUCTION

America is suffering a growth crisis. Since 2007, trend growth in per capita income in the United States has been 0.7%—only one-third of the postwar average of 2.1% prior to 2007. This growth failure hurts the middle class that has too few jobs and limited ability to get a raise or otherwise live better. The growth failure hurts small businesses. Entrepreneurs hold back in pursuing their business goals, and existing small businesses hesitate to hire and expand.

What determines growth? What has been the track record of the United States in producing growth? How does growth affect the rich, the poor, and the middle class? This paper focuses on the potential for better growth in the United States. We briefly review the fundamentals of successful long-run economic growth, summarize the historic growth record, and document the links between growth and the distribution of economic well-being. We then focus on the links between growth and innovation and growth and small businesses. Finally, we make suggestions for improved public policy to augment economic growth.

ECONOMIC GROWTH: CONCEPTS AND SOURCES

Economic growth for the United States accords with the intuition from personal experience—hard work and effort pay off in better, higher-paying jobs; saving and investing can finance college, vacations, and retirement; and more increases in paychecks and family budgets permit a better life.

In thinking about national economic growth, however, it is useful to dig more deeply into the various ways that measured economic activity can rise.

Since 2007, trend growth in per capita income in the United States has been 0.7%—only one-third of the postwar average of 2.1% prior to 2007.

Households measure their economic success by their income; the sum of wages earned, dividends paid to them, and interest received. For the nation as a whole, the conventional measure of income is referred to as the Gross Domestic Product (GDP). Because the resources to pay wages, dividends, and interest are only available if products and services are made and sold, GDP also measures total national production.

Population Growth

Another way that GDP can get bigger is by adding more people. In 1950, the population of the United States was roughly 150 million and real GDP (measured in 2009 dollars) was $2.3 trillion. Over the ensuing 63 years, the population has more than doubled to 317 million people. It stands to reason that with double the people, the United States could produce double the goods and services.

Notice, however, that while businesses would be producing and paying out twice as much, they would be using twice as many workers in the process and paying twice as many people. Unfortunately, this means that there is simply the *same* income for each person. That is hardly the goal; the goal is to make every American better off, to have more income over time and for future generations. To achieve this goal, GDP would have to more than double—thus increasing income per person.

Indeed, this is precisely what happened. GDP at the end of 2013 was $15.9 trillion—almost seven times higher. In the process, real income per capita rose from

$14,000 to more than $50,000 in 2013. Sustained increases in real income per person enable everyone in the country to earn more and spend more on a higher standard of living. It is precisely the kind of growth that is central to economic success.[1]

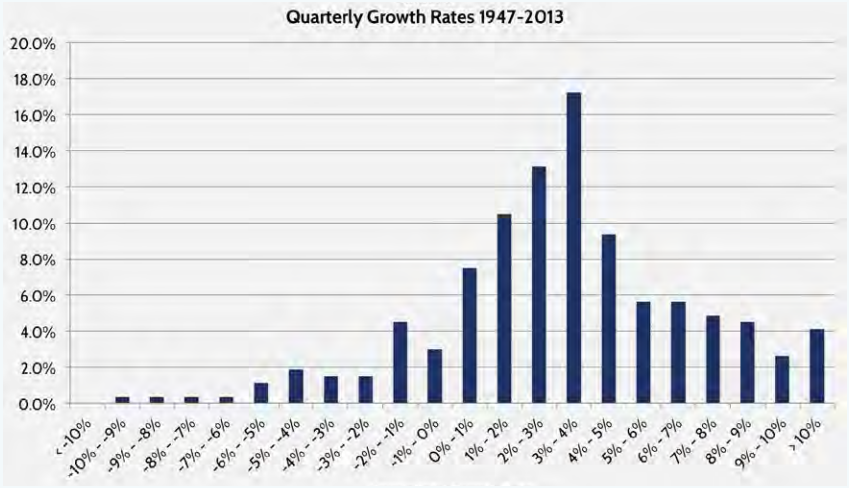
Recovering From the Recession

The Great Recession officially ended in June 2009. At that time, real (inflation adjusted) GDP was more than $600 billion, or 4%, lower than its peak in the second quarter of 2008. The unemployment rate was 9.5% (and rising). The U.S. economy had workers, factories, managers, and technologies sitting idle and awaiting use.

In such circumstances, economic growth can be quick and quite rapid. Businesses can easily ramp up production by restoring night shifts, bringing back laid off workers, offering longer hours or overtime, reopening closed branch offices and facilities, and reversing recession-induced cutbacks. The payrolls, payments for supplies, and other outlays quickly translate that output expansion into more rapid growth in the economy as a whole—especially for families.

Put differently, it is possible for the economy to grow—and decline—quite rapidly during the relatively rare recessions and recoveries. But recessions and the need to recover from them are hardly good news. Instead, the focus of economic growth policies should be on the long-run, average growth that occurs outside of business cycles. This type of growth occurs at more modest rates.

CHART 6



Source: Author's calculations.

Chart 6 documents this phenomenon. It shows the range of quarterly economic growth rates—from contracting at greater than a 10% rate to expanding at 10% or greater—experienced in the United States from 1947 through 2013.

For example, Chart 6 shows that a growth rate between 3% and 4% occurred roughly 17% of the time (46 quarters)—understandable when average growth is 3.3%—while a growth rate of 8% to 9% happened just a shade more than 4% of the time (11 quarters). Chart 7 translates this insight from GDP as a whole to per capita GDP. The basic character of the results is the same, but because the population has grown continually, the measured pace of growth is shifted downward to be dominated by growth in the 1% to 2% annual rate.

Trend or Potential Growth

The discussion thus far emphasizes the importance of growth in GDP per capita outside of business

1. One way that GDP can get larger is through increases in wages and prices. Yes, it seems good if wages double, but it doesn't represent real progress if prices also double. The standard of living will be unchanged. For this reason, the focus should be on so-called real growth—those increases in GDP that derive from more production and sales of goods and services.

cycle fluctuations. How *does* the economy grow and standards of living increase? The answer is deceptively simple. If you want to raise the amount of income per person, then there must be (1) more people working in the population, or (2) the same workers have to be more productive.

CHART 7

Source: Author's calculations.

CHART 8

Sources: Bureau of Labor Statistics (BLS) and Congressional Budget Office (CBO).

People at Work

One way to generate more income per capita is to have more people working. If two out of every three people are working, it is possible to have much higher income per capita than if only one person is working. Over the postwar period, this has been one part of the successful playbook of the U.S. economy. Chart 8 shows that the labor force participation rate—the fraction of the population that is either working or seeking work—rose steadily from the early 1950s to the mid-1990s. The rise was fueled by increased labor force participation of women for much of the postwar era. In the past 15 years, however, the labor force participation of both men and women has declined—and is projected to decline further.

Productivity

The most important source of sustained growth, however, is increases in labor productivity. Chart 9 shows the dramatic growth of productivity in the United States from 1947 to the present.[2] Workers in 2013 are nearly five times as productive per hour as comparable to workers in 1947. When workers are five times more productive, their employers can afford to pay them five times as much, their families see a paycheck that is five times larger, and their spending can expand fivefold to include college, a bigger house, new cars, vacations, and myriad other elements of a higher standard of living.

2. The chart is based on BLS data for annual business productivity (output per hour) growth, using 1.0 as the index value for 1947. A value of 2.0 means that workers are twice as productive as in 1947, 3.0 means three times as productive, and so forth.

The chart also shows that rising productivity is not an immutable economic law. Productivity grew at an average annual rate of 3.3% from 1947 to 1969, and then slowed dramatically to only 1.8% annually from 1970 to 1994. Since then, productivity growth has rebounded to 2.4% annually.

CHART 9

Source: BLS[3]

It is important to focus on fluctuations in labor productivity for two reasons. First, it raises the deeper question of what contributes to labor productivity. Second, it makes clear that public policy may be able to foster or deter the pace of productivity growth, and, in turn, have important influences on how well Americans live.

Productivity: Skills and Effective Use of Labor

A straightforward way to increase the productivity of workers is to improve their education and skills. Better educated workers are more easily trained to operate complex machinery, implement new systems, provide better advice and service, gain mastery of new jobs after promotion or relocation, solve production-line problems, and otherwise contribute to the firm's objectives. Education and skills can come from formal education in public and private schools, on-the-job training and in-house courses by employers, and through on-the-job experience. The various means of acquiring more skills and productivity are among the reasons that a good foundation of basic education is complemented by a career of steady work and accumulation of skills.

At the same time, it is essential that highly skilled individuals are not stuck in ill-fitting jobs. That is, it is important to have a flexible labor market that matches workers' skills with the right jobs. This permits workers to take advantage of their skills—and get paid more—as well as giving both workers and employers the benefit of greater productivity.

Productivity: Capital Accumulation

A single worker can move more dirt in an hour with a modern backhoe than the age-old shovel. That is the simplest example of a phenomenon that extends throughout the economy. Workers who have access to more and better equipment, machines, computers, facilities, technologies, and other forms of capital are more productive. Analysts use the ratio of capital to labor—the so-called capital intensity of an economy—as a measure of labor access to capital. Chart 10 shows that the capital intensity of the U.S. economy has risen, albeit with some fluctuations, over the postwar period. Capital intensity has also flattened out in the past decade due to weaker investment, foreshadowing the poor overall economic growth that the United States has experienced.

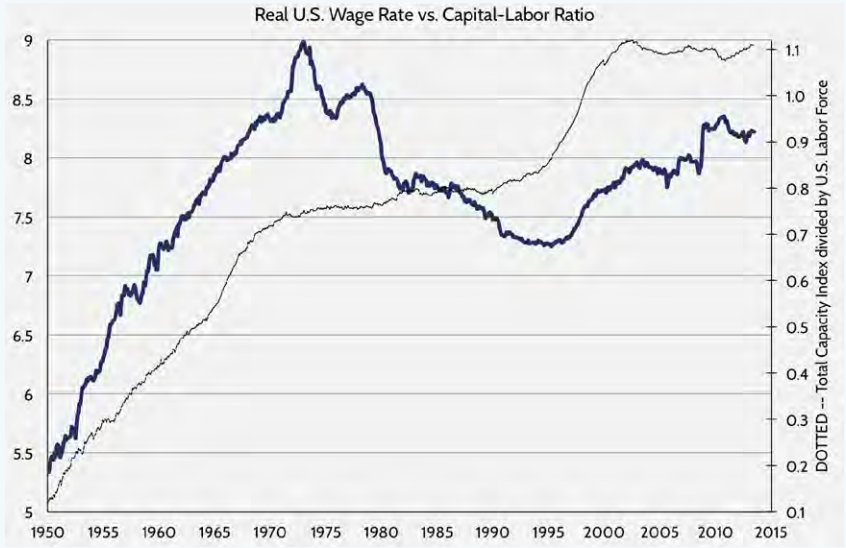
Capital intensity is closely correlated with productivity and, because productivity allows

3. A productivity index is the ratio of productivity measured in a particular time period to the productivity measured in a base period. See footnote 2.

CHART 10

Source: Wells Capital Management, a business of Wells Fargo Asset Management.

CHART 11



Source: Wells Capital Management, a business of Wells Fargo Asset Management.

employers to compensate workers more highly, it is also closely related to inflation-adjusted earnings and the standard of living. As seen in Chart 11, the "Real U.S. Wage" is an inflation-adjusted measure of what workers get paid. As the capital intensity of the economy waxes and wanes, so, too, does the standard of living generated by work. A lesson from this is that factors which seemingly "benefit firms" by allowing them to invest more ultimately shift to benefiting workers in the form of greater pay.

Productivity: Innovation and Technology

The final channel for improving labor productivity is inventions and new technologies. The spread of wireless communications technologies has permitted greater productivity. Automated ordering and delivery systems have modernized retail, improved supply management, and revolutionized productivity. It is hard to find a corner of the United States that still does business with the same skills and technologies as it did 50 years ago.

The moral is that policies that promote faster investment, skill acquisition, the free flow of labor, and innovation will enhance labor productivity growth. When combined with policies that increase labor force participation, they will engender faster economic growth and rising standards of living.

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GROWTH AND THE AMERICAN CITIZEN

Given this background, what has been the historical record and projected path of the U.S. economy regarding growth, incomes, and jobs? Chart 12 summarizes the overall picture, in which the solid line shows actual GDP (inflation adjusted) and the dotted line depicts the trend level of GDP.[4] Two lessons emerge. The first is that the United States is subject to fairly regular business cycle slumps and booms, sometimes quite dramatic ones. These influence the measured growth rates of GDP quite substantially (see Chart 6), but they do not constitute the type of growth at the heart of preserving and enhancing the American Dream.

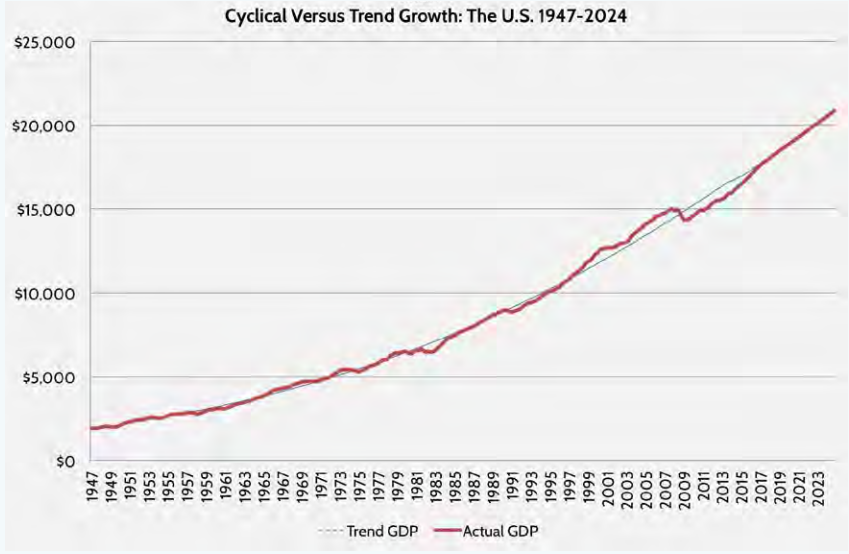
However, discarding the business cycles, trend GDP has shown a continuous upward rise since 1947. But we are in jeopardy of seeing that GDP growth rate slow dramatically.

As mentioned, in principle, rising GDP could simply reflect a larger population and workforce. However, the historical record and projected future show rising GDP per capita even after removing the cyclical components (see Chart 13).

Charts 12 and 13 contain the potentially misleading impression that the trend growth rate is fixed, an immutable economic law that dictates the pace of expansion. This is far from the case. As a demonstration, Table 1 shows the estimated trend growth rates during the postwar era. For example, the first row shows that the overall trend (excluding business cycles) from 1947 to 2013 was GDP growth at a 3.3% annual rate, while GDP per capita rose at a 2.1% rate.

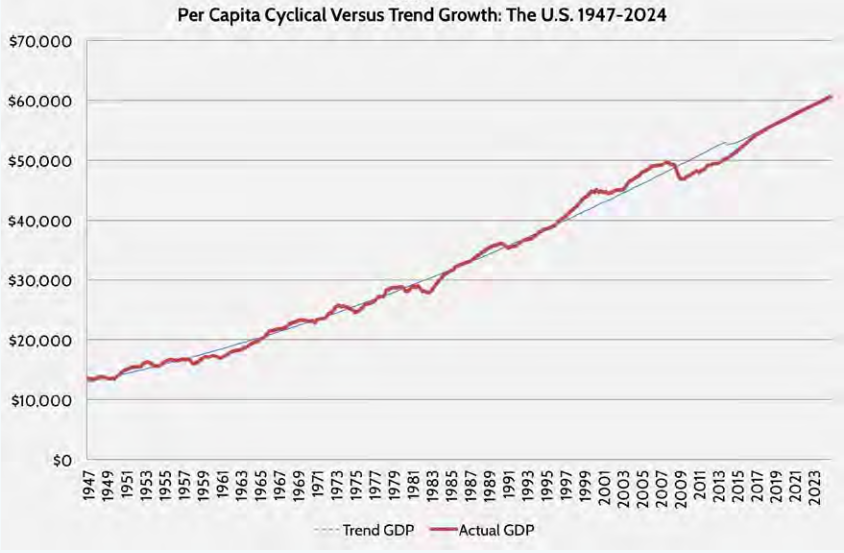
This overall rate, however, conceals several distinct periods. During the early postwar period, from 1947

CHART 12



Source: Author's calculations.

CHART 13



Source: Author's calculations.

4. The trend rate of growth is the sustainable rate of economic growth in the absence of business cycle booms or recessions.

to 1969, the trend growth rates were quite rapid. GDP and GDP per capita grew at rates of 4.0% and 2.4%, respectively. Over the subsequent two and one-half decades, however, these fell to 2.9% and 1.9%, respectively.

From 1986 to 2007, trend growth in GDP recovered to 3.2%, while trend GDP per capita growth rose to 2.0%. These were rates quite close to the overall historic performance. Since 2007, however, growth has been quite slow and the underlying trends—1.5% and 0.7%—quite low.

TABLE 1
ESTIMATED TREND GROWTH RATES

	GDP	GDP Per Capita
1947–2013	3.3%	2.1%
1947–1969	4.0%	2.4%
1970–1985	2.9%	1.9%
1986–2007	3.2%	2.0%
2008–2013	1.5%	0.7%
2014–2014	2.5%	1.7%

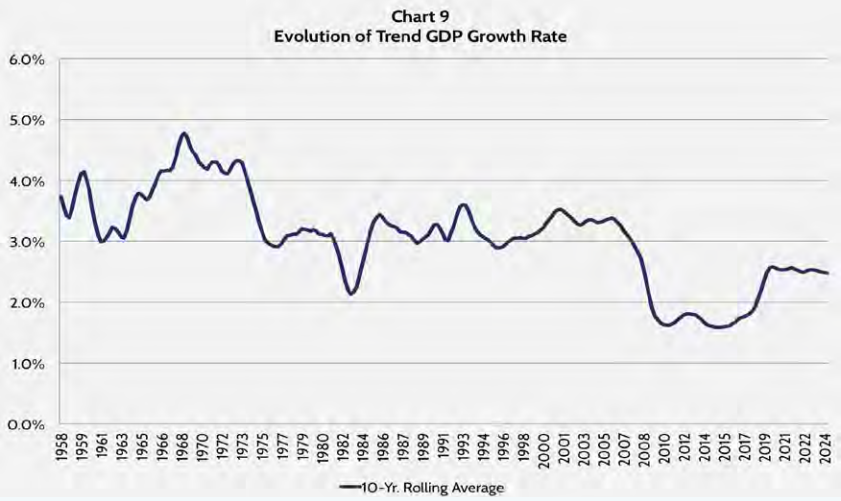
The estimates in Table 1 rely on splitting history into distinct eras and are fraught with the possibility of choosing the wrong years as break points. Another approach, seen in Charts 14 and 15, is to simply display how trend growth in GDP and GDP per capita has evolved. Specifically, the observation for each year is the average of the past 10 years (40 quarters) growth in trend GDP.

A quick inspection of those charts reveals the same story as in the previous charts. Trend growth in the early postwar period was relatively rapid, followed by a noticeable decline in the 1970s and 1980s. Trend growth subsequently recovered until the period from 2008 to the present.

Charts 12–15 make the point that trend growth in GDP and GDP per capita has shifted in the United States. This is significant because it suggests that the underlying determinants of trend growth—labor force participation, education, skills, capital accumulation, innovation, and so forth—have shifted greatly over time.

Why may that happen? Onerous regulations and high taxes can diminish the incentives to work, willingness to invest, and capacity to innovate. Put differently, it raises hope that improved public policies can again restore rapid growth in the United States.

CHART 14

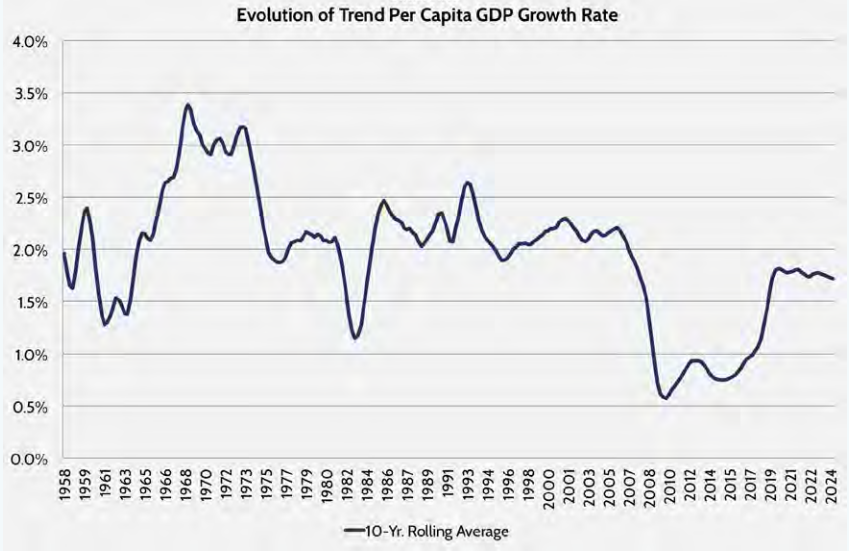


Source: Author's calculations.

More rapid growth *matters*. To see this, look at Table 2, which displays the number of years it takes income (GDP per capita) to double at various rates of trend growth.

The trend growth rate of postwar GDP per capita has been 2.1%. As Table 2 indicates, at this pace of expansion, an individual could expect the standard of living to double in 30 to 35 years (33 years to be exact). Put differently, during the course of one's working career, the overall ability to support a family and pursue retirement would become twice as large. In contrast, at the current per capita trend rate of 0.7%, it would take 99 years to double income per person.

CHART 15



Source: Author's calculations.

The dramatic difference in aspirations, opportunities, and achievement between a "2.1% per capita economy" and a "0.7% per capita economy" should be cause for national concern. Raising the trend rate of growth is central to retaining the American Dream and the nation's place on the globe.

TABLE 2
THE IMPORTANCE OF TREND GROWTH TO ADVANCING THE STANDARD OF LIVING

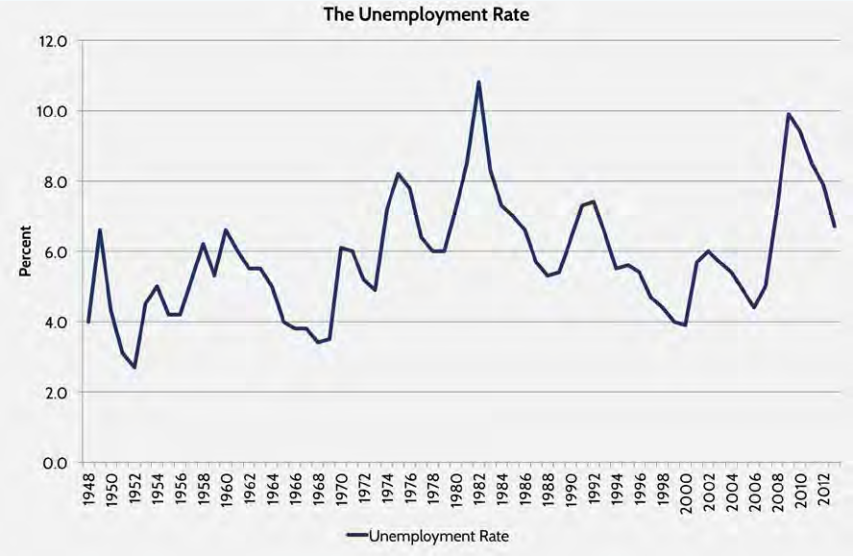
Trend Growth Rate Per Capita	Years for Income to Double
0.50%	139
0.75%	93
1.00%	70
1.25%	56
1.50%	47
1.75%	40
2.00%	35
2.25%	31
2.50%	28
2.75%	26
3.00%	23

Growth and Jobs

A standard concern is that growth will not be widespread enough to create jobs for everyone. As a matter of historical record, however, this concern is simply misplaced. The U.S. population more than doubled over the postwar era. If growth did not create jobs, one would expect widespread unemployment.

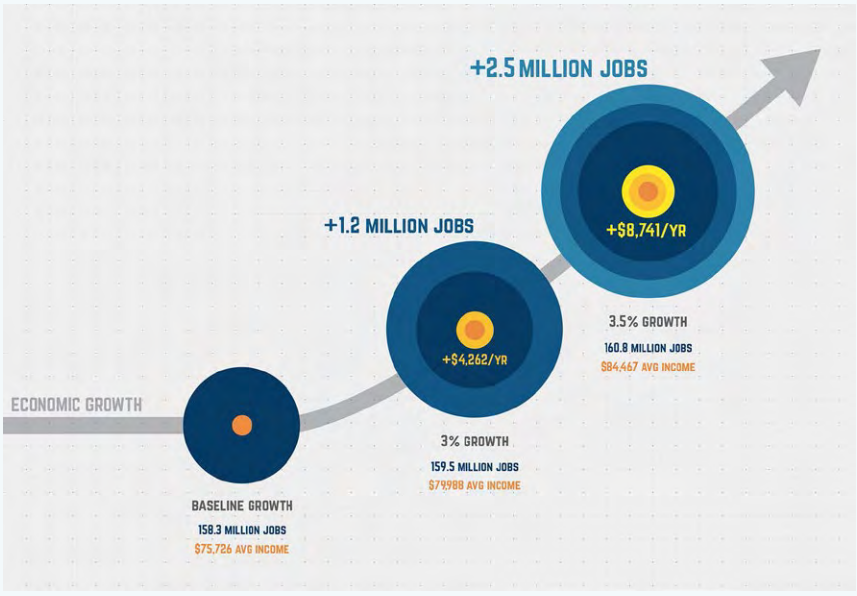
As Chart 16 demonstrates, the United States has had periods of quite high—sometimes exceeding 10%—unemployment. It has also had periods of strikingly low—below 3%—unemployment. However, from a growth perspective, the most significant aspect of Chart 16 is the regular return of the unemployment rate to "normal" levels. Put differently, the trend rate of growth in the economy has proven sufficient to create enough jobs to keep the labor force employed. There is no reason to doubt the ability of more rapid growth to meet the needs of job seekers.

CHART 16



Source: BLS.

CHART 17
THE GROWTH OPPORTUNITY: 2015–2024



Source: Author's calculations.

Nevertheless, millions of workers remain idle from the aftermath of the Great Recession. As result, there would be a near-term bonus from faster economic growth as they were put back to work. If the American economy were to grow at a rate of 3%, there would be roughly 1.2 million more jobs this decade. This number would rise to 2.5 million if growth escalated to 3.5% in the next 10 years. Chart 17 demonstrates the difference between rapid growth and baseline growth and the corresponding jobs projections.[5]

Growth and Innovation

Innovation and growth are closely related as technological progress is a central route to improving labor productivity growth. However, there is a "virtuous cycle" to growth and innovation, as economic growth also substantially impacts the willingness of society to invest in innovation. This is reflected in the growth of research and development (R&D) spending over time.

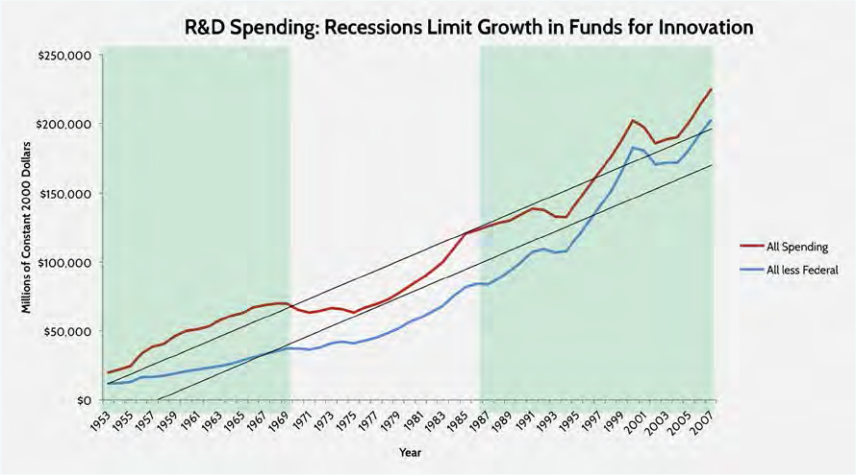
Chart 18 illustrates both total and nonfederally financed industrial R&D spending in the United States in real dollars from 1953 to 2007. Clearly, the growth in R&D spending takes a considerable dip in the years with slow economic growth (1970–1985) relative to the years with rapid growth (1953–1969 and 1986–2007). After R&D spending started decelerating around the beginning of the 1970s, it took until the next high growth period for businesses to start rapidly raising their investments in future products.

5. Details of projections are available upon request of AAF.

Growth and Small Businesses

Slow growth harms small businesses and the middle class. For example, wood kitchen cabinet makers (also includes countertop makers) saw their numbers grow to more than 179,000, a 57% increase in employment from 1990, during the last high-growth period. However, the subsequent low-growth period after 2008 today has entirely wiped out this growth, with employment having fallen below 1990s level to 106,000.

CHART 18



Source: National Science Foundation.
http://www.nsf.gov/statistics/iris/search_hist.cfm?indx=1

Growth and the Distribution of Well-Being

Will faster growth help the middle class? Will it benefit only the rich? Is growth good for those in poverty? A central concern in recent years has been the degree to which overall economic progress—increases in GDP or GDP per capita—are shared broadly in American society. Put differently, does an increase in overall GDP signal an increase in incomes at the bottom of the income distribution, to the middle class, *and* to the affluent?

CHART 19

Source: BLS

This section looks at the relationship between income distribution and overall economic growth and finds that historically faster growth has improved the standard of living of *all* Americans. Put differently, if the United States improves its growth outlook over the next decade, it is to the benefit of the rich, the poor, and the middle class alike.

Specifically, we can document the historic relationship between the overall pace of economic growth (as measured by the growth rate of GDP) and the changes in the average income in each quintile (one-fifth, or 20%) of the income distribution. Any such discussion must be grounded in the facts. The public debate is littered with assertions that growth benefits only the rich. What are the facts?

TABLE 3
AGGREGATE GROWTH AND THE INCOME DISTRIBUTION: AN EXAMPLE

		Growth Benefits the Bottom	Growth Benefits the Top	Growth Benefits Everyone
Income Quintile	Initial Incomes	Incomes	Incomes	Incomes
1st Quintile	$100	$125	$100	$125
2nd Quintile	$200	$250	$200	$250
3rd Quintile	$300	$375	$325	$375
4th Quintile	$400	$400	$450	$500
5th Quintile	$500	$500	$575	$625
Top 10%	$800	$800	$900	$950
Top 5%	$1,500	$1,500	$1,700	$1,700

How should the results of such an investigation be interpreted? Consider Table 3, which shows a hypothetical income distribution in which the first one-fifth of the population has an average income of $100; the second fifth has an average income of $200; the next fifth, $300, and so forth. These are shown as "Initial Incomes." Also shown are the average incomes in the very upper end of the income distribution; one has an average income of $800 in the top 10%, and the other has $1,500 in the top 5%.

Alternative Income Measures

In examining the U.S. experience on growth and income distribution, an important issue arises: What is the right measure of income? One could focus on the incomes that individuals earn from their labor, savings, investment, farm work, rental business, and other market-related activities. Presumably this—a pretax and pretransfer measure—would be quite closely connected to the way that growth affects the income distribution.

Alternatively, one could look at the posttax, posttransfer income of individuals. Because this would incorporate the progressive U.S. tax and transfer system, it would tend to redistribute from rich to poor and be less directly connected to the growth and distribution mechanics in the economy.

Suppose that better trend growth exclusively helps those in the lower classes. If so, then their incomes will rise, while those at the top will remain stagnant.

This example is shown in column 3 of Table 3. When growth benefits the lower classes, the bottom 20% of the individuals have average incomes of $125 instead of $100. Similarly, the second fifth see their average rise to $250, not $200. And, in the example, the middle class has average incomes up to $375 from $300. Average incomes in the top two quintiles (and the very upper end of the top quintile) are unchanged.

Column 4 illustrates a growth pattern in which the rich get richer. Average incomes for the bottom two quintiles remain the same, while they rise for those in the middle and above. (One could construct even more examples that benefit only the very top.) Column 5, however, displays a growth pattern in which every part of the income distribution benefits.

As explained in the text box, there is more than one way to measure the income distribution. The results are presented here in the form of charts for either pretax, pretransfer income or post-tax, post-transfer income. (The complete results are summarized in Appendix 2.) The charts show the impact on average income in the various segments of the income growth as a result of more rapid economic growth.[6]

The charts contain a wealth of information; however, their broad characteristics are as important as any

6. Specifically, I choose as a "baseline" the growth projections of the CBO, which average 2.5% annual growth for real GDP over the decade ending in 2024. I then simulate the impact on those income measures of faster growth at the rate of 3% and then 3.5%.

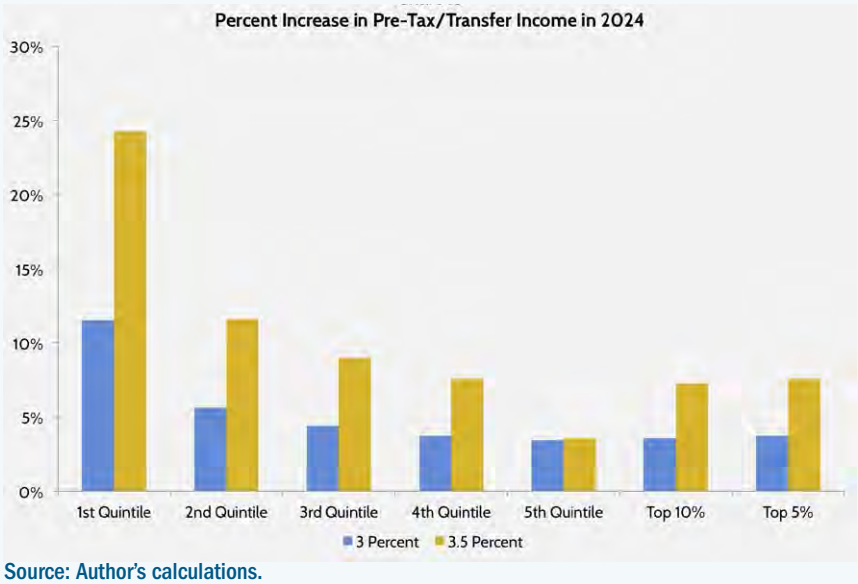
individual projection. First, every line slopes *up*. That is, overall economic growth helps every part of the U.S. income distribution. Second, the tax and transfer system helps low-income Americans considerably. As a result, growth has a smaller impact on the lowest income Americans than it would in the absence of the social safety net.

The results of the analysis are summarized in Charts 20 and 21. Consider Chart 20 first. Ramping up growth from the tepid CBO baseline to a 3% growth rate would raise income in the lowest quintile by 10% in 2024. The impact in the middle quintile is a bit less than one-half as large. Notice that a smaller percentage increase will represent a greater dollar increase because the middle quintile starts at a higher level of income.

Not surprisingly, growth at a faster rate of 3.5% has even more beneficial effects across the income distribution and means another 10% increase in the standard of living of the middle class in 2024.

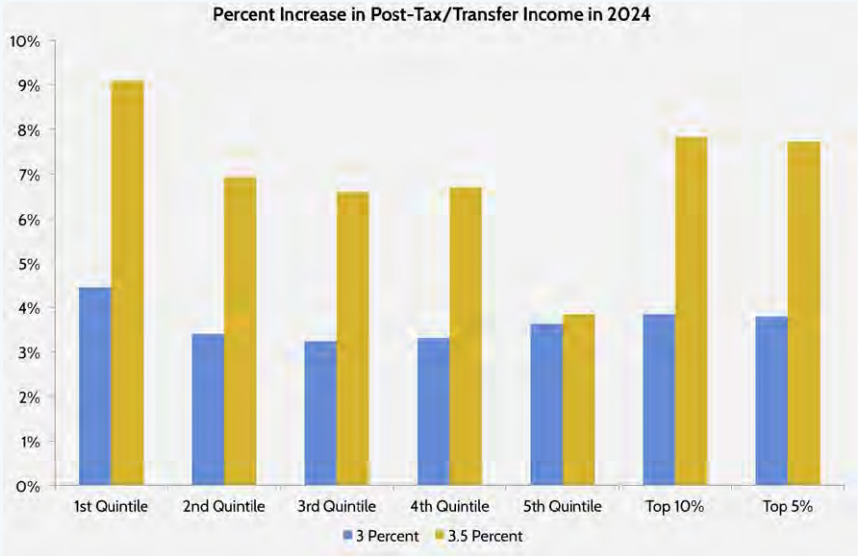
The results in Chart 21, in contrast, show the impact on post-tax and post-transfer income. Accordingly, the impact at the bottom end of the income distribution is not as large—the faster growth replaces the impact of the social safety net. For the middle part of the income distribution, the results range from 3% to nearly 7% higher income after one decade.

CHART 20



Source: Author's calculations.

CHART 21



Source: Author's calculations.

The Historical Record: A Recap

Since 1947, the United States has displayed consistent upward trend economic growth even in per capita terms. The magnitude of this trend, however, has fluctuated over time and is now quite low. The former suggests that good economic policies can support a more rapid pace of economic growth; the latter is deep cause for concern. At current rates, it will take a

century to double the standard of living in the United States. Finally, the historical record indicates that Americans broadly share in the gains from economic growth, as the average income across the income distribution rises in response to faster GDP growth.

POSSIBLE POLICY OPTIONS FOR MORE RAPID GROWTH

Achieving better long-term economic growth in the United States requires changing the basic policy strategy. Long-term success requires moving away from targeted, temporary fixes and toward permanent, structural reforms that will generate better long-run performance. Examples of economic policy that enhance growth follow:

Entitlement Reform

The policy problem facing the United States is that spending rises above any reasonable metric of taxation for the indefinite future. Period. There is a mini-industry devoted to producing alternative numerical estimates of this mismatch, but the diagnosis of the fundamental problem is not complicated. The diagnosis leads as well to the prescription for action. Over the long term, the budget problem is primarily a spending problem, and correcting it requires reductions in the growth of large mandatory spending programs—entitlements like Social Security and federal health programs.

At present, Social Security is running a modest cash flow deficit, increasing the overall shortfall. There are even larger deficits and future growth in outlays associated with Medicare, Medicaid, and the Patient Protection and Affordable Care Act (ACA). These share the demographic pressures that drive Social Security but include the inexorable increase in health care spending per person in the United States.

For this reason, an immediate reform and improvement in the outlook for entitlement spending would send a valuable signal to credit markets and improve the economic outlook. The spending future outlined there represents a direct impediment to job creation and growth. The United States is courting further downgrade as a sovereign borrower and a commensurate increase in borrowing costs. Any sharp rise in interest rates would have dramatically negative economic impacts; even worse, an actual liquidity panic would replicate or result in an experience worse than the experience of fall 2008.

Alternatively, businesses, entrepreneurs, and investors perceive the future deficits as an implicit promise of higher taxes, higher interest rates, or both. For any employer contemplating locating in the United States or expanding existing facilities and payrolls, rudimentary business planning reveals this to be an extremely unpalatable environment.

In short, entitlement reform is a pro-growth policy move at this juncture. As summarized by an American Action Forum paper, research indicates that the best strategy to both grow and eliminate deficits is to keep taxes low and reduce public employee costs and transfer payments.[7]

Tax Reform

An overhaul to modernize and simplify the U.S. tax code is long overdue. The tax code is in need of dramatic improvements, including a modern international tax system, a lower corporation income tax rate, correspondingly lower rates on business income tax via so-called pass-thru entities, and broad elimination of tax preferences to preserve efficient allocation of investment and budget neutrality.

7. See http://americanactionforum.org/insights/repairing-a-fiscal-hole-how-and-why-spending-cuts-trump-tax-increases.

The types of reforms that generate beneficial economic effects include reducing the corporate tax rate, repealing the corporate AMT and making the R&D tax credit permanent, and exempting 95% of foreign source dividends. At the same time, one could improve work incentives by simplifying individual income tax rate brackets (recent proposals have suggested two brackets of 10% and 25%) and exclude a substantial portion of dividends and capital gains from taxation.

Regulation Reform

The rapid increase in burdensome regulations comes at considerable cost to American businesses, consumers, workers, and the economy as a whole. In the first seven months of 2014 alone, the federal government imposed more than $116 billion in compliance costs and an estimated 23 million net paperwork burden hours on American businesses and individuals.[8] This has a significant impact on employment. Just $1 billion in new regulation burden is associated with a 3.6% decline in industry employment.[9] The cumulative effect of regulation is significant and should be accounted for when writing new rules. A wholesale reevaluation of existing regulations, starting with the most burdensome, duplicative, and costly, should be undertaken to limit the negative impact on employment and prosperity.

Immigration Reform

Immigration reform can raise population growth, labor force growth, and, therefore, growth in GDP. In addition, immigrants have displayed entrepreneurial rates above that of the native-born population.[10] New entrepreneurial vigor embodied in new capital and consumer goods can raise the standard of living. Absent immigration, the population and overall economy will decline as a result of low U.S. birth rates. Serious, economically based immigration reform would raise the pace of economic growth substantially, raise GDP per capita, and reduce the cumulative federal deficit.

Energy Reform

The most important economic event of the past decade is that North America is leading a global shift in energy supply, so good energy policy is simply good economic policy. Reliance on markets to generate new supply and adjudicate alternative demand is the best way to go—including participation in global energy markets. Unfortunately, U.S. policy is still rooted in an obsolete mind-set in which energy is "special," requires excessive regulation, and effectively bans exports.

Federal policy should take advantage of the opportunity for greater domestic production and for greater trade in energy products, both of which would enhance economic growth. Exports of crude oil must be approved by the Department of Commerce. Export facilities for liquefied natural gas must be approved by the Department of Energy, which has approved just six of 30 applications since 2011.

8. See http://americanactionforum.org/rodeo-database for detailed data.

9. See Batkins and Gitis, "The Cumulative Impact of Regulatory Cost Burdens on Employment". http://americanactionforum.org/research/the-cumulative-impact-of-regulatory-cost-burdens-on-employment.

10. See Holtz-Eakin, "Immigration Reform, Economic Growth, and the Fiscal Challenge." http://americanactionforum.org/sites/default/files/Immigration%20and%20the%20Economy%20and%20Budget.pdf.

APPENDIX 1

METHODOLOGY FOR INCOME GROWTH PROJECTIONS

To project the growth of income measures in each quintile, the top 10%, and the top 5%, I first estimated the past relationship between mean household income and economic growth. The data I employed contain two different measures of income, both of which were examined by Burkhauser, Larrimore, and Simon (2012).

The first measure is pre-tax, pre-transfer household income, which reflects the value of all income earned by a household before paying taxes or receiving credits and noncash benefits. The second is post-tax, post-transfer income plus the value of employer provided or government-provided health insurance. This measure of income aims to represent all resources actually available to each household as it reflects household disposable income after paying taxes and receiving government transfers, such as the Earned Income Tax Credit. In addition, it includes the value of a major noncash benefit—health insurance. The pre-tax, pre-transfer income data span 1977 to 2008 and the post-tax, post-transfer income plus health insurance data span 1979 to 2008.

Both measures of income are adjusted for inflation in each year and are adjusted for household size. Incomes are adjusted for inflation using CPI-U-RS to reflect real values over time. In addition, it is important to adjust income for household size to reflect the resources available to each person. For instance, a one-person household that earns $50,000 is better off than a two-person household that earns the same amount. Household income is adjusted for size by dividing income level by the square root of the number of people in the household.[11]

To examine the relationship between household income and economic growth, I took a log-differences approach and estimated the following regressions:

$$(1)\ \log(b_{q,t}) - \log(b_{q,t-1}) = \alpha_0 + \alpha_1 t + \alpha_2(\log(y_t) - \log(y_{t-1})) + \varepsilon$$
$$(2)\ \log(a_{q,t}) - \log(a_{q,t-1}) = \alpha_0 + \alpha_1 t + \alpha_2(\log(y_t) - \log(y_{t-1})) + \varepsilon$$

In model 1, $b_{p,t}$ represents household income before taxes and transfers in quintile q and year t. Likewise in model 2, $a_{q,t}$ represents household income after taxes and transfers plus health insurance in quintile q and year t. Finally, y_t represents real GDP in year t. Subtracting log income and log real GDP in one year from their log values in the previous year allows for a precise examination of the impact of real GDP growth rates on household income growth rates. I used each model to run regressions on incomes in each quintile, the top 10%, and the top 5%, making 14 regressions in all.

Appendix Table A1 displays the regression results for each model by quintile, the top 10%, and the top 5%.

These results indicate that those in the bottom 20% benefit the most from economic growth. For instance, a 1% increase in real GDP is associated with a 2.1% increase in pre-tax, pre-transfer average income for households in the bottom 20% and a 0.63% increase for households in the top 20%. The same trend occurs for post-tax, post-transfer plus health insurance income, though it is less pronounced.

Using these estimated relationships, I then projected average pretax, pretransfer and post-tax, post-transfer incomes in each quintile under different growth scenarios for each year until 2024. Since my data only

11. I thank Jeff Larrimore for providing this average income data for each quintile, the top 10%, and the top 5%.

go until 2008, I projected income levels using actual real GDP growth for each year from 2009 to 2013. Then from 2014 to 2024, I projected income levels under each growth scenario. The first scenario is the CBO's baseline real GDP growth, which averages 2.5% per year from 2014 to 2024. I also projected household income growth if real GDP growth averaged 3.0% and 3.5% each year from 2014 to 2024. This yields projected income levels for each quintile, the top 10%, and the top 5% under the baseline, 3.0%, and 3.5% per year real GDP growth scenarios. All of the projections are illustrated in charts A1 to A16.

A1: GAINS IN INCOME FROM ECONOMIC GROWTH

	1	2
1st Quintile		
Real GDP	2.10***	0.81***
Year	0.0005	0.0010*
2nd Quintile		
Real GDP	1.03***	0.62***
Year	0.0003	0.0008*
3rd Quintile		
Real GDP	0.80***	0.59***
Year	0.0001	0.0004
4th Quintile		
Real GDP	0.68***	0.60***
Year	-0.0001	0.0001
5th Quintile		
Real GDP	0.63***	0.66***
Year	-0.0004	-0.0003
Top 10%		
Real GDP	0.65***	0.70**
Year	-0.0004	-0.0005
Top 5%		
Real GDP	0.68**	0.69**
Year	-0.0005	-0.0007

***p<0.01

**p<0.05

APPENDIX 2

COMPLETE SET OF GROWTH AND INCOME DISTRIBUTION ANALYSES

CHART A1

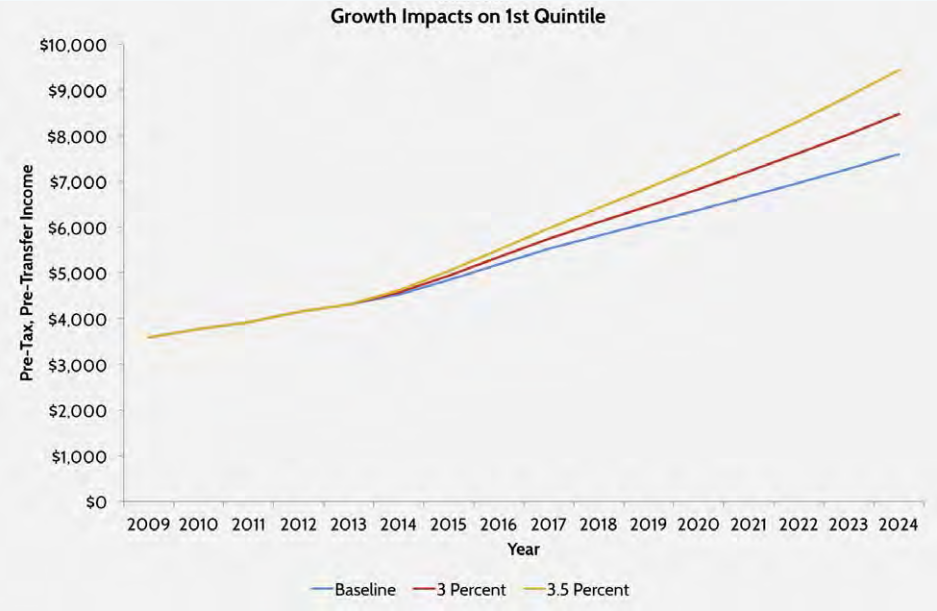


CHART A2

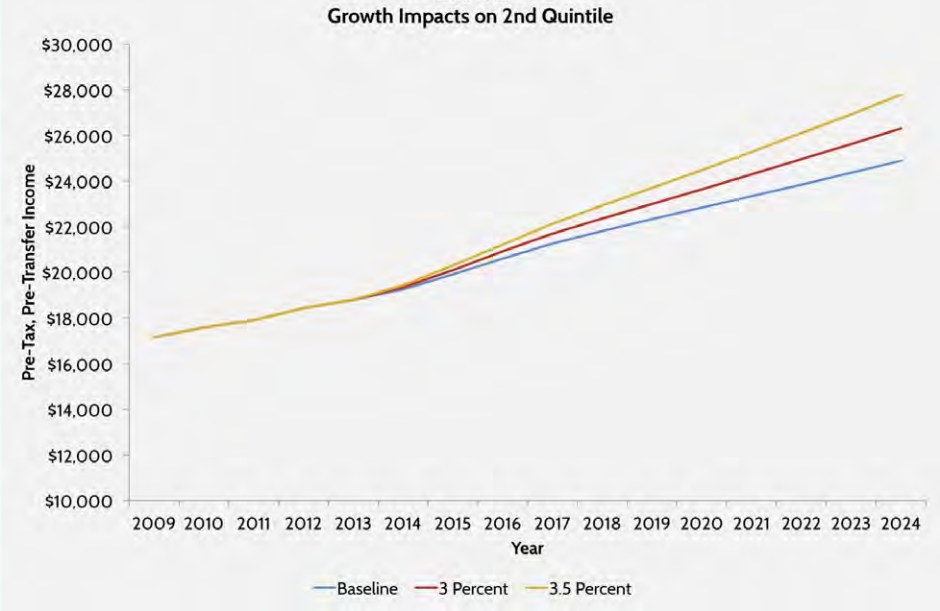


CHART A3

CHART A4

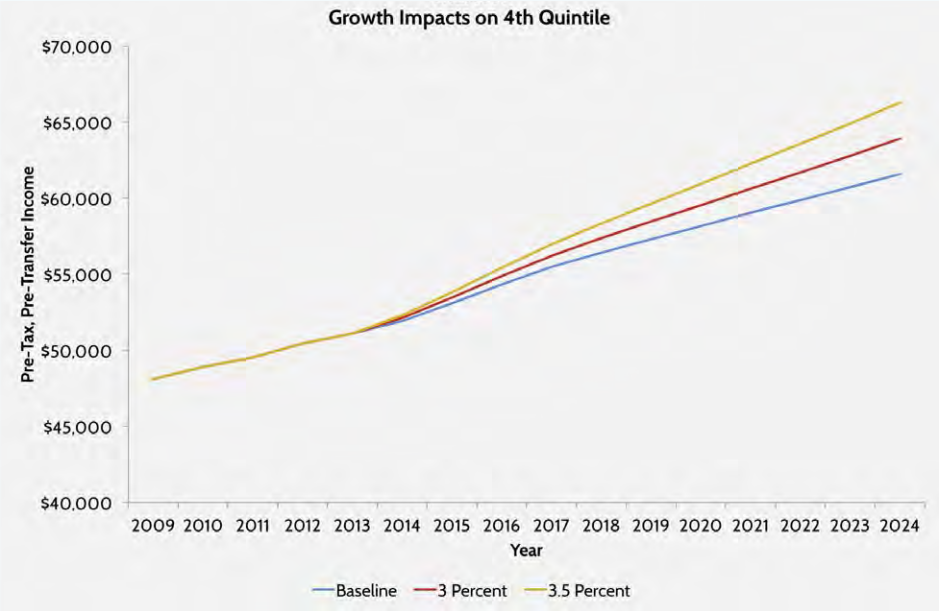


CHART A5

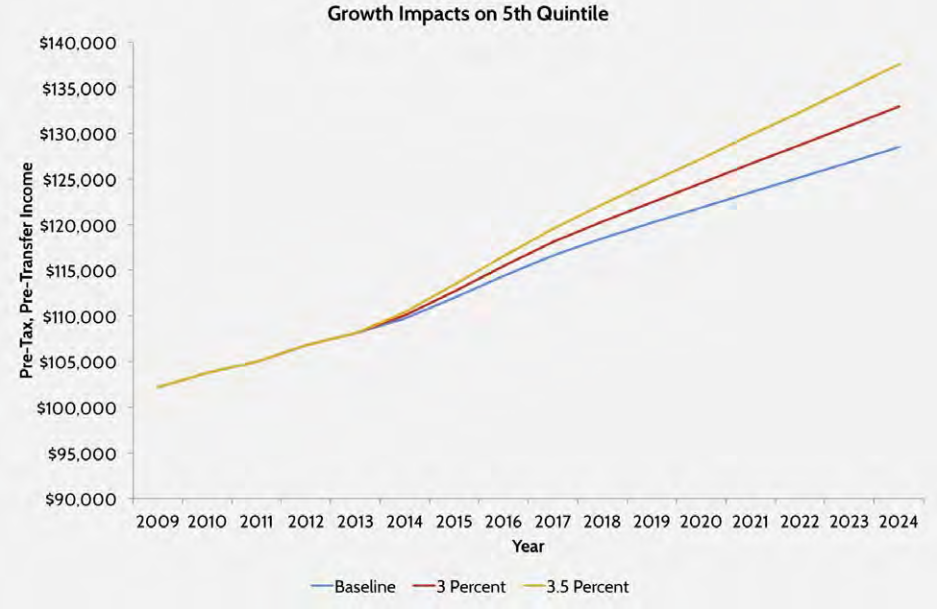


CHART A6

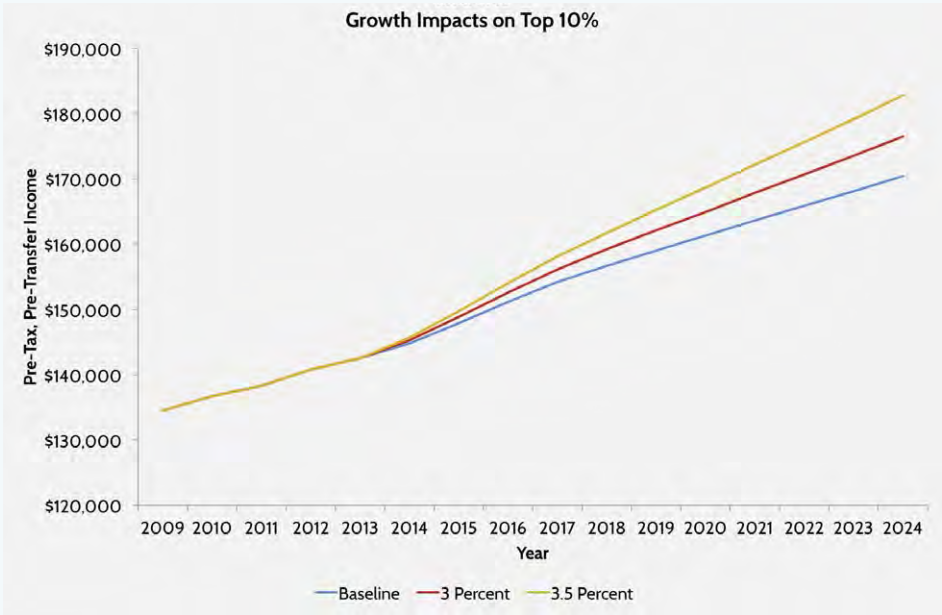


CHART A7

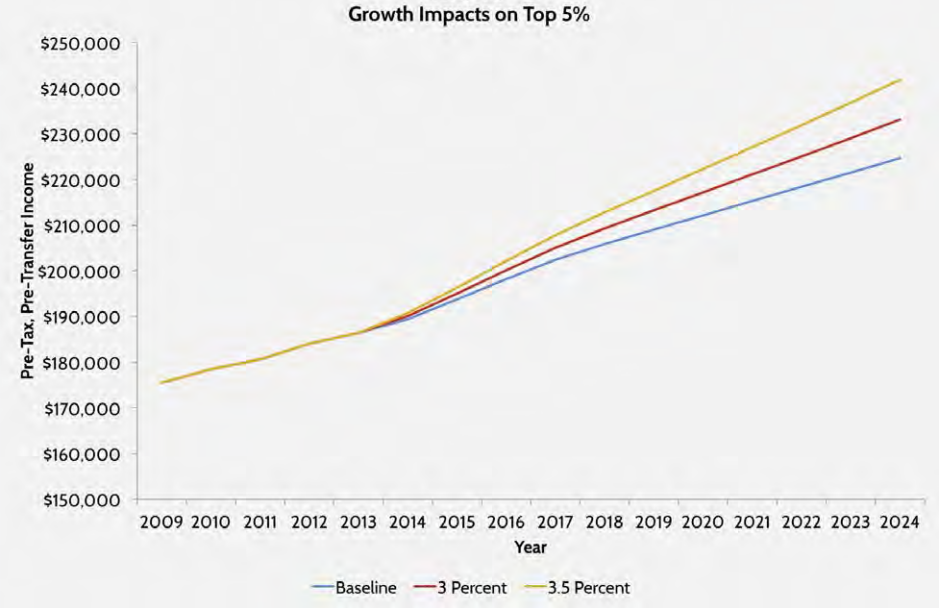


CHART A8

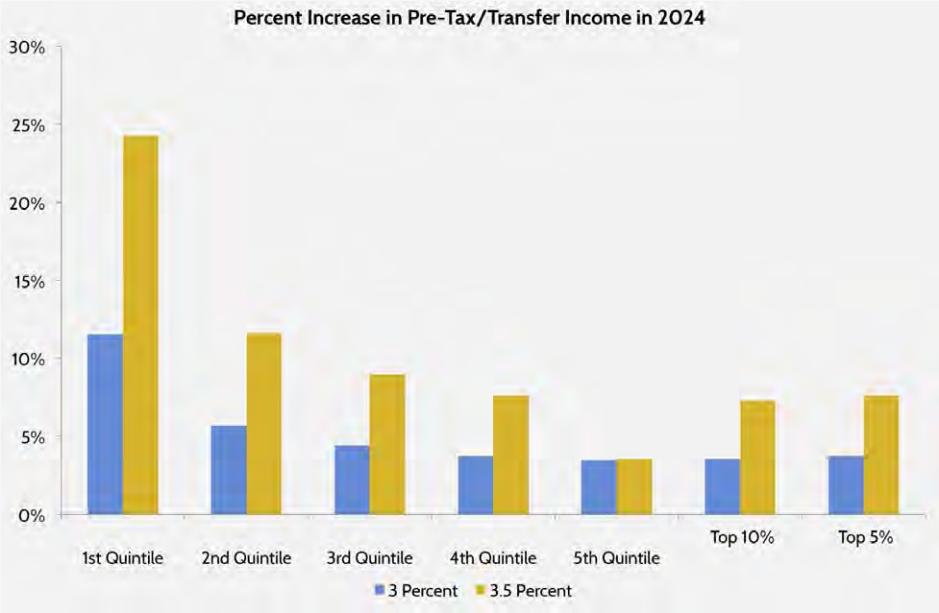


CHART A9

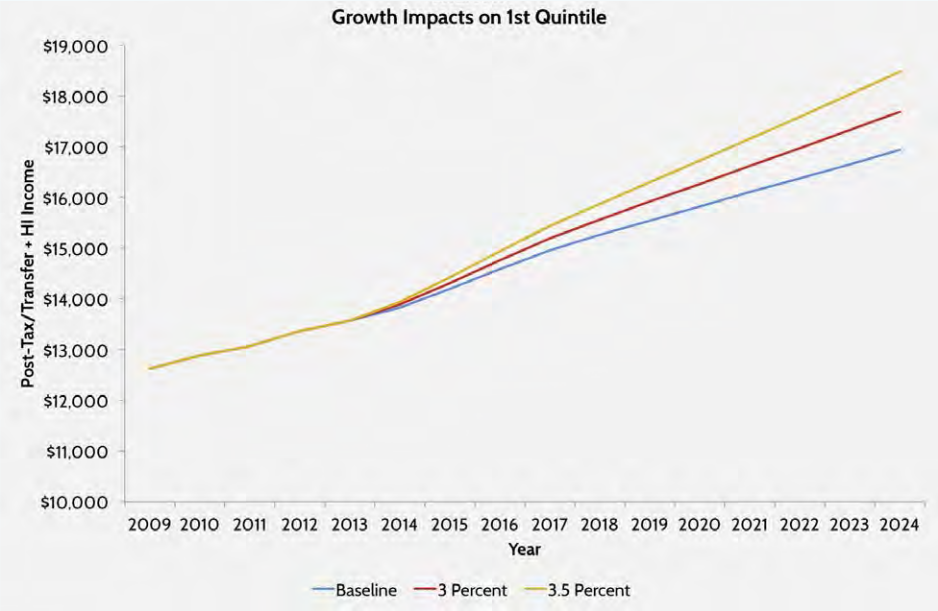


CHART A10

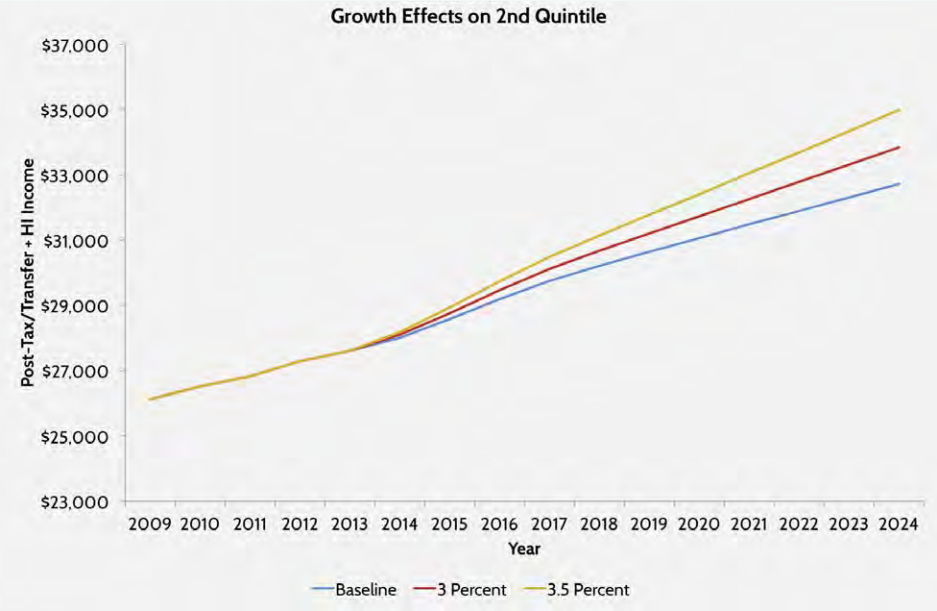


CHART A11

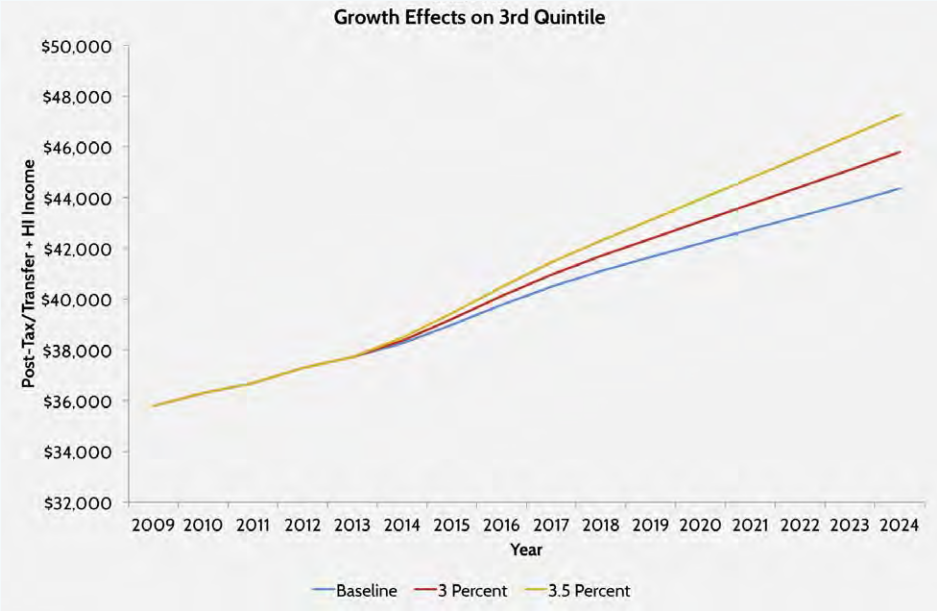


CHART A12

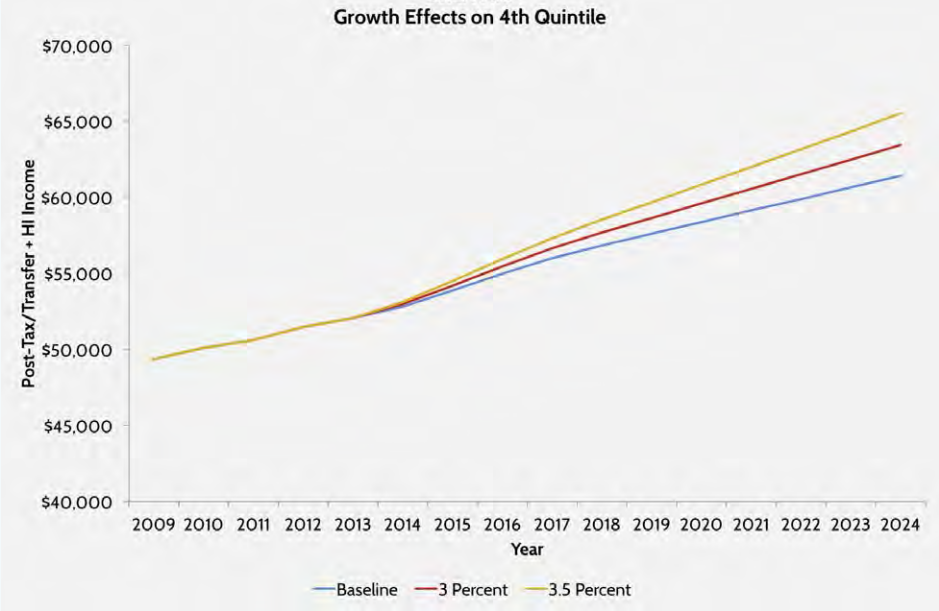


CHART A13

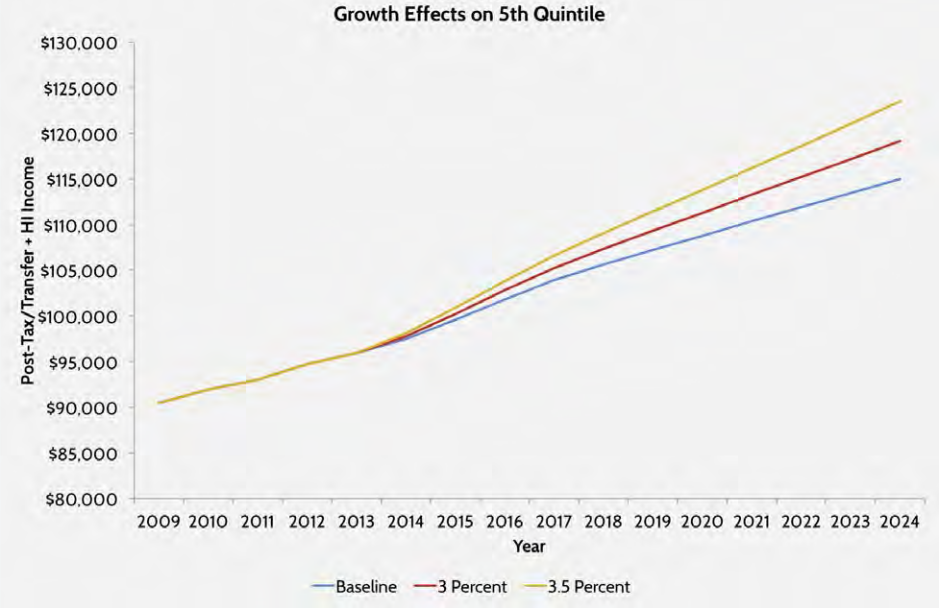


CHART A14

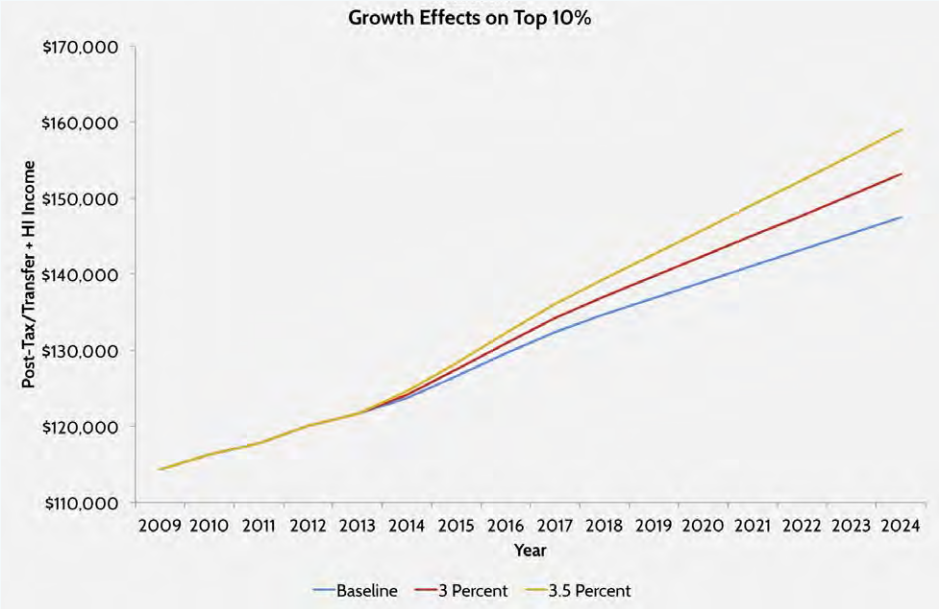


CHART A15

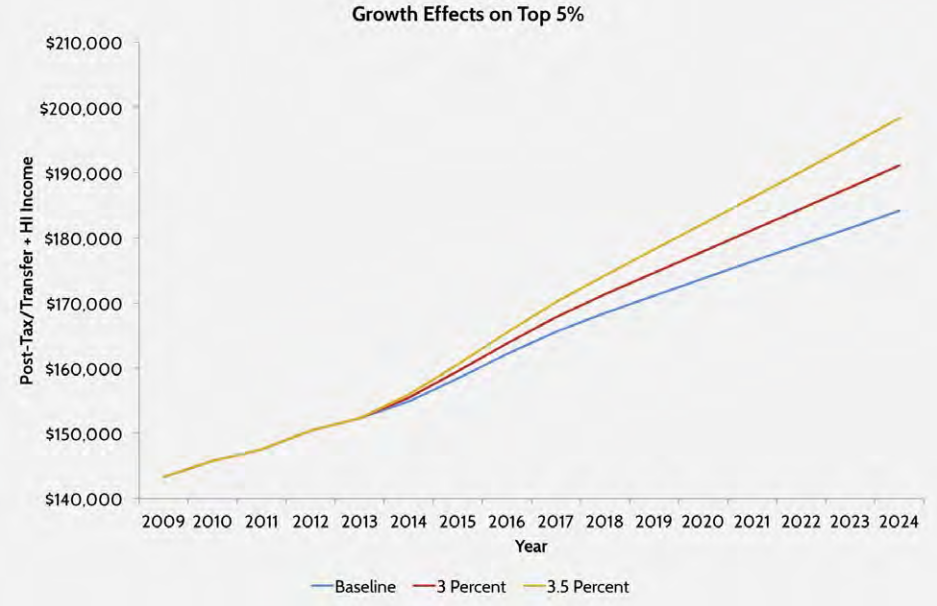
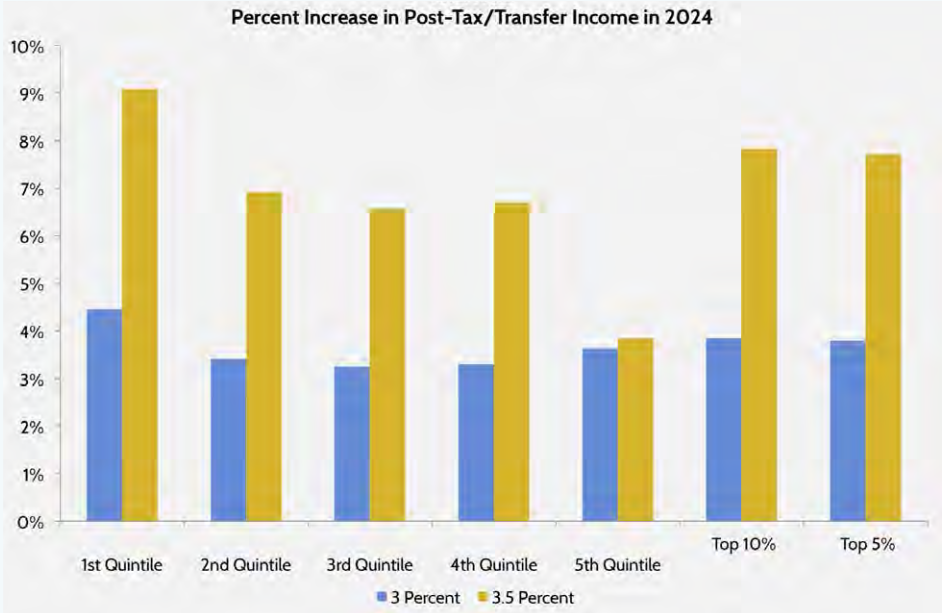


CHART A16



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President, American Action Forum

Douglas Holtz-Eakin has a distinguished record as an academic, policy adviser, and strategist. Currently, he is the president of the American Action Forum and most recently was a Commissioner on the congressionally chartered Financial Crisis Inquiry Commission. Since 2001, he has served in a variety of important policy positions.

From 2001 to 2002, he was the chief economist of the President's Council of Economic Advisers (CEA), where he had also served from 1989 to 1990 as a senior staff economist. At CEA, he helped formulate policies addressing the 2000–2001 recession and the aftermath of the terrorist attacks of September 11, 2001. From 2003 to 2005, he was the sixth director of the nonpartisan Congressional Budget Office (CBO), which provides budgetary and policy analysis to the U.S. Congress. During his tenure, CBO assisted Congress as it addressed numerous policies—notably the 2003 tax cuts (JGTRRA), the Medicare prescription drug bill (MMA), and Social Security reform. Between 2007 and 2008, he was director of domestic and economic policy for the John McCain presidential campaign. Following the 2008 election, Holtz-Eakin was president of DHE Consulting, an economic and policy consulting firm providing insight and research to a broad cross-section of clients.

Holtz-Eakin has held positions in several Washington-based think tanks. He was senior fellow at the Peter G. Peterson Institute for International Economics (2007–2008) and the director of the Maurice R. Greenberg Center for Geoeconomic Studies and the Paul A. Volcker chair in international economics at the Council on Foreign Relations (2006). He has also been a visiting fellow at the American Enterprise Institute, the Heritage Foundation, and the American Family Business Foundation.

He built an international reputation as a scholar doing research in areas of applied economic policy, econometric methods, and entrepreneurship. He began his career at Columbia University in 1985 and moved to Syracuse University between 1990 and 2001. At Syracuse, he became trustee professor of economics at the Maxwell School, chairman of the Department of Economics, and associate director of the Center for Policy Research.

Holtz-Eakin serves on the boards of the Tax Foundation, the National Economists Club, and the research advisory board of the Center for Economic Development.

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