JOBENOMICS™

2018 U.S. Economic Outlook

26 January 2018

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26 January 2018

Executive Summary: Jobenomics deals with the economics of small business and job creation. In addition to our monthly reports, this report deals with Jobenomics view of the state of the U.S. economy and how our economy might fair in 2018. As indicated in this 60-page analysis, Jobenomics sees as many upsides as downsides to our continued economic prosperity. As shown below on Jobenomics 2018 U.S. Economic Outlook Matrix, Jobenomics predicts an equal probability (33.3%) for economic improvement, maintaining the status quo, or an economic slowdown.

Today, our economy is booming, and the future looks sunny. However, storm clouds are billowing on the horizon. Discordance in Washington, turbulence in our mainland, and a multitude of foreign threats portend to upset our economy. The Trump Administration's bold economic and job creation vision (i.e., sustained 4% GDP growth and 25 million new jobs) and recent tax reform legislation should help propel the economy forward. On the other hand, governance, domestic and international disruptions could make the U.S. economy falter. 2018 will be an exciting year.

Jobenomics 2018 U.S. Economic Outlook Matrix

Strategic Considerations *Weighted Projections*		Get Much Better	Get Better	Stay the Same	Get Worse	Get Much Worse
Economy	GDP Growth		•			
	Stock Markets		•	•		
	Consumer Confidence			•	•	
	Debt & Deficits				•	
	Inflation			•		
Business	Big Business	••	••			
	Small & Micro-Business		••	•		
	Startup Businesses			•		
Labor Force	Employment	•	•			
	Unemployment			••		
	Not-in-Labor-Force			•	•	
Governance	Trump Administration	•	•	•••	•	•
	Fiscal Policy (Congress)				••	•
	Monetary Policy (The Fed)		•	••		
Domestic Disruptors	Technology	•	•		••	
	Income & Wages		•		•	
	Civil Unrest			•	•	
	Natural Disasters		•	•		
International Disruptors	Economic Competition			•	•	
	Conflicts/Wars/Cyber Attacks			•	•	•
	Extremism/Terrorism			•	•	
	Black Swans				•	•
		33.3%		**33.3%**	**33.3%**	

Background Material. Most economists rely on empirical macroeconomic economic, business and labor force models to derive their 2018 forecast. Taken alone, these three empirical models indicated that 2018 would be one of the best years economically in recent U.S. history. In addition to these traditional metrics, Jobenomics adds three other more subjective areas (governance, domestic and international disruptors) to its 2018 outlook equation. Any economic analysis without a critique of global-macro (strategic) trends and policy-making is incomplete. These three subjective global-macro trends can threaten U.S. economic growth, and in worst case scenarios could create a financial downturn or crisis. The weighted projections shown by the black dots are subjective but are backed by comprehensive Jobenomics research. The 175-page Jobenomics Comprehensive U.S. Labor Force & Employment Report and the 115-page Jobenomics Comprehensive U.S. Labor Force & Unemployment Report contain supporting documentation that can be downloaded free of charge.

The Jobenomics 2018 Economic Outlook attempts to be apolitical to the maximum extent possible since the Jobenomics National Grassroots Movement is a non-partisan movement supported by Republicans, Democrats and Independents alike. Regarding economic, community, small business and workforce development, this analysis is equally laudatory or critical of today's policy-makers as it is with previous administrations. Restoration of the American Dream for those at the base of our socioeconomic pyramid deserves much more attention than it receives from government officials. Mass-producing small businesses and jobs will not only elevate the status of the underemployed and unemployed but will provide more career opportunities for middle-class workers and protect the gains for those who already achieved financial well-being.

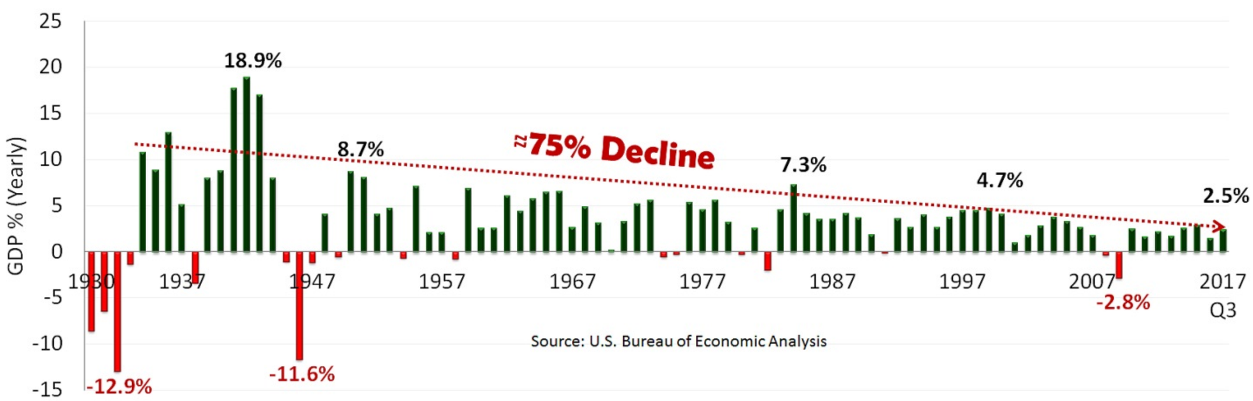
Economy

Strategic Considerations *Weighted Projections*		Get Much Better	Get Better	Stay the Same	Get Worse	Get Much Worse
Economy	**GDP Growth**		•			
	Stock Markets		•	•		
	Consumer Confidence			•	•	
	Debt & Deficits				•	
	Inflation			•		

- **GDP Growth.** This Jobenomics 2018 U.S. Economic Outlook report anticipates that GDP will get better in 2018. Most economists believe that economic growth depends on employment and GDP growth, which in turn is dependent on stable investment in business and job growth. For the U.S. economy, the ideal rate of GDP growth is around 3%. GDP growth exceeding 4% signals overheating and asset bubbles. GDP growth below 2% is sclerotic that makes the U.S. economy vulnerable to financial downturns. Two-quarters of negative GDP growth triggers a recession. When an economy grows at negative or sclerotic GDP rates, instability and unrest occur, and governing institutions lose their credibility.

U.S. GDP Growth History, by Year, Since Great Depression

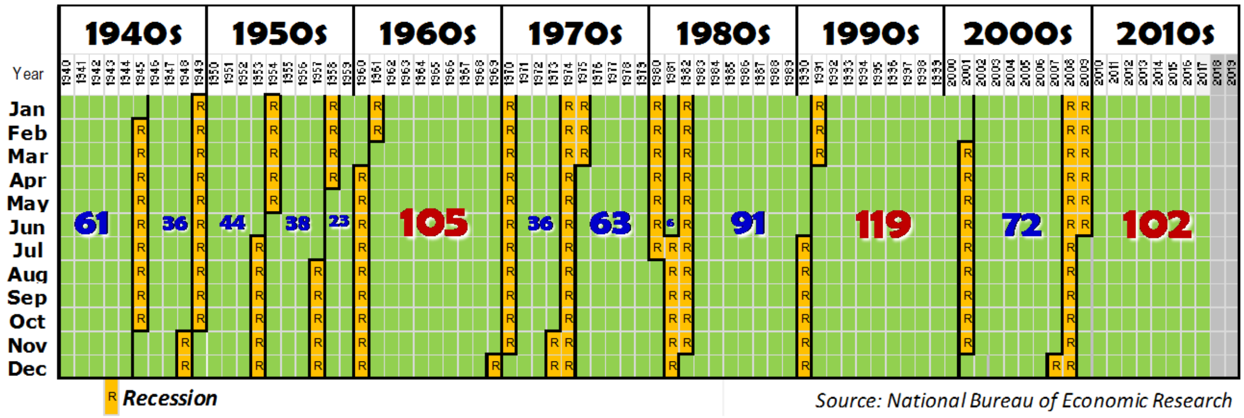
BEA, Table 1.1.1. Percent Change From Preceding Year



During the Great Depression, U.S. GDP hit its nadir of a negative 12.9% growth in 1932—the year that President Franklin D. Roosevelt was elected. During FDR's first term, he instituted the "New Deal" that pumped significant amounts of federal government money to revive the economy. During FDR's second time in office (1937-41), the U.S. economy boomed during the buildup and entry into WWII. In 1942, U.S. GDP hit its all-time high of 18.9% during the height of WWII. During the post-WWII period, U.S. GDP growth slumped to a negative 11.6% due to reduced government spending and tepid private sector investment. However, by 1950, the U.S. economy was humming again. By 1950, U.S. GDP hit a high of 8.7%. Since 1950, U.S. GDP declined steadily by approximately 75% in Q3 2017, surged during periods of war (Korea 1950-53, Vietnam 1960-75), and declined during recessionary periods (1937-38, 1945, 1949, 1953, 1958, 1960-61, 1969-70, 1973-75, 1980, 1981-82, 1990-91, 2001 and the Great Recession of 2007-09). As shown by the dotted red line, year-over-year U.S. GDP growth declined by approximately 75% over the last

9-decades. Since WWII, the United States suffered twelve recessions. So far this decade (the 2010s) has been recession-free.

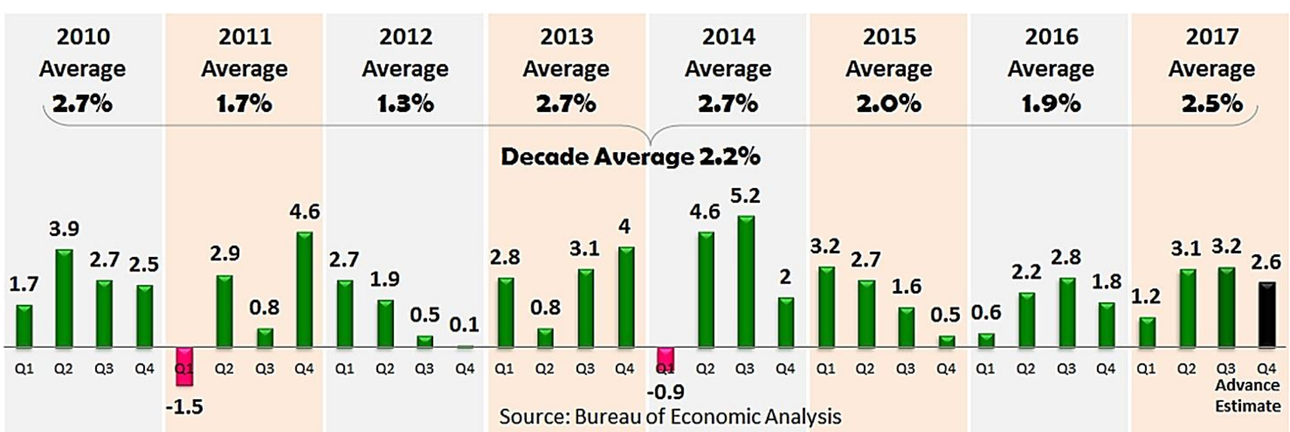
Longest Running Post-Recession Recoveries (Months)



Since the Great Recession, the U.S. economy achieved 102-months of continuous GDP growth, which is just shy of the records set in the 1960s (105 months) and the 1990s (119 months). Hypothetically, if the current economic expansion matches the historical record of 119 months, the next recession will occur in 22 months or in June 2019—a little more than halfway through President Trump's first term in office.

While there is no evidence of a time limitation, history is not on the side of continued expansion. A financial downturn could easily dismantle the Administration's economic and workforce efforts to obtain 4% sustained GDP growth and 25 million new jobs over the next ten years. Financial downturns happen more frequently than many experts are willing to acknowledge. Since the 1940s, the U.S. economy averaged 1.7 recessions and three financial crises per decade.

Real GDP Quarterly Percent Change This Decade



According to the U.S. Bureau of Economic Analysis (BEA), during the post-recession recovery period from 2010 through 2017, U.S. GDP averaged a mere 2.2%. In 2015 and 2016, U.S. GDP grew by subpar rates of 2.0% and 1.9% respectively. During the first year of the Trump Administration, quarterly **GDP growth** rate averaged 2.5% (1.2% Q1, 3.1% Q2, 3.2% Q3 and 2.6% Q4 Advance Estimate).

Progress on tax measures, along with continued strength from business and consumer confidence, should lead the U.S.economy to 3% growth in 2018, according to The Conference Board, global, independent business membership and research association. Goldman Sachs economics and the Federal Reserve forecast 2.5%. Jobenomics projects that due to tax cut exuberance U.S. GDP growth will reach 3.5% during the first half of 2018, but is likely be in the range of 2.5% to 3.0% by the end of the year if tax cuts do not produce the expected returns.

- **Stock Markets.** The bull market is now 105 months old. All three major U.S. stock markets are now at historic highs. Total U.S. stock market capitalization is now valued at $30 trillion as indicated by the Russell 3000 Index, an index that represents the 3,000 largest U.S.-traded stocks or 98.5% of all U.S. incorporated equity securities. Given its momentum, Jobenomics envisions that U.S. stock markets may get a little better or stay the same, barring any internal or external disruptions.

U.S. Stock Market Growth

U.S. Stock Market Indices		Recession Low 3/9/2009	1 Jan 2017	1 Jan 2018	1st 4-Weeks of 2018 1/26/2018
DJIA	Value	6,507	19,763	24,831	26,564
	Growth Total (2009 to 2017)	-	204%	**26%**	7%
	Growth Annual Average		**26%**		TBD
S&P 500	Value	676	2,252	2,684	2,866
	Growth Total (2009 to 2017)	-	233%	**19%**	7%
	Growth Annual Average		**30%**		TBD
NASDAQ	Value	1,284	5,425	6,927	7,487
	Growth Total (2009 to 2017)	-	323%	**28%**	8%
	Growth Annual Average		**42%**		TBD

Since the Great Depression low point in March 2009, the NASDAQ tripled in value (+323%), and Standard and Poor's 500 (S&P 500) and Dow Jones Industrial Average (DJIA) doubled in value (+233% and 204%, respectively). During President Trump's first year in office, the NASDAQ grew 28%, followed by the DJIA at 26%, and the S&P 500 at 19%. These percentages compare favorably to the annual average growth rate in the previous 7¾ year post-Great Recession period (NASDAQ 42%, S&P 500 30%, and DJIA 26%). As a result of the passage of the Tax Cuts and Jobs Act in December 2017 (TCJA), these three indices surged between 7% and 8% in the first 4-weeks of January 2018—an explosive beginning but unsustainable over the course of the year.

U.S. stock markets greatly exceeded expectations in 2017, doubling the number of returns in 2016, and creating approximately $5.5 trillion of new wealth. Consequently, many market-watchers believe that 2018 will be a year of profit-taking and cautious speculation. Nervousness about political, military and trade clashes will inhibit the expansion of the U.S. bull market.

A major reason for the U.S. stock market success is that the U.S. economy has been the "least ugly" economy in the world. The European Union has been in crisis with many of its southern member nations sliding in and out of recession. While still respectable with 6.8% GDP growth in 2017, the Chinese economy is no longer generating double returns as it did in the past. A large number of developing economies and emerging nations are struggling. Oil-rich Middle East economies are reeling from low oil prices, insurgencies, and terrorism. So until things change, America should continue to be a haven for foreign investment. However, the international landscape is rapidly evolving. The global economy is now growing, which could discourage foreign investment in favor of speculating in local markets.

Having a businessman President with larger-than-life bravado and a penchant for making deals should keep interest in U.S. stock markets high. While Trump's America First policy annoys foreigners diplomatically, it should attract more foreign investment since America is focusing on business growth after a decade of inattention. The passage of the TCJA will also encourage investment in hopes of a potential stock market rally.

The Federal Reserve played a major role in stock market appreciation since the Great Recession. Since the onset of the Great Recession, the Fed spent almost 11 trillion dollars' worth of stimuli and incentive programs. Now that the Fed accomplished its mission getting the economy back on track, it is now reversing course by unwinding the trillions of dollars of toxic assets from failing banks and increasing the Federal Funds Rate. So far the marketplace has shrugged off these Fed rate increases but is wary of future Fed actions that may have a cooling effect on the red-hot stock market.

For 2018, the stock market's recent success story may be its biggest liability. Almost daily, pundits predict that the stock market bubble is about to pop and the "greatest financial reset in U.S. history" could soon materialize. To some extent, these dire predictions are credible due to the bull market's exuberant growth rate. Also, the U.S. government (Fed and Treasury) expended much of its financial resources and goodwill (i.e., the willingness of foreign countries to buy U.S. securities and bonds) during the Great Recession, and may not have the financial wherewithal to stymy a future downturn.

As a result, many economists and financial institutions are cautiously optimistic about stock market performance in 2018. From a Jobenomics perspective, growth will continue in 2018 but not at the rate it did in 2017. Barring any domestic or international disruption, U.S. stock indices are likely to rise between 5% and 15% in 2018. However, other organizations are not as bullish. Fifteen Wall Street banks surveyed by Bloomberg expect that the stock market growth rate in 2018 will be around 4.5%, based on anticipated growth of the preeminent and trendsetting S&P 500 index.

The S&P 500 is widely-regarded as the best single gauge of large-cap U.S. equities and includes 500 leading companies. Market volatility is one of the reasons for the conservative 4.5% S&P 500 growth forecast. During the post-recession period, S&P 500's annual returns had been highly cyclical from a high of 30% in 2013 to a negative 1% in 2015. Many analysts view 2017's cyclical apex high of 20% as a prelude to a cyclical decrease in 2018. Volatility in Washington politics and global affairs also contribute to profit-taking and cautious speculation in 2018.

Consumer Confidence. For 2018, Jobenomics believes that consumer confidence will either maintain its historical high or drop slightly over the course of the year.

Consumption is an economic function defined as the value of all goods and services bought by people. Leading economists determine the financial performance of a country by calculating consumption levels and consumer dynamics. In 2017, U.S. personal consumption expenditures exceeded $13.4 trillion.

As measured by the Consumer Confidence Index, a measurement of consumer dynamics, U.S. consumer confidence reached a 17-year high in November 2017, which is one of the primary factors for current enthusiasm about the strength of the U.S. economy.

Consumer confidence is essential to the extent that it is the driving force for people to spend their hard-earned money to buy goods and services that generate economic growth. However, the consumer confidence index is an idiosyncratic measurement of financial health since it is a measurement regarding how consumers "feel" rather than what they "know" about the economy. So, this index should be taken with a grain of salt since feelings change rapidly.

America is a consumption-based and market-driven society. Consequently, consumer confidence is directly related to personal consumption spending. Personal consumption represents the vast majority 69% of U.S. GDP in 2017. Government consumption and expenditures (17%), private domestic investment (17%), and net U.S. imports/exports (-3%) represent the remaining 31%.

The underlying theory of a consumption-based economy is that progressively higher consumption of goods and services is beneficial. Jobenomics believes that this argument is only partly correct. Production, not consumption, is the real source of wealth. Production uses resources to create goods and services that are suitable for use or exchange in a market-driven economy. If we truly want a healthy economy, America needs to create the conditions under which producers (businesses as opposed to governments) can accelerate the process of creating wealth for others to consume and deploy profits to recapitalize operations or enhance productivity.

In America's pre-consumer era, the U.S. economy consisted of agriculture and cottage industries that first produced what citizens needed and then traded the rest. Non-essential consumption was mainly the privilege of an elite few. Over the ensuing centuries, consumerism began to dominate the American economic equation as the masses yearned for more and better products and services. Today, consumption is no longer a privilege but a necessity. Increased spending is essential to keep the U.S. economy growing.

Without increased consumption, the economy will falter. For every percentage point change in yearly GDP growth, approximately 1.5 million jobs are gained or lost. The Great Recession validated this math. During the 18-month long Great Recession, America's GDP dropped 5.5% resulting in the loss of 8.7 million jobs.

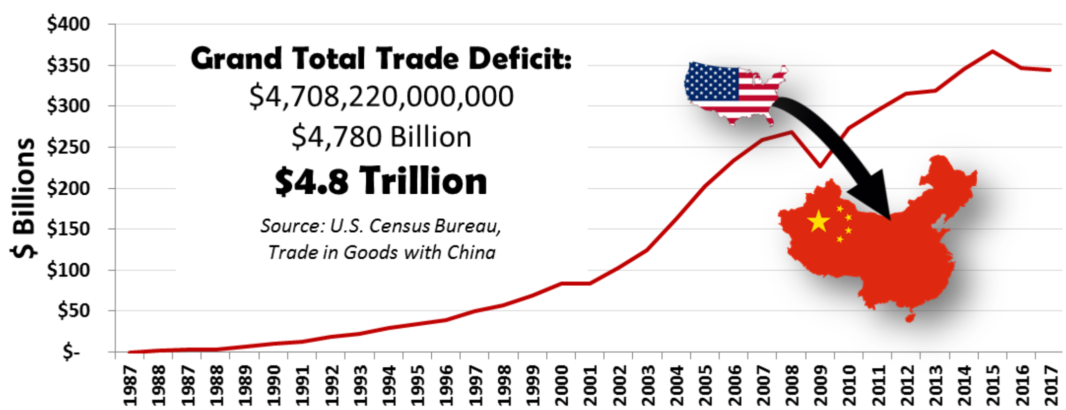
To achieve President's Trump's goal to produce 25,000,000 new jobs over the next 10-years, the Administration must increase GDP by 1.7% per year (1% GDP growth = 1.5 million jobs per year, 1.7% GDP growth = 2.5 million jobs per year or 25,000,000 new jobs in 10-years). Since the average annual rate of GDP growth this decade is 2.3%, the Administration must achieve an annual 4.0% GDP growth rate to meet the 25,000,000 new jobs goal.

- **Debt & Deficits.** Overspending and neglecting to bring fiscal accounts into balance is an existential threat to the U.S. economy. Regrettably, debt and deficit reductions are issues that public officials and the American public tend to ignore.

  There are two major categories of deficits: spending and trade. Deficit spending practiced by the federal government is out of control. All the states except Vermont have a legal requirement for a balanced budget. The federal government does not have a balanced budget requirement and is racking up unsustainable amounts of debt. The same applies to trade deficits.

  On average, federal spending deficits and trade deficits amount to about $1 trillion per year. $1 trillion is the equivalent of 10,000,000 jobs per year calculated at $100,000 per job (wages, benefits, overhead). Instead of deploying this trillion dollar bounty to job creation, the United States uses half for often-worthy but mostly-capricious politically-oriented handouts. The other half is allowed to migrate overseas to create foreign jobs, businesses, and infrastructure.

U.S. Trade Deficit History with China

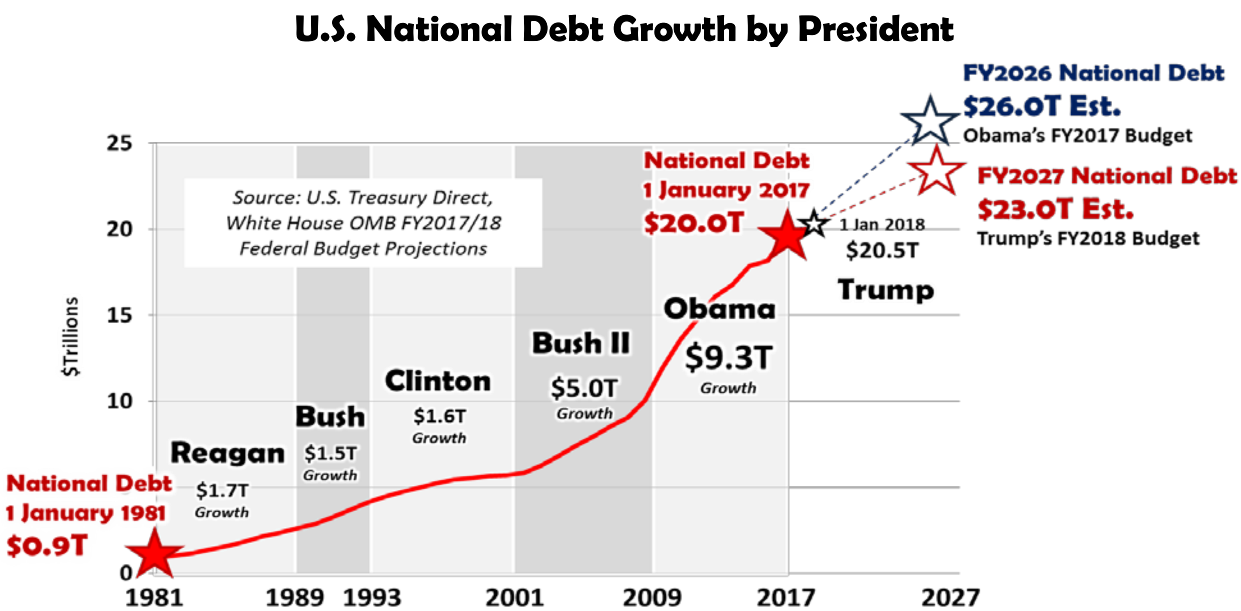


The claim that the United States financed the Chinese economic miracle that raised 700 million people out of poverty is mostly valid.

According to the U.S. Census Bureau's Trade in Goods with China database, the U.S. trade deficit increased from $0 in 1985 to $350 billion per year today. Since 1985, the total U.S.-China deficit amounted to an incredible trade imbalance of $4.8 trillion (not adjusted for inflation). $4.8 trillion equates to 320 million Chinese jobs calculated at $15,000 per job, or roughly half of the 700 million Chinese raised out of poverty. This rough calculation makes the point that trade deficits hurt the American labor force and the economy. It also explains some of the reasons for the erosion of the American middle-class and the loss of much of the U.S. manufacturing base over the last three decades.

China has not only dominated the U.S. trade balance in goods and services but in intellectual capital as well. A February 2017 report by the Commission on the Theft of American Intellectual Property states the **intellectual property theft** (cyber theft, counterfeit goods, software piracy and trade secrets theft) **costs the American economy as much as $600 billion a year** with the vast majority attributed to the Chinese government. Two highly credible individuals, Dennis Blair (former Director of National Intelligence and PACOM Commander) and Jon Huntsman (former Ambassador to China, Governor, Deputy Trade Representative, and Presidential Candidate) chair this commission. According to the report, in addition to annual financial losses of up to $600 billion per year, intellectual property theft causes **tens of millions less U.S. jobs**, suppression of GDP growth and innovation.

Over the last five decades, total U.S. debt (government, business, financial and individual) has grown from a luxury for a few to an addiction to all. Compared to the current U.S. GDP of $20.5 trillion, total U.S. debt has now reached an all-time high of $67 trillion, up from $4 trillion in 1967 and $27 trillion at the turn of the Century, as reported by the U.S. Federal Reserve System of St. Louis. U.S. national debt equals about one-third of total American debt whereas private sector (household and corporate) debt is responsible for the remaining two-thirds.



U.S. national debt increased from $0.9 trillion when President Reagan took office to $20.5 trillion on 1 January 2018. Presidents Reagan, Bush Sr. and Clinton's debt increases were relatively minor, totaling $1.7T, $1.5T and $1.6T respectively. During President G.W. Bush's tenure, national debt growth increased by $5.0T. During President Obama tenure, national debt skyrocketed by $9.3T.

When President Trump took office, the national debt was $20.0 trillion and grew by $0.5 trillion during his first year in office. According to the Trump Administration's FY2018 Budget request, the projected size of the national debt is estimated to be $23.0 trillion by FY2027, which is $3.0 trillion less than the Obama's Administration FY2026 forecast. The Tax Cuts and Jobs Act is projected to increase debt by $1.5 trillion over the next decade. However, the Tax Cuts and Jobs Act as advertised is expected to grow the economy and become budget neutral by 2027. The President's FY18 Budget calculates deficit spending at $3.2 trillion over the 2018 to 2027 timeframe with a projected 2018 deficit of $404 billion.

After a brief decline after the Great Recession, the New York Fed reports that household debt set a new record high of $13.4 trillion in 2017. $13.4 trillion is approximately two-thirds the size of America's national debt, which makes the debt problem doubly worrisome. At $8.7 trillion, mortgage debt is the most significant household debt category, which places 48 million homeowners at risk if the current housing bubble unexpectedly bursts. Student school loan debt increased 157% from $0.5 trillion in 2007 to $1.4 trillion as of Q3 2017. The average monthly student loan payment for 44.2 million borrowers is approximately $351 per month. The remaining 20% of household debt consists of auto loans ($1.2T), credit card debt ($0.8T), home equity loans ($0.4T) and various other forms of indebtedness ($0.4T).

Excessive debt is not only an American challenge. According to the IMF, global combined debt (government, household, and nonfinancial firms—not including the financial sector) is at an all-time high at 225% of world GDP, or $152 trillion. Two-thirds of global combined debt, amounting to about $100 trillion, consists of liabilities in the private sector. Quoting the IMF, "The sheer size of (private sector) debt could set the stage for an unprecedented private deleveraging process that could thwart the fragile (global) economic recovery….Financial crises tend to be associated with excessive private debt….It is clear that meaningful deleveraging will be very difficult without robust (GDP) growth."

As scary as this IMF prediction is, it does not include the unimaginable debt associated with the too-big-to-fail financial sector. The financial industry includes commercial banks, shadow banks (hedge funds, money-market mutual funds), and financial intermediaries (insurance companies, pension funds)—all of which pose a near-term $50 trillion global financial risk.

Then there is the invisible financial behemoth called derivatives. Derivatives are primarily unregulated financial instruments based on the perceived future value (hedges and bets) of underlying assets like stock, bonds, mortgages, currencies, interest rates. Derivatives also include a variety of exotic options (a derivative which is more complicated than commonly traded "vanilla" products) such as Compound, Barrier, Lookback, Chooser and Rainbow options.

Investopedia estimates the size of the derivatives market at $1.2 quadrillion ($1,200 trillion), which equates to over 10-times world GDP or 60-times U.S. GDP. Derivatives caused the sub-prime mortgage crisis that led to the 2007 Great Recession and global financial crisis. Derivatives are likely to be a significant contributor to a potential future economic crisis.

Since the Great Recession, government debt increased by 50% in advanced economies. Following the trend set by the United States, other nations printed vast amounts of money, lowered interest rates, bought weak financial assets, and spent lavishly on overpriced infrastructure projects (especially in China) to stimulate GDP growth. In the short-term, these efforts elevated consumption, increased the market value of 60 major stock exchanges throughout the world, and inflated the value of real estate in major metropolitan areas (a 1,000 square foot condo in upscale London now costs about $4 million). All of these actions significantly increased global debt.

The fact that America has gone from the world's largest creditor nation to the most prominent debtor nation in the last three decades is sobering. While people are familiar with the miracle of compound interest (where money makes money on money), few grasp the anathema of compound debt (debt that begets more debt). Albert Einstein said that the principle of compound interest is one of the most potent forces in the universe. Einstein would consider the anathema of compound debt to be equally valid.

Compounding debt is upending American institutions. Insurance companies can longer cover liabilities (e.g., U.S. insurance companies are exiting Obamacare in droves). Pension funds are grossly underfunded (e.g., U.S. state and local pension funds have up to $3 trillion of unfunded commitments). Ten U.S. cities have gone bankrupt. States, like Illinois, are on the verge of defaulting on their mountains of debt. Welfare programs are on the road to insolvency (e.g., Medicare is projected to be insolvent within 10-years). Debt is cancer that continues to metastasize in the U.S. economy. Surgery is not the only option. Economic growth is an antidote.

In conclusion, Jobenomics believes that deficits and debts will get worse in 2018. Jobenomics also predicts that 2018 will be a seminal year for deficit and debt policy-making. If President Trump is successful in executing his economic, workforce and trade policies, America might be able to turn the corner on these cancerous fiscal challenges. If the Trump Administration is unsuccessful, the future for deficit/debt reduction looks bleak.

Inflation. Most prognosticators do not see inflation as a significant issue in 2018. Jobenomics agrees.

Inflation is a key economic indicator. Rising prices and decreased value of money are the hallmarks of inflation. Positive inflation in the 1% to 2% range is considered normal. Rates above 3% are considered abnormal and trigger government intervention by the Federal Reserve. The Federal Reserve judges the ideal rate of inflation at 2%. The current inflation rate for the United States is 2.2%.

A broader definition of inflation includes deflation, stagflation, super-inflation, and hyperinflation.

- A persistent decrease in the price level of goods and services causes deflation. Deflation leads to lower production, consumption, and employment. Japan has been fighting a deflationary spiral since the 1980s when its real estate bubble burst. In 1980, the total land value of greater Tokyo was estimated to be equal to the land value of the rest of the world.

- Stagflation is an economic condition of both chronic inflation and stagnant business activity, resulting in high unemployment rates. Stagflation was an American financial phenomenon in the 1970's resulting from a combination of economic stagnation, rising prices, and inflation. The cause of the 1970's stagflation was increasing global competition from countries fully recovered from the devastation of WWII. Three U.S. Administrations (Nixon, Ford, Carter) failed to curb stagflation. President Reagan's supply-side economics and tax cuts, known as Reaganomics, broke the stagflation and helped the economy to recover.

- Super-inflation is very high, above 10%, but not out-of-control inflation. Hyperinflation is super-inflation on steroids that causes economies to collapse. In hyperinflation, prices drastically increase as currency plummets in value. Economic depressions, wars, and loss of confidence in a nation's paper currency are common hyperinflation triggers. A massive increase in money supply, not supported by growth in the output of goods and services, is often associated with hyperinflation.

  In the last 20 years, several dozen economies have collapsed due to hyperinflation. With the exception of Russia in the 1990s and Argentina in the 1980s, all other hyperinflation collapses were in small third-world countries or countries ravaged by war. Barring a financial reset or crisis, Jobenomics does not foresee any of these inflationary scenarios happening in 2018 but is carefully watching unfolding events that could trigger such situations.

While deflation, stagflation, super-inflation, and hyperinflation are unlikely in 2018, they are essential matters to consider. While the U.S. economy seems to be resistant to these maladies, other parts of the world are less immune. Contagion can spread quickly throughout the global economy.

Since Washington cannot bring itself to cut spending, the alternative is to grow the economy prodigiously. From a Jobenomics perspective, President Trump's sustained 4.0% GDP growth vision is not only needed but necessary to reduce soaring debt. On the other hand, there is another alternative to lowering massive indebtedness if the economy fails to grow at prodigious rates.

Throughout history, nations used inflation as a debt reduction weapon. Homeownership provides an excellent example. The real money value of fixed-price mortgages decreases in proportion to the rate inflation, which constitutes a sound financial reason for homeownership during periods of high inflation. On the other hand, homeownership during deflationary periods is fiscally unsound.

However, rising inflation is hard to control, which is the reason that the Fed gives inflation so much attention. Runaway inflation leads to super-inflation and hyperinflation that wipes out debt but destroys the economy. The most recent and worst examples of runaway inflation occurred in Zimbabwe in 2008. During the height of Zimbabwe's economic crisis, it only took a little more than one day for the prices of essential goods to double in price. To combat rising anger and extinguish the raging hyperinflation, the Zimbabwe government began printing trillion dollar inflation sets of \$10T, \$20T, \$50T and \$100T notes (dollar bills)—the biggest notes in financial history.

Business

Strategic Considerations *Weighted Projections*		Get Much Better	Get Better	Stay the Same	Get Worse	Get Much Worse
Business	**Big Business**	••	••			
	Small & Micro-Business		••	•		
	Startup Businesses			•		

Big business is the anchor tenant of the economy. Small business is the engine of the economy. Startup businesses are the seed corn of the economy. For the U.S. economy and labor force to be sustainable, all three elements must be producing goods and services efficiently and cost-effectively. Unfortunately, both U.S. small business and startup businesses are faltering. American policy-makers and decision-leaders need to expand existing small business and mass-produce new small businesses to be competitive in the global marketplace.

Relying solely on big business for economic and workforce prosperity is a 20th Century paradigm. A big business dominant approach to economic and workforce development will not work in the 21st Century—an age of economic growth dominated by the emerging digital economy and widespread technological advances. 21st Century businesses are less painful to start than at any time in history. Digital and network technology levels the playing field for startups and small businesses. Digital startups are 100-times easier to create at one-tenth the cost than traditional startups.

According to the Kauffman Foundation, the preeminent economic growth and entrepreneurship non-profit organization, most **city and state government policies that look to big business for job creation are doomed to failure** because they are based on unrealistic employment growth models. "It's not just net job creation that startups dominate. While older firms lose more jobs than they create, those gross flows decline as firm's age. **On average, one-year-old firms create nearly 1,000,000 jobs, while ten-year-old firms generate 300,000**. The notion that firms bulk up as they age is, in the aggregate, not supported by data."

Without a viable small business creation and sustainment strategy, the U.S. economy is unlikely to prosper as it did in the 20th Century. Small business creation is unquestionably the best way to create tens of millions of new jobs.

- **Big Business.** The outlook for big business is very encouraging and should even get much better in 2018. Already flush with cash, lower corporate taxes and repatriated overseas earnings will enhance bottom lines of major U.S. corporations. The Administration's efforts to eliminate unnecessary regulations and level the trade playing field should further strengthen big business' global competitiveness in 2018.

  The corporate tax rate decreased from 35% to 21% will make American big businesses larger and more sustainable than they already are. As reported by highly-respected business publications, the majority of big companies will deploy earnings on mergers, acquisitions, stock buybacks, dividends and investing in secondary markets. From a corporate and shareholder standpoint, implementing profits internally and making money on money is a prudent use of capital. From a U.S. economic growth perspective, the TCJA intended for most of the newfound earnings to be used for job creation, as implied by the use of the term "Jobs Act."

Big business has blessed the American way of life and economy. However, Jobenomics contends that too many corporations are too inward-looking and overly concerned about corporate and shareholder value. As "corporate citizens," big business must also concern themselves with social well-being and community development. Corporate citizenship, also known as corporate conscience or corporate social responsibility, is a concept that promotes the health and welfare of society, communities, small businesses, the workforce and the environment.

Today's big businesses are immensely powerful—often more powerful than the nation and communities that they ostensibly serve. Apple, the most prosperous company in the world, serves as a good example.

If Apple were a country, it would rank 17^{th} out 198 countries, with a market value the size of Mexico's GDP ($987 billion). As of January 2018, Apple had a market cap of $914 billion, annual net sales (2017) of $229 billion with a net income of $48 billion, and a cash stockpile of $269 billion with an estimated $253 billion (94%) stashed in overseas affiliates. If Apple were a state, its economic power would be higher than 47 out of 50 states in America.

Power begets responsibility. Federal and state governments bear the responsibility to govern, secure and care for their constituencies. Big businesses with commensurate economic power should also assume responsibility for underwriting community development and social well-being.

Despite its power and wealth, Apple employs a microscopic workforce in comparison to equally endowed institutions. Compared to Walmart, which has a market valuation one-third the size of Apple, Walmart provides 19-times as many jobs as Apple (1,500,000 versus 84,000 direct employees respectively). Compared to countries like Mexico, which wields comparable economic power as Apple, Mexico supports 29-times more jobs than Apple (58 million Mexicans versus 2 million Americans for Apple including 84,000 direct, 450,000 U.S. suppliers and 1,530,000 contingent workers). Without a viable workforce, economies cannot prosper. Apple's employment-to-resources ratio is clearly out of whack compared to traditional big businesses.

Apple not only became the wealthiest company in the world by producing excellent products but by slashing direct labor force costs. By replacing high-cost direct labor with lower-cost independent contractors, contingent workers, and automated machines, Apple became hugely profitable. The same is true for the next four highly-valued U.S. technology giants (Alphabet-Google $792 billion, Microsoft $694 billion, Amazon $634 billion, Facebook $537 billion) and many other American big businesses. Compared to foreign conglomerates, especially Chinese technology giants (Alibaba, JD.com, Baidu, Tencent, Xiaomi), U.S. conglomerates pay far less attention to economic, community, small business, and workforce development. The long-term economic impact of this disparity will be detrimental to U.S. prosperity.

Two-thirds of Apple sales are overseas. As a result of this sales ratio, many perceive that Apple considers itself more a citizen of the world than an American corporate citizen. This perception may be warranted since Apple spends more time and money developing overseas markets and labor forces at the expense of the labor force. For example, Apple is translating its hardware operating language (iOS) into Mandarin Chinese to make it easier for 850 million native Mandarin speakers to build iOS apps and compete in the highly lucrative app market that is currently dominated by American app developers. A sizeable percentage of Apple's 1,530,000 contingent workers are apps developers. Furthermore, by pandering to the Chinese market, Apple empowers Chinese economic hegemony over the United States, which will be discussed later in this analysis. For more information download the Jobenomics report entitled, China's Digital Economy Quest.

The problem for multinational conglomerates, like Apple, is whether their corporate social responsibility applies more globally than nationally. For U.S. conglomerates, corporate social responsibility is often more globally-oriented due to the attractiveness of emerging markets. For foreign multinationals, especially Chinese companies, corporate social responsibility is overwhelmingly nationalistic. From a Jobenomics perspective, corporate social responsibility begins at home. The family is more important than friends, associates or clients.

The TCJA lowered corporate taxes on U.S. profits from 35% to 21%, which will save Apple almost **$7 billion** in 2018. The TCJA also lowered the repatriation tax rate from 40% to 15.5%. If Apple repatriates all of its overseas cash ($253 billion) at a 15.5% tax rate, Apple will pay $39 billion in U.S. taxes, which leaves **$214 billion** in after-tax profits. Quoting a 17 January 2018 Apple press release, "Apple, already the largest U.S. taxpayer, anticipates repatriation tax payments of approximately $38 billion as required by recent changes to the tax law." In other words, it appears that Apple plans to repatriate most of its overseas cash.

So what does Apple plan to do with $221 billion of additional cash? A recent analysis by Forbes asserts that "Apple will use the (repatriated) funds primarily to increase its shareholder returns, improving dividends and share repurchases." In layman's terms, this means that Apple and its investors will be the primary beneficiaries of the newfound cash. Consequently, Apple will invest only a small percentage of this additional money in capital expenditures, workforce development, and socially responsible projects.

Per the Apple press release, Apple intends to invest $30 billion over the next five years in capital expenditures in the United States. $30 billion is a pittance compared to Apple's annual profits and cash reserves. Moreover, much of the capital expenditures are likely to be applied to automation that will displace many more lower-skilled workers than the high-tech jobs it will create. The press release also states that Apple plans to "create over 20,000 new jobs (over the next 5-years) through hiring at existing campuses and opening a new one." For a company that has the resources of the size of Mexico, 4,000 new jobs per year is a very modest figure. However, many of these jobs may not include American citizens. According to MyVisaJobs.com, in 2017, Apple filed for 2,007 H1B visa and green card applications with an average starting salary of $151,000. Consequently, President Trump's tweet that Apple's response the TCJA is "huge win for American workers and the USA!" may be a bit premature if this analysis is correct.

Apple is a titan of industry. Its contribution to America and the world is enormous. Its technology is transformative. It is too important to fail. To be even more successful, America needs to view Apple as predominantly American. Built on an American foundation, Apple must ensure that its foundation is firm and supportive.

Apple is America's corporate darling, but anti-technology and anti-trust sentiments are burgeoning. Once supportive, policy-makers view growing monopolistic power and influence of tech-giants with alarm. The disparity between vast sums of wealth and low employment create a Robber-Barron connotation. Corporate support for liberal and progressive causes alienates conservative institutions. To ameliorate tech-lash, American corporate titans must be more proactive in economic, community and workforce development with emphasis on those at the base of America's socioeconomic pyramid. Tech-giants and other big businesses could use their collective power for socially responsive programs like urban renewal, micro-business creation, and middle-class restoration.

With the collective technological power underwritten by the financial strength of $3.6 trillion worth of listed equities, the five tech titans could quickly create tens of millions of indirect and induced Americans jobs. With a miniscule cadre of 84,000 direct employees, Apple supports nearly 2 million indirect jobs (450,000 U.S. suppliers and 1,530,000 contingent workers). Each of Apple's indirect jobs creates 3-times as many induced jobs (e.g., transportation, hospitality, and other service occupations) for a total of approximately 8 million Americans. Consequently, if the Big-5 committed themselves to doubling the size of their indirect workforce by exploiting the network effect of their ubiquitous platforms, they would enable the creation of tens of millions of jobs in the digital economy. By doing so, the American economy and workforce would prosper, and public trust in tech titans would soar.

Is such a feat of these grand proportions possible? Absolutely. The Chinese Big-5 (Alibaba, JD.com, Baidu, Tencent, Xiaomi) are doing this today. Alibaba serves as an excellent example. According to Alibaba's founder, Jack Ma, Alibaba was founded "to champion small businesses, in the belief that the internet would level the playing field by enabling small enterprises to leverage innovation and technology to grow and compete more effectively in the domestic and global economies." Jack Ma's strategic vision fits within China's strategic framework and "New Retail" vision to become the world's leading economic power.

In a 2016 letter to his shareholders, Jack Ma committed Alibaba to help solve the world's social problems. "In 20 years, we hope to serve 2 billion consumers around the world, empower 10 million profitable businesses and create **100 million jobs.**" The majority of these jobs will be in China. Jack Ma's New Retail vision is a hybrid E-Commerce/On-Demand Economy. This digital economy hybrid integrates Alibaba's e-commerce platform (with all its bells-and-whistles from a massive network replete with zettabytes of consumer data analyzed by state-of-the-art data analytic technologies), mobile-commerce (1 billion Chinese mobile phone users) and near real-time provisioning of goods and services tailored to satisfy customer needs and demands.

From the Jobenomics 2018 U.S. Economic Forecast perspective, corporate tax cuts and repatriation of capital will not significantly grow the U.S. labor force, which provides the goods and services that are needed to increase U.S. consumption and GDP growth. At a December 2017 Yale CEO Summit only 14% of CEOs planned to make significant, immediate domestic capital investments after the TCJA bill passed. At a November 2017 Business Roundtable Summit, led by JPMorgan Chase CEO's Jamie Dimon, only 43% are planning to ramp up hiring, and 18% are implementing job cuts in early 2018. If these CEOs represent the attitude of other American CEOs, then corporate profitability triumphs over corporate social responsibility by a wide margin.

Restoring the U.S. manufacturing base and re-shoring American jobs are two of President Trump's vitally-important, signature initiatives. Manufacturing currently employs 12,539,000 Americans, which is less than 6% of the U.S. labor force. During the first year of the Trump Administration, U.S. manufacturers produced only 196,000 new jobs, which equates to an annualized growth rate of 1.6%, precisely half of the latest reported (Q3 201&) U.S. GDP growth rate of 3.2%. The TCJA should substantially increase the robustness of the U.S. manufacturing sector. However, the American public should not be encouraged to view manufacturing as a significant producer of high paying jobs as it did in the 20th Century.

From a wage perspective, **manufacturing is no longer the high paying industry sector that it used to be**, nor will it be in the future. According to the U.S. Berkeley Labor Center and the National Employment Law Project, contrary to public perception that manufacturing jobs are "good jobs," manufacturing wages now rank in the bottom half of all jobs in the United States and are not even keeping up with inflation. In the largest segment of the American manufacturing base, automotive manufacturing, wages have declined further, falling three times faster than manufacturing as a whole and **nine times faster** than all occupations.

Technology is transforming manufacturing processes to be more efficient and cost-effective via automation of manual and cognitive labor across the entire manufacturing supply chain. Even though automation is replacing human work, it will significantly help the United States to regain its manufacturing statue. By reducing the human element, U.S. manufacturers could soon out-compete countries that specialize in low-cost, high-touch manufacturing. In 2018, one of China's leading garment manufacturers, Tianyuan Garments Company, will start production in a modern $20 million Arkansas factory that can manufacture T-shirts for a paltry 33 cents ($0.33) each—well below the cost of similarly produced Tianyuan goods in China. U.S. manufacturers that replace labor with machines and artificially intelligent agents will out-compete those with low human labor costs. Consequently, it is imperative that Americans accept this fact of 21st Century life and politicians quit advertizing manufacturing as a job mecca.

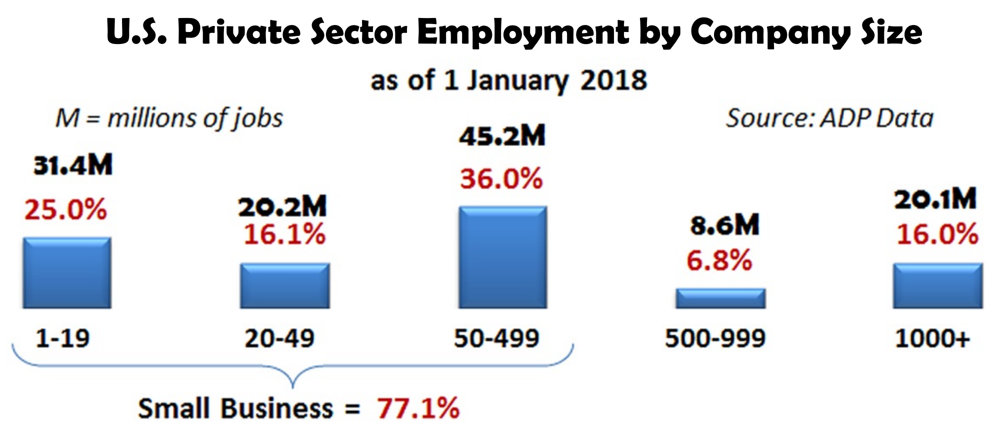
For manufacturing to regain its former world-class status, a highly-skilled workforce will be needed to fill next-generation jobs created by the revolution in network and digital technologies. What America needs is more skills-based training and certification programs to mass-produce small businesses and jobs for those replaced by automation. Socially conscious big companies have a huge role to play in satisfying both of these needs.

Small & Micro-Business. While Jobenomics addresses big business and government employment trends, its principal focus is on highly-scalable small and micro-businesses that employ the vast majority of Americans and create an enormous amount of new jobs. For 2018, Jobenomics believes that the TCJA will encourage small and self-employed growth, which, in turn, promotes economic and labor force growth. Jobenomics also asserts that small and micro-businesses are producing half as many new jobs as they did in the recent past. The result is a loss of over ten million jobs over the last decade since the small business engine is operating at half capacity.

According to the U.S. Small Business Association,

- Small businesses are firms with less than 500 employees (1-499)
- There are 29.6 million U.S. small businesses compared to 18,600 big enterprises with over 500 employees. Of the 29.6 million small businesses, 5.8 million had paid employees and 23.8 million had no employees, termed "nonemployers."
- The BLS definition of a nonemployer business is "one that has no paid employees, has annual business receipts of $1,000 or more ($1 or more in the construction industries), and is subject to federal income taxes". Nonemployer businesses include:
    - Individual proprietorships, sole proprietorships, an unincorporated company owned by an individual or self-employed person.
    - Partnerships or unincorporated businesses owned by two or more persons having a shared financial interest in the enterprise.
    - Corporations that are legally incorporated businesses under state laws.

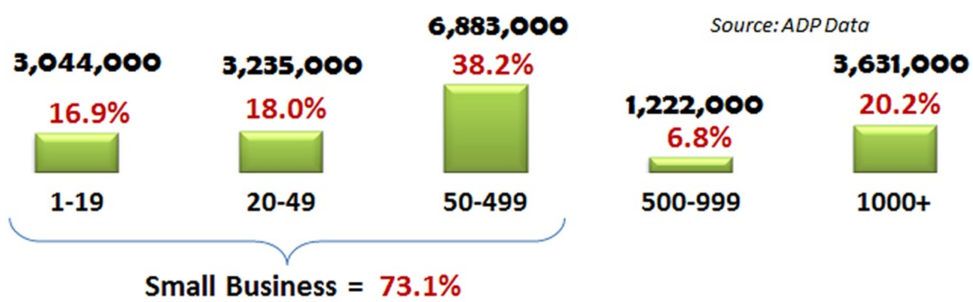
Jobenomics classifies "small business" as having 1-499 employees (the definition supported by the U.S. Small Business Administration), medium-sized business as 500-999 and large businesses as 1000+ employees. Also, Jobenomics defines micro-businesses as having 1-19 employees, which includes self-employed individuals.



As reported by ADP, small businesses are undeniably the dominant employer in the United States. Small firms with less than 500 employees employ 77.1% of all private sector Americans with a total of 96,823,000 employees—over 3.4-times the number of corporations with more than 500 employees that have 28,725,000 employees. Micro-businesses with 1-19 employees employ 1.6-times the number of companies with over 1,000 employees (31,370,000 versus 20,141,000).

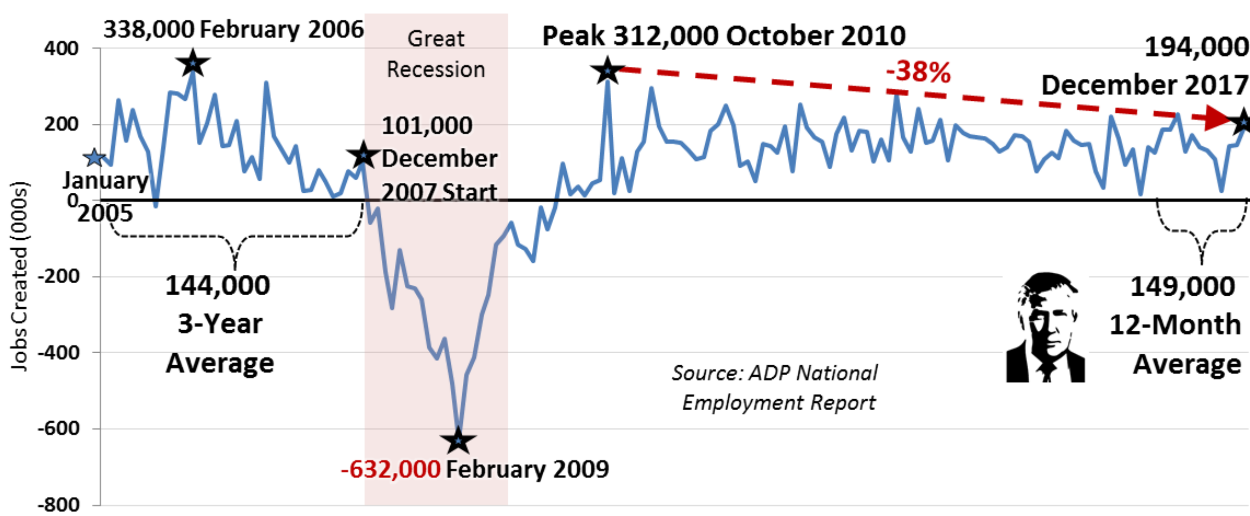
U.S. Private Sector Jobs Created This Decade by Company Size

1 January 2010 to 1 January 2018 (96 Months)



Since the beginning of this decade, small businesses created 73.1% of all new jobs in the United States. Small businesses with less than 500 employees created 2.7-times more jobs as large businesses with 500+ employees, or 13,158,000 versus 4,853,000 new jobs respectively. Micro-businesses and the self-employed with 1-19 employees produced 84% as many jobs as corporations with over 1,000 employees (3,040,000 versus 3,631,000).

U.S. Small Business (1-499) Job Creation Engine Is Faltering

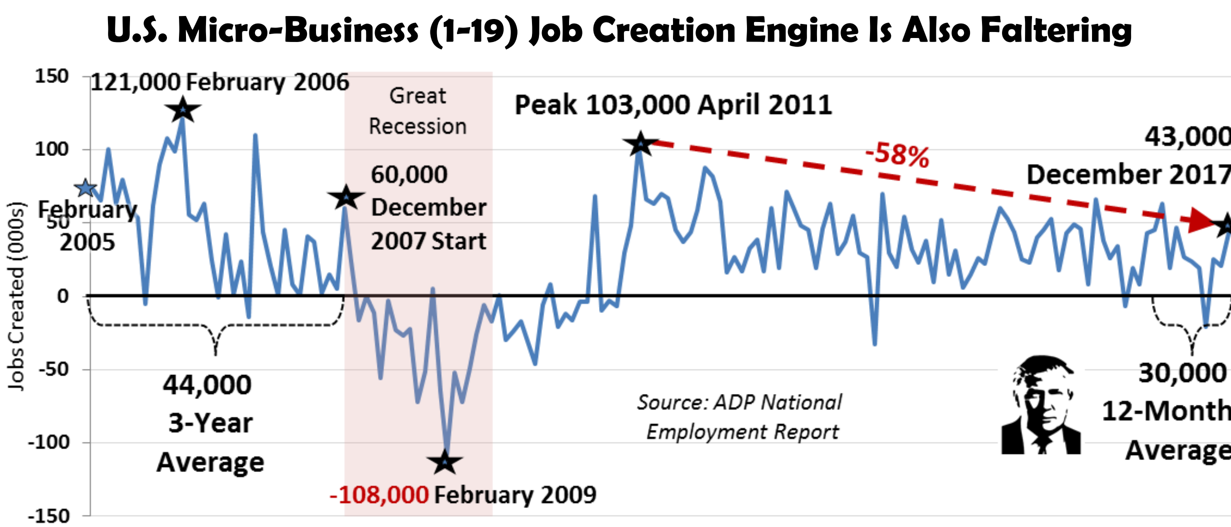


During the depth of the Great Recession in February 2009, small businesses laid off 632,000 people in a single month, which is indicative of the hazards of a stalled small business engine. Twenty months later, the small business engine was hitting on all cylinders and generated a peak of 312,000 jobs in October 2010. Since this post-recession peak to today, small business job creation dropped 38% to 194,000 in December 2017, a net monthly difference of 118,000 jobs.

A decade consists of 10-years or 120-months. Consequently, over a 120-month period, a deficit of 118,000 jobs equates to 14 million fewer jobs. In other words, if America's small business engine chugged along at the job creation speed that it did in October 2010, the United States would have generated 14 million additional jobs by October 2020. If the U.S. small business engine produced jobs at the 3-year (2005 through 2007) average rate of 144,000 jobs per month, as shown, 17 million new jobs would have been added by December 2017.

The average micro-business job creation over the first year of the Trump Administration was 149,000 jobs per month. If maintained, small businesses can create 19 million out of the 25 million jobs, or three-fourths of the employment opportunities that President Trump promised. With this kind of engine power, it is surprising that Washington lavishes attention on big business while giving lip service to small business.

If the small business engine had heart, it would be a micro-business. Most micro-business are self-employed firms (one-person incorporated or unincorporated), family businesses (mom-and-pops) or partnerships.



Sadly, the U.S. micro-business heart is suffering from a form of atherosclerosis (narrowing or blockage of the arteries) as indicated by a 58% decline since the post-recession peak.

After conducting dozens of meetings on Capitol Hill, this author concludes that the overwhelming number of Washington politicians are comfortable collaborating with a CEO of a billion-dollar corporation but uncomfortable with entertaining 100-owners of million dollar companies. While many perceive the reason for this distinction is that, as opposed small businesses, big business can afford lobbyists and substantial campaign contributions. Jobenomics believes this perception is only partly accurate. The main reason involves Washington's 20th Century big business mindset. Most politicians just do not understand the business/economic equation and naturally assume that big businesses produce the most jobs as well as high-paying jobs with lots of benefits. Both these assumptions do not hold water in the 21st Century marketplace. Politicians, who claim to understand the business/economic equation, most often view it through a big business lens. Few serial entrepreneurs are found inside the Washington beltway.

Micro-businesses are also the heart the U.S. economy. Mom-and-pop businesses are essential to local communities. They are the type of enterprises that hire the unemployed and give part-time jobs to high schoolers and other entry-level individuals who want to work. Continued deterioration and denigration of micro-businesses can only lead to economic stagnation.

The vast majority (95%) of small and micro-businesses are "pass-through" businesses (sole proprietorships, partnerships, and S-Corporations that pay taxes based the owner's income tax returns). Consequently, TCJA's pass-through businesses tax reduction from 39.6% to 20% for qualified business income should have a positive economic and labor force impact in 2018. The primary intent of TCJA's pass-through business legislation was to boost mom-and-pop business growth and employment.

Unfortunately, most of the earnings generated by pass-through entities are not by mom-and-pop businesses but by high net-worth individuals (e.g., hedge fund managers, management consultants, and real estate executives) who self-incorporate as an LLC or S-Corp to reduce their tax burden. While the TCJA includes "anti-abuse measures" to ensure that only owners of "bona fide" businesses claim the 20% rate, abuse is likely to grow now that a new "territorial system" exempts foreign profits by U.S. business. A shrewd Wall Street hedge fund manager or real estate broker can start a pass-through business on a Caribbean island to reduce their tax burden and deduct business expenses while enjoying Mai Tais on the beach.

While the Jobenomics outlook for small and self-employed business is positive throughout 2018, it is less bright than it could be. Washington and corporate America need to place significantly more attention on small business development and sustainment. Tax cuts will help but are not the solution to the problems facing small businesses. Proposed Administration's small business "association health plans" will also help but yet are insufficient.

America needs to rejuvenate the small business entrepreneurial spirit and create a worldview that small and micro-businesses are a viable alternative to the decreasing number of high-paying full-time jobs. Women-owned and minority-owned businesses are deserving of far more attention than they receive today. Additionally, digitally-savvy Screenagers (Generation Z) are suited for starting micro-business tailored to meet the needs of the emerging digital economy and contingent labor force. If the 29.6 million American small businesses created or hired only one net new employee over the next several years, Trump's 25 million new jobs goal could happen in a much shorter timeframe than he currently envisions.

- **Startup Businesses.** Due to the scant amount of attention from Washington and the American public, Jobenomics' outlook for startup businesses is less bright than big and small businesses. This assessment is somewhat ironic since startups are quicker and more affordable to launch than any time in history. The internet, new technology, and digital economy level the playing field for startups, and provide startups with unfettered access to the global marketplace.

  According to James McQuivey, a leading analyst tracking the development of digital disruption, as compared to the traditional companies, a digital firm is 100-times more straightforward to create since it has 10-times the number of innovators that can innovate at one-tenth the cost. Additionally, digital startups are much faster than traditional startups, which is an exciting opportunity for those that can capitalize on the momentum of the emerging digital economy. More importantly, digital startups provide better-paying, longer-lasting jobs than other start-ups, and they contribute more to innovation, productivity, and competitiveness.

The digital economy (also known as the web economy, internet economy, network-centric economy, or the new economy) is an economy that built on digital and networked technologies. In addition to new technologies, processes, and systems, the digital economy consists of various components including government (policy and regulation), infrastructure (internet, networks, telecom, and electricity), and providers (digital service, content, information and knowledge workers).

From a Jobenomics standpoint, there are at least eight unique but intertwined categories of economic activities that define the emerging Digital Economy:

- The **E-Commerce Economy** is the buying and selling of goods and services, or the transmitting of funds or data, via digital networks. These business transactions occur as business-to-business, business-to-consumer, consumer-to-consumer or consumer-to-business. In 2017, retail e-commerce sales worldwide reached $2.3 trillion.
- The **Sharing Economy** community's vision of the new economy involves sharing underutilized or idle assets via mobile devices, redefining the value of ownership and upending industries like transportation, accommodation, and logistics.
- The **On-Demand Economy** is a business model where consumer demand is satisfied by near real-time provisioning of goods and services.
- The **App/Bot/Artificial Intelligence Economy** community's broad view emphasizes automation of daily mundane tasks via smart algorithms and artificial intelligence agents that reduce the need for human intervention and increase leisure time for more productive pursuits.
- The **Platform Economy** community sees the digital economy from a network platform business model where mega-corporations exploit network effects to garnish greater and greater degrees of influence and control of significant segments of society and the global economy.
- The **Gig/Contingent Workforce Economy** community's focus is on creating an employment landscape that provides an opportunity for workers in the future economy where part-time and temporary workers outnumber full-time workers with standard workforce agreements.
- The **Data-Driven Economy** community's mindset involves the exploitation of storage, search, capture, query, transfer, sharing, visualization and analysis of zettabytes of Big Data as a way to create a new digital economy.
- The **Internet of Everything Economy** community looks at the digital ecosystem from the perspective that tens of billions of connected things will exert significantly more influence than the billions of people.

Experts disagree about the date when the digital economy will usurp today's traditional economy. Given the current rate of growth and the transformative effects of new NTR technologies, processes and systems, the digital economy could be the dominant element of many nations by 2025. The McKinsey Global Institute (MGI) lists twelve disruptive technologies that will affect billions of consumers and workers, and inject hundred trillion of dollars of economic activity into the Digital Economy by 2025. If all MGI's predictions come true, the total economic impact of these disruptive technologies would be $124 trillion which would be higher than the entire global nominal GDP of $86 trillion slightly less than $138 trillion of GDP purchasing power parity as calculated by the International Monetary Fund.

Business startups are the seed corn of the U.S. economy. Without the planting and fertilization of these seedlings, the fields of American commerce would remain fallow.

Many startups turn into high-growth scaleups. A scaleup is a development-stage business that wants to rapidly grow in term of market access, revenues, and employees. In the 1980s, 16% of all startups scaled up to 50 employees in 10-years. Today, only 11% of startups scale up to 50 employees in 10-years according to the Kauffman Foundation. This differential equates to almost a **one-third decline in job creation** by the most powerful labor force generator in the U.S. economy. Imagine if one of the three biggest U.S. companies (e.g., Apple, Alphabet, Amazon) failed to make the jump from startup to scaleup?

The Bureau of Labor Statistics' Business Dynamics Summary states that the United States is now creating startups (firms less than 1-year old) at historically low rates, down from 16.5% in 1977 of all companies to 8% in 2014 (latest available data on new starts). Quoting a Wall Street Journal analysis of BLS Business Dynamics data, if the U.S. were creating new firms at the same rate as in the 1980s, it would equate to more than "**200,000 companies and 1.8 million jobs a year**."

According to the September 2017 U.S. Census Bureau news release, in 2015 (latest survey data) the United States created 414,000 startup firms created 2.5 million new jobs as opposed to an average of 3.3 million new jobs from an average of 524,000 startups for the pre-Great Recession period 2002-2006.

In sharp contrast to U.S. policy-maker indifference, China's leadership is aggressively mass-producing startup businesses to create jobs, increase domestic consumption and grow their economy. In a March 2016 address to the National People's Congress, Chinese Premier Li Keqiang boasted that in 2015 12,000 new companies were founded each day (4,380,000 per year or over 10-times the amount of the United States), an increase of 21.6% over the previous year.

Of the 3 million startup businesses created over the last decade, tens of thousands of ultra-high growth startups (called unicorns and gazelles) generated millions of net new jobs for America. According to the Kauffman Foundation, these fleet-footed startups account for 50% of all new jobs created. Uber, Lyft, Airbnb, SpaceX, WeWork, and Pinterest are recent examples of unicorns—startup companies that rapidly achieve a stock market valuation of $1 billion or more. A gazelle is a high-growth company (of any size, but usually a recent entrepreneurial startup) that increases revenues by over 20% per year over a period of four years. The top-10 U.S. gazelles include Natural Health Trends, Paycom Software, Lending Tree, ABIOMED, MiMedx Group, Facebook, NetEase, Ellie Mae, Amazon.com and Arista Networks, according to Fortune magazine.

From a Jobenomics standpoint, the king of startups is Elon Musk. South Africa-born, Canadian-reared, now an American citizen, Elon Musk is a visionary without parallel in recent history.

Musk's most recognized startups are Tesla and SpaceX that have inspired millions and transformed the transportation industry. Other Musk startups include PayPal (online payment system), SolarCity (renewable energy), Neuralink (neurotechnology), Zip2 (information network), OpenAI (artificial intelligence), The Boring Company (tunneling equipment), and Hyperloop (high-speed transportation). Elon Musk is also the king of job creation with the vast majority of his 40,000 employees located in the United States. This number of jobs is expected to increase significantly as Musk-inspired technologies and systems go mainstream.

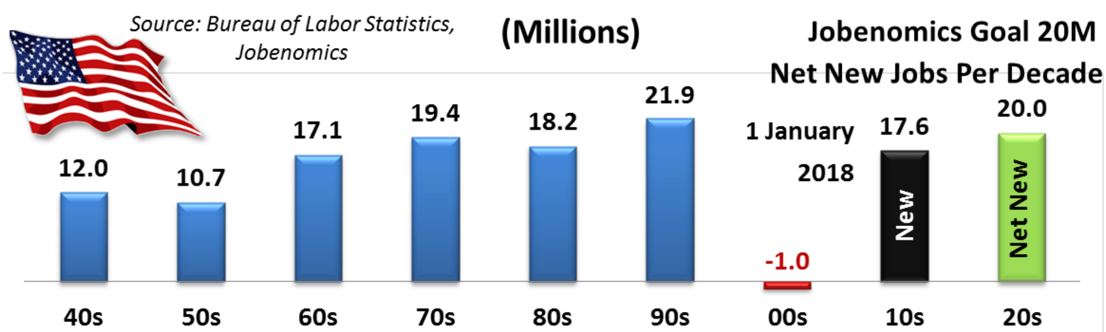
The Jobenomics 20-part series, entitled President Trump's New Economy Challenge provides a detailed analysis why **the Trump Administration's bold economic (4% GDP) and job creation (25 million new jobs) vision is likely to fall short** due to Washington's and America's concentration on big business rather than small business startups and sustainment. Startups are not only critical to net job creation; it is the primary determinant for GDP growth given the fact that big businesses are increasingly looking at automation and outsourcing (to foreign workers or domestic contingency workers) to replace conventional full-time labor force. Consequently, America needs to create the conditions that will produce serial entrepreneurs like Elon Musk.

Labor Force

Strategic Considerations *Weighted Projections*		Get Much Better	Get Better	Stay the Same	Get Worse	Get Much Worse
Labor Force	**Employment**	•	•			
	Unemployment			••		
	Not-in-Labor-Force			•	•	

Jobenomics predicts that the number of employed will get better in 2018 but not to the degree advertised by the Administration. If the Administration takes a stronger stance on mass-producing small business and shifting its focus from the traditional economy to the emerging digital economy, Jobenomics believes that the employment situation will get much better in 2018. Regarding the number of unemployed, Jobenomics thinks that the official U3 Unemployment Rate will remain at its post-recession low. The Not-in-Labor-Force cadre, a U.S. Bureau of Labor Statistics (BLS) category for citizens who can work but chose not to work, is likely to stay the same or get worse due to the lack of high-skilled labor in proportion to industry demand.

Jobenomics Goal: 20 Million Net New Jobs in the Next 10-Years



The United States consistently produced tens of millions of new jobs for six consecutive decades from the 1940s through the 1990s. The bottom fell out in the decade of the 2000s with a net loss of one million jobs. Consequently, it is critical that a significant number of new jobs are created for the U.S. economy to prosper.

20 million net new jobs per decade is a goal that has historical precedent. It is the number needed to accommodate new labor force entrants, a growing population, and maintaining an unemployment rate of 5%, which is considered a "normal rate of full" employment.

U.S. employment grew by 17.6 million citizens this decade. At the current rate of growth and barring a financial downturn, the U.S. labor force should gain 21.7 million new jobs by the end of the decade

A basic understanding of three BLS labor force categories is essential to evaluating labor force statistics. According to the BLS, the basic concepts involving employment and unemployment are straightforward. People with jobs are **Employed**. People are **Unemployed** if they do not have a job, have actively looked for work in the prior four weeks, and are currently available for work. The **Not-in-Labor-Force** category includes adults who are capable of working but are not looking for work.

U.S. Labor Force Gains and Losses Since 2000

as of 1 January 2018

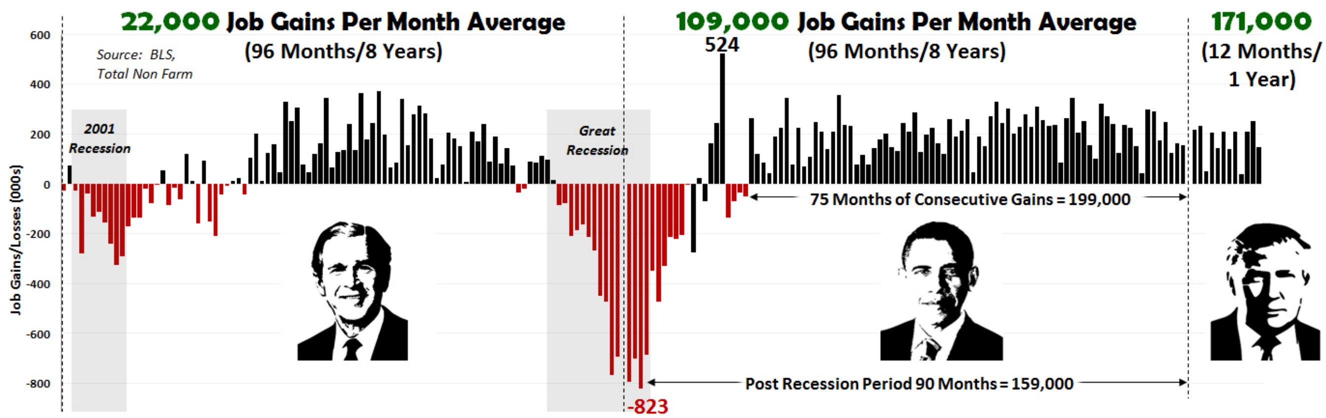
	Working Population: Employment Gain/Loss	Non-Working Population: Not-in-Labor Force Gain/Loss	Non-Working Population: Unemployed (U3) Gain/Loss	Net Labor Force Gains-Losses
Last Month (December 2017)	148,000	96,000	(40,000)	92,000
Trump Era (Jan 2017-Present)	2,055,000	506,000	(926,000)	2,475,000
Post Recession (Jan 2010-Present)	17,602,000	11,699,000	(8,522,000)	14,425,000
Obama Era (2009-2016)	10,479,000	14,626,000	(3,784,000)	(363,000)
Bush II Era (2001-2008)	2,115,000	9,892,000	5,652,000	(13,429,000)
Since Year 2000	16,599,000	26,857,000	923,000	(11,181,000)
	BLS CES Report (CES0000000001) Table B-1 Seasonally Adjusted	*BLS Not-in-Labor-Force Report (LNS15000000) Seasonally Adjusted*	*BLS Unemployed Report (LNS13000000) Table A-10*	

Maintaining a proper balance between these three categories is essential to economic success. The recent improvement in the Employed and Unemployed categories are positive developments. On the other hand, the voluntary departure of able-bodied adults in Not-in-Labor-Force category remains a significant U.S. workforce and economic challenge.

Between 1 January 2000 and 1 January 2018, the Not-in-Labor-Force category (people who can work but don't) increased by 26,857,000 citizens, the Employed increased by 16,599,000, and the Unemployed increased by 923,000. The net result of these changes means the U.S. labor force is weaker today by a net 11,181,000 citizens than it was at the turn of the Century. This weakness is exacerbated by a population growth of 44 million additional American citizens present today compared to the year 2000 (282 million versus 326 million).

- **Employment.** Most Americans wrongheadedly assume that a good economy creates jobs. Good jobs build a good economy. Moreover, jobs do not create jobs, businesses do.

Job Gains/Losses By President Since 2001



From 2001 to 2018 (the 17-year/204-month period covering the Bush, Obama, and Trump Administrations), the United States produced monthly job gains 149-times and job losses 55-times. The best month for job gains (524,000) occurred in May 2010. The worst month for job losses (-823,000) occurred in March 2009. The average number of new jobs over this 17-year period was a measly 71,000 job gains per month.

Most economists use a job creation rate standard of 250,000 new jobs per month. This rate supplies enough jobs to the U.S. workforce that will produce enough goods and services to grow GDP. This reasonably high threshold is needed to compensate for months with weak employment gains and during periods of recessions. The United States exceeded the 250,000 benchmark 30-times over the last 17-years, or once in every seven months. Consequently, reaching this job creation threshold is an achievable goal.

From an Administration job creation standpoint,

- The Bush Administration (2001 to 2008) created an average of only 22,000 new jobs per month, due to the onslaught of two major recessions, the calamity of 9/11 and the United States' expensive mobilization for the global war on terrorism.
- The Obama Administration (2009 to 2016) created an average 109,000 job gains per month. If the six months of the Great Recession that Obama "inherited" was subtracted, the average of the ensuing 90-month period yielded an average of 159,000 new jobs per month. Perhaps, the most important legacy of the Obama Administration is 75-months of consecutive job gains averaging 199,000 jobs per month during a period where the U.S. economy grew at a sclerotic rate of 1.5%. The last 6-years of the Obama Administration, job gains were impressive: 2.1, 2.1, 2.3, 3.0, 2.7, and 2.2 million jobs per year respectively.
- The Trump Administration continued the positive job creation trend with 12 consecutive months of job gains and extended the continuous job creation run to 87 months—the longest span of labor force gains since the Bureau of Labor Statistics began record keeping in February 1939. During his first year in office (2017), the Trump Administration created 2.1 million jobs, averaging 171,000 job gains per month, which is useful but insufficient for the Trump Administrations to create 25 million new jobs over the next decade. To achieve President Trump's goal of creating 25 million new jobs over the next nine years, the Administration needs to generate an average of 212,454 new jobs per month.

Job Creation 2000 to 2010

Employment *Source: BLS*	1 Jan 2000	1 Jan 2010	Change
Private Sector	110,241,000	107,296,000	**(2,945,000)**
Government	20,540,000	22,482,000	**1,942,000**
Total	130,781,000	129,778,000	**(1,003,000)**
		Monthly Average (120 Months)	**(8,358)**
		Annual Growth Rate	**-0.1%**

The decade of the 2000s was a particularly lousy decade with negative employment growth due to two recessions that lasted 26-months, the second of which was the 18-month long Great Recession of 2007 to 2009 that precipitated a global financial crisis. During this decade, the U.S.

private sector lost almost 3 million jobs, and the U.S. government gained nearly two million jobs, for a net employment loss of slightly over 1 million jobs and a negative annual growth rate of 0.1%.

Jobs Creation 2010 to 2018

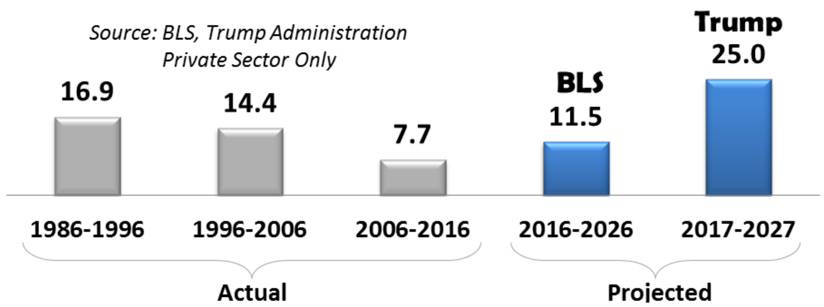
Employment *Source: BLS*	1 Jan 2010	1 Jan 2018	Change
Private Sector	107,296,000	125,039,000	**17,743,000**
Government	22,482,000	22,341,000	**(141,000)**
Total	129,778,000	147,380,000	**17,602,000**

Monthly Average (96 Months) **183,354**

Annual Growth Rate **1.7%**

The decade of the 2010s has been slightly better. The most recent 8-year period produced an average yearly job growth rate of 1.7% that was below the 2.2% average annual rate of GDP growth. Since GDP growth largely depends on consumption (a product of growing jobs and wages), poor performance in job growth will eventually drag down GDP to its level. Without job growth, the only ways to stabilize or grow GDP is by increased private sector or government investment (which is unlikely) or eliminating trade deficits (also unlikely).

Jobs Creation 2016 to 2026



The 24 October 2017 BLS Employment Projections Summary predicts that private sector employment is projected to increase by 11.5 million over the 2016-26 decade, which is substantially below the Trump Administration's 25 million projection over the next ten years. The BLS also projects an annual GDP growth rate of 2.0% from 2016 to 2026, which is also substantially lower the Administration's goal of a sustained GDP growth rate of 4.0%.

From a Jobenomics standpoint, labor force growth underpins GDP growth, and such a difference is concerning. The BLS attributes its slow growth rate projection to the decelerating growth of the "civilian noninstitutional population," which is the combined total of Employed, Unemployed and Not-in-Labor-Force categories. According to the BLS, the civilian noninstitutional population will grow at annual rate of only 0.9% from 2016 to 2026. This growth is slower than previous decades, 1.0% from 2006 to 2016, and 1.3% from 1996 to 2006.

As shown in Table 2.1 of the BLS Employment Projections Summary, the 11.5 million new jobs projection includes 10,527,000 in the seven services-providing industries, 779,000 self-employed, 219,000 in the three goods-producing industries (manufacturing, construction, and mining) and a loss of 6,100 agricultural jobs. Regarding manufacturing, between 2016 and 2026, the BLS projects a manufacturing **loss** of 736,000 jobs, which is diametrically opposed to the Administration's efforts to generate millions of high-paying manufacturing jobs.

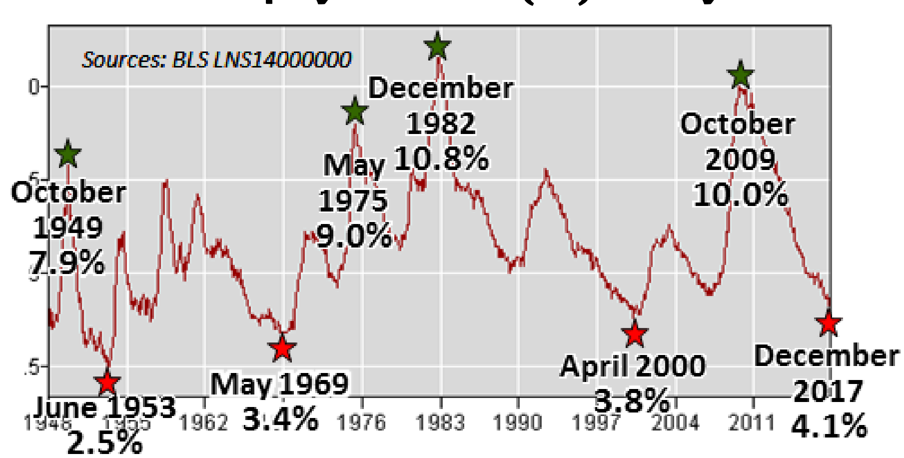
The BLS Employment Projections Summary was released two months before the enactment of the Tax Cuts and Jobs Act (TCJA). Unfortunately, the TCJA is unlikely to meaningfully close the employment disparity between the BLS and the Administration that it serves.

An analysis of the TCJA by the Tax Foundation, a highly-credible independent nonprofit tax policy institution in Washington DC, estimates that the TCJA create between 339,000 new full-time equivalent jobs, and "if" fully implemented, 1.6 million jobs over the next ten years. House Speaker Paul Ryan estimates that TCJA reforms will help businesses create 890,000 full-time jobs over the next decade. If these assessments are accurate, the TCJA will help generate an insufficient number (between 33,900 and 160,000 per year, or 2,825 and 13,000 jobs per month) of new jobs to close the gap between the BLS and the Administration projections.

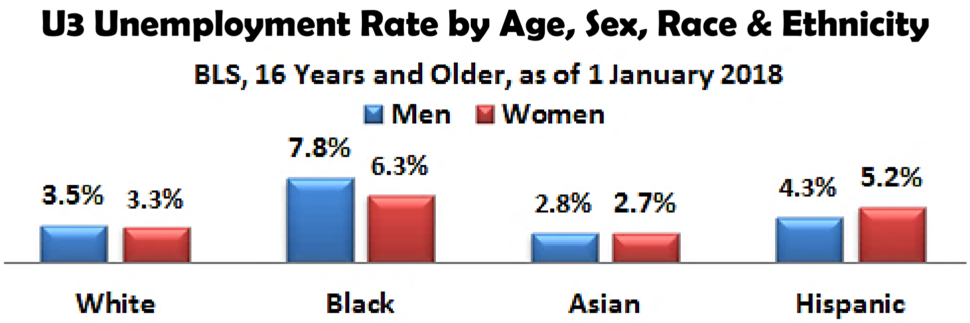
To fulfill President Trump's 25 million job objective, the Administration needs to create an economic and labor force environment that can generate 212,454 new jobs per month over the next nine years. The TCJA is a step in the right direction. Big businesses are likely to add jobs but not enough given the rationale explained earlier in this document. Cutting regulations will help small business job creation, but the level is unknown. Leveling the trade playing field will also help but is unlikely to be implemented in scale anytime soon. What is needed most is a concerted effort to mass-produce startups, expand existing small businesses, and a shift of focus from the traditional economy to the emerging digital economy. If the Administration accomplishes the menu of items in a stable economic environment, Jobenomics believes that the President will reach its job creation goal.

- **Unemployment.** Jobenomics projects that the official U3 Unemployment Rate will remain unchanged in 2018 from its current post-Great Recession low of 4.1% in December 2017—a rate not seen since February 2001. From a historical unemployment rate perspective, the post-WWII low was 2.5% in June 1953, followed by 3.4% in May 1969, and 3.8% in April 2000.

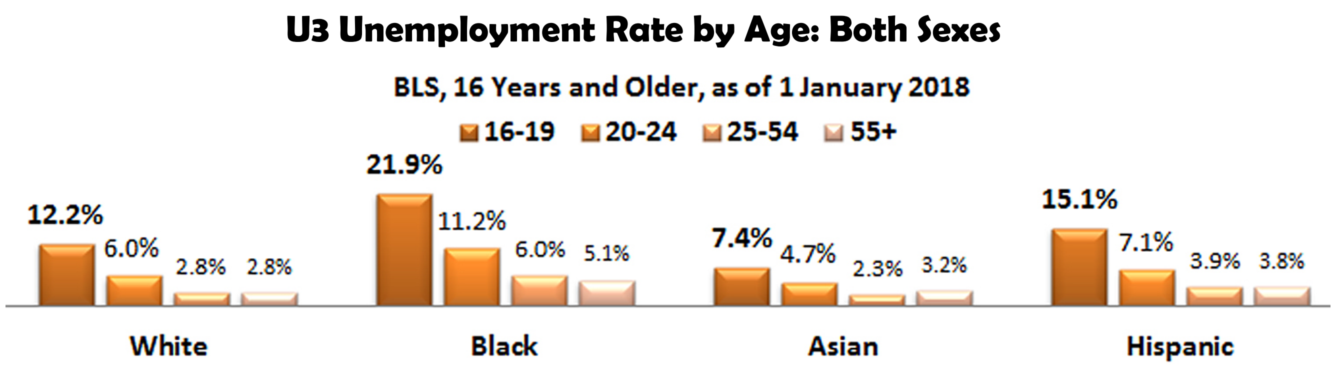
Historical Unemployment Rate (U3) History Since WWII



Unemployment rates have been highly volatile over the last fifty years. The official U3 unemployment rate peaked shortly after WWII and declined to a historical low within a decade. Subsequent peaks happened in the early 1960s, mid-1970s after the OPEC oil shock, and the 1980s after the tech boom bubble broke, which set the all-time U3 rate peak of 10.8% in December 1982. During the go-go decades of the 1990s and 2000s, the unemployment rate stayed relatively low until the Great Recession that commenced in December 2007 and ended in June 2009. Due to the Great Recession, the unemployment rate soared to a peak of 10.0% and then gradually dropped to 4.1% today, a low not seen since February 2001.



This chart depicts current U3 unemployment statistics by sex, race, and ethnicity. Black and Hispanic Americans are more likely to be unemployed than White or Asian Americans. White and Black males are more likely to be unemployed than their female counterparts. Asian and Hispanic females are more likely to be unemployed than their male counterparts. As a group, Blacks were the most unemployed with a top unemployment rate of 7.8% for Black men and 6.3% for Black women. Over the last year, the unemployment rate for Black men dropped by 0.9% and Black women by 1.0%. Hopefully, this trend will continue.



Younger Americans in all age groups are more likely to be unemployed as opposed to older Americans. Unemployment rates for youth aged 16 to 19 are four times higher than the national average.

From a Jobenomics perspective, the United States has more of a youth unemployment problem than a total unemployment challenge. If the 16 to 19 year old group engaged in productive activities (education, training, public service or employment), the U3 unemployment rate would likely be reduced, not only for this age group but later groups as these youth mature.

From an overall labor force perspective, the U3 rate is a relatively weak indicator and undeserving of the amount of attention it receives. The official U3 employment rate is a somewhat artificial percentage since it depends on people "actively looking" for work. Once an individual quits looking, regardless of the reason, they are placed in the Not-in-Labor-Force category.

Few Americans know that is theoretically possible for the United States to have a zero rate of unemployment if all unemployed people just quit looking for work and joined those in the Not-in-Labor-Force. Under the current BLS survey, if unemployed respondents answered "no" to any of the following four BLS survey questions, the United States can have an instantaneous zero rate of unemployment.

1. "do you want a job?"
2. "have you worked in the last 4-weeks?"
3. "have looked for a job in the last 12-months?"
4. "would you take a job if offered?"

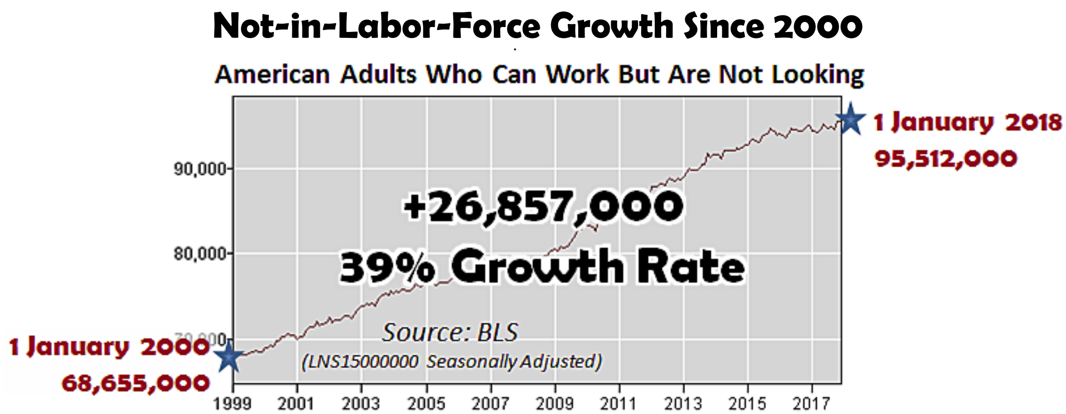
Consequently, the U3 unemployment rate is a manipulatable metric and an inconsequential macroeconomic indicator of the strength of the U.S. economy.

Other Unemployment & Not-in-Labor-Force Categories

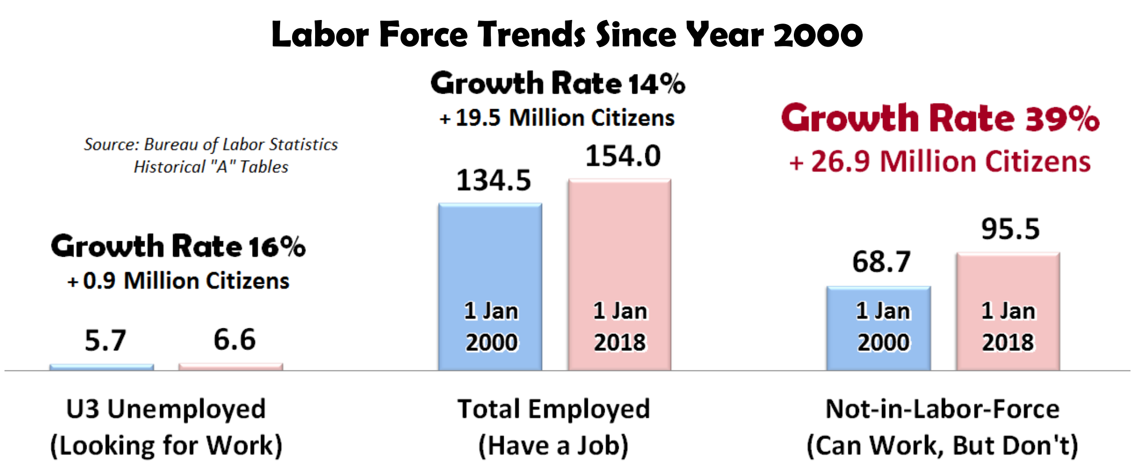
BLS Category	Source: U.S. Bureau of Labor Statistics Tables A-1 and A-15	Current Rate	Currently Unemployed
		1-Jan-18	
	Can Work And Are Looking (% of Civilian Labor Force)	**160,597,000**	
U1	Persons unemployed 15 weeks or longer, as a percent of the civilian labor force	**1.5%**	**2,408,955**
U2	Job losers and persons who completed temporary jobs, as a percent of the civilian labor force	**2.0%**	**3,211,940**
U3	**Total unemployed, as a percent of the civilian labor force ("official" unemployment rate)**	**4.1%**	**6,584,477**
U4	Total unemployed plus discouraged workers, as a percent of the civilian labor force plus discouraged workers	**4.4%**	**7,066,268**
U5	Total unemployed, plus discouraged workers, plus all other marginally attached workers, as a percent of the civilian labor force plus all marginally attached workers	**5.1%**	**8,190,447**
U6	**Total unemployed, plus all marginally attached workers, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all marginally attached workers ("total" unemployment rate)**	**8.1%**	**13,008,357**
	Can Work But Are Not Looking		
"Not in the Labor Force"	**Those who have no job and are not looking for one**	***Rate Not Calculated by BLS***	**95,512,000**

As shown, six Unemployment categories (from U1 Long-Term Unemployed to U3 Officially Unemployed to U6 Total Unemployed and Underemployed) are reported monthly by the BLS. The BLS also calculates the number of adults that can work but are not looking for work in a category entitled Not-in-Labor-Force. Not-in-Labor-Force (95,512,000) is 14.5-times the size of U3 Unemployed (6,584,477) and 7.3-times the size of U6 Unemployed (13,008,357). Therefore, the Not-in-Labor-Force exerts much greater strain on the U.S. economy than does U3 and U6 Unemployment—a fact largely ignored by macroeconomists and policy-makers.

- **Not-in-Labor-Force.** The explosive growth of people in the Not-in-Labor-Force Category is one of the most severe challenges facing American economic growth today. Woefully, little is being done to address this problem. Jobenomics foresees a minimal change in 2018 and may even worsen as lower-skilled workers become increasingly frustrated and voluntarily leave the workforce for alternative lifestyles and dependency on public assistance.



Over the last 18-years, the Not-in-Labor-Force category (a BLS category that includes adults who are capable of working but are not looking for work) has grown at an incredible rate (39%) and number of citizens (26,857,000).



Using official U.S. government data, this chart puts the rapid Not-in-Labor-Force growth into perspective. Labor force trends since the year 2000 indicate that percentage-wise, the Not-in-Labor-Force grew at the fastest rate (39%), followed by U3 Unemployed (16%) and Total Employed (14%). Numbers-wise, the Not-in-Labor-Force increased by 26.9 million people, followed by Total Employed growth of 19.5 million and U3 Unemployed growth of 0.9 million people. The U.S. economy is not sustainable as long as the unemployment and voluntary departure rates exceed people entering the labor force.

Not-in-Labor-Force citizens tend to remain unemployed much longer—often for life—than the unemployed who are actively seeking employment. Even more mind-boggling is the statistic that 95% of the Not-in-Labor-Force BLS survey respondents say that they "do not want a job now."

Economists divide unemployment into two broad categories of **voluntary unemployment** and **involuntary unemployment**. Voluntary unemployment refers to individuals who leave their jobs willingly in search of other employment. Involuntary unemployment involves fired or laid off personnel who have to look for another job.

These categories can be further subdivided into "**frictional unemployment**" (in-between jobs), "**cyclical unemployment**" (related to business cycles during recessionary periods and periods of economic growth), and "**structural employment**" (loss of jobs due to lack of jobs at the going wage rate or the lack of employable skills). Jobenomics adds a fourth category called, "**functional unemployment**," which includes the Not-in-Labor-Force (not looking for work) and the Unemployed (looking for work).

The ability to work should be the determining factor for unemployment as opposed to whether or not a person is looking for work. Jobenomics contends that all Americans capable of working, regardless if they are looking or not, should be considered "**Functionally Unemployed.**" Jobenomics defines "functional" as capable of operating or working. A functional adult who is capable of working but chooses not to work should be considered unemployed for the same reason that "discouraged," "marginally attached" and "part-time workers for economic reasons" are included in the BLS U4, U5, and U6 unemployment categories.

"Functional" Unemployment

Labor Force	1 January 2018		Unemployed
Category	Definition	Percent	Millions
Unemployed (BLS U6)	Unemployed or underemployed who are looking for work		13.0
BLS "Not in labor force"	Have no job and are not looking		95.5
	Total U6 Unemployed + Not-in-Labor-Force (BLS)		108.5
	% Total US Population (Census Bureau)		327.0

33%

If calculated against the entire U.S. population, the Functional Unemployment rate would be 33%, which is significantly higher than the advertised 4.1% U3 or 8.1% U6 unemployment rates.

Jobenomics would not eliminate the old U-Rate system but institute a reporting system based on population and the capability to work. By focusing on functional unemployment (U6 and Not-in-Labor-Force), as opposed to U3 unemployment, policy-makers and the American public could make better decisions regarding labor force participation, tax revenue generation and entitlement/welfare expenditures.

The BLS should also consider reporting unemployment rates as a percentage of the entire U.S. population as opposed to the Civilian Labor Force, which is an arbitrary percentage based on the willingness to work or to look for work.

U3, U6 & NiLF Functional Unemployment

As of 1 January 2018	Number	Rate Comparison	
Total U.S. Population	**326,971,209**		**100.0%**
Civilian Labor Force	**160,597,000**	**100.0%**	**49.1%**
Functionally Unemployed (NiLF & U6)	**108,520,357**	**67.6%**	**33.2%**
Not-in-Labor-Force (NiLF)	**95,512,000**	**59.5%**	**29.2%**
U6 Total Unemployed	**13,008,357**	**8.1%**	**4.0%**
U3 "Officially" Unemployed	**6,584,477**	**4.1%**	**2.0%**

Using current BLS methodology, the Functional Unemployed rate would equate to 67.6% of the Civil Labor Force. Percentages calculated a percentage of the population would make the Functional Unemployment rate 33.2%. Comparing Americans who are capable of working with the overall society would be a better economic metric regarding the strength of the labor force and the ratio of the working versus non-working population.

The Census Bureau and the Bureau of Labor Statistics provide limited insight into why people are not in the labor force. According to a BLS spokesperson, "Our survey is designed to measure work and looking for work. We do not focus on people outside of the labor market." One should not perceive this spokesperson's comment as trite but as factual.

The BLS was established in 1884 during the advent of the Industrial Revolution to collect information on labor employment. Despite its many attempts to expand its statistical analysis beyond the traditional thirteen vertical industrial supersectors, the BLS has been unable to obtain approval and sufficient funding to explore in-depth analysis of the Not-in-Labor-Force. Other similar areas that need more empirical data and analysis include the Contingent Workforce and the Digital Economy—both of which are transforming the U.S. economy and labor force.

Current BLS methodology also provides limited visibility in crosscutting industries like the Healthcare supersector, a sector that anecdotally represents upwards of 18% of the U.S. economy, and the Energy supersector. For the record, Jobenomics applauds the BLS for the timely and quality information that they provide. With a marginal amount of additional resources, the BLS could present macroeconomic data and analysis that would elevate policy- and decision-making to a more strategic level.

A major reason for the Not-in-Labor-Force growth is due to the exponential growth and financial attractiveness of U.S. welfare and social programs. While there is no evidence that people on welfare are immune to work, there is evidence that many recipients often lack the skills necessary to obtain the types of jobs that pay above-average wages, which, in turn, makes welfare and means-adjusted social benefits attractive. According to a CATO Institute study, "the current (U.S.) welfare system provides such a high level of benefits that it acts as a disincentive for work." Furthermore, hundreds of federal, state and local welfare and social assistance programs have created a culture where beneficiaries have a "PhD-level" of understanding how to obtain a subsistence level income, which often requires non-reportable income derived in the underground economy.

Unfortunately, American policy-makers and their constituents have polar opposite views regarding welfare and social program expenditures that consume about 63% of mandatory spending of the U.S. federal budget. Jobenomics foresees that there is little chance of compromise between the two camps on cutting federal spending. However, there seems to be universal agreement on the need to grow the economy. Increasing sustained GDP growth of 3% or higher would provide financial resources to ensure safety-nets for the poor as well as investment resources for small business and job creation—the focus of the Jobenomics National Grassroots Movement—at the base of the United States' socioeconomic pyramid.

Another primary reason for the Not-in-Labor-Force growth is due to the ever-increasing number of students enrolled in postsecondary education. Government subsidized postsecondary education is a means-tested welfare program for people that cannot otherwise afford a college education.

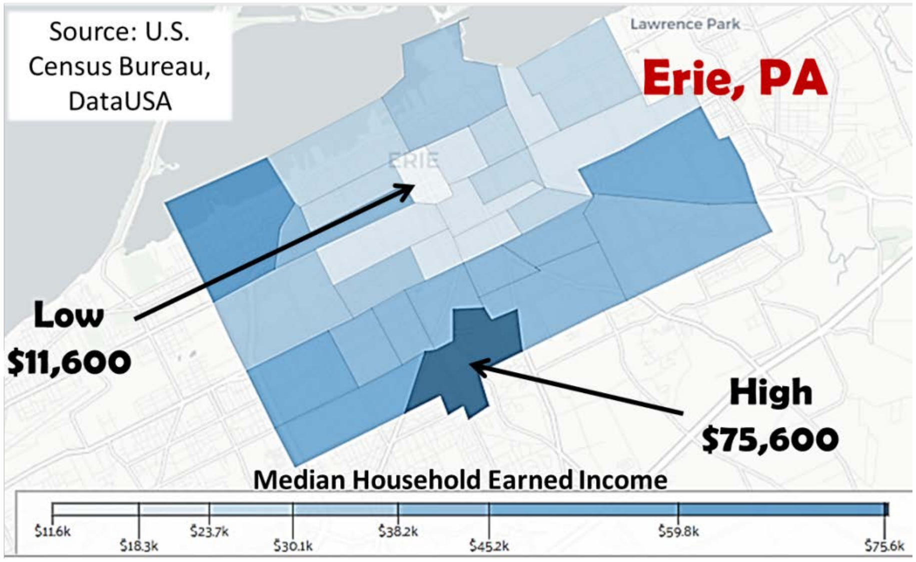
Jobenomics endorses subsidized postsecondary education for the right reasons such as, to land the right job at a livable wage, to self-actualize and to achieve economic self-sufficiency. Unfortunately, too many students use government subsidies to enroll in postsecondary institutions for the wrong reasons, such as parental or peer pressure, enjoying the college scene, or delaying the drudgery of work.

Subsidized postsecondary education is not free. Consequently, many students are burdening themselves with a lifetime of long-term debt. According to the U.S. Department of Education's Federal Student Aid Portfolio Summary, outstanding student loans reached **an all-time high of $1.37 trillion in 2017**, up from $0.52 trillion in 2007. The total number of outstanding federal student loan borrowers also reached **an all-time high record of 42.6 million borrowers** in 2017, up 28.3 million borrowers from in 2007.

Based on historical data, the number of postsecondary students in the Not-in-Labor-Force will continue to increase at a rate of 7% to 8% per year. Student loan debt will also continue to grow and compound.

The Not-in-Labor-Force challenge is especially acute in low-income inner-city communities. Over the last decade, at the invitation of local officials, this author visited over 100 cities and met with thousands of policy-makers, community leaders, and business-execs regarding the Jobenomics economic, community, small business and workforce development concepts. These communities included large cities (e.g., Detroit, Atlanta, New York City), small cities (e.g., Erie, Durham, Wilmington), and highly-distressed urban areas (e.g., West Baltimore, Austin Chicago).

Low-Income Inner-City Communities



Erie, Pennsylvania, a midsized city of 100,000 residents, serves as an example of one of Jobenomics inner-city initiatives. The median household earned income within Erie's inner-city is a mere $11,600 as opposed to a $75,600 less than a mile away. This low level of income produces poverty, hopeless, and a bounty of other social ills like drug use, gangs and crime. A downloadable 50-page Jobenomics-Erie is available. Jobenomics Erie's program goal is to create hundreds of micro-businesses that will produce 3,500 new direct jobs with livable wages and viable long-term career opportunities over the next five years.

Traditional economic development specialists concentrate on well-resourced and high-skilled communities. Jobenomics economic development approach focuses on less-resourced and lower-skilled communities. Traditional specialists advocate business incubators to find silver bullet technologies that will create substantial enterprises and business accelerators that provide mezzanine financing to an existing business to take them to the next level. Jobenomics advocates community-based business generators to mass-produce highly-scalable startups at the base of the U.S. socioeconomic hierarchy. Jobenomics contends that America needs a combination of incubators, accelerators, and generators for economic and labor force growth.

The solution to mass-producing jobs in less-resourced and lower-skilled communities starts with establishing a skilled-based training and certification program in a community-based business generator. To date, Jobenomics is working with over a dozen cities to mass produce micro-businesses and jobs with an emphasis on inner-city minorities, veterans, women, new workforce entrants and other hopefuls who want a job. For more information, download from the extensive Jobenomics research library that contains volumes of material on economic, community, small business, and workforce development.

Governance

Strategic Considerations *Weighted Projections*		Get Much Better	Get Better	Stay the Same	Get Worse	Get Much Worse
Governance	Trump Administration	•	•	•••	•	•
	Fiscal Policy (Congress)				••	•
	Monetary Policy (The Fed)		•	••		

Good governance inspires. Bad management discourages. Given Washington's bitter political divide, governance is a serious issue. From an economic perspective, 2018 is very much in question.

Henry Kissinger once told this author, "to remain king of the mountain people below you must want to hold you up even if they don't like you." Since WWII, the United States has been the king. U.S. policy-makers and decision-leaders must unify under a common cause to retain the benefits of our current economy. Unfortunately, special interest groups and identity politics present a mounting challenge to common cause and civility.

In today's anti-establishment and iconoclastic world, governance is not for wimps. Perhaps, this is the reason that America voted for President Trump as well as other countries that selected authoritative nationalistic leaders. Even devout globalists are avidly seeking superstate champions—former President Obama would be a quintessential candidate—who will administer economic and foreign policy on a global basis.

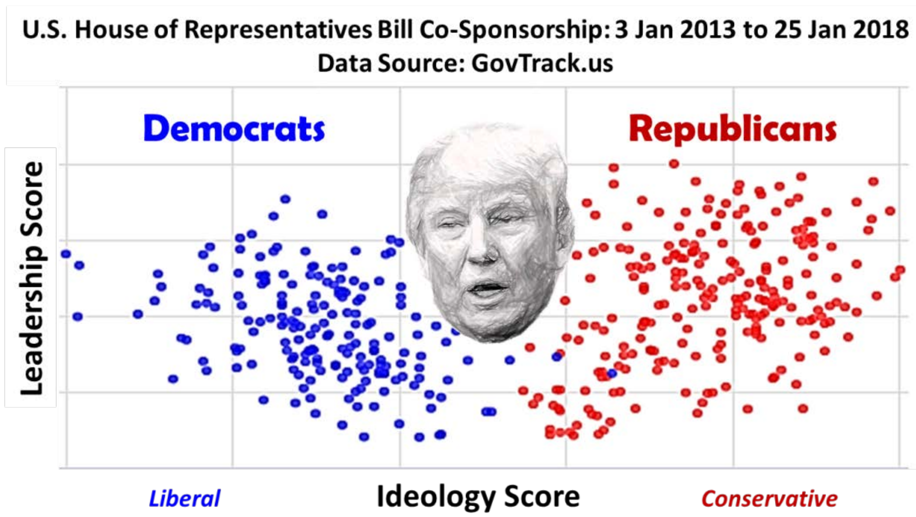
- **Trump Administration.** Love him or hate him, President Trump is the most influential (possessing a compelling force to affect the actions, behavior, and opinions of others) leader in the world today. The one fact that everyone accepts is that President Trump sucks out all the oxygen in any room he enters or any location that receives his tweets.

  The Trump Twitter Archive is a repository of 10,766 Donald J. Trump tweets since he declared his candidacy on 16 June 2015 to the date of this publication). During his first full year in office, President Trump tweeted exactly 2,567 times for an average of 7 tweets per day. Based on loud outcries from the global elite, he is more than just influential—he is transformative. Few chambers in today's political establishment are sacrosanct from the President's transformational ambitions.

  As such, it is almost impossible to predict if the U.S. economy will get much better or much worse under his tenure. President Trump documented (tweets) what he feels and unabashedly says what is on his mind. The President is unlikely to change in 2018. However, the bandwidth of economic responses to his warrior-spirit ranges from getting much better to much worse in 2018. To a significant degree, the U.S. economy will parallel Trump's rise or fall in the year(s) ahead.

  Donald J. Trump's John Wayne-style and George Patton-aggressiveness could enable the Trump Administration to upend Washington's business-as-usual mentality to make the U.S. economy more competitive and efficient than ever. On the other hand, America has evolved into an ultra-polarized nation with many jealously and ferociously guarded fiefdoms.

Washington's Political Ideological Divide



Unfortunately, the [ideological divide](#) is so vast and acrimonious that "draining the swamp" in Washington may not produce an adequate return on investment compared to draining other swamps in major American communities—especially inner-city communities—that desperately need the power of the Presidency to effect change and rehabilitate urban ghettos. Moreover, he is more accepted and energized by the proletariat-leaders than the aristocratic-Washington establishment.

Donald J. Trump is a Washington outsider. His best performances are outside the Washington beltway. His 50-state rallies generated impassioned enthusiasm in overflowing crowds. President Trump even performs well in hostile foreign environments.

President Trump's first overseas venue began and was well-received in Saudi Arabia, a country angered by his strident rhetoric on Islam. World leaders at the 2018 Davos World Economic Forum braced for a bombastic Trump but were pleasantly pleased with a businessman interested in making win-win deals. Rather than depleting his energy in rope-a-doping Washington, the President should get out of town more often.

The Jobenomics National Grassroots Movement urges the President to focus on U.S. economic, community, business and workforce development. Blighted and economically-depressed inner-cities present an ideal opportunity for executing his economic and job creation vision. Based on Jobenomics experience in urban renewal and meetings with thousands of Democrat and Republican community leaders, President Trump's take-no-prisoners demeanor and real estate development expertise would greatly benefit underserved and marginalized communities. President Trump has the élan and credentials to rehab communities. If he can turn swampland into luxury resorts, he can undoubtedly revamp blighted areas.

President Trump has learned from his many deals that it takes as much energy to manage a little deal as a big deal that has a much grander upside. Urban renewal has a considerable upside. During his campaign, Candidate Trump articulated his Urban Renewal Agenda to an African-American audience in Charlotte, North Carolina. "It is great to be here in Charlotte to discuss an issue that means so much to me. That is the issue of urban renewal, and the rebuilding of our inner cities…and to provide a new deal for Black America."

The President's campaign promise of a new deal for Black America is grounded in three principles: safe communities, great education, and high-paying jobs." Quoting Candidate Trump from his October 2017 speech in Charlotte, his vision of a new deal includes:

> "Tax holidays for inner-city investment", "new tax incentives to get foreign companies to relocate in blighted American neighborhoods", "federal disaster designation for blighted communities in order to initiate the rebuilding of vital infrastructure", "demolition of abandoned properties", "increased presence of law enforcement", "financial reforms for credit to pursue their dreams in business and create jobs", and "encourage small-business creation by allowing social welfare workers to convert poverty assistance into repayable but forgive-able micro-loans."

Now that the President has an established Cabinet and agenda, perhaps it is time for President Trump to get back to his roots rejuvenating decaying neighborhoods. By doing this and employing the full power of the Presidency, he can transform the hardest hit parts of America and help close political and racial divides that separate people that he was elected to serve.

President Trump is more of an entrepreneur than a politician. An entrepreneur tends to be intuitive, risk-taking, and deal-making. Politicians usually pursue a path of risk-avoidance, consensus-making, and number-crunching.

President Trump has the disposition, skills, dauntlessness, and forcefulness to do "a really big deal"—perhaps the most prominent American deal ever—by raising over 100 million inner-city denizens out of poverty, or near poverty, via a massive urban renewal program.

A massive urban renewal program would incorporate all the tenets of the Trump Administration's economic and job creation plan. It also would be a fertile proving ground for President Trump's minority, law enforcement, crime, and immigration initiatives. By lifting economically-distressed communities, the entire country would benefit economically.

- **Fiscal Policy (Congress).** Given the discordance generated by the ideological divide in Congress, the U.S. economy is likely to get worse, or even much worse. Internecine attacks will escalate during the run-up to the November midterm elections. For the opposition party, flipping the House and Senate, and overthrowing the Republican agenda are overarching concerns.

  Few people understand that the President only indirectly controls fiscal policy. The Legislature is responsible for financial policies that adjust federal spending levels and tax rates. According to the Congressional Budget Office, fiscal policy (tax and spending) can affect the U.S. economy through their impact on federal borrowing, private demand for goods and services, people's incentives to work and save, and federal investments.

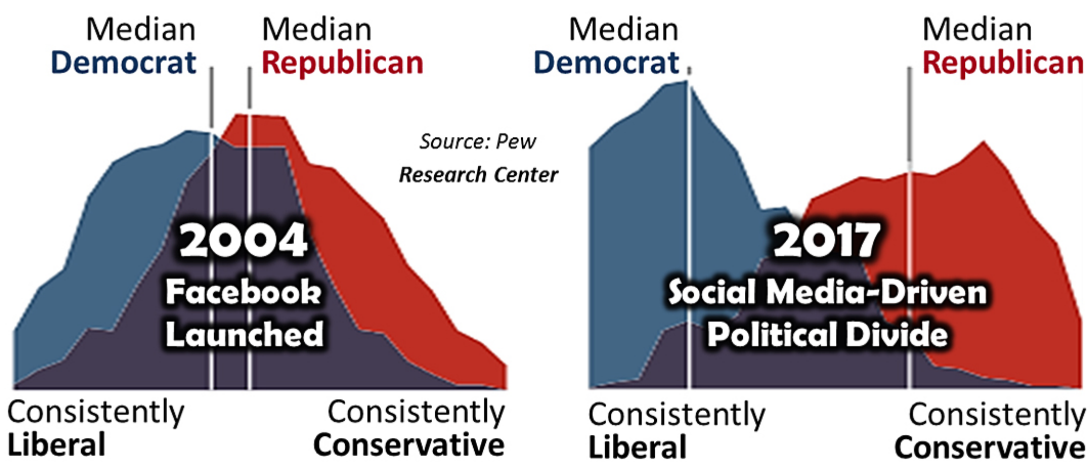
Today, Congressional policy-making is determined more by force (majority vote) than consensus (bipartisanship). For example, the TCJA was passed by a Republican-controlled Congress, with the support of a Republican president, with zero Yae-votes from Democrat Senators and House members. Another example is when a Democrat-controlled Congress and Democrat president unilaterally passed the 2010 Affordable Care Act, otherwise known as Obamacare.

Republican and Democrat legislators have antithetical views about fiscal policy as well as the disposition of the United States and America's role in the 21st century. The political right supports nationalist, capitalistic, and conservative economic policies. The political left supports globalist, socialistic, and liberal economic policies. Regrettably, legislators (and their constituents) are at a crossroads where the left no longer believes anything the right as to say, and vice versa.

Many pollsters believe that America's ideological divide is as vast as it was before the secession that led to the American Civil War. A recent political poll by the [Pew Research Center](), a Washington DC-based nonpartisan opinion-polling institute, states that Republicans and Democrats are now much further apart ideologically than at any point since 1994 when PEW began surveying the Partisan Divide, and "decidedly wider" since social media made its debut in 2004. According to Pew, "In nearly every domain, across most of the roughly two dozen values questions tracked, views of Republicans and Republican-leaning independents and those of Democrats and Democratic leaners are now further apart than in the past."

Social Media-Driven Divisiveness

Source: Pew Research Center



Today's partisan political divide is social media-driven considering the amount of negative political advertising, manipulation, and hate-speech that abounds on the internet. Traditional media outlets (i.e., television and radio) also add fuel to the fire but are often tame in comparison to the vileness and character assassinations posted on the internet.

The social media phenomenon is not unique to the United States. Social media was used to ignite the 2011 Arab Spring, propelling the Middle East and the Ummah into chaos. Whether this level of lawlessness will infect the United States is not outside the realm of possibility now that American political warfare is tantamount to a 21st Century blood-sport without the actual spilling of blood—at least not yet like happened in the Civil War and the 1960s.

From an economic perspective, what concerns Jobenomics the most about Congressional polarization is the penchant for the opposition party to dethrone the ruling party. Republican opposition to the progressive agenda and President Obama was terrible. Democrat opposition to anything Republican is now even worse. Worst of all is the palpable hatred for President Trump and the unified effort by Democrats to remove him from office by any means possible. This atmosphere is destructive and introduces economic insecurity. Moreover, it encourages foreign economic and military intervention to exploit our weaknesses.

Consequently, Jobenomics predicts that the Congressional political divide is likely to make the U.S. economic situation worse, or much worse, during the run-up to the November 2018 midterm election. Crucial fiscal policy actions from the size and disposition of the budget, to welfare reform, to infrastructure spending, are likely to be deadlocked. Assuming that the Democrats do not flip the Senate or House, or dethrone the President, 2019 is expected to be a much tamer year.

- **Monetary Policy (The Fed)**. In 2018, U.S. monetary policy is unlikely to change, and may even get better, as Federal Reserve intervention curtails now that the U.S. economy and labor force is on firmer ground. However, while stronger, the U.S. economy is less capable of dealing with a future downturn.

  Unbeknownst to most American citizens, while the Fed is an instrument of the U.S. government, it was created in 1913 as an independent organization that does not have to seek approval from the President or Congress for its decisions—ostensibly to keep it free of politics. A presidentially-appointed Board of Governors governs the Fed. While the Board of Governors is an independent government agency, Federal Reserve Banks are set up like private corporations. Member banks hold stock in the Federal Reserve Banks and earn dividends. The Fed's twelve regional member banks oversee privately-owned U.S. member banks.

  The Federal Reserve System (the Fed) is the U.S. central banking system (central bank) that is responsible for U.S. monetary policy. Monetary policy involves promoting maximum employment, stable prices, and moderate long-term interest rates in the U.S. economy. The Federal Open Market Committee (FOMC) is the organization within the Fed that sets monetary policy that directly affects interest rates, which indirectly affects stock prices, wealth, and currency exchange rates.

  According to the Fed website, Fed also "promotes the stability of the financial system in the United States and abroad, monitors the safety and soundness of individual financial institutions, fosters payment and settlement system safety and efficiency, and promotes consumer protection and community development."

U.S. Government Financial Bailouts, Buyouts, and Stimuli Since 2008

Total $16.9 Trillion			
Federal Reserve	**$ 11,213**	**Treasury**	**$2,910**
Primary Credit Discount	$ 111	Troubled Asset Relief Program (TARP)	$700
Secondary Credit	1.00	Tax Break for Banks	$29
Primary dealer and others	$ 147	Stimulus Package (Bush)	$168
ABCP Liquidity	$ 146	Stimulus II (Obama)	$787
AIG Credit	$ 60	Treasury Exchange Stabilization	$50
Commercial Paper Funding	$ 1,200	Student Loan Purchases	$60
Maiden Lane (Bear Stearns)	$ 30	Citigroup Bailout Treasury	$5
Maiden Lane II (AIG)	$ 23	Bank of America Bailout Treasury	$8
Maiden Lane III (AIG)	$ 30	Support for Fannie/Freddie	$400
Term Securities Lending	$ 75	Line of Credit for FDIC	$500
Term Auction Facility	$ 375	Treasury Commitment to TALF	$100
Securities lending overnight	$ 10	Treasury Commitment to PPIP	$100
Term Asset-Backed Loan Facility	$ 1,000	Cash for Clunkers	$3
Currency Swaps/Other Assets	$ 606	**FDIC**	**$2,478**
GSE Debt Purchases	$ 200	Public-Private Investment (PPIP)	$1,000
GSE Mortgage-Backed Securities	$ 1,250	FDIC Liquidity Guarantees	$1,400
Citigroup Bailout Fed Portion	$ 220	Guaranteeing GE Debt	$65
Bank of America Bailout	$ 87	Citigroup Bailout FDIC Share	$10
Commitment to Buy Treasuries	$ 300	Bank of America Bailout	$3
Quantitative Easing (QE1)	$ 1,750	**HUD**	**$306**
Quantitative Easing (QE2)	$ 600	Hope for Homeowners (FHA)	$300
Operation Twist	$ 667	Neighborhood Stabilization (FHA)	$6
Quantitative Easing (QE3)*	$ 1,440	** $40B/month thru 2015 (36 months)*	
Tresury Buying Program (QE4)**	$ 885	*** $45B/mon for 18 months & $75B for 2014*	

Source: Bloomberg, Jobenomics

Since the onset of the Great Recession, U.S. Federal Reserve, U.S Treasury, U.S. Department of Housing and Urban Development (HUD), and the Federal Deposit Insurance Corporation (FDIC) injected $17 trillion worth of bailouts, buyouts, and stimuli into the U.S. economy.

The combination of a wide variety Fed programs, Treasury asset relief programs and stimulus packages, FDIC aid to troubled banks, and HUD programs for troubled homeowners accomplished what they were meant to do—stop the country from sliding back into recession. On the other hand, the U.S. economy became addicted to the stimuli and may not be as robust as many believe it to be. Today, the Fed has fewer financial resources, which makes the U.S. economy more vulnerable to future economic downturns and depreciates the prospects of a rapid economic recovery.

Over the last decade, the Fed injected over $11 trillion worth of financial bailouts, buyouts, and stimuli into the U.S. economy. The Fed's Quantitative Easing (printing money) programs equated to over $5 trillion. In addition to bailouts, buyouts, and stimuli, the Fed instituted an unconventional Zero Interest Rate Program (ZIRP) policy to energize the U.S. economy. Nominal ZIRP interest rates encouraged people to spend rather than save due low rates of return in traditional saving accounts, certificates of deposits and bonds.

With the Fed support, ZIRP policies proliferated around the world. Many countries even took ZIRP a step further by implementing Negative Interest Rate Programs (NIRP) that charged customers and banks fees to save (store) money. These actions weakened the balance sheet of central banks around the world—the effects of which are still unknown. However, in today's highly interconnected global economy, a major meltdown in a country can easily have a domino effect on other countries.

The Fed accomplished its mission getting the economy back on track and is now reversing course by unwinding the trillions of dollars of assets and increasing the Federal Funds Rate.

- During the Great Recession and the post-recession recovery period, the Fed's balance sheet ballooned from $147 billion in 2008 to $864 billion in January 2009 to $4.4 trillion today—the biggest in the world. During this period, the Fed acquired $1.7 trillion worth of toxic asset (mortgage-backed securities).

  The Fed now needs to "normalize" the bank's balance sheet. In September 2017, the Fed announced that it would initiate a Balance Sheet Normalization Program that will gradually liquidate the Federal Reserve's securities holdings in its portfolio. Liquidation will begin at a rate of $10 billion per month, with a 60-40 split of Treasuries and mortgage-backed securities and "gradually" increase to $50 billion per month.

  At maximum rate, this balance sheet tapering could release upwards of $600 billion per year into the U.S. economy. $600 billion, the size of annual U.S. defense spending, is a significant amount of money for the economy to absorb. Many economists fear this amount of money will perturb the markets and impact fixed income investors. Moreover, it increases the risk of increased inflation especially if Congressional fiscal policies increase spending (which it intends to do) or decrease revenues (which it did with the TCJA).

  The Federal Funds Rate (currently 1.5%) is the rate at which depository institutions (banks) lend reserve balances to other banks on an overnight basis. The Federal Funds Rate underpins different interest rates such as the Discount Rate, Prime Rate, and Bank Rates. Discount Rate is the interest rate that the Fed charges its depository banks and thrifts who borrow money from the Fed. Prime Rate is the interest rate offered by banks to their most valued customers. Bank Rates are interest rates that banks charge customers. Therefore, movement in the Federal Funds Rate can have knock-on effects on the U.S. economy, labor force, and inflation.

  In 2017, the Federal Funds Rate was increased three times and currently stands at 1.5%. The Federal Funds Rate is likely to be raised two or three times in 2018 to the 2.0% to 2.5% range. So far the marketplace has shrugged off these Fed rate increases but is wary of future Fed actions that may have a cooling effect on the red-hot stock market.

From a historical perspective, Federal Funds Rate reached a high of 20% in 1979 and 1980 to combat double-digit inflation. More recently, the Federal Funds Rate reached 5.5% before the Great Recession. So, unless there are some dramatic changes, changes to interest rates in 2018 should not be of concern.

In summary, Jobenomics does not consider a significant change in U.S. monetary policy is likely as long as inflation stays under control and the global economy retains its current footing. So far the U.S. economy and labor force are both operating without Federal Reserve System support.

Domestic Disruptors

Strategic Considerations *Weighted Projections*		Get Much Better	Get Better	Stay the Same	Get Worse	Get Much Worse
Domestic Disruptors	Technology	•	•		••	
	Income & Wages		•		•	
	Civil Unrest			•	•	
	Natural Disasters		•	•		

The U.S. economy is stronger for some but not for others—and therein lies the rub!

The rapid advancement of network and digital technologies are improving the livelihoods of skilled workers while the unskilled are falling further and further behind. While wages have increased somewhat since 2016, income inequality has increased. Today, 72% of all American wage earners make below average income. Wealth creation (investments and ownership) also eludes the vast majority of citizens who live paycheck to paycheck. Consequently, not only are many people angry but they are increasingly venting their anger in nonproductive ways. Civil unrest is brewing. Even nature seems to be getting angrier. 2017 was the costliest year in history for U.S. natural disasters.

As a result of these factors, Jobenomics believes the U.S. economy will continue to bifurcate in 2018, getting better for some and worse for others.

- **Technology.** The rapid advancement of digital and network technologies in today's Digital Age generates a digital divide between workers who are technologically adept and those who have not yet adapted. This digital divide causes job polarization where the majority of middle-skilled jobs succumb to lower-skilled lower paying jobs, while the high-skilled few advance economically.

  The lack of appropriate skills is the primary reason that 6 million unemployed citizens cannot fill the 6 million open jobs in America. Furthermore, technology-driven job polarization not only produces grave disparities between the skilled and unskilled but also between the full-time workforce and part-time contingent workforce and the rich and poor.

  The revolution of emerging Digital Age technologies is called the Network Technology Revolution (NTR) by Jobenomics. The power of today's NTR cannot be understated. It took centuries to transform society in the Agricultural Age. Industrial Age technology took only decades for its transformational magic to work. Digital Age transformation happens in years.

  The Industrial Revolution (IR) transformed America from an agricultural-based society to an industrial-based society. The post-WWII Military Technology Revolution (MTR) underpinned the creation of the economic superpower on the planet. The 1980s Information Technology Revolution (ITR) ushered in an information age of prosperity and international commerce. Today, the Network Technology Revolution (NTR) is reshaping the global economy. Like the IR, MTR, and ITR, the NTR could lead to the creation of millions of U.S. businesses and tens of millions of new

American jobs, as well as countless economic and social benefits. Globally, the NTR's potential is exponentially higher regarding business, employment, and societal transformation.

The NTR is not ITR 2.0. While both are revolutionary, the NTR portends to be significantly more intrusive than its earlier and more benign cousin. ITR tools were designed to assist and enhance humanity's productivity. NTR agents are designed not only to augment but replace human endeavor. The NTR represents a perfect storm of technologies that emulate human form, attributes, and intelligence.

The power behind the NTR is a "perfect storm" of over three dozen transformative network and digital technologies, systems, processes and services.

"Perfect Storm" Of Transformative Technologies

The NTR is defined by Jobenomics as a perfect storm of transformative network and digital technologies, systems, processes and services including:
Big Data, Cloud Computing, Semantic Webs, Synthetic Reality, Mobile Computing, Ubiquitous Computing, Quantum Computing, 5G Broadband, Geo-Location, Near-Field Communications and Beacons, Inductive Charging, Spatial Sensing, Computer Vision and Pattern Recognition, Natural Language Processing and Speech Recognition, Data Mining and Predictive Analysis, Machine Learning, Transfer Learning, Deep Learning, Robotics, Telepresence and Telechirs, Nanobotics, Chatbots, Mechatronics, Memetics, Biometrics, Smart Cards, Blockchains, FinTech, Multifactor Credentialing, Emotive Surveillance and Management, Identity Management, Anonymity Networks, Ambient Intelligence, Artificial Intelligence and Intelligent Agents.

This perfect storm is revamping existing institutions, businesses, labor forces, economies, and governments; instituting new and different ideas, beliefs, behaviors and cultures; and even changing the very nature of human endeavor and work.

The nascent NTR already has been brilliantly innovative and creatively disruptive. The more creative the NTR becomes, the more destructive it will be. From an American outlook, with the proper focus and leadership, the NTR can create millions of new U.S. small businesses and tens of millions of jobs. Left unattended, unstructured and unplanned, the NTR is likely to render half of the U.S. workforce obsolete over the next several decades.

Jobenomics sees three major U.S. labor force trends occurring today that will have a dramatic effect on America's future economy and employment,

- More than any other labor force trend, the NTR will create significantly more employment opportunities for the contingent workforce than the traditional workforce.
- New workforce entrants and NTR-savvy digital natives have a substantially different view regarding business conduct and their roles in business.
- Those who cannot adapt will likely depart the U.S. labor force to the growing netherworld of perpetual familial and government assistance.

The NTR will accelerate job polarization between traditional full-time employees and part-time contingency workers. Contingency workers have to cobble together an income from task-oriented work, and part-time jobs. Moreover, many low-wage contingency workers have to supplement their income from government subsidies or seek unreported income opportunities in America's $2 trillion per year underground economy.

Over half of America's front-line fast-food workers require public assistance. Even working for America's biggest employer needs public support. 15% of all Walmart employees are on food stamps. As a response to the recent Tax Cuts and Jobs Act, Walmart is increasing its starting wage rate for hourly employees in the U.S. to $11 an hour. While this wage increase will help, it will not eliminate the job polarization challenge.

Job polarization is a primary cause for the vanishing American middle-class. Per a U.S. Federal Reserve report, "Over the past three decades, the share of middle-skill jobs in the United States has fallen sharply. Middle-skill jobs are those in which workers primarily perform routine tasks that are procedural and repetitive. The decline in the employment share of middle-skill jobs is largely due to sweeping economic changes, **advancement of technology**, outsourcing of jobs overseas, and contractions that have occurred in manufacturing. As the share of middle-skill jobs has shrunk, the share of high-skill jobs has grown, and that trend has drawn considerable attention. Less well known is the fact that the share of low-skill jobs has also risen."

Not only does the NTR have the ability to create 10s of millions of new American jobs, but it also can eliminate 10s of millions of American jobs via automation.

The revolution in digital and network technology is obsoleting workers via automation, artificial intelligence software agents, and AI-enabled smart machines. According to a 2013 University of Oxford study on computer automation "about 47% of total U.S. employment is at risk over the next two decades." If Oxford's estimates are correct, out of the 143 million U.S. nonfarm workers, 67 million jobs could be at risk. Obsolescence will impact all workers, including degreed workers, who have either routine manual or routine cognitive skills.

In cooperation with Citi Global Perspectives & Solutions, Oxford University conducted two other studies in 2015 and 2016 that addressed automation and computerization in greater detail.

The February 2015 Oxford/Citi study reaffirmed the earlier study probability that 47% of the U.S. labor force is at high risk of automation. It also assigned the likelihood that 33% of the U.S. workforce is at low risk of automation (namely the jobs that are highly creative and require social and cultural skills) and the remaining 20% at a medium risk of automation. Oxford/Citi cited three primary reasons why today's digital and network technology revolution is likely to be different from previous technology revolutions: (1) the pace of change has accelerated; (2) the scope of technological change is increasing, and (3) unlike innovation in the past, the benefits of technological change are not being widely shared—real median wages have fallen behind growth in productivity and inequality has increased."

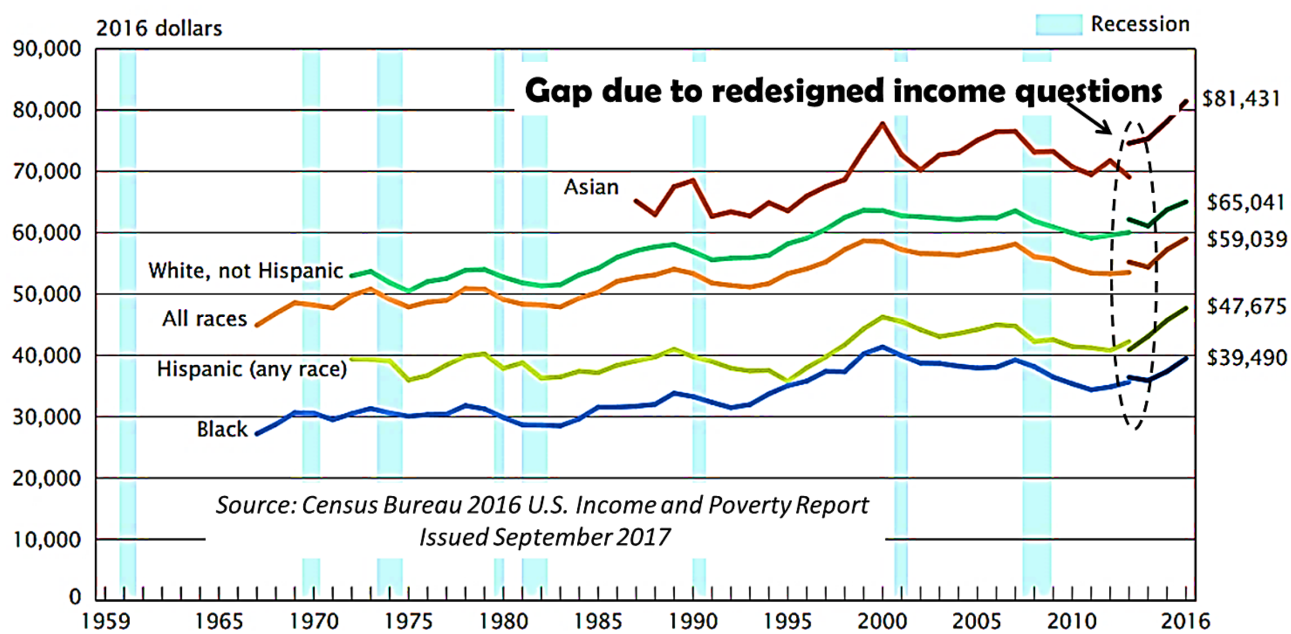
The January 2016 Oxford/Citi [study](#) took a deep dive into the effects of automation on the rest of the world. As compared to the United States and other developed economies, emerging and developing economies have a much higher rate of low-skilled workers that are more susceptible to automation. Oxford/Citi calculates that **"between 2002 and 2012, 33 legacy jobs were lost for every new digital job that was created."**

A 2017 [study](#) conducted by the Massachusetts Institute of Technology Media Lab measured the "expected job impact from automation" on U.S. 380 cities and towns. According to MIT, small cities and towns are more likely to lose jobs to larger urban centers that have an abundance of managerial and technical professions, which are less subject to automation from robotics and artificial intelligence. Large cities also harbor more innovative workers that use cutting-edge technologies.

In conclusion, the rapid advancement of Digital Age technologies is transforming America and the rest of the world at rates unfathomable during the Industrial and Agricultural Ages. Countries that respond rapidly to these transformation technologies will reap the economic bounty.

- **Income & Wages.** While wages increased somewhat since 2016, income inequality also increased. Wages are rising briskly for the top 28% who make much more than the other 72% of American wage earners who make below, usually well below, average earnings. Jobenomics foresees income inequality widening in 2018 with high-skilled workers reaping even better wages and lower-skilled workers losing ground.

Real Median Household Income by Race and Ethnicity: 1967 to 2016



The good news since 2014, according to the September 2017 U.S. Census Bureau's 2016 Income and Poverty [report](#), median U.S. household income rose by 8.5% in real terms, as shown. The most impressive percentage upturns happened in minority households. Asian Americas are more prosperous than other races and ethnicities with median household income of $81,431 compared to Whites at $65,041, Hispanics at $47,675 and Blacks at $39,490. The bad news is that the lines are not converging between races and ethnicities.

Several factors contribute to the sharp 8.5% household income rise in 2015 and 2016. Firstly, in 2014, the Census Bureau redesigned their income survey questions caused the gap circled on the chart. For the most part, the 5.2% income jump in 2015 was due to how the value of assets were calculated as opposed to a real income rise. Secondly, there is ample evidence that household members are now working more hours and supplementing their incomes with two jobs or part-time work to make ends meet.

Money metrics used by economists include earnings, income and household income. It is essential to use these metrics correctly when presenting a point of view or responding to a debate. According to the BLS, **Earnings** include wages or salaries, net income (gross receipts minus expenses) from pay, commissions, tips, and cash bonuses. **Income** includes earnings, interest payments, dividends, welfare payments, rental income, child support, alimony, tax rebates, inheritance, capital gains, and appreciation of assets. **Household income** is the sum of all people (related or otherwise) 15 years and older living in the household.

It is also important to differentiate mean earnings from median earnings. **Mean** earnings is the amount obtained by dividing total labor force earnings by the number of American workers. **Median** divides total earnings into two equal parts: one-half of the cases fall below the median and one-half of the cases exceed the median.

While median household incomes have improved somewhat since the Great Recession, median individual earnings remained stagnant—rising an average of 1.8% per year. Mean earnings rose 2.4% over the same timeframe. The reason that mean earnings (2.4% per year) rose faster over the decade than median earnings (1.8% per year) is primarily due to the explosive growth of wages at the high end of the wage scale.

2016 U.S. Labor Force Income Earnings

By Gender, Race, Ethnicity & New Workforce Entrants

Source: U.S. Census Bureau 2017 Annual Social and Economic Supplement, Jobenomics Analysis

U.S. Workers With Earnings		Above Mean Income <$60K	Population (Millions)	Below Mean Income <$60K	Population (Millions)	Total Population (Millions)
By Gender	Both Sexes	28%	45.8	72%	118.8	164.6
	Males	35%	30.1	65%	56.8	86.9
	Females	20%	15.7	80%	62.1	77.7
By Race & Ethnicity	Asian	39%	3.9	61%	6.1	10.0
	White Non-Hispanic	32%	33.5	68%	71.5	105.0
	Black Non-Hispanic	18%	3.6	82%	16.4	20.0
	Hispanic	15%	4.2	85%	23.1	27.3

To some degree, income inequality is color blind to all sexes, races and ethnic groups. According to the 2017 Census Bureau's Annual Social and Economic Supplement data, U.S. mean (average) earnings were $59,817 ($60K) for Americans who worked at full-time jobs in 2016. Out of a total of 164.4 million American workers 15-years old and over with earnings, 72% (118.8 million) earned below the mean. Regarding gender, 80% of American female wage earners made below average salaries compared to 65% of their male counterparts. By race and ethnicity, 85% of Hispanics made below average, followed Blacks at 82%, Whites at 68% and Asians at 61%.

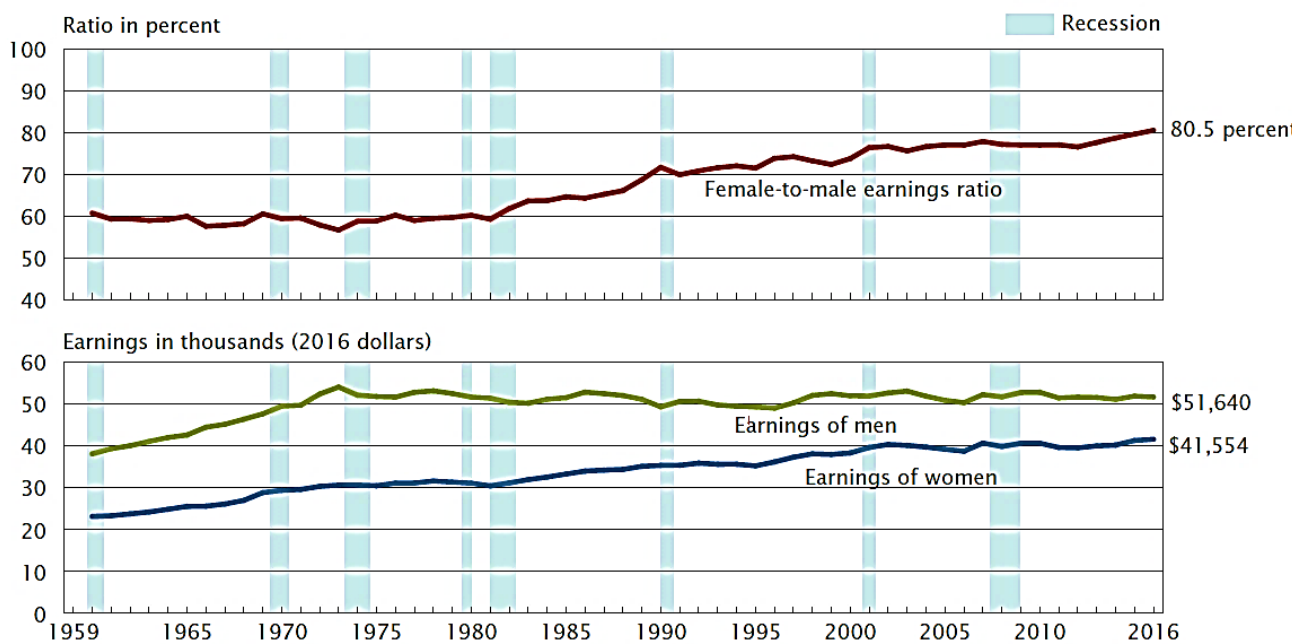
Without question, the gender pay gap will be highly-charged political and social issues in 2018. According to the Census Bureau, average earnings for men was $71,916 and women $53,372, a difference of $18,554. In other words, women make only 74.2% of their male counterparts.

PayScale, a leading U.S. online compensation information company, estimates that women earn 23.7% less or 76.3% for every dollar earned by men **across all jobs** in the United States. However, PayScale data also indicates that American women were paid only 2.4% less or 98 cents on every dollar, than men **in similar jobs**. In many instances, the difference between 76 and 98 cents on the dollar is because females pursue more lower-paying positions than men. Sadly, this consideration does not fit the narrative of gender pay gap activists.

While it is true that American men make more than women, the difference is narrowing. According to the U.S. Census Bureau's 2016 Income and Poverty report, women are closing the gap between the sexes over the last six decades.

Female-to-Male Earnings Ratio and Median Earnings of Full-Time, Year-Round Workers 15 Years and Older by Sex: 1960 to 2016

Source: U.S. Census Bureau, Income, and Poverty in the United States: 2016



As shown, since 1960, American females narrowed the female-to-male earnings ratio gap from 60% in 1960 to 80.5% in 2016 based on real median earnings of men ($51,640) and women

($41,554) who worked full-time 50 weeks or more. Equally noteworthy, Earnings of Men has not increased since the early 1970s, whereas Earnings of Women are up 70% since 1960.

Median versus Mean Earnings by Sex in 2016

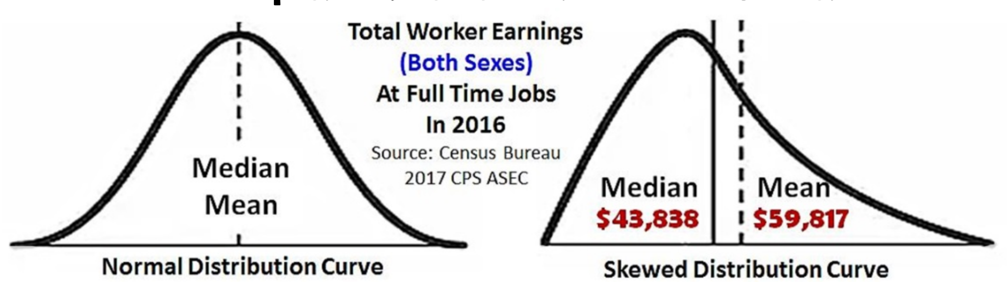
	Worked At Full Time Jobs				Worked At Part Time Jobs			
Median Earnings	Total	50 Weeks or More	27 to 49 Weeks	26 Weeks or Less	Total	50 Weeks or More	27 to 49 Weeks	26 Weeks or Less
Female	$39,157	**$41,554**	$29,346	$9,109	$10,869	$15,708	$10,473	$2,570
Male	$49,270	**$51,640**	$31,495	$10,239	$10,714	$15,711	$11,176	$3,268
Difference	-$10,113	**-$10,086**	-$2,149	-$1,130	$155	-$3	-$703	-$698
Earnings Ratio	79.5%	**80.5%**	93.2%	89.0%	101.4%	100.0%	93.7%	78.6%
Mean Earnings								
Female	$50,025	**$53,372**	$40,374	$16,144	$15,972	$21,757	$14,599	$4,911
Male	$67,270	**$71,916**	$46,860	$19,754	$19,410	$27,522	$19,516	$6,330
Difference	-$17,245	**-$18,544**	-$6,486	-$3,610	-$3,438	-$5,765	-$4,917	-$1,419
Earnings Ratio	74.4%	**74.2%**	86.2%	81.7%	82.3%	79.1%	74.8%	77.6%

Source: 2017 CPS ASEC Data for Year 2016

This chart shows in greater detail the differences between American males and females who received earnings in 2016. Except for Total Part-Time Jobs (highlighted in orange), women made less than their males counterparts in all categories shown. However, **median** (middle, highlighted in yellow) earnings of men ($51,640) and women ($41,554) were significantly less than the **mean** (average, highlighted in red) earnings of men ($71,916) and women ($53,372). Median earnings data for people who worked at yearly full-time jobs equated to 80.5% female-to-male earnings ratio, compared to a mean earnings ratio of 74.2%.

Median household income is the single most widely used measure of income by the Census Bureau. The Bureau prefers the use of medians as a central measure since they are less susceptible to being skewed by a small number of very high wage earners. Jobenomics prefers means over medians since top wage earner skews are essential to the gender pay gap debate. 74 cents on the dollar is a more poignant activist debate point than 81 cents on the dollar.

Examples of Skewed Distribution Curves

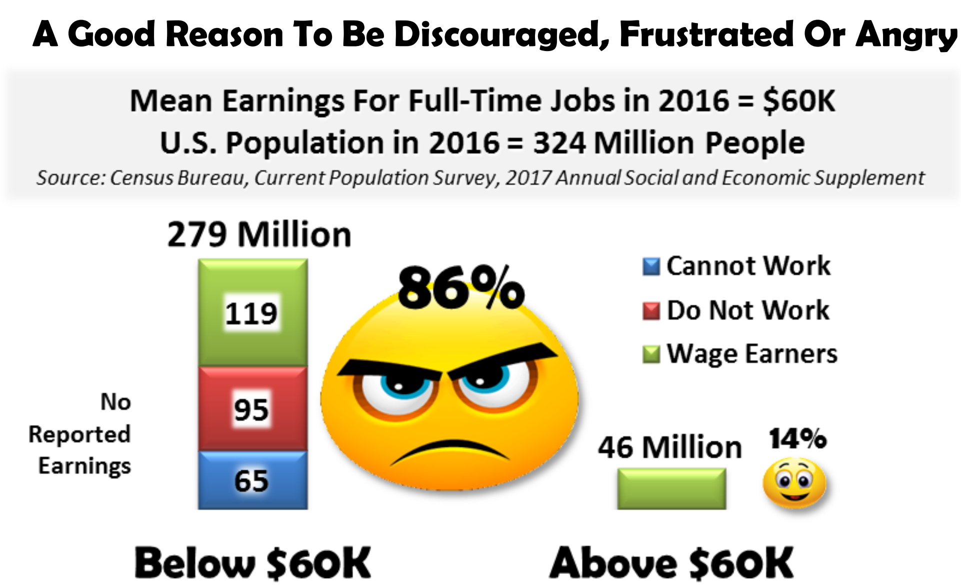


In a normal distribution curve, median and mean are the same. When the distribution curve is skewed to the left due to the preponderance of low wage earners, the median is lower than the mean. In 2016, the median income was much lower ($43,838) than mean income ($59,817), which shows the severity of skewing and why Jobenomics prefers to use the mean in comparing the gender and minority pay gaps. If economists want to show the effect of extraordinary high wages at uppermost parts of the pay scale (i.e., the Top 1%), then they should consider using the mean rather than the median.

In 2018, racial income inequality will remain an inflammatory front page issue. Rich white males are the demographic subject to the most scorn. The notion that white men make more money than non-whites is more of a red herring than factual. Percentage-wise, white men earn more than black and Hispanic men. The fact that Asian men are the most well-off financially escapes media coverage. Numbers-wise, white males are poorer than minority American males. According to Census Bureau Supplement data, there are 58,210,000 white males who earn less than mean income compared to 35,770,000 minority males (18,045,000 Hispanic males, 12,957,000 black males, and 4,768,000 Asian males).

Even though the subject of white male poverty is politically incorrect in today's America, angry white male issues need much more attention in 2018. Having 58 million financially distressed, frustrated and well-armed white men is a potential powder keg. If a small percentage of 13 million angry black men can disrupt the social and economic order in St. Louis and Baltimore by their violent protests, one can only imagine the disruption caused by unhappy whites who outnumber their black counterparts by a factor of almost 4.5 to 1. The United States is already experiencing an upturn in white male militancy and vigilantism (as evidenced by the rise of white supremacy movements). White nationalism is likely to increase as America transitions from a white-majority to a minority-majority nation.

2011 marked the first year in U.S. history that minority births exceeded white births. In 2015, over 50% of all U.S. children aged five years old were minorities. By 2020, more than 50% of all U.S. children are expected to be part of a minority race or ethnic group. By 2044, America will be a minority-majority nation. California, Texas, New Mexico and Hawaii are already minority-majority states—not counting the upsurge in the multiracial population.



In addition to people that took a wage, the Census Bureau reports that 94.6 million citizens who were capable of working but did not work (the BLS Not-in-Labor-Force category) reported no ($0) earnings. The Census Bureau also records population figures. In 2016, the total U.S. population was 324 million people, which leaves 65 million other Americans (children, disabled, stay at home spouses, etc.) who cannot work and thus have no earnings. Consequently, out of the total population, 86% of all Americans make below the average wage. No wonder why a high percentage of the American populace is discouraged, frustrated or angry with the well-to-do.

In conclusion, the inequities discussed above will provide ample ammunition for sloganeering and activism by marginalized citizens, social justice warriors, and the opposition party in the run-up to the 2018 midterm elections. As a consequence, hot-button gender and racial issues will divert America's attention from growing the U.S. economy to dealing with troublesome social problems. Today's diversity movement needs to be more inclusive and unifying as opposed to polarizing. Closing gender and racial pay gaps will help minimize today's political divide.

For a detailed discussion and data on income inequality, see the U.S. Income, Wage and Earnings section of the Jobenomics Comprehensive U.S. Labor Force & Unemployment Report.

- **Civil Unrest.** The 20th Century was an era of institution-building. The 21st Century portends to be one of anti-institutionalism. Striking a proper balance will help insure continued economic growth. Left unchecked, civil unrest, civil disobedience, and violence are likely to ensue.

  As implied by the earlier Good Reason to Be Discouraged, Frustrated and Angry chart, the American dream is more of an American fantasy than an achievable goal for many at the base of the U.S. socioeconomic pyramid. After a brief respite during the Great Recession of 2007-2009, income inequality and public restiveness are growing again in America.

  Economic (income and wealth) inequality provides the fuel for schisms, civil unrest, and violence. From a Jobenomics perspective, America's political, economic and social divide, coupled with weak governance, could lead to an era of vigilantism by extremists who have an ax to grind. August 2017's riots in Charlottesville could be a precursor to more severe events in 2018.

  2017 has given rise to a new and more virulent social justice movement enforced by "social justice warriors." These warriors have deep-seated convictions on a wide range of polarizing issues including identity politics, multiculturalism, nationalism, feminism, and environment. Social justice warriors thrive in divisiveness, promulgate solutions based on their narrowly-defined self-interests, and portray themselves as oppressed victims in an unjust society. To those who ascribe to a supreme moral purpose, their ambitions are inviolate. Desecration of their symbols or icons is a call to arms for the movement's social justice warriors.

  Civil unrest in America can manifest itself in many forms from protests to activism to militancy to violence. 2016 and 2017 had half as many violent demonstrations and riots as the entire 16-year period from 2000 through 2015. 2018 is likely to experience the same level of civil unrest and perhaps worse if the political divide does not narrow. Washington sets the tone for America. If our elected officials cannot be civil, how can the country be civil? Economic prosperity does not flourish in societies that are uncivilized.

Political activism is turning more militant as indicated by far-left Antifa militants (so-called anti-fascist groups focused on engaging and harming right-wing conservatives) and far-right White Supremacists and neo-Nazi militants. This militancy is also focusing on lower level government officials, such as the new FCC Chairman. After making the unpopular decision to repeal net neutrality, Chairman Pai receive a barrage of death threats, and his children were harassed at their home by protestors with signs bearing the children's names. If these trends continue in 2018, America will become even more ungovernable.

- **Natural Disasters.** Economists should not underestimate the economic impact of natural disasters in 2018. According to NOAA, 2017 was the worst year on record in American history with sixteen $1+billion-level disasters that caused over $300 billion worth of infrastructure damage and lost production. 2017's natural disaster roster was impressive with three destructive hurricanes, three massive tornado outbreaks, three severe weather events, two crippling hail storms, two substantial floods, two huge wildfires fires, and a damaging drought.

  From a Jobenomics standpoint, NOAA's economic impact estimate is low since the economic impact of Hurricanes Harvey, Irma, and Maria alone reached $300 billion of property damage, lost output, insurance claims and federal aid. Puerto Rico's governor says it will cost $95 billion to rebuild his tiny island territory from the devastation caused by Hurricane Maria.

  From a forecasting perspective, Jobenomics postulates that 2018 will either be equal to or better than 2017—the worst year in history. Climate change advocates would be more pessimistic. Seismophobics (fear of earthquake phobia sufferers) might be more despondent. California has not experienced a major earthquake (magnitude 7.0 to 7.9 on the Richter scale) over 7.0 since 1999, and a great earthquake (8.0+) since the 1700 Cascadia earthquake that caused a tsunami massive enough to smack Japan.

International Disruptors

Strategic Considerations *Weighted Projections*		Get Much Better	Get Better	Stay the Same	Get Worse	Get Much Worse
International Disruptors	**Economic Competition**			•	•	
	Conflicts/Wars/Cyber Attacks			•	•	•
	Extremism/Terrorism			•	•	
	Black Swans				•	•

The U.S. economy is subject to international competition and disruption. While these factors are often hard to calculate, they are essential considerations in forecasting. Regarding the potential for global disruption, the Jobenomics 2018 U.S. Economy Outlook ranges from maintaining the status quo to spiraling out of control given the volatility in world and spiritual affairs. 2017 was a vexing year, and 2018 may be equally or more distressing.

The world appears to be on a collision course in many realms. The four elements within the global balance-of-power (political, economic, military, social/religious) are all in a state of flux not experienced in modern history. As a result, an expansive group of movie producers, investigative journalists, strategic planners, wargamers, conspiracists, religionists, and eschatologists now have the grist for prognostications that are potentially apocalyptic in proportion.

As reported by BloombergPolitics, business and world leaders gathered at the 2018 World Economic Forum in Davos in January 2018 predict increasing global disruption. While the current global economic situation has improved, 90% of the Davos elite expect political and trade clashes. 80% foresee increased conflict and war. Moreover, the "deteriorating geopolitical landscape" is growing the threat of large-scale cyber attacks. In response to devastating massive cyber attacks, the U.S. Pentagon is considering a strategy of nuclear retaliation, as reported by the New York Times. While these reports tend to be apocalyptic, 2018 portends to be a turbulent year. Turbulence leads to uncertainty. Uncertainty dampens economic growth.

- **Economic Supremacy.** As opposed to military might, economic power has become the weapon of choice as evidenced by China's quest for supremacy in the emerging digital economy that is projected to be the size of the traditional economy within a decade or two.

  In 2017, China introduced a new five-year economic plan. 2018 will be the year of the plan's execution. According to an analysis of China's five-year plan by The U.S.-China Economic and Security Review Commission, a congressional commission of the U.S. government, the Chinese program seeks "to create new Chinese competitors that will be able to challenge U.S. companies abroad while slowly closing market opportunities in China for U.S. and other foreign firms." While U.S. government concentrates on recapturing its lost manufacturing capability, China focuses on dominating next-gen technologies and the emerging digital economy.

  Per Jobenomics' special report on China, entitled China's Digital Economy Quest, China represents the most significant U.S. near-peer competitor for global dominance in the emerging digital economy. China's digital economy quest has two primary goals. The primary goal is to develop millions of e-commerce micro-businesses to elevate hundreds of millions of rural poor from poverty. The second less-altruistic goal is global economic hegemony in the digital domain. China's transition from a physical (mainly manufacturing) economy to a digital economy is both rapid and impressive. Moreover, Jobenomics contends that **China's unified digital economy vision and public-private partnership is more mature and competitive than America's business-as-usual approach.**

Today, there are more than 750 million netizens in China—greater than twice the size of the United States total population. From a digital economy standpoint, China is more advanced than the United States in e-commerce, mobile commerce, social media, online payments, and fintech (financial technology), according to data from Nielsen, a preeminent global measurement and data analytics company, the World Economic Forum, and other distinguished organizations.

E-commerce is the growth engine for the Chinese economy with 47% of Chinese consumers shifting expenditures from offline to online. China is the world leader in mobile-commerce. 96% of all Chinese netizens are habitual smartphone users of the internet. The same is true for social media usage. 902 million daily users log into WeChat (multi-purpose social media mobile application with more applications and worth more than Facebook) to communicate, play games, pay bills, order goods and services, transfer money, make video calls, order food, read the news, and book appointments. Almost half of the Chinese netizens rely on mobile wallets to make online payments compared to U.S. consumers that are still wedded to credit cards. Fintech is an emerging service sector where China truly excels in banking, transacting business, conducting trade, capital markets, and cryptocurrency.

According to The Wall Street Journal, "the future of banking is in China." Jobenomics not only agrees but anticipates that the degree of digital disruption caused by the Chinese could easily redefine the way the world does business. 2018 will be a landmark year to see if the world also agrees and commences an economic pivot away from the United States towards China.

China's expansive One Belt One Road trade and diplomatic initiative is one of many Chinese initiatives designed to facilitate Eurasian connectivity and cooperation with China. In contrast, the United States is withdrawing from multilateral trade relationships in favor of bilateral agreements. Which strategy will win is in question.

For the Chinese to prosper economically, they have to attract more consumers. To maintain economic prosperity, the United States must mitigate trade deficits that drained U.S. coffers for decades. One thing is for sure. Both China and the United States will make it harder for nations to sit on the fence—the economic equivalent of "if you are not for me, then you are against me."

The Center for Global Enterprise calculates that China and the United States dominate the digital economy with 64 and 63 major platform companies respectfully. Platform companies leverage their networks to mobilize their billions of users. American and Chinese platform companies have user bases on par with the populations of the world's largest countries. Due to their global reach and access to 3.4 billion active global internet users, major platform companies are now more powerful and formidable than the most prominent industrial and manufacturing conglomerates.

U.S. platform companies are foundational regarding innovation and transformation. U.S. foundational platform companies created the innovative and disruptive digital platforms on top of which other firms develop complementary technologies, systems, processes, and services. To a large extent, China's platform companies are built on U.S. platforms. Unlike their U.S. counterparts, China's platform companies are applying NTR-related technology, systems, processes, and services within a government-backed strategic framework to mass-produce small businesses and jobs to raise 700 million Chinese rural poor out of poverty.

America is blessed to be the home of platform giants like Apple, Facebook, Google, Amazon, Microsoft, and eBay. While U.S. platform giants are making technological advancements in communication, media and entertainment, China and other foreign countries in Asia and Europe are using U.S. technology to develop their labor forces and economies to a much higher degree than in the United States. As corporate citizens, U.S. platform companies need to assume a much more significant role in developing U.S. companies to compete and prosper in the emerging global digital economy.

With the proper focus and leadership from Washington and corporate America, a national digital economy initiative could create millions of new small business and tens of millions of jobs. Left unattended, unstructured and unplanned, digital enterprises and jobs will flow to foreign entities. Over the last three decades, the United States allowed the erosion of its manufacturing base and outsourced jobs overseas. We must ensure that this folly does not happen in upcoming decades.

- **Conflicts/Wars/Cyber Attacks/Extremism/Terrorism.** The list of international wars, conflicts, cyber intrusions, and terrorist attacks are well known to anyone who watches the news. The preeminent question is whether or not this malevolence will cause a major financial downturn or crisis in the United States in 2018? From a Jobenomics standpoint, the answer is most likely yes.

  The United States traditionally experiences three financial crises per decade, half of which turn into recessions. So far this decade, foreign economic crises in the Eurozone, Venezuela, Russia, Ukraine, and Brazil were not contagious. Foreign wars and conflicts also had a relatively little negative impact on the overall U.S. economy. Consequently, the U.S. economy experienced 87-consecutive months of labor force expansion in a slow-growing economy.

  For the most of this decade, U.S. foreign policy was one of strategic patience and minimalist intervention that enabled the U.S. economy to prosper in a relative vacuum. Unfortunately, passivity emboldened U.S. adversaries. China constructed island bases in the Pacific, Russia annexed Crimea, the Shia Crescent is spreading, Syria is in ruins, Iran and North Korea are building nukes, and terrorists are becoming much more sophisticated.

  With the election of President Trump, the era of strategic patience ended and a new period of strategic engagement has started. While President Obama retreated from the only red-line he drew, President Trump paints numerous red lines, most notably with North Korea, Iran, ISIS—the most murderous countries on the planet. By doing so, he has put the rest of the world on notice. Whether the world agrees with President Trump's bold approach to in-your-face diplomacy, the die is cast. The next move is with our adversaries.

Most military planners anticipate that the next move will entail some form of asymmetrical warfare since engaging U.S. armed forces in conventional combat is a losing proposition.

Today, terrorism is the most malevolent form of asymmetrical warfare. While terrorist attacks have been psychologically devastating, the number of fatalities and economic impact has been rather low in America. According to CATO Institute, a Washington-based think tank, only 3,432 Americans were killed by terrorists over the last 30-years. While every life is precious, this number pales in significance to our national murder rate. In 2016, an estimated 17,250 cases of murder and non-negligent manslaughter occurred nationwide as calculated by Statista.

Tomorrow, perhaps as early as 2018, the most malevolent form of asymmetrical warfare is likely to be cyberwar or its close cousin, EMP (electromagnetic pulse). Cyber espionage, cyber intrusion, and cyber attacks are increasingly disruptive but relatively non-lethal. However, this could soon change if deployed on a massive scale to take down the U.S. power grid or critical infrastructure. Cyberwarfare tampers or destroys data. EMP fries circuits that carry data. The world's arch-terrorist, Kim Jong-un, already possesses cyber and EMP weapons of mass destruction.

In May 2017, a North Korean WannaCry ransomware attack crippled more than 230,000 computers in America and across the world. While WannaCry's damage was limited to billions of dollars, this type of attack could be a precursor for a very destructive cyberwar. Cyberwars consist of multiple attacks against critical infrastructure and populated soft-targets, such as chemical plants, pipelines, rail systems, dams, bio labs, and major public venues. Kim Jong-un's so-called "nuclear button" could trigger a stealt cyberwar as a prelude to a potential nuclear attack if needed.

As trumpeted by Kim on 19 April 2017, he is ready to reduce American military forces in South Korea and the U.S. mainland "**to ashes**" by a "**super-mighty preemptive strike**." A Super-EMP weapon is a likely method of reducing the American mainland to ashes, according to the United States EMP Commission, a commission created by the United States Congress in 2001. The Commission's 2017 Report states that "a Super-EMP weapon could be relatively small and lightweight." A North Korean long-range missile is capable of carrying a crude lightweight Super-EMP weapon. Even more worrisome, Super-EMP weapons can be launched or airlifted from freighters, submarines (North Korea has a fleet of about 70 warships), a balloon or satellite.

Quoting the EMP Commission, "A balloon-lofted warhead detonated at 30 kilometers altitude could blackout the Eastern Electric Power Grid that supports most of the population and generates 75 percent of U.S. electricity." On 8 February 2016, the North Koreans launched their first of many satellites, many of which are now orbiting over the continental United States. Again quoting the 2017 EMP Commission report, "**an EMP attack might be made by a North Korean satellite, right now.**" A North Korean Super-EMP satellite attack would cause a biblical-level of carnage. A national blackout would likely last many months, shutting down vital communication and transportation systems. Few Americans would survive (or would want to survive) in the primitive and subsistence conditions inflicted by a "super-mighty preemptive strike."

In addition to North Korea, Russia, China and Iran also possess similar or more advanced dastardly asymmetrical weapons.

On 25 January 2018, 70 scientists from the U.S.-based Bulletin of the Atomic Scientists moved the "Doomsday Clock" closer to midnight by 30 seconds in a statement that the world is now closer to the point of annihilation than at the height of the Cold War in 1953. It is now two minutes to midnight. 2018 portends to be a frightening year.

Black Swans. A black swan is an event that comes as a surprise and has an impact that is recognized mainly after the fact. While impossible to foretell, Jobenomics speculates that a Black Swan could arrive anytime soon given the state of world affairs.

In military parlance, Black Swans are unknown-unknowns (unk-unks). Unk-unks have been a part of the U.S. wargaming community since the early 1980s. Unk-unks acknowledge possibilities not conceived at a given point in time. The 9/11 Trade Tower attack was an unk-unk. The Eyjafjallajökull Icelandic volcano was an unk-unk that cost the airline industry three years of profits. The BP oil spill is another unk-unk. The 2008 sub-prime mortgage crisis that nearly brought the U.S. financial system to the brink of collapse also serves as an excellent example of a Black Swan unk-unk.

It is not unusual for lives of individuals, as well as the future of nations, to pivot on an unanticipated or unintended Black Swan event. Response guides for Black Swans cannot be written but only nervously anticipated. According to an ancient proverb, the veil that shields us from the future is mercifully woven by angels. Sadly, there is no shield from Black Swans that can turn our economy and livelihoods upside down.

Black Swans can be a curse for some and a blessing for others. World War II destroyed the economies of Europe and Asia, leaving the United States a global superpower possessing over half of the world's GDP. According to World Bank data, by 1960, U.S. percent of world GDP decreased to 39% ($0.5T versus $1.4T). U.S. to world GDP has now slipped to 25% ($18.6T versus $75.9T, 2016 data). While U.S. GDP maintains a significant lead over other nations, China is now the new global leader regarding GDP Purchasing Power Parity ($19.6T China versus $17.2T United States in 2011 baseline dollars).

While the U.S. economy is still the world's most influential, it is not as dominant as it used to be. In addition to decreasing GDP and purchasing power, U.S. economic power eroded due to its high level of indebtedness. Over the last three decades, the United States evolved from the world's largest creditor nation to the world's biggest debtor nation. The combined effect of declining U.S.-world GDP ratio and increasing debt gives other countries a much louder voice in world affairs. New players on the global stage will be a welcome change, assuming these players are not plotting ways to destroy the United States.

Individuals and institutions that support globalization assert that shared global governance will promote global prosperity. Jobenomics believes that this worldview is only partly correct. Shared responsibility is fine as long as all involved are concerned about the common good.

America must be wary to avoid being upended by malevolent forces. America's domestic U.S. political, cultural and racial divide makes our nation even more vulnerable to malicious intent. Our divided nation encourages pro-active actions from both internal and external actors who are opposed to the United States, the American way of life, and America's long-standing economic and cultural influence.

A global Black Swan could precipitate a reset in the global balance of power. A global reset could spawn regional Black Swans that would invoke an about-face in U.S economic and cultural hegemony that has existed over the last half-century.

By definition, there is no way to prevent a Black Swan. However, the United States can mitigate the impact of a moderate Black Swan event by strengthening our economy and unifying our people.

About Jobenomics: *Jobenomics deals with the economics of business and job creation. The non-partisan Jobenomics National Grassroots Movement's goal is to facilitate an environment that will create 20 million net new middle-class U.S. jobs within a decade. The Movement has a following of an estimated 20 million people. The Jobenomics website contains numerous books and material on how to mass-produce small business and jobs as well as valuable content on economic and industry trends. For more information see https://jobenomicsblog.com/.*