Trending in 2016: The Inequality of Growth

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Introduction

This past year has marked continued growth in demographic and economic indicators. The pace of population growth has increased slightly to an average of 0.8 percent since 2010. Change in the housing inventory has also accelerated, adding 1.4 million units last year. Employment increased by 3.6 million from 2015 to 2016. In the past year, median household income increased by 1.8 percent, while average household income increased by 3.1 percent.

These measures depict growth that is relatively steady but sedate. However, summary statistics, like national and annualized averages, minimize the variation in local trends and smooth the volatility evident in more timely data, by month or quarter. Perspective and complementary data clarify the growth in demographic and economic indicators:

Table 1. Trend Highlights

Trending	Caveats
Pace of population growth is increasing slightly to 0.8 percent since 2010.	Household growth rates are lagging population, reversing a trend that dates back to 1900.
Housing inventory is up by 6.2 million units since 2010 (996,000 annual average).	The last time average increases were less than a million units yearly was 1940–1950.
Employment increased by 12.2 million from 2010 to 2016.[1]	Labor force participation rates remain low at 62.3 percent.
Unemployment dropped to 5.9 percent, down from 6.4 percent in 2015.	The U-6 rate, a more inclusive measure of total unemployment, rose to 10.1 percent in July.[2]
Median household income increased by 8.2 percent from 2010 to 2016.	From 2010 to 2016, real change, adjusted for inflation, was negative at -2.1 percent.
Real gross domestic product (GDP) increased by 2.6 percent in 2015.	In 2016, GDP increased by 0.8 percent in the first quarter and 1.2 percent in the second quarter, thanks to consumer spending.

[1] Estimates of change since 2010 that include sample data, like employment and household income, refer to data from the 2010 American Community Survey, US Census Bureau.

[2] Esri's unemployment estimate shows the unemployed as a percent of the civilian labor force (not seasonally adjusted). The U-6 rate from the Bureau of Labor Statistics includes underemployed and workers that have dropped out of the labor force.

Trending	Caveats
Retail sales increased by 2.4 percent in June 2016, compared to June 2015.[3]	Consumer confidence slipped in July to 90, down from 93.1 in July 2015.[4]
Financial markets are still setting records—the DJIA recently hit a high of 18,500.	From a low of 15,660 in February 2016, markets remain extremely volatile.
Inflation remains low, primarily due to the drop in oil prices.	Inflation remains below the 2 percent level that the Fed deems healthy growth.

The Inequality of Growth

The measured pace of growth in the United States is both restrained and restricted. Slower change is to be expected from a mature population like the United States. The median age is now 38 years. Nine states have a median age over 40 years. There has been a slight increase in growth rates since the last census, especially among metropolitan areas, but annual population change today is only 87 percent of that change during the last decade, 2000–2010.[5]

Metropolitan areas are still driving US population growth, but that increase has also dropped from 2.6 to 2.2 million annually—the same slow pace as the US average of 0.8 percent. Even the 10 fastest-growing metro areas are increasing at a slower rate, dropping from an average of 3.7 percent from 2000 to 2010 to 2.6 percent since 2010.

Growth is not only slower, it's more localized. Five percent of the metropolitan areas account for 50 percent of the growth in metro population. From 2010 to 2016, less than half (44 percent) of the metro areas are posting growth rates higher than the US average. The impact of growth among metropolitan areas is waning along with the growth rates.

Micropolitan areas are not faring much better. Only 20 percent of the micropolitan areas have a growth rate higher than the US average. Nonmetropolitan counties are the exception to slowing growth, but the increase in average annual rates of change from 0.1 percent in 2000–2010 to 0.3 percent in 2010–2016 is negligible. A third of nonmetropolitan counties have experienced population loss since 2010.

Household growth is decelerating faster than population growth—reversing a trend that dates back to 1900 (at least).[6] The reason is simple: Households have been getting larger. The long-term decline in average household size was a result of fewer children and more single households. The economic impact of the Great Recession reversed that trend for many areas. The average number of people living in a household has increased to 2.59, which is the same as the average household size in 2000.

Growth in the housing inventory has been checked by economic and demographic trends. Annual change in housing units is only 63 percent of the yearly average during the last decade, 2000–2010. Residential construction has been slow to recover from the blunt force trauma affected by the Great

[3] US Census Bureau, CB16-119, https://www.census.gov/retail/marts/www/marts_current.pdf
[4] Consumer Confidence Index reported by the University of Michigan, http://www.sca.isr.umich.edu/
[5] The metropolitan/micropolitan areas in this paper reflect current definitions, which were updated in July 2015 by the Office of Management and Budget.
[6] Change in the nineteenth century was not included in this analysis.

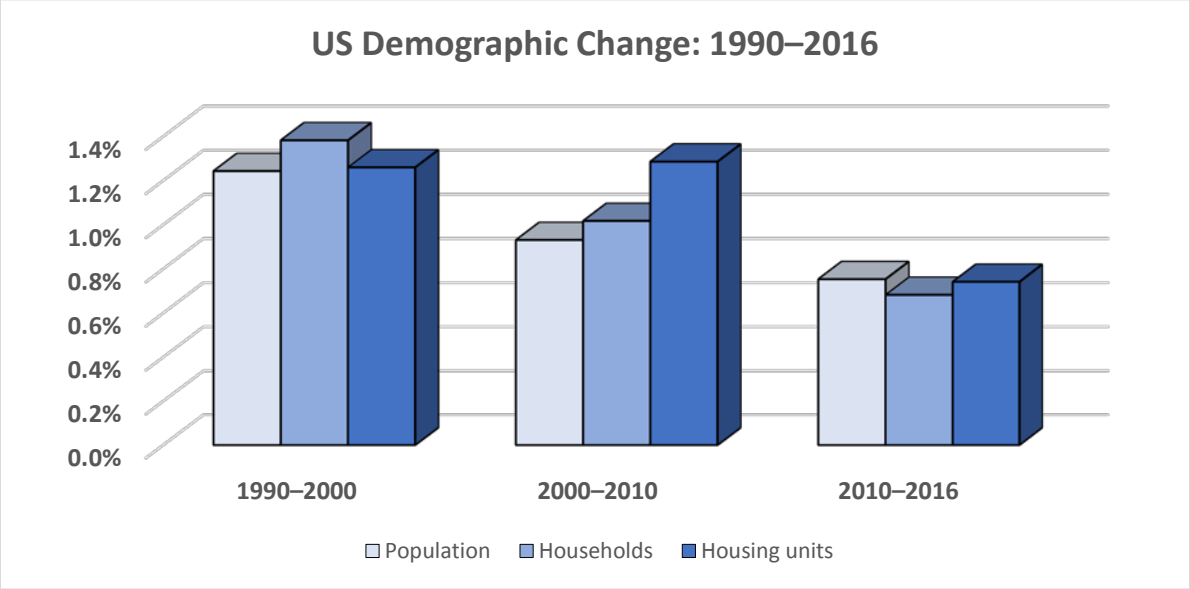
Recession, adding fewer than a million units, on average, since 2010. The last time average increases were less than a million units yearly was 1940–1950.

Demand for new housing has also shifted from single family homes to apartments. Tighter credit, increased debt, and slower rates of household formation among Millennials are sustaining the drop in home ownership and increasing demand for rentals. Following this trend, building permits for apartments have increased from about 20 percent of all permits to 38 percent of the permits in 2015.[7]

Like population, housing growth is slower now and more localized. Less than 10 percent of the metropolitan areas account for 50 percent of the growth in the US housing inventory. Most of the growth is in the largest metro areas or among the counties that were stimulated by the oil boom, primarily micropolitan and nonmetropolitan. Less than half of the metropolitan areas have a housing growth rate higher than the US average, 0.7 percent, from 2010 to 2016. Less than a quarter of micropolitan areas and nonmetropolitan counties are outperforming the US growth rates.

Demographic change is the likely outcome of past trends in fertility. Accounting for rates of mortality and immigration yields a staid national trend—an older population and slower growth.

Chart 1. Recent Change in Population, Households, and Housing Units



Economic change lacks the predictability of demographic trends. Its effects are evident in national trends like the unexpected weakening of household growth or home ownership—and in the localization of growth in population and employment. Unlike population, employment change increased after 2010. Recovery from the Great Recession has added 12.2 million jobs to the economy since 2010, compared to a net change of almost 9.3 million jobs from 2000 to 2010. Localization of employment growth is evident in both decades, but it's become more pronounced in the postrecession recovery:

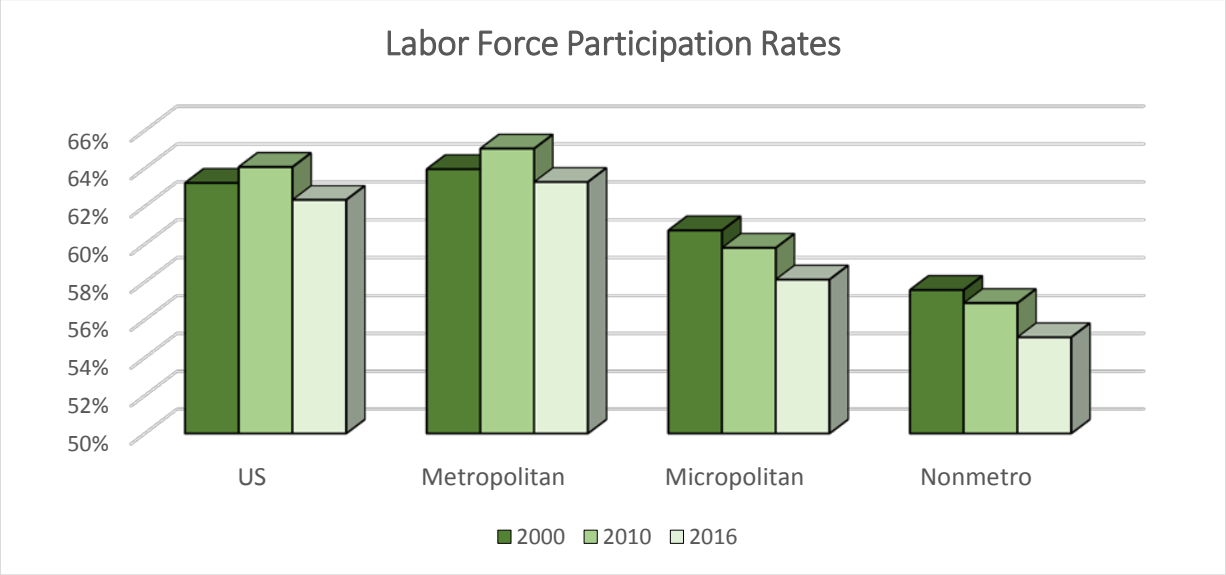
- Half of the net gain in employment from 2010 to 2016 was provided by 26 metropolitan areas. (Half of these large metros still have unemployment rates above the national average, 5.9 percent; one in four still has a labor force participation rate below the national average, 62.3 percent.)

[7] US Census Bureau, new residential construction time series: http://www.census.gov/construction/nrc/index.html

- Most micropolitan counties have reversed the net loss of jobs sustained from 2000 to 2010; however, their share of total employment is still decreasing in 2016. More than 10 percent are still losing jobs. Half of the micropolitan areas have unemployment rates larger than the national average.
- Employment prospects among nonmetropolitan counties also improved from a net loss of 1.9 percent from 2000 to 2010 to a gain of 4.7 percent since 2010. But 30 percent of the nonmetropolitan counties are still losing jobs, and the nonmetropolitan counties' share of total employment continues to decline.

The net effect of job growth and loss from 2000 through 2016 is a 2016 unemployment rate of 5.9 percent, which is a real improvement over the 10.7 percent rate in 2010, but it's not quite as low as the civilian unemployment rate in 2000 of 5.4 percent. Labor force participation rates have not returned to 2000 levels. The labor force increased in strength among metropolitan areas in 2010, but those gains have dissipated.

Chart 2. Labor Force Participation by Metropolitan Status



Some of the loss in civilian labor force is due to omissions in the official unemployment estimates—workers that have dropped out of the labor force. The official estimate of unemployment is 5.9 percent. The more comprehensive estimate of unemployment, the U-6 rate, is 10.1 percent. Labor force losses also reflect the gradual retirement of baby boomer workers, now aged 52 to 70 years, who have not been replaced in the workforce.

The localization of economic growth is not limited to jobs. Business startups are showing a similar pattern of change. A recent study of business startups found that 20 large counties accounted for half of all new businesses from 2010 through 2014 compared to 125 counties from 2000 through 2010. Almost 60 percent of the counties experienced a net loss of businesses in 2010–2014.[8]

Economic growth, like demographic growth, is more selective, slower, and insufficient for the majority of metropolitan, micropolitan, and nonmetropolitan areas. The largest metropolitan areas contribute

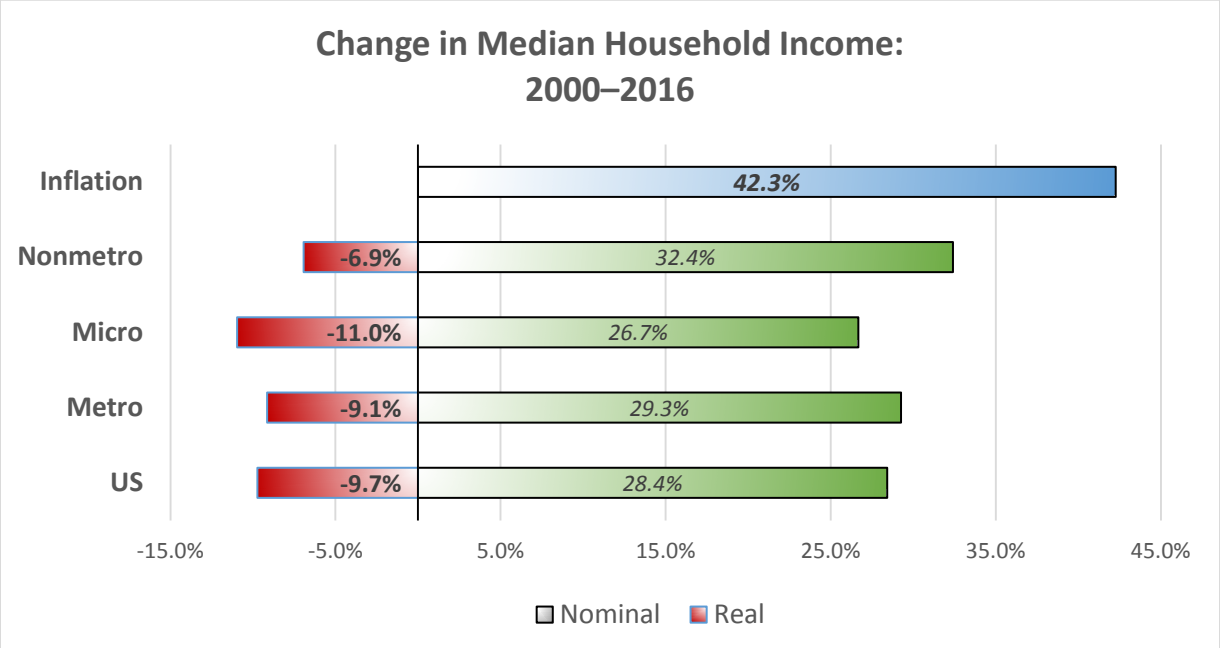
[8] Economic Innovation Group, "The New Map of Economic Growth and Recovery," May 2016.

most of the net gain in US population and employment. There are pockets of population growth among smaller metropolitan areas like The Villages in Florida, which attracts retirement migration, or Hilton Head in South Carolina, which attracts seasonal populations. There are also a number of employment centers spurring growth in smaller metros in Utah and Colorado, for example. However, employment in about 40 percent of the metropolitan areas and 30 percent of the micropolitan areas is either increasing very slowly (less than the national average)—or decreasing. The geography of growth is uneven.

Postrecession recovery has not balanced the distribution of income either. Since 2000, the more affluent households are the real beneficiaries of growth in household income. However, a straight comparison of the reported income distributions in 2000 and 2016 can be misleading: The income intervals are static, <$15,000, $15,000 to $24,999, etc., but the value of the dollar changed from 2000 to 2016. An income of $20,000 in 2000 would be $28,453 in 2016 dollars—adjusting for inflation.[9]

Median household income appears to be improving in 2016. In current dollars, the US median household income is $54,100 in 2016. Adjusting for inflation (constant dollars), 2016 median household income is really 2.1 percent lower than in 2010. Change in household income has not kept pace with inflation since 2000, although the average rate of inflation has been 2.2 percent over the past 16 years.

Chart 3. Nominal vs. Real Growth in Median Household Income



Median household income simply depicts the midpoint of an income distribution. An easier way to compare income distributions in 2000 and 2016 is to employ quintiles, which divide the income distribution into five equal parts. Each quintile includes one-fifth or 20 percent of the total households. Changes in the distribution of income are clarified by comparing the aggregate income earned by each quintile, as shown in table 2.

[9] Note: The income reported for any given year actually represents total income from the previous year. Inflation adjustments here reflect the change from 1999 (reported in 2000) to 2015 (reported in 2016).

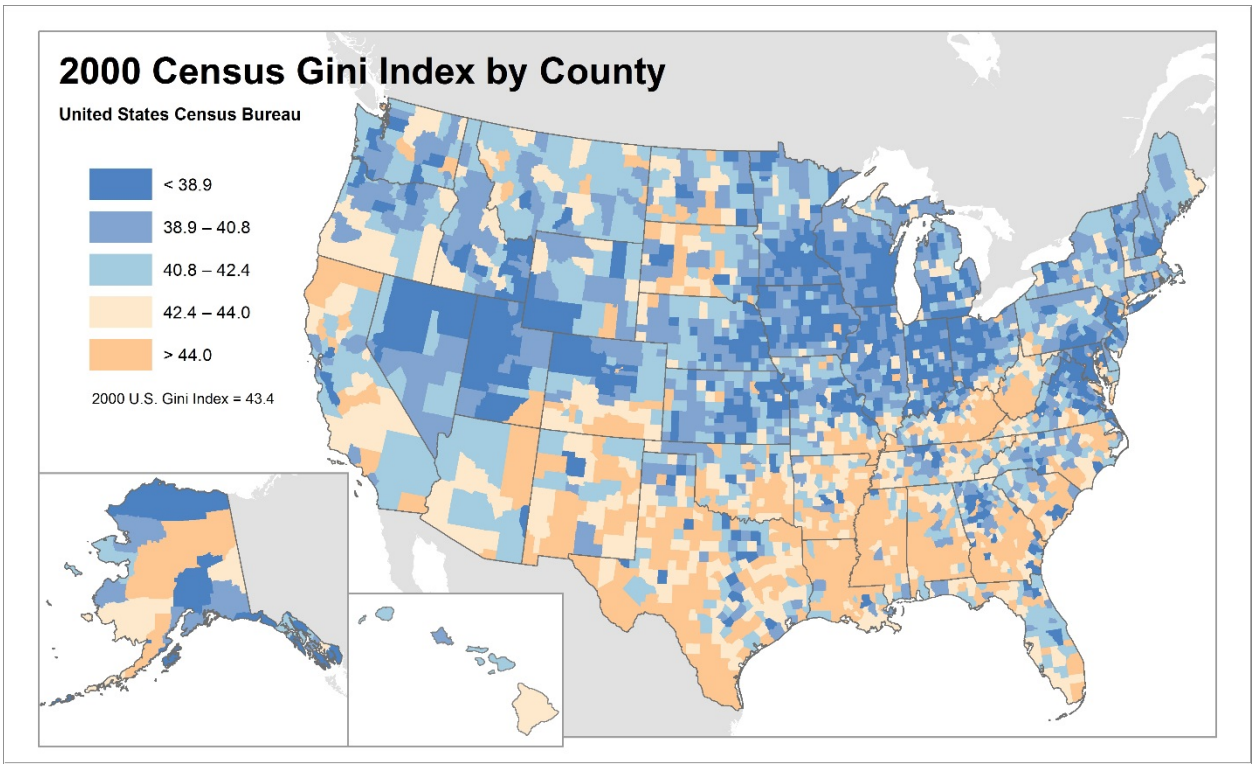
Table 2. Shares of Aggregate Household Income by Quintile

Quintiles: Household Income	Percent of Aggregate Household Income	
	2000	2016
Quintile 1: Bottom 20% of HHs	3.5%	3.2%
Quintile 2: Lower middle	8.9%	8.6%
Quintile 3: Middle 20% of HHs	15.0%	14.7%
Quintile 4: Upper middle	22.6%	23.5%
Quintile 5: Top 20% of HHs	50.0%	50.0%

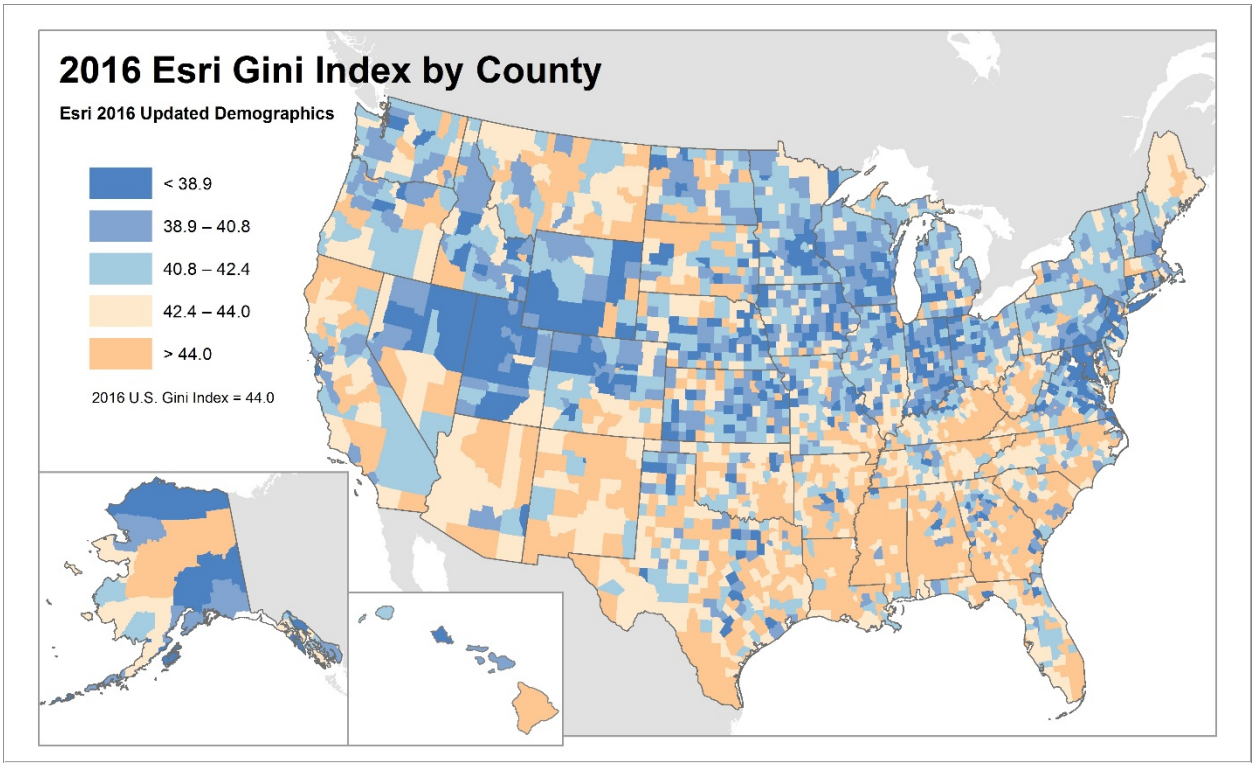
In 2000 and 2016, the top 20 percent (quintile 5) still controls half of aggregate household income. Changes in the shares of household income by quintile clearly benefit the upper middle class households in quintile 4. In the bottom 20 percent of households, the share of income has dropped from 3.5 percent to 3.2 percent. A difference of 0.3 percentage points appears minor, but it translates to a loss of more than $29 billion dollars in income for the households with the lowest income. Middle class households (quintile 3) lost $31 billion when their share of aggregate household income decreased to 14.7 percent.

The distribution of household income was hardly equitable in 2000, but the inequality is growing. The best way to see the disparity in the distribution of income is a summary measure known as the Gini ratio or Gini index. Like the quintiles shown in table 2, the Gini ratio compares the percent of household income earned by a select percent of all households. An index of 0 indicates perfect equality; all households have an equal share of income. An index of 100 represents perfect inequality; one household has all the income. The maps display the Gini index by county in 2000 (map 1) and 2016 (map 2). In these maps, the blue shades represent lower Gini indexes—more equitable income distributions. Orange shades reveal greater imbalances in income by county.

Map 1. Gini Index: Income Inequality in 2000



Map 2. Gini Index: Income Inequality in 2016



Outlook

If it was difficult to decipher the direction of the economy in 2015, the events of the past year have not clarified economic change.[10] The financial markets have been swinging wildly most of the year, showing abrupt drops and record highs. Some of the changes are prompted by global events, like Great Britain's vote to exit the European Union; however, uncertainty underlies much of the instability. Is the economy growing or not?

The positive portents of growth, like jobs, all include caveats, like lower rates of labor force participation and higher values among comprehensive measures of unemployment. What is certain is the disparity of growth. Fewer markets have been favored by growth since the Great Recession. Localization is not new to the postrecession economy, but it has become more pronounced—highlighting the gap between areas that are growing and prosperous and areas that are left behind.

Growth is certainly slowing, due in no small part to the maturity of the US population. Is it simply becoming more centralized too? That remains to be seen. The postrecession pattern of progress may not be a long-term trend. The metropolitan areas that were hit hardest by the recession have been quicker to rebound. The attraction of growth, however, affects the cost of housing too. Affordable housing and lower costs of living can improve the appeal of smaller markets with skilled labor forces.

Geographic disparity is not the only issue. The inequality of growth in household income is the real measure of economic stability. Prosperity doesn't require boom growth, just a more equitable distribution of the change. Most of the US gross domestic product (GDP) is dependent on consumer spending. The recent increase in middle class jobs can finally address income inequality—and, perhaps, allay some of the caveats to growth.

[10] *What's Trending in 2015: The Generation Gap*, http://downloads.esri.com/esri_content_doc/dbl/us/J10286_Trending_2015_The_Generation_Gap.pdf