Income inequality in the U.S. is rising most rapidly among Asians. Asians displace blacks as the most economically divided group in the U.S.

By Rakesh Kochhar and Anthony Cilluffo

Income inequality, a measure of the economic gap between the rich and poor, has risen steadily in the United States since the 1970s. More recently, the issue burst into public consciousness with the Occupy Wall Street movement in 2011 and subsequent calls for a $15 minimum wage. An important part of the story of rising income inequality is that experiences within America’s racial and ethnic communities vary strikingly from one group to the other.

Today, income inequality in the U.S. is greatest among Asians. From 1970 to 2016, the gap in the standard of living between Asians near the top and the bottom of the income ladder nearly doubled, and the distribution of income among Asians transformed from being one of the most equal to being the most unequal among America’s major racial and ethnic groups.

In this process, Asians displaced blacks as the most economically divided racial or ethnic group in the U.S., according to a new Pew Research Center analysis of government data. While Asians overall rank as the highest earning racial and ethnic group in the U.S., it is not a status shared by all Asians: From 1970 to 2016, the gains in income for lower-income Asians trailed well behind the gains for their counterparts in other groups. An increase in income inequality matters because of the potential for social and economic consequences. People at the lower rungs of the income ladder may experience diminished economic opportunity and mobility and have less political influence. Researchers have also linked growing inequality to greater geographic segregation by income. In addition, there is evidence that rising inequality may harm overall economic growth by...
reducing consumption levels, causing excessive borrowing by lower- to middle-income families, or limiting investment in education.

This measure of inequality, known as the 90/10 ratio, takes the ratio of the income needed to place among the top 10% of earners in the U.S. (the 90th percentile) to the income at the threshold of the bottom 10% of earners (the 10th percentile). It is a simple measure of the gap in income between the top and the bottom of the income ladder and is commonly used by researchers and government agencies.

The 90/10 ratio varies widely by race and ethnicity. In 2016, Asians at the 90th percentile of their income distribution had 10.7 times the income of Asians at the 10th percentile. The 90/10 ratio among Asians was notably greater than the ratio among blacks (9.8), whites (7.8) and Hispanics (7.8).

This pattern of inequality across groups represents a significant shift from the past. In 1970, the 90/10 ratio among Asians was 6.1, about as low as among whites (6.3). But the top-to-bottom gap in income among Asians increased 77% from 1970 to 2016, a far greater increase than among whites (24%), Hispanics (15%) or blacks (7%). This marked difference in the growth in inequality reflects the fact that Asians near the top experienced more growth in income from 1970 to 2016 than any other group while Asians near the bottom experienced the least growth.

The standard of living of lower-income Asians stagnated from 1970 to 2016
As evidenced by the rise in inequality from 1970 to 2016, higher-income adults in the U.S. experienced more of an increase in income than lower-income adults within all racial and ethnic groups, and this disparity was most pronounced among Asians. The income of higher-income Asians – those at the 90th percentile – nearly doubled from 1970 to 2016, rising 96%. Asians at the median-income level (50th percentile) experienced a 54% increase in income. But the income of Asians at the 10th percentile increased only 11% over this period.

Thus, inequality among Asians increased overall as those at the top of the income ladder pulled away from those at the middle and bottom, and Asians at the middle also pulled away from those near the bottom. Moreover, the gains for lower-income Asians lagged behind the gains for lower-income blacks (67%), whites (45%) and Hispanics (37%).
The majority of Asians have a higher standard of living than other groups, but some lag behind. Differences in income within racial and ethnic groups are not the only sources of inequality in the U.S., of course. The gaps in the standard of living across whites, blacks, Hispanics and Asians are also sizable and longstanding. These gaps are usually measured through differences in the mean or median incomes of groups. However, the sizes of the gaps are different at different tiers of the income ladder.

From 1970 to 2016, income growth skews to the top, more so among Asians. Among Americans overall, those at the 90th percentile of the income distribution earned $109,578 in 2016. That compared with $43,049 at the median (the 50th percentile) and $12,523 at the 10th percentile. The income at the 90th percentile in 2016 was 73% higher than in 1970, compared with an increase of 44% in the median income and an increase of 36% in the income at the 10th percentile.

The pattern observed nationally is also present among whites, blacks, Hispanics and Asians, but to varying degrees. Whites at the 90th percentile of their income distribution earned $117,986 in 2016. Meanwhile, the median income for whites was $47,958 and their income at the 10th percentile was...
$15,094. From 1970 to 2016, the 90th percentile income for whites increased 80%, notably greater than the increase of 52% at the median and an increase of 45% at the 10th percentile.

Changes in income at the various points of the income distribution were somewhat more balanced among blacks. For blacks, the income at the 90th percentile was $80,502 in 2016, compared with $31,082 at the median and $8,201 at the 10th percentile. Compared with 1970, these income levels represented an increase of 79% at the 90th percentile, 66% at the median, and 67% at the 10th percentile.

Income growth slowed for all from 2000 to 2016, but income inequality continued to rise

A hallmark of income growth in the U.S. this century is the marked slowdown that ensued with the economic recession in 2001 and the Great Recession of 2007-09. This slowdown affected people in all racial and ethnic groups and at all rungs of the income ladder.

Nationally, the income at the 90th percentile increased 65% from 1970 to 2000, but it increased only 4% from 2000 to 2016. Likewise, the median income in the U.S. increased 47% from 1970 to 2000, compared with a decrease of 2% from 2000 to 2016. At the 10th percentile, an increase of 53% from 1970 to 2000 was followed by a decrease of 11% this century.

The slowdown in income growth this century did not alter the general trajectory toward a rise in income inequality, however. Those at the top of the economic ladder fared better than those at the bottom through the economic slowdowns this century. The one exception was among blacks, with those at the 10th percentile experiencing slightly higher growth in income from 2000 to 2016 than those at the 90th percentile, 4% compared with 1%.
Following a rapid increase from 1970 to 2016, income inequality is highest among Asians. Asians are the highest-earning racial and ethnic group in the U.S., on average. However, their overall prosperity conceals a wide and rapidly growing economic divide between higher- and lower-income Asians. As noted, Asians at the 90th percentile had an income of $133,529 in 2016, compared with $12,478 for those at the 10th percentile. Thus, in 2016, the ratio of these two incomes – the 90/10 ratio – stood at 10.7 for Asians.

The level of income inequality among Asians was greater than among other racial and ethnic communities in 2016. Income inequality among blacks was the second highest – with a 90/10 ratio of 9.8 – followed by whites and Hispanics, each with a 90/10 ratio of 7.8. Nationally, the 90/10 ratio in 2016 is estimated to be 8.7.

**Gaps in income across the entirety of the income distribution**

A closer look at the gap between whites and other groups across the income distribution reveals the diversity of experiences from 1970 to 2016. The majority of Asians, especially those at the lower rungs of the income ladder, ceded ground to whites from 1970 to 2000, but all experienced a rebound to some extent this century. Hispanics, regardless of where they were in the income distribution, fell behind from 1970 to 2000, but lower-income Hispanics recovered some ground from 2000 to 2016. Among blacks, some of the gains from 1970 to 2000 were erased since 2000.

In 1970, Asians, as long as they were situated above the 5th percentile of their income distribution, had incomes equal to or greater than the incomes of whites. Asians at the 5th percentile earned 96% as much as whites at the 5th percentile in 1970, but Asians at other points of their income distribution earned about as much as or more than whites (income ratios equal to or greater than the parity level of 100).

However, from 1970 to 2000, incomes in the bottom half of the Asian income distribution did not grow at the same rate as incomes in the bottom half of the white income distribution. In 2000, Asians at the 5th percentile earned only 63% as much as whites at the 5th percentile, compared with 96% as
Black, Hispanic and Asian incomes, relative to whites, changed differently across the income distribution

Income of ___ as % of incomes of whites, by percentile

Fig. G

much in 1970. At the 25th percentile, the income of Asians as a proportion of the income of whites fell to 92% in 2000, from 104% in 1970. Indeed, the incomes of about half the Asian adult population – those with incomes less than the median (the 50th percentile) – were less than the incomes of whites in 2000. Asians with incomes above the median still out-earned whites in 2000, but often by smaller margins than in 1970.

Since 2000, Asians gained on whites all across the distribution, reversing the trend from 1970 to 2000. In 2016, Asians at the 5th percentile earned 73% as much as whites, up from 63% in 2000. Also, Asians at the 95th percentile earned 109% as much as whites, compared with 98% in 2000.

About one-in-four Asians, those at the 25th percentile of income and below, earned less than whites at similar points in the income distribution in 2016, however.

As noted, the ebb and flow in the economic status of Asians, compared with whites, is perhaps related to the ebb and flow in the skill characteristics of Asian immigrants. Asians who came to the U.S. as part of the wave spurred by the Immigration and Nationality Act in 1965 and the end of the war in Vietnam in 1975 were relatively low-skilled, but a second wave driven by the technology boom in the 1990s and the H1-B visa program brought relatively high-skilled workers.
Happiness and Life Satisfaction

by Esteban Ortiz-Ospina and Max Roser

How happy are people today? Were people happier in the past? How satisfied with their lives are people in different societies? And how do our living conditions affect all of this?

These are difficult questions to answer; but they are questions that undoubtedly matter for each of us personally. Indeed, today, life satisfaction and happiness are central research areas in the social sciences, including in ‘mainstream’ economics.

Social scientists often recommend that measures of subjective well-being should augment the usual measures of economic prosperity, such as GDP per capita. But how can happiness be measured? Are there reliable comparisons of happiness across time and space that can give as clues regarding what makes people declare themselves ‘happy’?

1. In this entry, we discuss the data and empirical evidence that might answer these questions. Our focus here will be on survey-based measures of self-reported happiness and life satisfaction. Here is a preview of what the data reveals.
2. Surveys asking people about life satisfaction and happiness do measure subjective well-being with reasonable accuracy.
3. Life satisfaction and happiness vary widely both within and among countries. It only takes a glimpse at the data to see that people are distributed along a wide spectrum of happiness levels.
4. Richer people tend to say they are happier than poorer people; richer countries tend to have higher average happiness levels; and across time, most countries that have experienced sustained economic growth have seen increasing happiness levels. So the evidence suggests that income and life satisfaction tend to go together (which still doesn’t mean they are one and the same).
5. Important life events such as marriage or divorce do affect our happiness, but have surprisingly little long-term impact. The evidence suggests that people tend to adapt to changes.

More than averages—the distribution of life satisfaction scores

Most of the studies comparing happiness and life satisfaction among countries focus on averages. However, distributional differences are also important.

Life satisfaction is often reported on a scale from 0 to 10, with 10 representing the highest possible level of satisfaction. This is the so-called ‘Cantril Ladder’. The below visualization shows how responses are distributed across steps in this ladder. In each case, the height of bars is proportional to the fraction of answers at each score. Each differently-colored distribution refers to a world region; and for each region, we have overlaid the distribution for the entire world as a reference.

These plots show that in sub-Saharan Africa—the region with the lowest average scores—the distributions are consistently to the left of those in Europe. In economics lingo, we observe that the distribution of scores in European countries stochastically dominates the distribution in sub-Saharan Africa.

This means that the share of people who are ‘happy’ is lower in sub-Saharan Africa than in Western Europe, independently of which score in the ladder we use as a threshold to define ‘happy’. Similar comparisons can be made by contrasting other regions with high average scores (e.g. North America, Australia and New Zealand) against those with low average scores (e.g. South Asia).
Another important point to notice is that the distribution of self-reported life satisfaction in Latin America is high across the board—it is consistently to the right of other regions with roughly comparable income levels, such as Central and Eastern Europe.

This is part of a broader pattern: Latin American countries tend to have a higher subjective well-being than other countries with comparable levels of economic development. As we will see in the section on social environment, culture and history matter for self-reported life satisfaction.

**Distribution of self-reported life satisfaction by world region**

Life satisfaction was reported on a scale from 0 to 10 (with 10 representing the highest satisfaction). Each colored distribution corresponds to a different world region. For each region the world distribution has been overlaid (blue markers). In every case, the height of bars is proportional to the frequency of answers at each score.

![Distribution of self-reported life satisfaction by world region](image)

**(Mis)perceptions about the happiness of others**

We tend to underestimate the average happiness of people around us. The following visualization shows this for countries around the world, using data from Ipsos' *Perils of Perception*—a cross-country survey asking people to guess what others have answered to the happiness question in the World Value Survey.

The horizontal axis in the chart below shows the actual share of people who said they are ‘Very Happy’ or ‘Rather Happy’ in the World Value Survey; the vertical axis shows the average guess of the same number (i.e. the average guess that respondents made of the share of people reporting to be ‘Very Happy’ or ‘Rather Happy’ in their country).

If respondents would have guessed the correct share, all observations would fall on the red 45-degree line. But as we can see, all countries are significantly below the 45-degree line. In other words, people in every country underestimated self-reported happiness. The most extreme deviations are in Asia—South Koreans tend to think that 24% of people report being happy, when in reality 90% do.

The highest guesses in this sample (Canada and Norway) are 60%. This is lower than the lowest actual value of self-reported happiness in any country in the sample (corresponding to Hungary at 69%).
In every country people think that others are less happy than they themselves say.

People were asked the following question: “When asked in a survey, what percentage of people do you think said that, taking all things together, they are very happy or rather happy?”. The average answer is plotted on the y-axis against the actual answer on the x-axis.

Why do people get their guesses so wrong? It’s not as simple as brushing aside these numbers by saying they reflect differences in ‘actual’ vs. reported happiness.

One possible argument is that people tend to misreport their own happiness, therefore the average guesses might be a correct indicator of true life satisfaction (and an incorrect indicator of reported life satisfaction). However, for this to be true, people would have to commonly misreport their own happiness while also assuming that others do not misreport theirs.

Alternately, there is substantial evidence showing that ratings of one’s happiness made by friends correlate with one’s happiness (discussed in more detail below), and that people are generally good at evaluating emotions from simply watching facial expressions (also discussed below). Hence, a more likely explanation is that people tend to be positive about themselves, but negative about other people they don’t know.

It has been observed in other contexts that people can be optimistic about their own future, while at the same time being deeply pessimistic about the future of their nation or the world.

Happiness inequality in the US and other rich countries

The General Social Survey (GSS) in the US is a survey administered to a nationally representative sample of about 1,500 respondents each year since 1972, and is an important source of information on long-run trends of self-reported life satisfaction in the country.

Using this source, Stevenson and Wolfers (2008) show that while the national average has remained broadly constant, inequality in happiness has fallen substantially in the US in recent decades.
The authors further note that this is true both when we think about inequality in terms of the dispersion of answers, and also when we think about inequality in terms of gaps between demographic groups. They note that two-thirds of the black-white happiness gap has been eroded (although today white Americans remain happier on average, even after controlling for differences in education and income), and the gender happiness gap has disappeared entirely (women used to be slightly happier than men, but they are becoming less happy, and today there is no statistical difference once we control for other characteristics).²

The results from Stevenson and Wolfers are consistent with other studies looking at changes of happiness inequality (or life satisfaction inequality) over time. In particular, researchers have noted that there is a correlation between economic growth and reductions in happiness inequality—even when income inequality is increasing at the same time. The visualization below, from Clark, Fleche and Senik (2015)³ shows this. It plots the evolution of happiness inequality within a selection of rich countries that experienced uninterrupted GDP growth.

In this chart, happiness inequality is measured by the standard deviation of answers in the World Value Survey. As we can see, there is a broad negative trend. In their paper the authors show that the trend is positive in countries with falling GDP.

![Evolution of happiness inequality within countries during periods of uninterrupted economic growth](Image)

Why could it be that happiness inequality falls with rising income inequality?

Clark, Fleche, and Senik argue that part of the reason is that the growth of national income allows for the greater provision of public goods, which in turn tighten the distribution of subjective well-being. This can still be consistent with growing income inequality, since public goods such as better health affect incomes and well-being differently.

Another possibility is that economic growth in rich countries has translated into a more diverse society in terms of cultural expressions (e.g. through the emergence of alternative lifestyles), which has allowed people to converge in happiness even if they diverge in incomes, tastes and consumption. Steven Quartz and Annette Asp explain this hypothesis in a New York Times article, discussing evidence from experimental psychology.

**Higher national incomes go together with higher average life satisfaction**

If we compare life satisfaction reports from around the world at any given point in time, we immediately see that countries with higher average national incomes tend to have higher average life satisfaction scores. In other
People in richer countries tend to report higher life satisfaction than people in poorer countries. The below scatter plot shows this.

Each dot in the visualization below represents one country. The vertical position of the dots shows national average self-reported life satisfaction in the Cantril Ladder (a scale ranging from 0-10 where 10 is the highest possible life satisfaction); while the horizontal position shows GDP per capita based on purchasing power parity (i.e. GDP per head after adjusting for inflation and cross-country price differences).

This correlation holds even if we control for other factors: Richer countries tend to have higher average self-reported life satisfaction than poorer countries that are comparable in terms of demographics and other measurable characteristics. You can read more about this in the World Happiness Report 2017, specifically the discussion in Chapter 2.

How do common life events affect happiness?
Do people tend to adapt to common life events by converging back to a baseline level of happiness?

Clark et al. (2008) use data from the German Socio-Economic Panel to identify groups of people experiencing significant life and labour market events, and trace how these events affect the evolution of their life satisfaction. The following visualization shows an overview of their main findings. In each individual chart, the red lines mark the estimated effect of a different event at a given point in time (with ‘whiskers’ marking the range of confidence of each estimate).

In all cases the results are split by gender, and time is labeled so that 0 marks the point when the corresponding event took place (with negative and positive values denoting years before and after the event). All estimates control for individual characteristics, so the figures show the effect of the event after controlling for other factors (e.g. income, etc.).
The first point to note is that most events denote the evolution of a latent situation: People grow unhappy in the period building up to a divorce or unemployment, while they grow happy in the period building up to a marriage. The second point is that single life events do tend to affect happiness in the short run, but people often adapt to changes. Of course, there are clear differences in the extent to which people adapt. In the case of divorce, life satisfaction first drops, then goes up and stays high. For unemployment, there is a negative shock both in the short and long-run, notably among men. And for marriage, life satisfaction builds up before, and fades out after the wedding.

The effect of life events on life satisfaction

In each individual plot, the red line marks the estimated effect of the corresponding event at a given point in time. 'Whiskers' denote the range of confidence around estimates. Time is labeled so that 0 marks the point when the event took place. Negative and positive values denote years before and after the event. All estimates control for individual characteristics, so the figures show the effect of the event after controlling for other factors, such as changes in income etc.

In general, the evidence suggests that adaptation is an important feature of well-being. Many common but important life events have a modest long-term impact on self-reported happiness. Yet adaptation to some events, such as long-term unemployment, is neither perfect nor immediate.

Are happiness averages really meaningful?
The most common way to analyze data on happiness consists in taking averages across groups of people. Indeed, cross-country comparisons of self-reported life satisfaction, such as those presented in 'happiness rankings', rely on national averages of reports on a scale from 0 to 10 (the Cantril Ladder).

Is it reasonable to take averages of life satisfaction scores? Or, in more technical terms: are self reports of Cantril scores really a cardinal measure of well-being?

The evidence tells us that survey-based reports on the Cantril Ladder do allow cardinal measurement reasonably well—respondents have been found to translate verbal labels, such as ‘very good’ and ‘very bad’, into roughly the same numerical values. But as with any other aggregate indicator of social progress, averages need to be interpreted carefully, even if they make sense arithmetically. For example, if we look at happiness by age in a given country, we may see that older people do not appear to be happier than younger people. Yet this may be because the average-by-age figure from the snapshot confounds two factors: the age effect (people from the same cohort do get happier as they grow older, across all cohorts) and the cohort effect (across all ages, earlier generations are less happy than more recent generations). If the cohort effect is very strong, the snapshot can even give a picture that suggests people become less happy as they grow older, even though the exact opposite is actually true within all generations.

This example is in fact taken from the real world: using data from the US, Sutin et al. (2013) showed that self-reported feelings of well-being tend to increase with age across generations, but overall levels of well-being depend on when people were born.