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## Median Male Lifetime Income Shows a Downward Trend

Average lifetime incomes of men entering the workforce since the 1960s have stagnated or fallen, while those of women have increased, according to the analysis presented in **Lifetime Incomes in the United States Over Six Decades** (NBER Working Paper No. 23371).

Fatih Guvenen, Greg Kaplan, Jae Song, and Justin Weidner draw on Social Security Administration data to provide what they believe is the first analysis of lifetime income distributions for a large number of cohorts in the United States. They find that while the earnings gap between men and women has narrowed over time, income inequality has been growing within both genders.

The study defines lifetime income as total labor earnings from ages 25–55. The researchers compile complete income histories for 27 cohorts of workers. Those in the oldest cohort turned 25 in 1957; those in the youngest turned 25 in 1983. The sample is restricted to private sector workers in commerce and

industry, sectors continuously covered by Social Security over the study period.

The researchers find a sharp divide in

\$136,400 less in lifetime income than did his 1967 counterpart. This decline was somewhat offset by an increase in non-

The median male who turned 55 in 2013 earned \$136,400 less in lifetime income, measured in 2013 dollars, than a 55-year-old 16 years earlier.

income trends between the pre- and post-1967 cohorts. Median lifetime income grew by 12 percent from the 1957 cohort

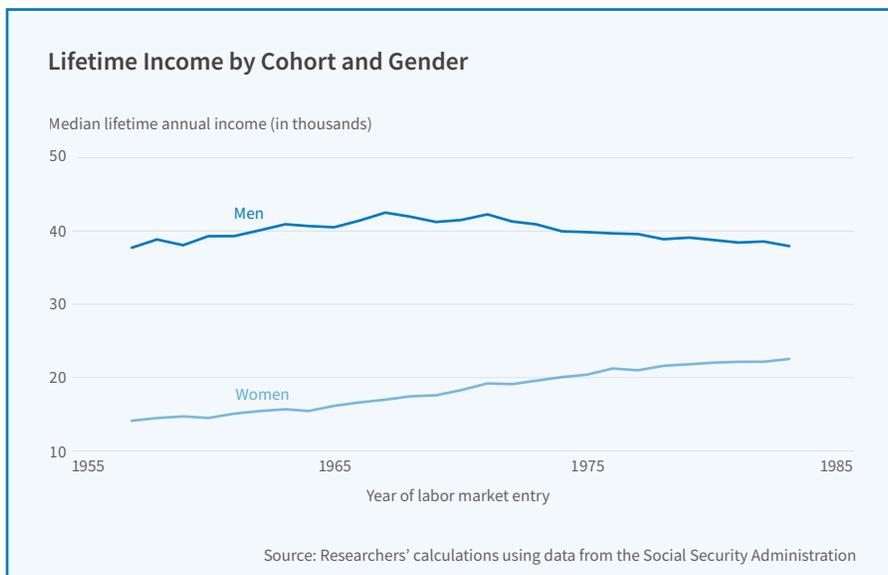
wage benefits, primarily health insurance and pension contributions. But even using an upper bound estimate of the growth of such benefits, the researchers find that the 1983 cohort's median lifetime income was \$96,100 lower than that of the 1967 cohort.

They find that while lifetime earnings increased across the spectrum for the 1957–67 male cohorts, they rose for only the top 20 percent of men in the cohorts between 1967 and 1983. The researchers attribute most of the fall in median lifetime income to a downward trend in men's earnings

in the early years of their careers. The median income for a 25-year-old in the 1967 cohort was \$33,000, compared with

\$29,000 (inflation adjusted) in the 1983

in the early years of their careers. The median income for a 25-year-old in the 1967 cohort was \$33,000, compared with \$29,000 (inflation adjusted) in the 1983



cohort. For 35-year-olds, the comparable figures fell from \$50,600 to \$42,400. “To our knowledge,” the researchers write, “the fact that a substantial fraction of the rise in cross-sectional and lifetime inequality for men can be attributed to a rise in inequality at age 25 has not been emphasized in previous work.”

The researchers used the personal consumption expenditure deflator to adjust earnings for inflation. They point out that had they used the Consumer Price Index

for that purpose, the decline in median earnings would be even larger.

The study reports a steady climb in median lifetime income for women. For the 1957 cohort, median female lifetime earnings were just 37 percent of those of the median male; for the 1983 cohort, that figure was nearly 60 percent. Female lifetime earnings rose at all percentiles throughout the study period. However, while the gains were spread evenly for the 1957–67 cohorts, growth was significantly

skewed toward the upper percentiles for the 1967–83 cohorts.

Looking at the most recent data, the researchers note that, since 1979, the median earnings of women early in their careers have remained essentially flat when adjusted for inflation. That could portend a trend toward sluggish or falling median lifetime earnings, as has been the experience among men. The researchers forecast increasing income inequality for the population as a whole.

— Steve Maas

## Technological Dynamism and the Fall in Labor’s Share

Labor’s share of economic output, the ratio of wages and compensation to national income, has declined in the last three decades in most developed nations, but the explanation of this trend is not yet clear. A new study of U.S. industries finds that the rise of “superstar firms” that dominate their sectors is a key factor.

On average, the greater the share of an industry’s sales that are concentrated among a small group of leading firms, the larger the decline in labor’s share of that industry’s output, the researchers of **The Fall of the Labor Share and the Rise of Superstar Firms** (NBER Working Paper No. 23396) report. They find that superstar firms enjoy wide profit margins in part because of their ability to capitalize on rapid technological change. The decline in labor’s share “is largely due to the reallocation of sales between firms rather than a general fall in the labor share within incumbent firms,” David Autor, David Dorn, Lawrence F. Katz, Christina Patterson, and John Van Reenen write. It is not that all firms have enjoyed a general fall in the shares of their sales going to labor costs—it is more that the superstar firms with low labor shares are capturing an ever greater share of the market, pushing down the aggregate labor share. The researchers show that “these patterns are also present in firm- and industry-level datasets from other OECD countries.”

In contrast to previous studies that have looked to macroeconomic and industry-level

2012 covering four-fifths of private sector employment. Labor’s share of U.S. output

The rise of “superstar firms” that are adept at patenting and using new technologies may be key to understanding the changing income shares of capital and labor.

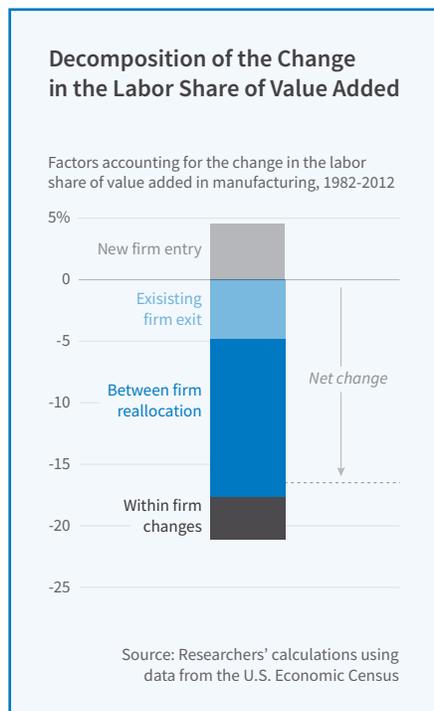
data to explain labor’s diminishing share, these researchers assemble firm- and establishment-level census data for six major sectors of the U.S. economy from 1982 through

fell from about 67 percent to 61 percent during that period. Looking at supplemental data for several OECD nations in Europe over part of that period, they find that such declines are common and are even larger in France, Germany, and Sweden.

The researchers find a consistent pattern in all six sectors. The market share of superstar firms is rising, causing an increase in concentration in detailed industries within these sectors. The industries where concentration rose most during the study period were the same ones in which the labor share declined most. This decline was due to the reallocation of output to superstar firms, rather than a general fall in labor share across all firms.

Over their three decades of data, the researchers find that the effects of concentration on labor share are accelerating. For example, they report that during the second half of their study period, rising concentration in manufacturing was responsible for a third of the fall of labor’s share.

A complementary analysis of firm data from many other developed nations reveals



patterns that closely resemble the changes observed in the United States. Almost all countries experience a decline in labor's share of income that is primarily due to the expansion of large firms with low labor shares, rather than a broad-based fall in labor income across all firms.

The researchers suggest that these

patterns are not simply due to greater lobbying by dominant firms driving up barriers to entry and expansion. "The growth of concentration is disproportionately apparent in industries experiencing faster technical change as measured by the growth of patent intensity or total factor productivity, suggesting that technologi-

cal dynamism, rather than simply anti-competitive forces, is an important driver of this trend," they conclude. However, they caution, even if the growth of superstars arises from competition on the merits, dominant firms may exploit their market power to protect their positions.

—*Laurent Belsie*

## What Happens When Refugees Come to the United States

Are refugees a burden on the taxpayer? New evidence suggests that, with a long enough perspective, the answer is no. [William N. Evans](#) and [Daniel Fitzgerald](#), in **The Economic and Social Outcomes of Refugees in the United States: Evidence from the ACS** (NBER Working Paper No. 23498), find that over their first 20 years in the United States, refugees who arrived as adults aged 18–45 contributed more in taxes than they received in relocation benefits and other public assistance. They also find that the younger the refugees were when they resettled in America, the more likely they were to catch up with their native-born peers educationally and economically.

The researchers constructed life-cycle profiles for refugees by extrapolating data from the 2010–14 American Community Survey. They separated refugees from other immigrants using Department of State data, and created a sample of 20,000 refugees who entered the country in 1990–2014. Their sample represents a third of refugees who arrived during the period. The researchers found that refugees who arrived

before the age of 14 had, by ages 19–24, graduated from high school at the same rates as their U.S.-born counterparts. At ages 23–28, those refugees displayed the

refugees' appetite for education, the researchers find, noting that "refugees who arrived as children of any age have much higher school enrollment rates

Over the first 20 years in the U.S., the average adult refugee pays taxes that exceed relocation costs and social benefits.

same college graduation rates as natives.

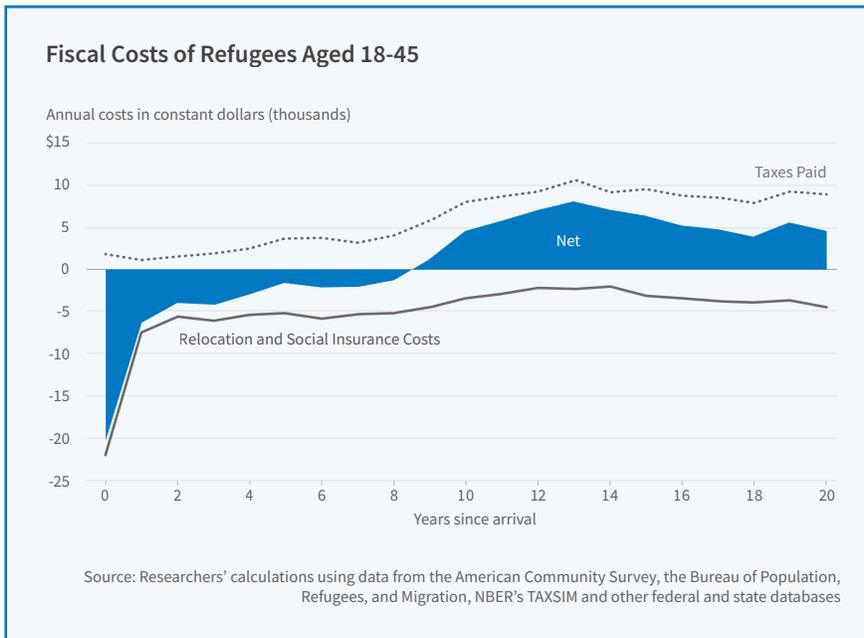
Refugees who arrived as older teens took longer to obtain their high school diplomas than their U.S.-born peers. The

than U.S.-born respondents of the same age." The gap in high school graduation rates observed between refugees and natives aged 19–24 disappears within a decade, and the gap in college graduation rates is halved over this period. Controlling for educational attainment, the researchers found "no difference in economic outcomes between refugees who arrived as children and U.S.-born survey respondents."

The researchers then turn to refugees who arrived as adults ages 18–45. On average, these individuals were less educated and less fluent in English than their U.S.-born coun-

terparts. After six years in the United States, however, these individuals had higher labor-force participation and employment rates than similarly aged U.S. natives. Given their lower educa-

Initial disadvantages are offset by



tional and language levels, their earnings were lower and their use of welfare and food assistance higher than the U.S.-born group. Education and language ability accounted for 60 percent of the earnings difference. Controlling

for those factors, the researchers found that after a decade, public assistance rates were the same for refugees and the native born.

The researchers calculate on average, the U.S. spends \$15,148 in relocation costs

and \$92,217 in social benefits over an adult refugee's first 20 years in the country. Over that same time period, the average adult refugee pays \$128,689 in taxes — \$21,324 more than the benefits received.

— Steve Maas

## How China's WTO Entry Led to Lower Prices in the U.S.

Current public debate has focused on domestic firms' loss of market share to lower-priced international competitors and consequent reduction in domestic employment. Far less attention has been paid to the improvement in living standards that arises when international competition leads to lower prices and increased productivity.

In **How Did China's WTO Entry Benefit U.S. Consumers?** (NBER Working Paper No. 23487) [Mary Amiti](#), [Mi Dai](#), [Robert C. Feenstra](#), and [John Romalis](#) find that U.S. imports of manufactured goods from China reduced the U.S. price index for manufactured goods by an estimated 7.6 percent between 2000 and 2006, due to China's entry into the World Trade Organization (WTO) in 2001. The resulting savings were large: U.S. manufacturing sector production was valued at \$4.5 trillion in 2014, so if prices had been 7.6 percent higher, that production would have cost \$340 billion more.

The researchers attribute at least two-thirds of the U.S. price change to changes in China's internal tariff policy, particularly reduction in tariffs on imported inputs, which lowered costs for Chinese producers and hence enhanced their global competitiveness. Chinese tariffs on imports were reduced from an average of about 15 percent in 2000 to 9 percent in 2006. Along with lowering tariffs, the Chinese government moved to stimulate Chinese exports by lifting export restrictions on domestic industry and remov-

ing capital requirements for exporters. It relaxed prohibitions on foreign direct

China's manufacturing exports to the United States grew 290 percent

The U.S. price index for manufactured goods fell by an estimated 7.6 percent, mostly because the lowering of Chinese import tariffs enhanced China's competitiveness.

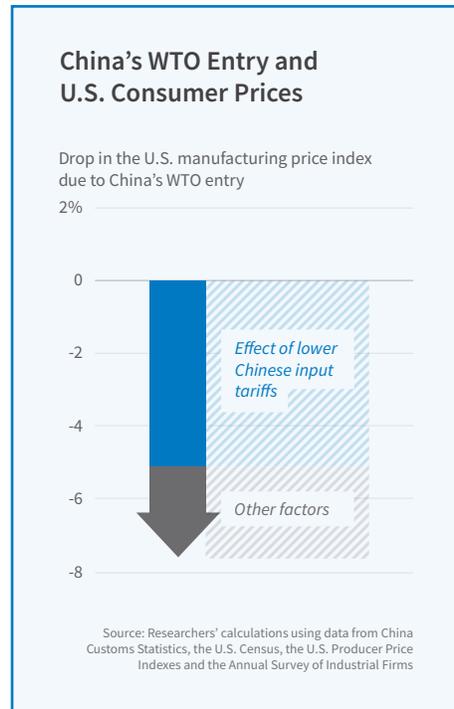
investment, lifted limits on textile exports, and reduced the number of products that required import licenses. China's WTO

from 2000 to 2006. The researchers estimate that 69 percent of the growth was driven by new exporters offering a widening variety of products, while 16 percent was created by incumbent firms exporting new products.

Chinese firms benefited from rapidly rising productivity. The researchers estimate that total factor productivity for Chinese exporters to the U.S. grew by an average of 10 percent per year over the period, while real value added per worker grew 11 percent per year. The researchers derive these estimates from detailed U.S. and China annual trade data, customs data, U.S. producer price indexes, and survey data on the output, materials cost, employment, capital, and wages of individual Chinese firms.

Because lower Chinese import tariffs improved the productivity of Chinese firms and lowered their costs, those firms were better able to compete in the U.S. market and were more likely to try to enter it. The researchers conclude that the lowering of Chinese import tariffs was responsible for more than 65 percent of the reduction in U.S. manufacturing prices resulting from China's entry into the WTO.

— Linda Gorman



entry set the stage for the awarding of permanent normal trading relations by the U.S. federal government in 2002. This reduced uncertainty about the size of U.S. import tariffs faced by Chinese exporters.

## Consumption Inequality and the Frequency of Purchases

While income inequality has grown over the past 35 years, surveys conflict on whether that has translated to greater consumption inequality. Surveys that measure short-term consumer spending—say, over periods of two weeks—display increases in consumption inequality. But those that track spending over longer terms show little or no increase in consumption inequality, at least in the case of nondurable goods.

Can these different survey findings be reconciled? In **Consumption Inequality and the Frequency of Purchases** (NBER Working Paper No. 23357), **Olivier Coibion, Yuriy Gorodnichenko, and Dmitri Koustas** analyze surveys of shopping patterns since 1980 and find that “when household spending is aggregated over the course of the year, there is essentially no trend in inequality.” What’s behind the divergence in consumption inequality surveys, they find, is that Americans are shopping less frequently and buying more on each shopping trip. A major factor in this pattern, they add, is the emergence and spread of club/warehouse stores that sell items in bulk.

The researchers focus on seemingly contradictory data collected under two distinct components of the Consumer Expenditure Survey (CEX), a U.S. household survey conducted by the Bureau of Labor Statistics. According to the CEX Diary Survey, which is based on household records of spending every two weeks, the consumption gap between high- and low-consumption households has grown since 1980. In contrast, data from the CEX Interview Survey, which queries households quarterly about their spending at monthly or quarterly frequency,

depending on the spending category, display very little increase in inequality.

Why the difference? The researchers find in the Diary Survey that the fraction of days on which households shop for nondurable goods has been falling. This is a gen-

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While annual consumer spending was approximately constant over the period 2004 to 2014, the number of shopping trips declined and average spending per trip increased.

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eral finding, which obtains across various demographic groupings based on age, race, and income. This pattern is also evident in Nielsen Home Scanner data drawn from daily records of participants’ purchases over

or frozen. The researchers find that the increased prevalence of club/warehouse stores since the early 1980s accounts for approximately 40 percent of the rise in measured inequality in expenditures. They further note that competition from club stores

has spurred traditional stores to offer more in bulk.

The Bureau of Labor Statistics’ American Time Use Survey, which has been conducted since 2003, further confirms that shopping patterns have changed.

The researchers conclude that “households do fewer trips per day and are less likely to go to any store on any given day.”

The researchers suggest several factors other than the rise of club stores that may be contributing to the decline in shopping frequency, including greater traffic congestion, which discourages shopping trips; increasing ownership of large refrigerators, freezers, and houses with more stor-

age space; and expanded access to credit, all of which enable more households to take advantage of bulk discounts.

They also note that the growth of online retailing and home deliveries may reverse, or at least balance, the trends in shopping documented in their paper, as the reduction in fixed costs of shopping produced by such services could encourage high shopping frequency with lower total purchases per shopping experience.

—Steve Maas



the course of a year.

“While annual spending is approximately constant over 2004–14, we see that the number of shopping trips declines by close to 20 percent, while the average spending per trip increases by the same amount,” the researchers report. Most of the higher spending reflects an increase in bulk purchases.

The advent of club stores has offered consumers an opportunity to stock up on staples and other goods that can be stored

## Dynamic Complementarity in Head Start and K–12 Classes

In **Reducing Inequality Through Dynamic Complementarity: Evidence from Head Start and Public School Spending** (NBER Working Paper No. 23489), Rucker C. Johnson and C. Kirabo Jackson find synergistic benefits from increased investment in Head Start and increased investment in K–12 education. While spending of either type improved academic outcomes to some degree, access to both resulted in a dynamic complementarity that offered far greater long term benefit.

Launched in 1964 as one of President Lyndon B. Johnson's War on Poverty programs, Head Start aims to enhance literacy, numeracy, reasoning, problem-solving, and decision-making skills. Funding of local programs comes primarily through grants from the federal government, with local grantees expected to provide about 20 percent of the funding. Children must be four years old to be eligible to participate, and at least 90 percent of children in each Head Start center must come from families with incomes below the poverty line.

Funding increases in public schools examined in this study are the result of court-ordered school finance reforms (SFRs) launched between 1971 and 2010 to correct some of the inequities between school systems due to the varying wealth of districts. By focusing on SFRs, the researchers were able to identify spending increases that were argu-

ably unrelated to other confounding influences on student outcomes. Data on annual Head Start spending was compiled at the county level, and public K–12 spending at the school district level.

The effects of increases in Head Start spending on academic outcomes were larger when participants in the program subsequently attended schools that were comparatively well-funded as a result of court-ordered reforms.

Rather than relying on test scores to evaluate Head Start and K–12 spending, the researchers use the Panel Study of Income Dynamics (PSID) to look at the life trajec-

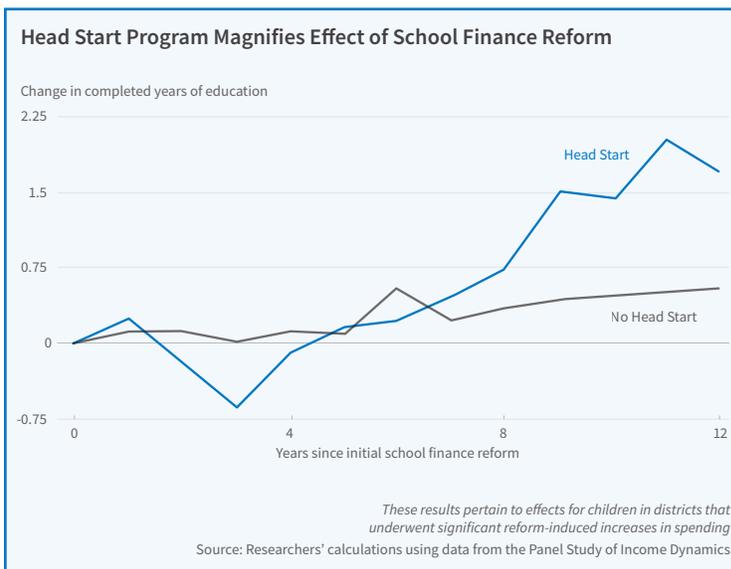
sible influences of family circumstances and other local policy changes unrelated to Head Start or K–12 spending levels.

The researchers find that the marginal effects of increases in Head Start spending

are more than twice as large when students attend schools with K–12 spending at the 75th percentile rather than at the 25th percentile. In 75th percentile schools, exposure to Head Start raised later educational attainment by 0.22 years, adult wages increased by 5.6 percent, and the likelihood of adult incarceration fell by 2.2 percentage points. In comparison, educational attainment increased 0.096 years, wages increased only 1.9 percent, and the likelihood of incarceration was lowered by just 0.75 percentage points among those exposed to Head Start whose public schools were in the 25th percentile of spending. At the same time, a 10 percent increase in K–12 funding had only minor effects on educational attainment, adult wages, and incarceration when the students

did not attend Head Start beforehand. The dynamic complementarity that the researchers find may explain the varying results of other studies on the impact of Head Start on student outcomes that have not controlled for school spending during the K–12 years.

—Jen Deaderick



ories of individuals born between 1950 and 1976. They have information on outcomes through 2013. By using the range of birth years, they were able to differentiate between individuals who reached the age of four at a variety of Head Start spending levels. They use various strategies to control for the pos-

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