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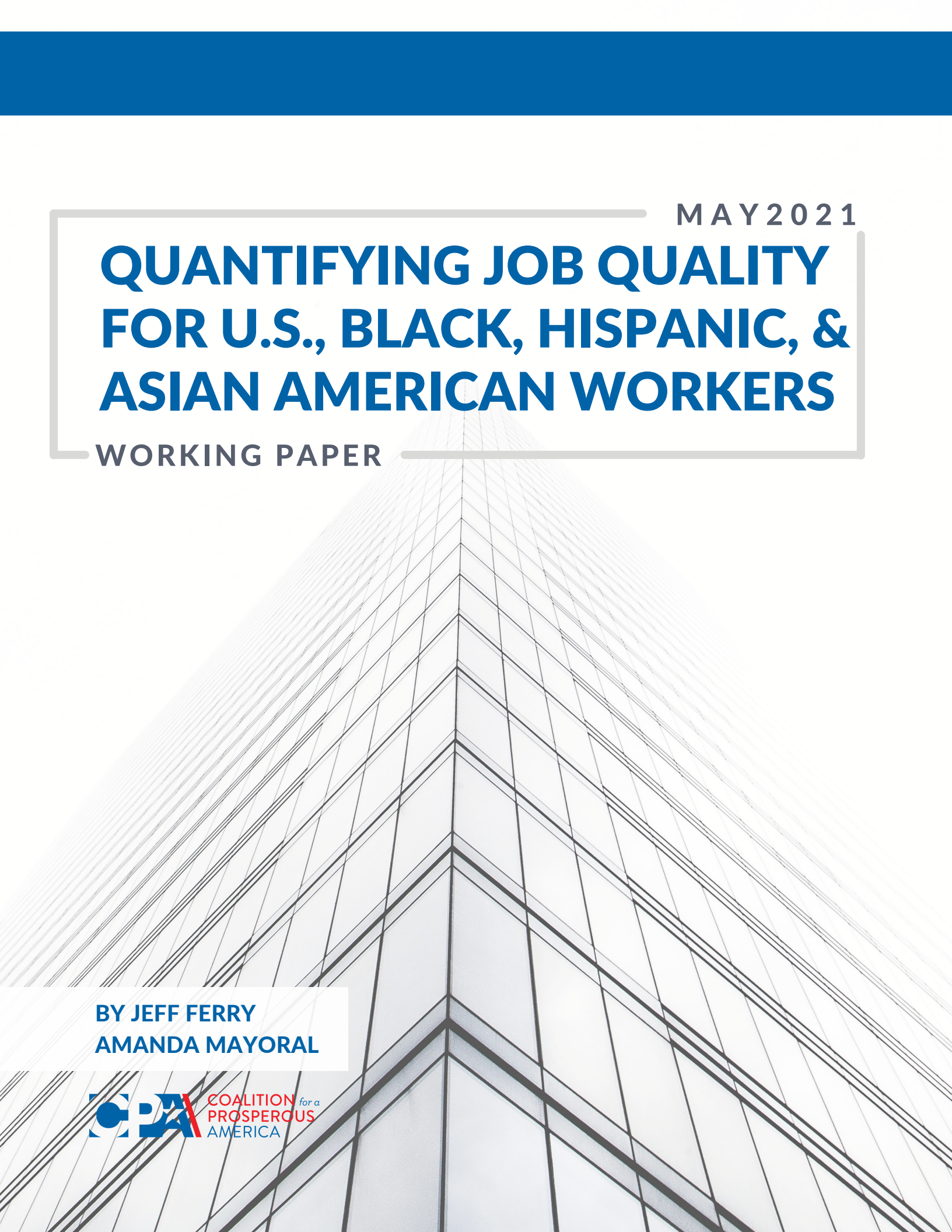
# QUANTIFYING JOB QUALITY FOR U.S., BLACK, HISPANIC, & ASIAN AMERICAN WORKERS

WORKING PAPER



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COALITION for a PROSPEROUS AMERICA

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***About Coalition for a Prosperous America**: CPA is the only national, bipartisan organization representing exclusively a coalition of domestic manufacturers, labor unions, and family farm groups dedicated to rebuilding U.S. manufacturing and broadly restoring American prosperity.*

## KEY TAKEAWAYS

- Black American job quality is far worse than that of the total population. The Black Job Quality Index (JQI) for 2020 was 38.7, more than 40 points below the JQI for the total U.S. private sector production and nonsupervisory workforce. For the Black nonsupervisory workforce, 72% of their jobs are low quality, and only 28% rank as high-quality. More than any other group, Black Americans are paying the price for the decline in U.S. job quality in recent decades.

- The JQI for Hispanic Americans was 38.1 in 2020, 42 points below the U.S. JQI. In 2002, 28% of Hispanic American employees held high-quality jobs and 72% were in low-quality employment. Although far below the U.S. JQI, the Hispanic American JQI rose by 29% since 2007, when it was just 29.5. The increase in the Hispanic American JQI was driven largely by the growth of Hispanic jobs in high-quality health care and construction service jobs.

- The Asian American JQI began the period well above the total U.S. figure and rose further, to reach 158.3 in 2020. At that level, 61% of Asian American employees were in high-quality jobs, with just 29% in low-quality. The high and rising Asian American JQI was driven by high-quality professional business service, health care, and finance/insurance jobs.

- The U.S. Private Sector Job Quality Index measures job quality as determined by weekly income for U.S. production and nonsupervisory workers. The JQI shows that the U.S. creates millions more low-quality jobs than high-quality jobs each year. The JQI for December 2020 was 80.5, indicating that 55% of nonsupervisory workers worked in low-quality jobs, and only 45% in high-quality. The JQI was even lower in February 2020 at 75.8. The pandemic eliminated many more low-wage than high-wage jobs from the economy, paradoxically raising the JQI. By April 2021, about two thirds of those jobs had returned.

- Despite rising incomes for many Americans since 2007, Black Americans are not getting their fair share. Job growth for Black Americans since 2007 has been concentrated in low-quality jobs, notably in service sector jobs such as food service and social assistance. The slow growth in high-quality jobs since 2007, including a decline in many manufacturing sectors, has made it more difficult for Black and Hispanic Americans to gain access to these jobs.

- The JQIs for Black and Hispanic Americans reflect the economic inequality faced by these groups. The combination of more low-quality than high-quality jobs and the sectoral shift from manufacturing to service sector jobs has had a disproportionate effect on Black and Hispanic Americans, reflected in their low JQIs.

- The problem of declining job quality has been greatly exacerbated by the growth of low-quality service sector jobs. Although the U.S. economy has created millions of jobs in the years before the pandemic and in the first quarter of 2021, too many of these jobs, in industries like food service and social assistance, are often low-wage and low-hour. These pay levels are often insufficient to raise a family, and often the people taking those jobs are suffering declining living standards as compared to their previous employment.

- Policy initiatives to address the inequality of Black and Hispanic Americans suffering from much lower job quality than the total American population include supporting high-wage industries, notably

manufacturing. These industries offer the best opportunity for Black and Hispanic Americans, who have relatively less educational qualifications than other Americans, to find high-quality jobs capable of supporting middle class lifestyles. Established policy objectives, including increased educational opportunities and reduced job discrimination, have an important role to play. But the importance of the sectoral mix of job opportunities, and the dominance of low-quality job growth in recent decades, is often overlooked.

## INTRODUCTION

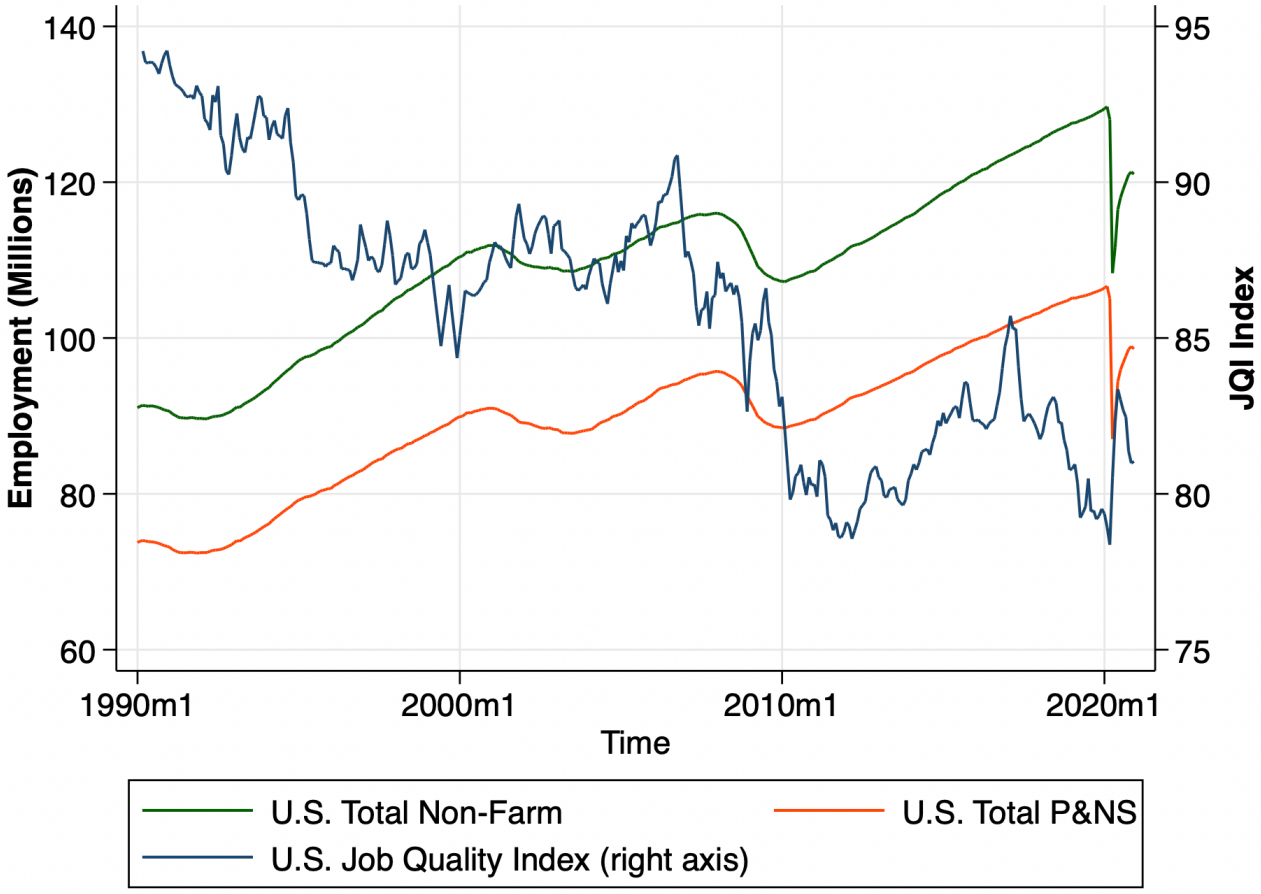
Much attention is devoted to the number of jobs in the U.S. economy. While employment totals have increased steadily over the past ten years and are now bouncing back after the COVID slump, job *quantity* is not as important as job *quality*. Job quality, as measured by employees' weekly wages, has deteriorated for millions of workers as the economy has created more low wage jobs than high-wage jobs each year for many years. This report reveals that by last year, there were over 10 million more low-quality than high-quality jobs in the U.S. economy.

The U.S. Private Sector Job Quality Index (JQI) measures the *quality* of U.S. jobs as distinct from their *quantity*. In partnership with Cornell Law School, we published our first report on the JQI in 2019. We use Bureau of Labor Statistics (BLS) data to calculate the average weekly wage for all Production and Nonsupervisory (P&NS) employees. We exclude management and business owners to focus on the ordinary workers that make up 80% of the total U.S private sector workforce, 98 million out of a total 122 million workers. The BLS divides the P&NS workforce into 175 industrial sectors. Each sector's average weekly income is available monthly. By calculating the national average weekly wage for all P&NS employees, we can establish a threshold to split high- and low-quality jobs. The jobs in all sectors delivering a weekly wage above the threshold are termed high quality and all jobs below the threshold are low quality. The average weekly wage, or threshold, as of December 2020 was $857.60.

The JQI is the ratio of high-quality jobs to low-quality jobs, multiplied by 100 and expressed as an index. Figure 1 shows that while total employment has risen substantially, the JQI has declined from 94.2 in 1990 to 80.5 in December 2020. The index of 80.5 for 2020 translates to a total of 55% of U.S. jobs as low quality and 45% of jobs as high quality. The index deteriorated by 13 points in the last 30 years as the creation of low-quality jobs substantially outpaced the creation of high-quality jobs.

In this CPA Working Paper, we present Job Quality Indexes for three important minority groups within the U.S. workforce: Asian, Black, and Hispanic Americans. The results show that Black and Hispanic American Job Quality Indexes are far below that for the total U.S. population. Asian American JQI however is substantially higher than the overall U.S. JQI.

**Figure 1: U.S. Total Employment and U.S. Job Quality Index**




*Source: BLS data; CPA calculations*

The minority JQI indexes are calculated by combining the ethnic group information in the BLS Current Population Survey with the industrial sector information in the Establishment Survey to obtain employee counts and wage levels for each ethnic group within the population. Each minority JQI is calculated by comparing their wages in each sector to the national threshold and adding up the employees in high-quality sectors for a high-quality total and the same for low quality. Each minority JQI is then the ratio of HQ employees to LQ employees for each minority group.

## DIFFERENCES BETWEEN U.S. AND MINORITY JQI's

**The analysis of minority employment by sector reveals huge differences in job quality for different ethnic groups.**

The Black and Hispanic American JQIs for 2020 were more than 40 points below the U.S. JQI. The Asian American JQI for 2020 was almost double the U.S. JQI.

Figure 2 and Table 1 below show the evolution of the four JQI measures since 2007, the earliest year for which we can obtain sectoral employment and wage information by ethnic group. Although the U.S. JQI for 2007 showed low-quality jobs outnumbering high-quality, the index continued to decline, reaching 80.5 last year. It was even lower prior to the pandemic, which eliminated millions more low-quality than high-quality jobs.

The Black American JQI was 41.2 in 2007, about half that of the total U.S. workforce. A JQI of 41.2 means that 29.2% of Black jobs (P&NS) were high quality and 70.8% were low quality. Worse, this low JQI level deteriorated further in the subsequent 13 years. In 2020, the Black American JQI was down a further 6%, from 41.2 to 38.7. The deteriorating JQI reflects faster growth in low-quality jobs over these years. The COVID pandemic eliminated millions of low-quality jobs but made little impact on the overall job quality picture. We explore these trends in greater detail below.

The Hispanic American JQI was at 29.5 in 2007, well below that of the Black American JQI. However, it moved up gradually, to reach 38.1 last year, almost the same as the Black American JQI. The racial division of job quality in the U.S. means that minorities are paying a much larger price for the deterioration of U.S. job quality. The decline in high-quality jobs as a share of total jobs hit Black and Hispanic Americans harder because they are more strongly represented in jobs filled by people with lower educational levels, i.e., semi-skilled or unskilled jobs.

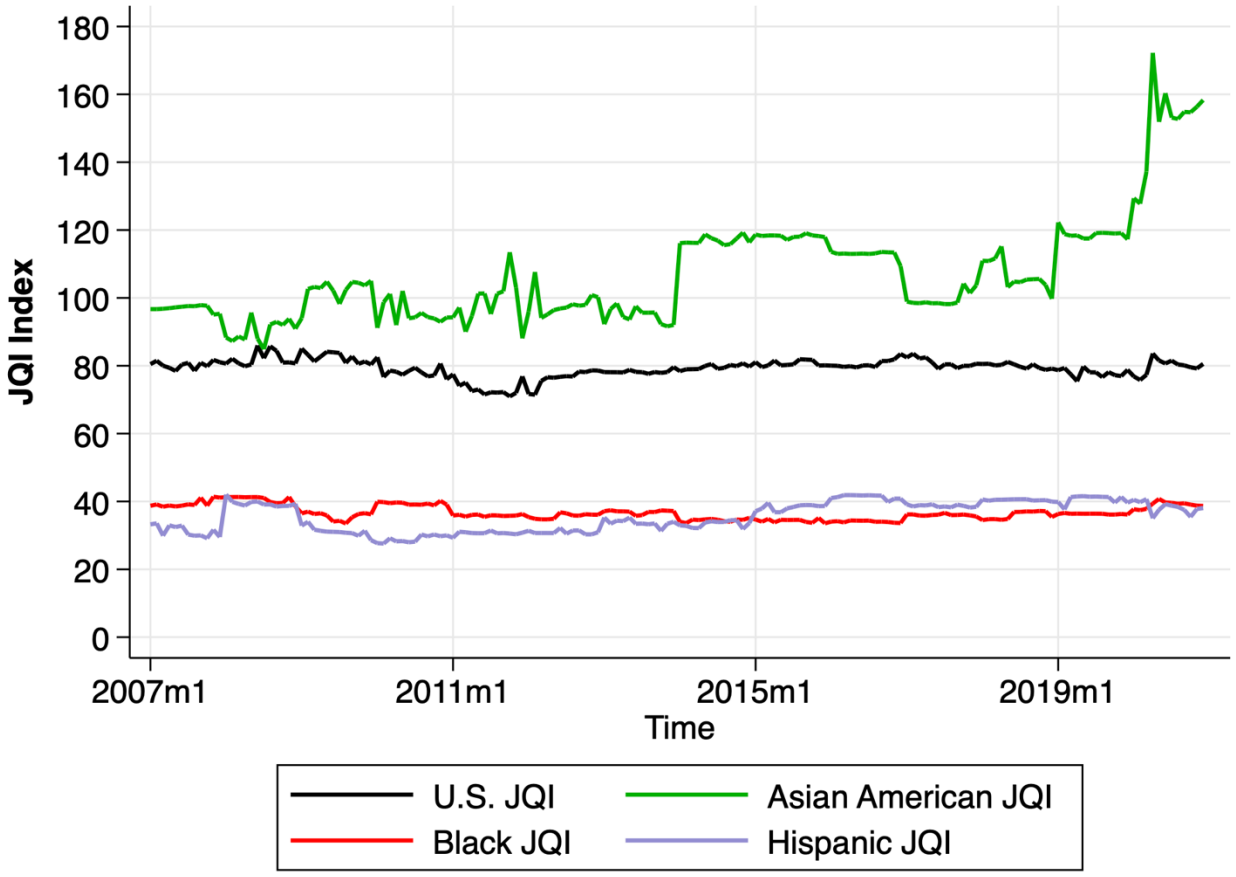
Asian Americans have a very different perspective in job quality. The Asian American JQI was substantially higher than the U.S. total JQI, at 95.3 in 2007 and rose further, to reach 158.3 in 2020. At that level, 61.3% of Asian American jobs are high-quality. Asian Americans have successfully targeted high-paying sectors of the U.S. economy, as we explain further below.

**Table 1: U.S. & Minority JQI 2007-2020**

| Group | JQI 2007 | JQI 2020 | % Change JQI | % Difference Minority vs US JQI (2020) |
|---|---|---|---|---|
| U.S. | 81.1 | 80.5 | -0.74% | - |
| Asian American | 95.3 | 158.3 | 66.11% | 96.6% |
| Black American | 41.2 | 38.7 | -6.07% | -51.9% |
| Hispanic American | 29.5 | 38.1 | 29.15% | -52.7% |

*Source: BLS data; CPA calculations*

**Figure 2: U.S. JQI vs. Minority JQIs, 2007-2020**



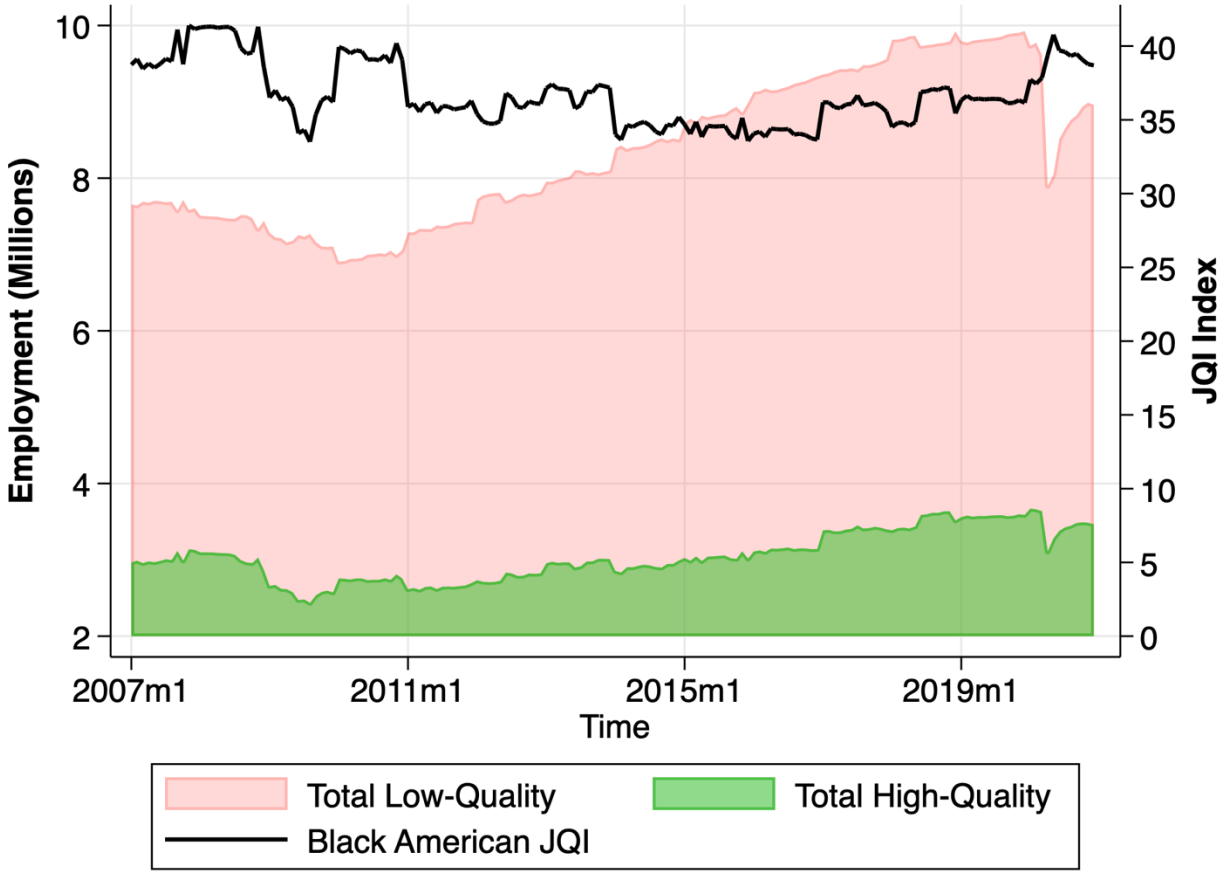
## THE BLACK AMERICAN JQI

The number of Black American jobs has increased by 16%, from 10.7 million in 2007 to 12.4 million in 2020, representing 13% of the total nonsupervisory workforce. Yet Black Americans account for just 8% of all high-quality jobs and twice as many (17%) of all low-quality jobs.

**The gap between the U.S. JQI and Black American JQI shows that Black Americans get nearly half as many high-quality jobs as they should if the racial division of good jobs were equitable. On top of that, they hold far more low-quality jobs than their share of the population would suggest. Figure 3 shows how low-quality jobs (red area) dominate Black nonsupervisory jobs.**

The sharp fall in early 2020 due to the COVID pandemic and associated layoffs is clearly visible. The pandemic hit both high-quality and low-quality jobs, and both are now slowly returning to the pre-pandemic normal.

**Figure 3: Black American Employment, High and Low Quality**




*Source: BLS data; CPA calculations*

Black Americans make up 13% of the nonsupervisory workforce. Yet they tend to be strongly overrepresented in some of the largest low-quality job sectors, while only modestly over-represented in few high-quality sectors. Table 2 calls out some of the largest sectors to show how Black Americans suffer from a preponderance of low-quality jobs and a low Black American JQI. Black Americans are strongly represented in transportation equipment manufacturing, chiefly automotive manufacturing, as a result of the Big Three's long history of recruiting Black workers, especially in the years after World War II. The weekly pay for Black transportation equipment workers is over $1,000 a week, well above the average Black weekly wage of $780 in 2020. In hospitals and freight trucking, Black Americans enjoy similar over-representation in these high-quality sectors.

However, Black Americans are strongly over-represented in low-wage, low-hour sectors. For example, in both home health care services and nursing care facilities, Black Americans account for more than double the 13% of workers they account for in the population as a whole. In both sectors, they earn weekly wages that are about half of their national average weekly wage. Typically, weekly wages at that level come from jobs that are part-time, well below the standard 40 hours a week.

**Table 2: Black American Employment, Selected Sectors**

| | **Total Black 2020** | **Share of Total Workforce** | **Average Black Wage** |
|---|---|---|---|
| **Total Black Employment (P&NS)** | 12,426 | 13% | $780 |
| | | | |
| **High** | | | |
| | 2020 | Share of Industry | Weekly Wage |
| Transportation equipment mfg | 158 | 14% | $1,052 |
| Hospitals | 768 | 16% | $1,043 |
| General freight trucking | 154 | 17% | $995 |
| | | | |
| **Low** | | | |
| | 2020 | Share of Industry | Weekly Wage |
| Employment services | 583 | 19% | $718 |
| General merchandise stores | 582 | 20% | $344 |
| Home health care services | 401 | 29% | $474 |
| Nursing care facilities | 355 | 28% | $527 |

*Source: BLS data; CPA calculations*

The concentration of Black employment in low-wage sectors accounts for the low earnings and low JQI of Black workers. The slight decline of the Black American JQI, by 2.5 points between 2007 and 2020, is explained in Table 3. We can aggregate the 175 industrial sectors into 16

Super Sectors, which we call the Super 16 Sectors (see Appendix 1 for a full list of industrial sectors and Super 16 Sectors). The Super 16 Sectors are a more familiar, intuitive categorization of industries.

Black employment, like U.S. employment as a whole, rose in many sectors in those years. But Black job growth was concentrated in the sectors in Table 3, and this dragged Black American JQI down further as those are low-wage sectors. For example, the Retail Trade sector paid a weekly wage of $434 in 2020, 22% below the national average, and Black jobs increased by 15.2% in that sector in the last 13 years. These changes demonstrate that rising employment is not on its own sufficient to lift living standards for Black workers and their families. On the contrary, rapidly rising employment in low-quality sectors can actually widen racial disparities because certain groups are over-represented in high-quality sectors while other groups are overrepresented in low-quality sectors.

**Table 3: Black American Employment Changes 2007-2020, Selected Super 16 Sectors**

| Super 16 Sector | 2007 | 2020 | Difference | % Change 2007 |
|---|---|---|---|---|
| | (Thousands of Employees) | | | |
| Health Care and Social Assistance | 1481 | 2031 | 550 | 37.2% |
| Transportation, Warehousing, and Utilities | 328 | 655 | 327 | 99.6% |
| Retail Trade | 1417 | 1632 | 216 | 15.2% |
| Accommodation and Food Services | 1154 | 1359 | 205 | 17.8% |

*Source: BLS data; CPA calculations*

## RACIAL DISPARITIES AND SECTORAL JOB DISTRIBUTION

Black Americans are paid less within a sector and Black Americans are more heavily concentrated in low-wage sectors than the U.S. population as a whole. There are many competing explanations for the large differences in income between Black Americans and other ethnic groups in the U.S. A recent Congressional report, *The Economic State of Black America in 2020* (JEC, 2020), identified two reasons—racial discrimination and low levels of unionization—as contributors to this income gap. But the JQI analysis shows that sectoral distribution of jobs is an equally important factor in the lack of racial equity in income.

Table 4 shows the impact of sectoral income differences along with income differences among ethnic groups. In all seven sectors, Black Americans are paid less than the U.S. total population, around 15%-20% less in most cases. However, the differences between the sectors are much larger. For example, the Black weekly income in Transportation Equipment Manufacturing is 47% greater than the average Black weekly income in Employment Services, and more than double that of every other low-quality sector in the table. Indeed, the Black income in Transportation Equipment Manufacturing is more than triple that of General Merchandise Stores.

**Table 4: Weekly Wage (2020) of Selected Sectors for US and Minority Groups**

| | U.S. Workforce (P&NS) | Asian American | Black American | Hispanic American |
|---|---|---|---|---|
| **Average Wage (All P&NS Employees)** | $904 | $952 | $780 | $768 |
| **High-Quality Sectors** | Weekly Wage (Dollars/week) | | | |
| Transportation equipment mfg | $1,212 | $1,098 | $1,052 | $1,047 |
| Hospitals | $1,289 | $1,665 | $1,043 | $1,178 |
| General freight trucking | $1,059 | $971 | $995 | $965 |
| **Low-Quality Sectors** | | | | |
| Employment services | $769 | $896 | $718 | $737 |
| General merchandise stores | $440 | $430 | $344 | $349 |
| Home health care services | $586 | $757 | $474 | $536 |
| Nursing care facilities | $652 | $842 | $527 | $596 |

*Source: BLS data; CPA calculations*

The changing composition of the U.S. workforce in the years since 2000 hits Black Americans harder than it hits other ethnic groups, in particular whites, because Black Americans are more strongly concentrated among the 64% of the U.S. workforce that does not have a four-year college degree. For workers without four-year degrees, the traditional route to a middle-class income has been the manufacturing sector. That sector's abrupt decline, which began in the 1980s but accelerated after 2000, has forced these workers to look elsewhere for employment. Unfortunately, the service sectors where jobs have grown most rapidly in this century pay well below manufacturing wages. Table 5 illustrates this effect for all nonsupervisory workers. We use 2019 data because the 2020 data is distorted by the pandemic layoffs.

Since 2007, employment in the Durable Manufacturing sector has declined by 11%. This sector offers a weekly wage well above the national average. Those jobs have declined under the onslaught of import competition. At the same time, employment has risen strongly in Health Care and Social Assistance, Education Services, and Accommodation and Food Services. All three of those sectors grew by more than 20% and each now numbers more than 12 million nonsupervisory workers. Yet all those sectors deliver average weekly pay below the national average. To take the most graphic example, a worker losing their job in durable manufacturing and moving to an average job in Accommodation and Food Services would suffer a pay cut of 61%.

For Black Americans, the effects of the drying up of high-paid manufacturing jobs are even more severe, because certain sectors of durable goods manufacturing have traditionally been a route to middle-class incomes and lifestyles. Our findings are similar to those of economist Chinhui Juhn, who found as early as 1991 that wage inequality in the U.S. economy was increasing due to a higher premium awarded to high-paid workers and wage declines for lower-paid workers (Juhn,

Murphy, Pierce, 1991). This finding was used by economist William Rodgers III to explain the pay disadvantages for Black workers—"…growing earnings inequality that disadvantaged all less-skilled workers contributed to racial inequality's widening," Rodgers wrote in 2019 (Rodgers, 2019).

The evidence suggests that imports are the root driver of this growing inequality. The ability to offshore production to low-wage countries in Asia, Latin America, and elsewhere has put less skilled workers into direct competition with those workers in a way that was previously impossible. Several major developments combined to reduce employment and wages in all internationally tradable U.S. industries. These include: the development of the container ship (which brought down international shipping costs); the rise of globalization (which gave multinationals an impetus to offshore U.S. production), and the entry of China into global markets—with the Chinese Communist Party's unique state-capitalist formula for promoting exports utilizing rampant intellectual property theft, pervasive billion-dollar state subsidies to export industries, and forced labor.

**Table 5: Black American Employment and Weekly Wages, Super 16 Sectors**

| Super 16 Sectors | No. Employees 2019 (Thousands) | Share of Total (%) | % Change, No. Employees since 2007 (%) | Weekly Wages 2019 ($/week) |
|---|---|---|---|---|
| Mining and Logging | 515 | 0.5 | -8 | 1,350 |
| Information | 2,314 | 2.2 | -4 | 1,185 |
| Finance and Insurance | 5,007 | 4.8 | 8 | 1,173 |
| Construction | 5,512 | 5.3 | -3 | 1,138 |
| Transportation, Warehousing, and Utilities | 5,148 | 4.9 | 25 | 1,043 |
| Professional and Business Services | 17,056 | 16.2 | 17 | 1,004 |
| Wholesale Trade | 4,754 | 4.5 | -3 | 978 |
| Durable Goods Manufacturing | 5,540 | 5.3 | -11 | 952 |
| Nondurable Goods Manufacturing | 3,171 | 3.0 | -6 | 890 |
| Real Estate and Rental and Leasing | 1,482 | 1.4 | 12 | 866 |
| Educational Services | 3,257 | 3.1 | 28 | 722 |
| Health Care and Social Assistance | 18,233 | 17.4 | 30 | 695 |
| Other Services | 4,889 | 4.7 | 6 | 687 |
| Arts, Entertainment, and Recreation | 2,131 | 2.0 | 25 | 602 |
| Retail Trade | 13,359 | 12.7 | 0 | 512 |
| Accommodation and Food Services | 12,609 | 12.0 | 23 | 370 |

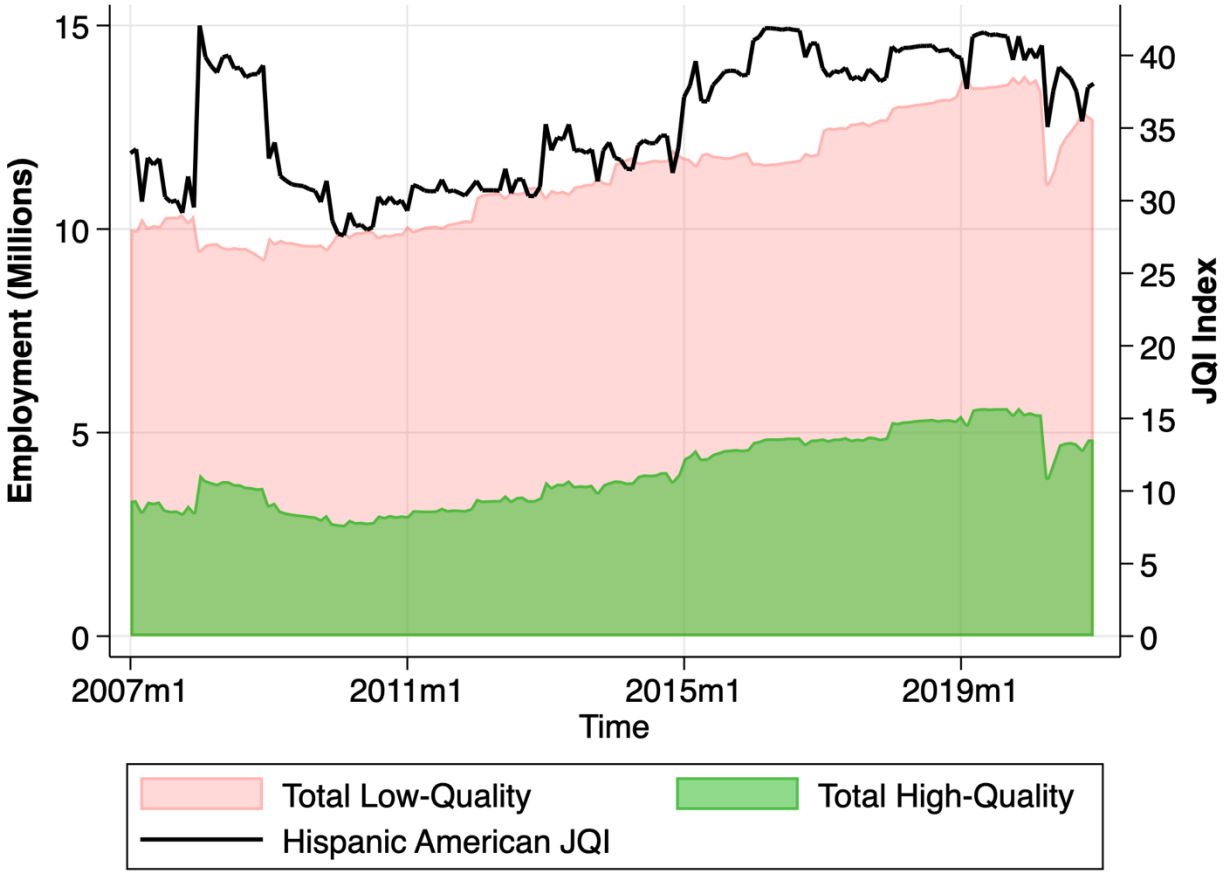
*Source: BLS data; CPA calculations*

## THE HISPANIC AMERICAN JQI

The number of Hispanic American employees increased by 31% to 17.5 million between 2007 and 2020, representing 18% of the total workforce in 2020. The Hispanic American JQI was just 29.5 in 2007, below the Black American JQI. However, by 2020, the Hispanic American JQI had risen to 38.1 with 4.8 million Hispanic Americans in high-quality jobs (28%) and 12.7 million in low-quality employment (72%).

**Like the Black non-supervisory workforce, Hispanics have more than double the number of low-quality jobs than high-quality jobs.**

**Figure 4. Hispanic American Jobs, High and Low Quality, 2007-2020**




*Source: BLS data; CPA calculations*

Despite the increase in the Hispanic American JQI, the number is still 42 points lower than the U.S. JQI. The lower Hispanic American JQI stems from the relatively large share of Hispanic

employment in low quality sectors. For instance, Table 6 below shows that Hispanic Americans comprise 18% of the population, but they are over-represented in the full-service restaurant industry (28%) and building service jobs (42%).

While low-quality jobs dominate Hispanic employment, Hispanic Americans also tend to have high-quality construction jobs, though this is not enough to offset the larger share of low-quality jobs. Further, while the average weekly wage for Hispanic Americans is $768, they tend to earn a large amount more in high-quality sectors (over $1,000) and well below in low-quality sectors (roughly $300), indicating a large wage inequality within the Hispanic group.

**Overall, the large share of low-quality service jobs occupied by Hispanic Americans is a main driver in the disparity between the U.S. JQI and Hispanic American JQI.**

Recall that the Hispanic American JQI has increased by 30% since 2007. The main drivers of this change come from increases in high-quality health care, construction, transportation, and business service jobs. Aside from service sector jobs, Hispanic Americans also saw a net decline of high-quality manufacturing jobs since 2007 (not shown).

**Table 6: Hispanic American Employment 2020, Total and Selected Sectors**

| | Hispanic Employment 2020 (Thousands) | Share of Total Workforce (%) | Average Hispanic Wage Dollars/week |
|---|---|---|---|
| **Total Hispanic Employment (P&NS)** | 17,531 | 18% | $768 |
| **High-Quality Sectors** | | Share of High Industry | |
| Construction-Building contractors | 509 | 30% | $1,054 |
| Hospitals | 503 | 11% | $1,178 |
| General freight trucking | 204 | 23% | $965 |
| **Low-Quality Sectors** | | Share of Low Industry | |
| Full-service restaurants | 1048 | 28% | $342 |
| Services to buildings & dwellings | 755 | 42% | $557 |
| General merchandise stores | 550 | 19% | $349 |
| Warehousing and storage | 436 | 34% | $667 |

*Source: BLS data; CPA calculations*

**Table 7: Hispanic American Employment Growth 2007-2020, Selected Super 16 Sectors**

| Super 16 Sector | 2007 | 2020 | Change | % Change 2007 |
|---|---|---|---|---|
| | | (Thousands) | | |
| Health Care and Social Assistance | 554 | 1008 | 453 | 81.8% |
| Construction | 860 | 1260 | 401 | 46.6% |
| Transportation, Warehousing, and Utilities | 54 | 423 | 370 | 689.2% |
| Professional and Business Services | 503 | 747 | 244 | 48.6% |

*Source: BLS data; CPA calculations*

## THE ASIAN AMERICAN JQI

The total of Asian American nonsupervisory jobs has increased sharply by 33%, from 4.6 million in 2007 to 6.1 million in 2020, representing 6% of the total workforce. In 2020, Asian Americans held a JQI of 158.3, with 3.7 million high-quality jobs (61%) and 2.4 million low quality jobs (39%).

**With more high-quality jobs than low-quality, Asian-Americans had a JQI well above 100, a distinction no other minority nor the total U.S. working population can claim**.

The Asian American JQI is 97% larger than the U.S. JQI. The relatively high Asian American JQI reflects the group's higher share of high-quality service jobs relative to their share of the population (6%), particularly in hospitals (9%) and technology/computer service sector jobs (23%).

Since 2007 the Asian American JQI has been higher than the U.S. JQI. Despite a relatively high initial JQI, the Asian American JQI rose further, reaching 158.3 in 2020. Asian Americans have had a better job quality experience than the average American for the past 13 years and have done so at an increasing rate. The main sectoral drivers of the change in the Asian American JQI are the same sectors that comprise the largest share of high-quality Asian jobs: computer design services and hospital jobs.

**Figure 5: Asian American Employment, High and Low Quality, 2007-2020**

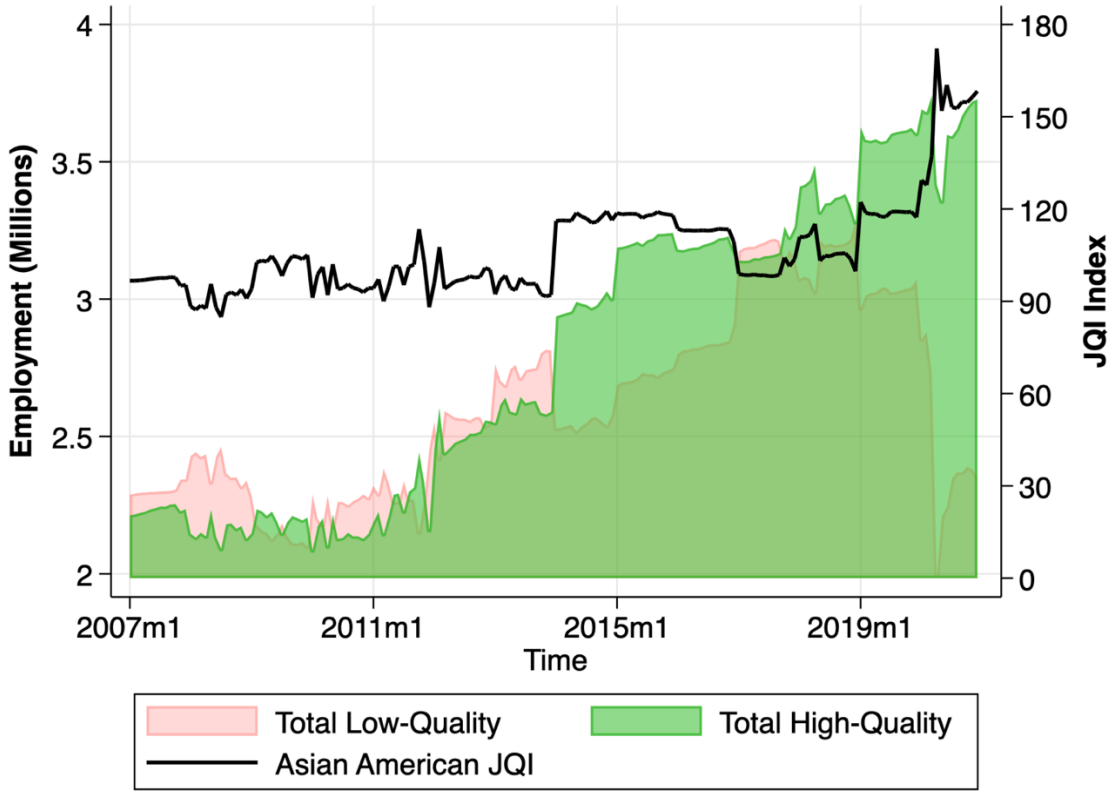



**Table 8: Asian American Employment 2020, Total and Selected Sectors**

| | Asian Employment 2020 (Thousands) | Share of Total Workforce (%) | Average Asian Wage Dollars/ week |
|---|---|---|---|
| **Total Asian Employment (P&NS)** | 6,081 | 6% | $952 |
| **High-Quality Sectors** | | Share of High Industry | |
| Hospitals | 412 | 9% | $1,665 |
| Computer services | 405 | 23% | $2,039 |
| Computer & electronic manufacturing | 146 | 23% | $940 |
| **Low-Quality Sectors** | | Share of Low Industry | |
| Full-service restaurants | 257 | 7% | $390 |
| Individual and family services | 134 | 6% | $632 |
| General merchandise stores | 132 | 5% | $430 |
| Traveler accommodation | 97 | 9% | $438 |

*Source: BLS data; CPA calculations*

The over-representation of Asian Americans in some high-quality sectors and some low-quality sectors helps to explain another phenomenon: rising inequality within the Asian American community. A Pew Research study in 2018 found that Asian Americans had the highest level of income inequality in the U.S., surpassing Black Americans who were previously the most unequal group (Kocchar, Cilluffo, 2018). The Pew study used the 90/10 ratio to measure inequality. This measure compares the income level of those at the 90$^{th}$ percentile to those at the 10$^{th}$ percentile. Asian Americans in 2016 had a ratio of 10.7, based on income of $133,529 for 90$^{th}$ percentile Asian Americans, and $12,478 for their 10$^{th}$ percentile counterparts. For all Americans, the ratio was 8.7, based on $117,986 for the 90$^{th}$ and $15,094 for the 10$^{th}$ percentile.

The Pew researchers attributed Asian American inequality to differing waves of immigration: Asian immigration before 1990 was dominated by "push" immigration, as a broad range of immigrants, many of them low-skilled, fled politically volatile countries such as Vietnam. After 1990, immigration laws were changed to encourage the "pull" immigration of high-skilled Asian immigrants, many of them in the high-paid U.S. technology industry. The JQI sectoral analysis shows that Asian Americans are over-represented in both high-quality and low-quality sectors, as in Table 8 above. The problem for the U.S. economy is, in Pew's words, "the standard of living of lower-income Asians stagnated from 1970 to 2016." The stagnation was not just among Asian Americans, it extended to all ethnic groups and the U.S. as a whole. The fundamental driver of the widening inequality among all ethnic groups and Americans as a whole has been increased international competition for low-skilled workers from low-wage nations.

## CONCLUSION

Comparison of the four JQIs, for the total U.S. nonsupervisory workforce, and the Black, Hispanic, and Asian American minorities, graphically shows the importance of the sectoral composition of the U.S. economy for incomes and living standards. The above-25% growth rate in low-quality sectors like Health Care and Social Assistance or Accommodation and Food Services (see Table 5) explains why U.S. job quality for the typical worker has suffered even as job quantity has risen and the real income of the top 10% has risen.

Manufacturing employment has fallen by 11% in Durable Goods Manufacturing and 6% in Nondurable Goods Manufacturing. (Both of those percentage declines would double if we used a starting point 10 years before 2007, the period where this data set begins). The decline in manufacturing has led to the loss of millions of high-paying, good-quality jobs. The decline in manufacturing was not an accident nor was it inevitable. It was the result of a number of policy mistakes, including free trade agreements like NAFTA and the admission of China into the WTO

which, combined with growing emphasis on short-term returns for public companies, led to widespread offshoring of U.S. jobs. The persistent overvaluation of the dollar has been a further challenge hastening the deindustrialization of the U.S.

Considering the growing gap between high-quality and low-quality jobs, it appears more important than ever been before in American history to gain a high-quality sector jobs, or failing that, enable one's children to get into a high-quality job sector. Education is often seen as the best route into better jobs. Table 8 illustrates the large difference between college enrollment rates among different ethnic groups. Asian Americans 'surprisingly high JQI score is likely largely due to their strong focus on educational attainment.

**Table 9: College Enrollment Rates of Recent U.S. High School Graduates Aged 16-24**

| Year | Total | White | Black | Asian | Hispanic |
|---|---|---|---|---|---|
| 2019 | 66.2 | 66.9 | 50.7 | 89.9 | 63.4 |

*Source: BLS data; CPA calculations*

But from a U.S. policy perspective, there are other constraints on equitable growth in U.S. living standards. In a globalized world, many high-paying jobs are limited by global competition. Black Americans have suffered from the decline in U.S. auto production. Hispanic Americans have suffered from the downward pressure on food manufacturing incomes. Independent business owners (including a growing number in minority groups) have suffered from downward pressure on prices in internationally competitive industries. All of these pressures have been exacerbated by the unfair tactics practiced by many of America's trading partners, and the widespread view in foreign countries that the U.S. market is a soft target for imports—be it excess steel from a Russian mill or cheap toys and apparel made by forced labor in China.

The Biden administration has promised to raise the pay of low-quality jobs through a variety of measures, including raising the minimum wage, increasing the child tax credit, and increasing redistribution through the income tax system. These measures may succeed to some extent, but all suffer from the problem that redistribution harms some and helps others. Typically, voters rebel against such measures before they can go too far.

A better and more fundamental solution is to raise the share of high-quality jobs in the economy by reclaiming the high-quality sectors that have been lost to foreign producers. This has the double benefit of restoring high-quality jobs here immediately. In addition, the high-quality sectors tend to be in high-growth industries, so increasing high-quality jobs today will lead to a faster economic growth rate tomorrow, thus increasing the size of the total pie. In the long run, this facilitates redistribution to poorer sections of society. More important it increases opportunity for poorer, disadvantaged workers to find high-quality jobs. Finally, the upward pressure of more high-quality jobs will actually raise the pay of other sectors over time. This composition by industrial sector is crucial to the health and growth of a mature economy like the U.S.

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# APPENDIX I. INDUSTRIAL SECTORS AND SUPER 16 SECTORS

The BLS Establishment Survey breaks private sector employment into 175 industrial sectors. These sectors are also aggregated into 16 "super-sectors" for easy economy-wide comparison. Sectors are listed here.

| Super 16 Sectors | Complete list of industrial sectors (175) |
|---|---|
| Accommodation and Food Services | Cafeterias, grill buffets, and buffets |
| Accommodation and Food Services | Drinking places, alcoholic beverages |
| Accommodation and Food Services | Full-service restaurants |
| Accommodation and Food Services | Limited-service restaurants |
| Accommodation and Food Services | RV parks and recreational camps |
| Accommodation and Food Services | Snack and nonalcoholic beverage bars |
| Accommodation and Food Services | Special food services |
| Accommodation and Food Services | Traveler accommodation |
| Arts, Entertainment, and Recreation | Agents, promoters & managers of arts, sports, & similar events |
| Arts, Entertainment, and Recreation | Amusements, gambling, and recreation industries |
| Arts, Entertainment, and Recreation | Independent artists, writers, and performers |
| Arts, Entertainment, and Recreation | Museums, historical sites, and similar institutions |
| Arts, Entertainment, and Recreation | Performing arts companies |
| Arts, Entertainment, and Recreation | Spectator sports |
| Construction | Building equipment contractors |
| Construction | Building finishing contractors |
| Construction | Building foundation and exterior contractors |
| Construction | Highway, street, & bridge construction |
| Construction | Nonresidential building construction |
| Construction | Other specialty construction trade contractors |
| Construction | Residential building construction |
| Construction | Utility system construction |
| Durable Goods Manufacturing | Agricultural, construction & mining machinery manufacturing |
| Durable Goods Manufacturing | Commercial & service industry machinery manufacturing |
| Durable Goods Manufacturing | Computer & electronic manufacturing |
| Durable Goods Manufacturing | Electrical & appliance manufacturing |
| Durable Goods Manufacturing | Engine, turbine & power transmission equipment manufacturing |
| Durable Goods Manufacturing | Fabricated metal manufacturing |
| Durable Goods Manufacturing | Furniture manufacturing |
| Durable Goods Manufacturing | HVAC & commercial refrigeration machinery manufacturing |
| Durable Goods Manufacturing | Industrial machinery manufacturing |
| Durable Goods Manufacturing | Medical equipment & supplies manufacturing |
| Durable Goods Manufacturing | Metalworking machinery manufacturing |
| Durable Goods Manufacturing | Nonmetallic mineral manufacturing |

| | |
|---|---|
| Durable Goods Manufacturing | Other general-purpose machinery manufacturing |
| Durable Goods Manufacturing | Other misc. manufacturing |
| Durable Goods Manufacturing | Other wood product manufacturing |
| Durable Goods Manufacturing | Plywood & engineered wood manufacturing |
| Durable Goods Manufacturing | Primary metal manufacturing |
| Durable Goods Manufacturing | Sawmill & wood preservation manufacturing |
| Durable Goods Manufacturing | Transportation equipment manufacturing |
| Educational Services | Education |
| Finance and Insurance | Activities related to credit intermediation |
| Finance and Insurance | Depository credit intermediation |
| Finance and Insurance | Insurance agencies, brokerages, and related services |
| Finance and Insurance | Insurance carriers |
| Finance and Insurance | Non-depository credit intermediation |
| Finance and Insurance | Other financial investment activities, including funds and trusts |
| Finance and Insurance | Securities, commodity contracts, brokerage & exchanges |
| Health Care and Social Assistance | Child day care services |
| Health Care and Social Assistance | Community care facilities for the elderly |
| Health Care and Social Assistance | Emergency and other relief services |
| Health Care and Social Assistance | Home health care services |
| Health Care and Social Assistance | Hospitals |
| Health Care and Social Assistance | Individual and family services |
| Health Care and Social Assistance | Medical and diagnostic laboratories |
| Health Care and Social Assistance | Nursing care facilities |
| Health Care and Social Assistance | Offices of dentists |
| Health Care and Social Assistance | Offices of other health practitioners |
| Health Care and Social Assistance | Offices of physicians |
| Health Care and Social Assistance | Other ambulatory health care services |
| Health Care and Social Assistance | Other residential care facilities |
| Health Care and Social Assistance | Outpatient care centers |
| Health Care and Social Assistance | Residential mental health facilities |
| Health Care and Social Assistance | Vocational rehabilitation services |
| Information | Broadcasting excluding Internet |
| Information | Data processing, hosting & related services |
| Information | Motion picture & sound recording industries |
| Information | Other information services |
| Information | Publishing Excluding Internet |
| Information | Telecommunications services |
| Mining and Logging | Logging |
| Mining and Logging | Mining, except oil and gas |
| Mining and Logging | Oil and gas extraction |
| Mining and Logging | Support activities for mining |

| | |
|---|---|
| Nondurable Goods Manufacturing | Apparel manufacturing |
| Nondurable Goods Manufacturing | Chemical manufacturing |
| Nondurable Goods Manufacturing | Food manufacturing |
| Nondurable Goods Manufacturing | Misc. nondurable manufacturing |
| Nondurable Goods Manufacturing | Petroleum & coal product manufacturing |
| Nondurable Goods Manufacturing | Plastic product manufacturing |
| Nondurable Goods Manufacturing | Printing & related manufacturing |
| Nondurable Goods Manufacturing | Rubber product manufacturing |
| Nondurable Goods Manufacturing | Textile mill manufacturing |
| Nondurable Goods Manufacturing | Textile product mill manufacturing |
| Other Services | Auto repair & maintenance services |
| Other Services | Commercial machinery repair & maintenance services |
| Other Services | Death care services |
| Other Services | Dry-cleaning and laundry services |
| Other Services | Electronic equipment repair & maintenance services |
| Other Services | Household goods repair & maintenance services |
| Other Services | Membership associations & organizations |
| Other Services | Other personal services |
| Other Services | Personal care services |
| Professional and Business Services | Accounting and bookkeeping services |
| Professional and Business Services | Advertising & related services |
| Professional and Business Services | Architectural and engineering services |
| Professional and Business Services | Business support services |
| Professional and Business Services | Computer systems design & related services |
| Professional and Business Services | Employment services |
| Professional and Business Services | Facilities support services |
| Professional and Business Services | Investigation & security services |
| Professional and Business Services | Legal services |
| Professional and Business Services | Management & technical consulting services |
| Professional and Business Services | Management of companies & enterprises |
| Professional and Business Services | Office administrative services |
| Professional and Business Services | Other professional and technical services |
| Professional and Business Services | Other support services |
| Professional and Business Services | Scientific research & development services |
| Professional and Business Services | Services to buildings & dwellings |
| Professional and Business Services | Specialized design services |
| Professional and Business Services | Travel arrangement & reservation services |
| Real Estate and Rental and Leasing | Activities related to real estate |
| Real Estate and Rental and Leasing | General rental centers |
| Real Estate and Rental and Leasing | Lessors of real estate |
| Real Estate and Rental and Leasing | Machinery and equipment rental and leasing |

| | |
|---|---|
| Real Estate and Rental and Leasing | Offices of real estate agents and brokers |
| Retail Trade | Auto parts, accessories, & tire stores |
| Retail Trade | Automobile dealers |
| Retail Trade | Beer, wine, and liquor stores |
| Retail Trade | Book stores & news dealers |
| Retail Trade | Building material and supplies dealers |
| Retail Trade | Clothing stores |
| Retail Trade | Florists |
| Retail Trade | Furniture stores |
| Retail Trade | Gasoline stations |
| Retail Trade | General merchandise stores |
| Retail Trade | Grocery stores |
| Retail Trade | Home furnishings stores |
| Retail Trade | Jewelry, luggage, & leather goods stores |
| Retail Trade | Lawn and garden equipment and supplies stores |
| Retail Trade | Non-store retailers |
| Retail Trade | Office supplies, stationery, & gift stores |
| Retail Trade | Other miscellaneous store retailers |
| Retail Trade | Other motor vehicle dealers |
| Retail Trade | Retail electronics & appliance |
| Retail Trade | Retail health & personal care |
| Retail Trade | Shoe stores |
| Retail Trade | Specialty food stores |
| Retail Trade | Sporting goods & musical instrument stores |
| Retail Trade | Used merchandise stores |
| Transportation, Warehousing, and Utilities | Air transportation |
| Transportation, Warehousing, and Utilities | Courier and messenger services |
| Transportation, Warehousing, and Utilities | Freight transportation arrangement |
| Transportation, Warehousing, and Utilities | General freight trucking |
| Transportation, Warehousing, and Utilities | Natural gas distribution |
| Transportation, Warehousing, and Utilities | Pipeline transportation |
| Transportation, Warehousing, and Utilities | Power generation and supply |
| Transportation, Warehousing, and Utilities | Specialized freight trucking |
| Transportation, Warehousing, and Utilities | Support activities for air transportation |
| Transportation, Warehousing, and Utilities | Support activities for other transportation, including rail |
| Transportation, Warehousing, and Utilities | Support activities for road transportation |
| Transportation, Warehousing, and Utilities | Support activities for water transportation |
| Transportation, Warehousing, and Utilities | Transit and ground passenger transportation |
| Transportation, Warehousing, and Utilities | Warehousing and storage |
| Transportation, Warehousing, and Utilities | Water, sewage and other systems |
| Wholesale Trade | Alcoholic beverage wholesalers |

| | |
|---|---|
| Wholesale Trade | Apparel & piece goods wholesalers |
| Wholesale Trade | Chemical merchant wholesalers |
| Wholesale Trade | Commercial equipment wholesalers |
| Wholesale Trade | Druggist goods wholesalers |
| Wholesale Trade | Electric goods wholesalers |
| Wholesale Trade | Farm product raw material wholesalers |
| Wholesale Trade | Furniture wholesalers |
| Wholesale Trade | Grocery & related wholesalers |
| Wholesale Trade | Hardware & plumbing wholesalers |
| Wholesale Trade | Lumber & construction supplies wholesalers |
| Wholesale Trade | Machinery, equipment & suppliers wholesalers |
| Wholesale Trade | Merchant wholesalers, misc. durable goods |
| Wholesale Trade | Metal & mineral wholesalers |
| Wholesale Trade | Misc. nondurable goods wholesalers |
| Wholesale Trade | Motor vehicles & parts wholesalers |
| Wholesale Trade | Paper & paper products wholesalers |
| Wholesale Trade | Petroleum wholesalers |
| Wholesale Trade | Wholesale electronic agents & brokers |

# APPENDIX II. METHODOLOGY

The Job Quality Index (JQI) is a measure of the difference between high and low earning jobs in manufacturing industries. The JQI covers 175 industry codes and spans 13 years. The JQI is the ratio of the number of high to low paying jobs calculated by each month *(m)* of the year *(y)*:

$$JQI_{m,y} = \frac{High_{m,y}}{Low_{m,y}} * 100$$

The number of high and low paying jobs are separated by a threshold. For instance, for each sector *(s)*, the number of high paying jobs is determined by the decision:

$$High_{s,m,y} = \begin{cases} Employment_{s,m,y} & WeeklyWages_{s,m,y} \geq AverageWage_{m,y} \\ 0 & else \end{cases}$$

The number of low paying jobs is similarly determined:

$$Low_{s,m,y} = \begin{cases} Employment_{s,m,y} & WeeklyWages_{s,m,y} < AverageWage_{m,y} \\ 0 & else \end{cases}$$

For each time period, weekly wages are provided as the product of:

$$WeeklyWages_{s,m,y} = Hours_{s,m,y} * Wages_{s,m,y}$$

Total earnings is defined as the sum of earnings (wages*employment) calculated by sector and aggregated for each year and month period:

$$Total\ Earnings_{m,y} = \sum_{s=1}^{175} WeeklyWages_{s,m,y} * Employment_{s,m,y}$$

The threshold is the average wage, which is a changing value that depends on the wages in each month-year period. Specifically, the threshold is the ratio of the sum of total earnings for a month-year period divided by the sum of all employment.

$$AverageWage_{m,y} = \frac{Total\ Earnings_{m,y}}{\sum Employment_{s,m,y}}$$

Next consider the formula to calculate the JQI by a sub-group, such as race or gender. While the formula for computing the sub-group JQI doesn't change, we use group specific values (*Minority)* to replace the standard inputs for wages and employment.

For the minority wage, we adjust regular wages by a relative wage rate:

$$WeeklyWages_{s,m,y}^{Minority} = Hours_{s,m,y} * Wages_{s,m,y}(1 + RelativeWage_{m,y})$$

Total earnings for the minority group used to compute the JQI is:

$$Total\ Earnings_{m,y}^{Minority} = \sum_{s=1}^{175} WeeklyWages_{s,m,y}^{Minority} * Employment_{s,m,y}^{Minority}$$

The average wage used to determine the share of high and low sector jobs is the same average wage calculated above. The number of high and low minority jobs are divided by the decision:

$$High_{s,m,y}^{Minority} = \begin{cases} Employment_{s,m,y}^{Minority} & WeeklyWages_{s,m,y}^{Minority} \geq AverageWage_{m,y} \\ 0 & else \end{cases}$$

The number of low paying jobs is similarly determined:

$$Low_{s,m,y}^{Minority} = \begin{cases} Employment_{s,m,y}^{Minority} & WeeklyWages_{s,m,y}^{Minority} < AverageWage_{m,y} \\ 0 & else \end{cases}$$