EMPOWERING AMERICAN CITIES

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Manufacturing Myth-Busters

Myth 1: Manufacturing Doesn't Fit in a Forward-Looking Economy

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When we economists travel around the U.S. with the Empowering American Cities project sharing our research on local economies, audiences are sometimes surprised at the weight we place on the Manufacturing sector. Why are audiences surprised when we extol the virtues of manufacturing? We often encounter a pervasive public narrative about American manufacturing that is largely untrue. **As believers in the potential of the Manufacturing sector, we challenge the myths that have led many to overlook the sector's value and its opportunity to contribute to a regional economy's prosperity.**

This is the first in a series of three "Myth-Busters" challenging negative perceptions of U.S. manufacturing.

Manufacturing: Old Economy vs. New Economy

Among the misperceptions of manufacturing is the belief that manufacturing jobs are mired in the past: uncompetitive pay, dirty physical labor and 19th-century technology. Many manufacturing jobs today are "new economy" roles, such as computer numerical control machinery, robotics and additive manufacturing (3D printing), that are either directly involved in tech manufacturing or harnessing technology in traditional goods-producing industries.

Aside from technology's growing role in traditional manufacturing subsectors such as automobile production, tech manufacturing itself occupies an increasingly large share of overall U.S. manufacturing employment. Some of this growth is in response to bipartisan policy incentives. The CHIPS Act of 2022, for example, specifically supports semiconductor manufacturing, while separate policies encourage electric vehicle battery production among other "new economy" jobs.

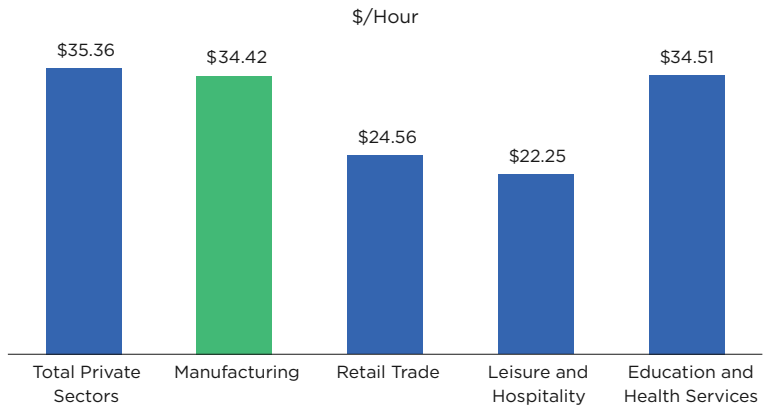
Even the subsectors less tied to technology, either directly or indirectly, should not be dismissed as antiquated, as these industries can also offer competitive employment and economic advantages.

Manufacturing and Regional Economic Output

As might be expected in roles that require technical skills, manufacturing jobs offer pay above the levels of the service sector. According to the Bureau of Labor Statistics, the average hourly wage of all employees in the

Manufacturing sector is $34.42, handily exceeding many service sector roles like retail trade ($24.56) and Leisure and Hospitality ($22.25) and competitive with fields like Education and Health Services ($34.51). Like all sectors, Manufacturing encompasses jobs offering a wide range of pay, but the averages speak to highly competitive career paths. This is particularly true with subsectors like semiconductor and aircraft manufacturing, in which average hourly wages exceed $50. Such compensation is particularly attractive for those who do not view a traditional four-year college degree as a good fit or a wise investment of time and capital.

Average Hourly Earnings in the U.S., 2024



Source:Bureau of Labor Statistics

Moreover, technology-oriented areas offering high pay are growing rapidly, meaning that manufacturing in the U.S. is increasingly composed of high-tech, high-wage industries. Over the past decade, the number of employees in Manufacturing's three highest-paying subsectors increased by over 11%, while the number employed in the lowest-paying subsectors shrunk by 11%.

Key to understanding the contributions of any sector is the concept of productivity, measured as the economic output per worker or per hour worked (Empowering American Cities uses the former definition). Given a finite workforce in any Extended Metropolitan Area (EMA) at a point in time, the EMA outperforms economically when more of the workers are employed in highly productive industries. Not only is the output per worker greater in highly productive sectors, but jobs in these sectors tend to pay workers more, broadly strengthening regional economies through greater consumption. Among the 10 major sectors in the U.S. economy, Manufacturing ranks third in productivity. It is one of four sectors that "punches above its weight" on a national level, meaning that Manufacturing's share of employment produces a disproportionately large piece of the nation's gross domestic product.

Beyond those directly employed in manufacturing, the sector's expansion boosts the economy in many other ways, a phenomenon economists call the "multiplier effect." This is a measure of the ripple effects that manufacturing generates by, for instance, creating new supplier jobs or by raising average wages, which bolsters the economy through consumption. In terms of employment effects, Manufacturing has among the highest multipliers of any sector. According to the Economic Policy Institute, every manufacturing job generates more than five jobs elsewhere in the economy, and for every position filled manufacturing durable goods, which includes items like aircraft, vehicles and household appliances, more than seven jobs are created in other sectors.

Manufacturing's employment impact contrasts favorably to the multiplier effect in other areas, such as retail trade, which generates only 1.2 additional jobs. The Manufacturing sector also boasts strong economic multipliers, defined as the GDP impact of every dollar of value added in the manufacturing process. According to the

National Association of Manufacturers, every dollar spent in manufacturing produces a total impact of $2.69 to the overall economy.

A Diverse, Urban American Workforce

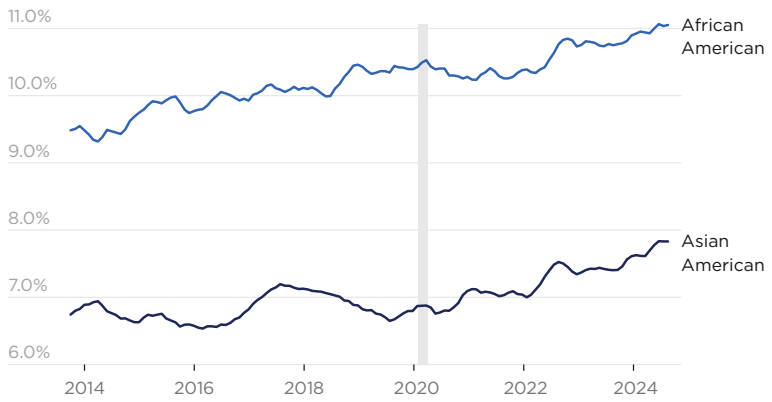
A common criticism of manufacturing is that it generates employment opportunities for only a narrow slice of the U.S. population. It is true that manufacturing plays a disproportionately large role in rural employment, with some 2.6 million rural employees in 2019, according to the Manufacturing Institute, the National Association of Manufacturers' workforce development and education affiliate. The bulk of manufacturing labor, however, is found in and adjacent to urban settings.

Our work defining economically connected counties in EMAs shows that many rural counties are very much part of the economic ecosystem of cities. In other words, rural does not mean isolated. Still, as the U.S. working-age population shifts away from rural areas, urban manufacturers report greater access to talent. It is reasonable to expect that the industry will follow the demographic shift toward more densely populated locations.

In measures of workforce diversity, manufacturing has made enormous strides, according to 2024 Bureau of Labor Statistics data. African Americans now represent over 11% of the industry's workforce, up by nearly 2 percentage points in the past 10 years. Asian American representation in the sector has grown by almost 3 percentage points over the past 20 years, and manufacturing's labor force now includes a larger share of Asian Americans than the group's share of the U.S. population. Meanwhile, the share of Hispanic workers has grown to be roughly in line with their portion of the population.

Share of Workers in Manufacturing Industry

12-month average



Shaded areas indicate U.S. recessions.

Source:Bureau of Labor Statistics

It is true that the field is male dominated, but even in this area there has been change. Women make up just under 30% of the manufacturing workforce, and the sector is trying to grow that number. The Manufacturing Institute launched its 35x30 initiative in 2022, an endeavor to raise the female participation in the sector's labor force to 35% by 2030.

Conclusion

Manufacturing is a powerful asset to a diversified regional economy. While the Manufacturing sector tends to be more cyclical and sensitive to global factors than some other sectors, its long-term contributions overcome any short-lived challenges. The ability to create middle-income jobs for a diverse modern workforce, the fact that many of those roles do not require a four-year college degree with associated costs, and the high economic multipliers associated with the sector make Manufacturing an important sector worthy of investment and support.

COMING SOON TO MANUFACTURING MYTH-BUSTERS ...

Myth 2: U.S. Manufacturing Jobs Were Lost Solely To Productivity, Not Trade.

For more information on **Empowering American Cities**, please visit our website.
More reading on manufacturing in the new economy:

Manufacturing: Regional Strengths and Shifts

Electric Vehicles: New Cars, New Regions and New Challenges