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## What Types of Local Job Creation Most Benefit Residents?

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# POLICY BRIEF

## What Types of Local Job Creation Most Benefit Residents?

Timothy J. Bartik

### BRIEF HIGHLIGHTS

- *Local economic development policies that aim to create jobs can have different impacts on residents' earnings, depending on the types of jobs targeted and local economic conditions.*
- *Creating local jobs in midwage occupations (and in the industries where these occupations are often found) can boost the earnings of community residents, particularly those without a bachelor's degree.*
- *If the community already has a high employment rate—a “tight” local labor market—creating jobs in low-wage occupations tends to increase the earnings of workers without a bachelor's degree.*
- *However, creating jobs in high-wage occupations in a tight labor market reduces real earnings of workers without a bachelor's degree, in part by driving up local prices.*
- *Federal, state, and local policymakers should consider how to create more jobs in midwage occupations, as well as how to help residents with less education access higher-wage jobs.*

For additional details, see the full technical report at <https://research.upjohn.org/up-technicalreports/45/>.

Economic development agencies often strive to create jobs in their communities, but it is unclear how the types of jobs created, or local economic conditions, may alter local job creation's effects on the earnings of community residents. My new working paper (Bartik 2022) estimates how the creation of jobs in different occupation groups affects the (inflation-adjusted) earnings of the residents in the community (or local labor market). I divide occupations into three groups based on their wage levels: 1) the low-wage group, which includes many service jobs; 2) the midwage group, which includes many manufacturing jobs; and 3) the high-wage group, which includes many professional jobs.

For the typical local labor market, only job creation of midwage occupations significantly increases the real earnings of local residents. Creation of these midwage jobs yields larger earnings increases for residents without a bachelor's degree than for those with a bachelor's degree.

Creating midwage jobs may especially help residents without a bachelor's degree because these jobs pay relatively well for the required education credentials. Additionally, less-educated workers are less geographically mobile and thus are more sensitive to local job trends.

High-wage jobs also pay well, but their required education credentials make them less accessible to less-educated groups. Low-wage jobs are accessible, but their relatively low pay means they often fail to boost many residents' earnings.

These general patterns change somewhat for “tight” local labor markets—those that already have a high share of their residents employed. For these communities, job creation in low-wage occupations does increase real earnings for residents without a bachelor's degree. In such a tight labor market, growth in low-wage jobs may force up wages and also lead to the hiring of workers who otherwise would not be employed.

However, in tight local labor markets, job creation in high-wage occupations reduces real earnings for residents without a bachelor's degree. These occupations are not readily accessible to less-educated groups, but faster growth in them drives up local prices.

For local economic developers, these results support targeting job creation in industries that have a larger share of employment in midwage occupations. If local employment rates are high, economic developers can also target industries with more low-wage occupations, but if their goal is to lift earnings of residents broadly, they should be more cautious about targeting high-wage industries.

For policymakers at all levels of government, these results suggest the need for varied strategies to increase access to higher-wage jobs. One strategy is to encourage the growth of industries that offer many midwage jobs. But this industrial policy has limits because of economic and technological changes. Therefore, policymakers should also consider education programs to increase access to high-wage occupations, as well as an increased minimum wage and other policies to boost wage standards for what today are low-wage occupations.

## What Types of Local Job Creation Most Benefit Residents?

**Midwage occupations have declined, with jobs shifting to both low-wage and high-wage occupations.**

### Trends in Different Occupational Wage Groups

Occupations can be grouped in many ways, but I follow earlier work by assigning three groups based on wages and education credentials (Autor 2019). Low-wage occupations include jobs in transportation, most construction and mechanic work, and services, including cleaning, personal care, food preparation and serving, and working as health aides. Midwage occupations include production and operative jobs in manufacturing, clerical and administrative-support jobs, and many retail sales jobs (other than cashiers). High-wage occupations include managers and executives, professionals, technicians, and police and firefighters.

To understand how job creation across these occupation groups affects earnings in different communities, I focus on the period from 2000 to 2015–2019. Over this period, the mix of jobs shifted away from midwage occupations and toward low-wage and high-wage occupations, with the national number of jobs in midwage occupations actually declining (Bartik 2022, Table 5). These changes reflect a growing number of managers and professionals within many industries, as well as growth of industries that include many low-wage jobs, such as food service. The decline in midwage jobs occurred both because of a shift away from industries that had many midwage occupations and because of shifts away from midwage and toward high-wage occupations within industries. Manufacturing industries, for example, often include many midwage jobs, and these industries performed poorly during this period. Furthermore, within manufacturing, the share of midwage production and operative jobs tended to decline, while the share of high-wage jobs increased.

### How Occupational-Demand Shifts Affect Local Labor Markets

These occupational trends vary across different local labor markets. I examine 371 “commuting zones” (CZs), which are groups of contiguous counties that include most commuting flows. These 371 CZs include both metro and rural areas, and they encompass 96 percent of the U.S. population.

In this policy brief, I focus on how different shifts in occupational demand affect real earnings of persons aged 25–64 in two education groups: 1) those without a bachelor’s degree and 2) those *with* a bachelor’s degree.<sup>1</sup> My measure of “real earnings” controls not only for overall inflation but also for changes in local prices, as captured by shifts in local housing prices. Thus, it can be thought of as a measure of purchasing power of a local labor market’s workers.

Shifts in occupational demand are captured by changes in the national demand for the area’s specialized “export-base” (or “tradeable”) industries (those that sell their goods and services to a national market), weighted by the share of high-, mid-, and low-wage occupations in each of these industries. (See the paper for details.)

Table 1 summarizes how a shift in a CZ’s demand for different occupational groups affects the real earnings of the CZ’s residents by education between 2000 and 2015–2019.

For a typical CZ, increases in demand for midwage occupations have substantively large effects on the real earnings of CZ residents with less than a bachelor’s degree. Across the 371 CZs, it is common for the midwage occupational demand indicator to vary by 3 percent or more. Such a variation would imply a change in real earnings for workers without a bachelor’s degree of almost 5 percent ( $1.57 \times 3 = 4.7$  percent). The effect on workers with a bachelor’s degree is a little over half this size.

However, in these typical CZs, projected job growth in high-wage and low-wage occupations produces effects on residents’ earnings that cannot statistically be distinguished from zero.

If the CZ instead starts out with a “tight labor market”—a high employment rate, or a high ratio of employment to population—then increased demand for midwage jobs has an even greater earnings effect. For residents with less education, increased demand for low-wage jobs now also increases real earnings by a sizable percentage. More-educated

<sup>1</sup>Bartik (2022) also analyzes employment rates, real earnings, and local price effects.

**In most local labor markets, job creation in midwage occupations is more likely to increase real earnings, especially for workers with less than a bachelor's degree.**

**Table 1 Percentage Effects of Occupational Demand on Real Earnings Growth, 2000 to 2015–2019**

Typical local labor market					
Low-wage		Midwage		High-wage	
< Bachelor's	Bachelor's +	< Bachelor's	Bachelor's +	< Bachelor's	Bachelor's +
NS	NS	1.57	0.88	NS	NS
Tight local labor market					
Low-wage		Midwage		High-wage	
< Bachelor's	Bachelor's +	< Bachelor's	Bachelor's +	< Bachelor's	Bachelor's +
2.74	-0.94	1.79	1.24	-1.86	NS

NOTE: Each estimate shows the impact of a predicted 1 percent increase in overall local jobs from the specified occupation group in a CZ on the percentage change in real annual earnings of that CZ's residents with the specified education level. A "typical" local labor market is one that had the median employment rate, across all 371 CZs, as of 2000. A "tight" local labor market is one that had the 90th percentile employment rate, across all 371 CZs, as of 2000. "NS" means not statistically significantly different from zero.

SOURCE: Author's calculations, Table 13 in Bartik (2022).

workers, though, do not benefit from growth in low-wage occupations. The implication is that when the labor market is already tight, further growth in low-wage jobs may significantly improve employment opportunities, wage rates, and work hours for the less-educated group.

In such a tight labor market, growth in demand for high-wage jobs tends to reduce real earnings of the less-educated group. This may be due in part to a "gentrification effect": such jobs are not accessible to less-educated workers, but they tend to increase local housing prices. (This also may explain why more-educated workers do not see a benefit from increased demand for high-wage jobs: rising housing prices offset their nominal wage gains.)

### Policies to Improve Earnings for Workers without a Bachelor's Degree

Local economic developers cannot directly target job growth by occupation, but they *can* target businesses in industries that have different mixes of low-, mid-, and high-wage occupations.

Figure 1 shows how this could work, based on the 2015–2019 economic situation of two local labor markets: Philadelphia and the Twin Cities (Minneapolis/St. Paul). During this period, Philadelphia had more or less typical employment rates, while the Twin Cities had a tight labor market. Using the occupational mix as of 2015–2019 in different industries, and the tightness of these two areas' labor markets, I project the long-run effects on the earnings of residents without a bachelor's degree from a 1 percent increase in overall employment demand in different industries. (Because these projections are based on the earnings estimates of job growth between 2000 and 2015–2019, described above, the "long run" is about 15–20 years later.)

As the figure shows, job creation in an industry with many midwage jobs, such as fabricated metals manufacturing, increases the real earnings of the less-educated group in both areas.

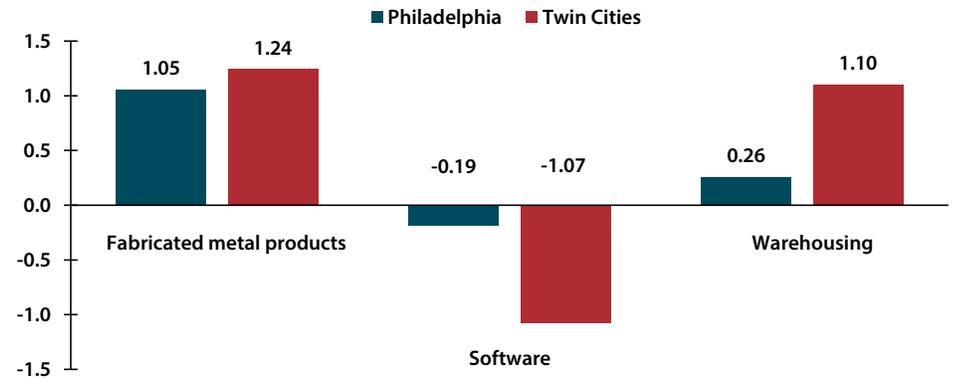
In contrast, effects vary more across local labor markets for industries that include many high-wage jobs, such as software, and industries that include many low-wage jobs, such as warehousing. In local areas where the employment rate is close to the national average, such as Philadelphia, job creation in industries that intensively use high-wage or low-wage occupations produces small earnings impacts for workers without a bachelor's degree. However, in local areas that are already booming, such as the Twin Cities, job creation in low-wage industries like warehousing may pay off for less-educated workers, whereas job creation in high-wage industries (such as software) may hurt less-educated workers.<sup>2</sup>

<sup>2</sup>The data appendix in Bartik (2022) provides similar estimates for each of 112 industries in each of 371 CZs.

## What Types of Local Job Creation Most Benefit Residents?

Policymakers should improve access to higher-wage job opportunities for less-educated workers by targeting job creation toward industries with mid-wage jobs, boosting education and training that prepare workers for high-wage jobs, and adopting policies that raise wages for today's low-wage jobs.

**Figure 1 How a 1% Increase in Overall Job Demand in Three Different Industries Affects Real Earnings of Workers without a Bachelor's Degree, by Selected Local Labor Market**



NOTE: The three industries vary in their respective percentages of low-, mid-, and high-wage occupations: fabricated metals (16, 61, 23); software (1, 18, 81); and warehousing (54, 37, 9). Philadelphia is a “typical” local labor market in having an adjusted employment rate (for the population aged 25–64) of 74.6% in 2015–2019; the Twin Cities are a “tight” local labor market with an employment rate of 80.3%. Bars show the percent real earnings change for workers without a bachelor's degree from a 1% increase in total employment, applied to the specified industry.

SOURCE: Author's calculations, Table 17 of Bartik (2022) and online data appendix.

Nonetheless, industrial policies to create more mid-wage jobs have limitations. After the pandemic, the United States may reshore some manufacturing jobs. Such reshoring could be encouraged by many policies, such as greater provision of services like manufacturing extension or customized training to help small and medium-sized manufacturers become more competitive. But no one thinks that reshoring of U.S. manufacturing will bring back manufacturing's glory days. Furthermore, technological changes are reducing the number of manufacturing production workers needed.

Therefore, policymakers should consider other methods to increase access to higher-wage jobs for less-educated workers. These policies could include education and training investments to help less-educated workers qualify for high-wage occupations. Additionally, policymakers should consider how wages could be improved for today's low-wage jobs. Such approaches could include increasing the minimum wage, easier unionization (Autor, Mindell, and Reynolds 2020), or, more ambitiously, the adoption of government wage boards (Dube 2019).

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