2.7. Washington Economic Factors Analysis

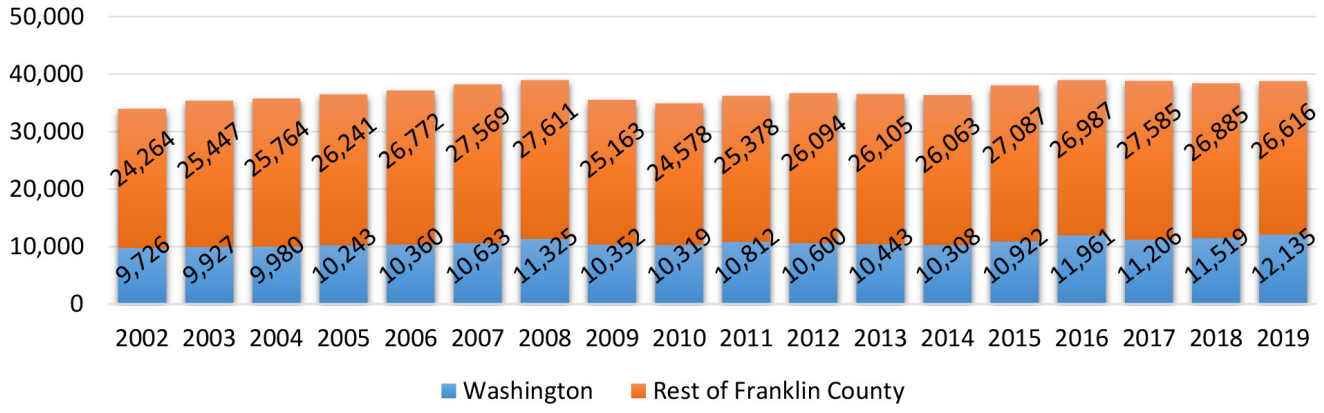
Because of the fact that the broader St. Louis region in declining in population overall, and U.S. population growth is projected to slow and even decline over the next four (4) decades, Washington cannot expect to simply capture a "fair share" of future population growth. To the contrary, Washington's fair share will likely mean a decrease in future population. Therefore, it is important for Washington to strategically-position itself in the St. Louis region's market as one of the region's most desirable places to live, work, and visit.

THE ECONOMY DEFINED BY JOBS IN ECONOMIC SECTORS

The greatest detail and greatest accuracy for local area economic profiles is based on county-level statistics throughout the U.S., including groups of counties such as metropolitan areas. City or municipal-level statistics are less robust but, nevertheless, are available in a database initiated nationally in 2002 with data currently available through 2019[3]. This data is helpful in evaluating Washington's relative position in the metropolitan St. Louis economy.

As shown in **Figure 2.7**, total jobs in Washington increased from 9,726 in 2002 to 12,135 in 2019, a growth rate of about 25 percent over almost two decades. Meanwhile, the rest of Franklin County added not quite ten percent more jobs, causing the county-wide growth to be about 14 percent. Washington is clearly doing very well as an attractor of jobs relative to the county, having captured roughly half of the net additional jobs in the county between 2002 and 2019.

2.7. TOTAL EMPLOYMENT IN WASHINGTON & FRANKLIN COUNTY, 2002-2019
Source: U.S. Census On-the-Map



3. This database, the LEHD (Longitudinal Employer-Household Dynamics) "On-the-Map" series from the U.S. Census Bureau is based on matching home addresses of workers to the addresses of their employers. Apparently, the unusual behavior of "work-from-home" policies during the Covid-19 pandemic period (very early 2020 to, perhaps, as late as the present time) has strained this statistical address-matching substantially. The nation still awaits meaningful On-the-Map data for the post-pandemic period and even for the pandemic period.

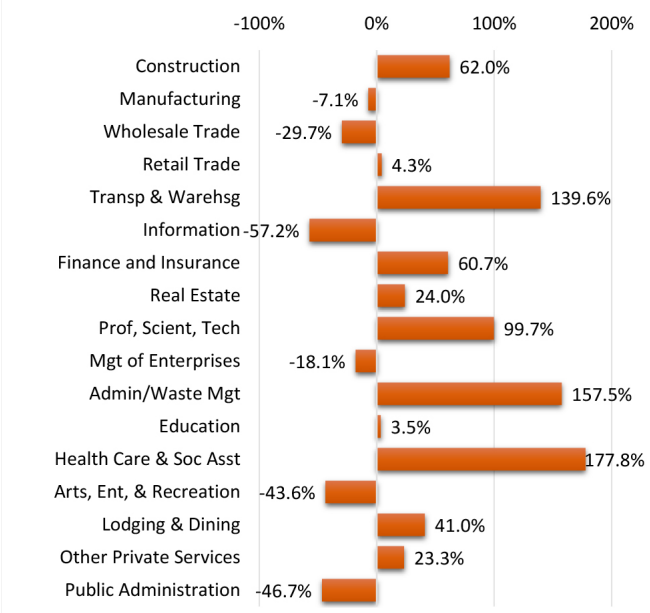
As a result, Washington's share of jobs in Franklin County increased from 29 percent in 2002 to 31 percent in 2019. This wasn't a steady trend, however. Washington dropped slightly to 28 percent of the county's jobs from 2003 to 2007, then climbed gradually to 31 percent.

Manufacturing jobs in Washington, as discussed shortly, are the backbone of the City's economy, but manufacturing jobs declined in the City between 2002 and 2019 by about seven percent even as the City's jobs overall increased by 25 percent. The City's growth and decline trends in the major economic sectors are shown in **Figures 2.8** and **2.9**.

The Health Care sector was the fastest growing, adding nearly 1,300 jobs with a growth rate of almost 180 percent between 2002 and 2019. The Administrative Support/Waste Management sector was a close second in growth rate (up almost 160 percent) but a more distant second in actual jobs (almost 400). The Professional, Scientific, and Technical Services sector added 330 jobs, doubling its numbers. Lodging and Dining places (e.g., hotels, restaurants, bars) added 310 jobs (up 41 percent) while Construction added 235 jobs (up 62 percent), Transportation and Warehousing added 187 jobs (140 percent), and Finance and Insurance added almost 150 jobs (61 percent). In many ways, these net additions have helped to diversify the City's economy, enabling it to be more resilient to economic downturns and offering more options for the nearby workforce.

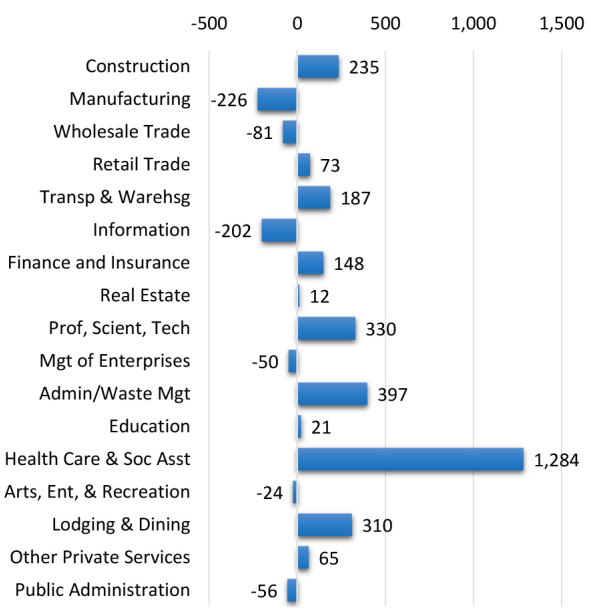
2.8. MAJOR ECONOMIC SECTOR JOB GROWTH RATE TRENDS IN THE CITY OF WASHINGTON, 2002-2019

Source: U.S. Census On-the-Map



2.9. MAJOR ECONOMIC SECTOR JOB CHANGES IN THE CITY OF WASHINGTON, 2002-2019

Source: U.S. Census On-the-Map



But not all is beautiful. The Information, Wholesale Trade, and Manufacturing sectors all declined as did—in smaller amounts—Management of Businesses and Enterprises; Arts, Entertainment, and Recreation; and Public Administration. In many ways, the last two decades have seen dramatic changes in the composition of the Washington economy based on jobs, which leads to a discussion of how that composition stacks up within the metropolitan economy.

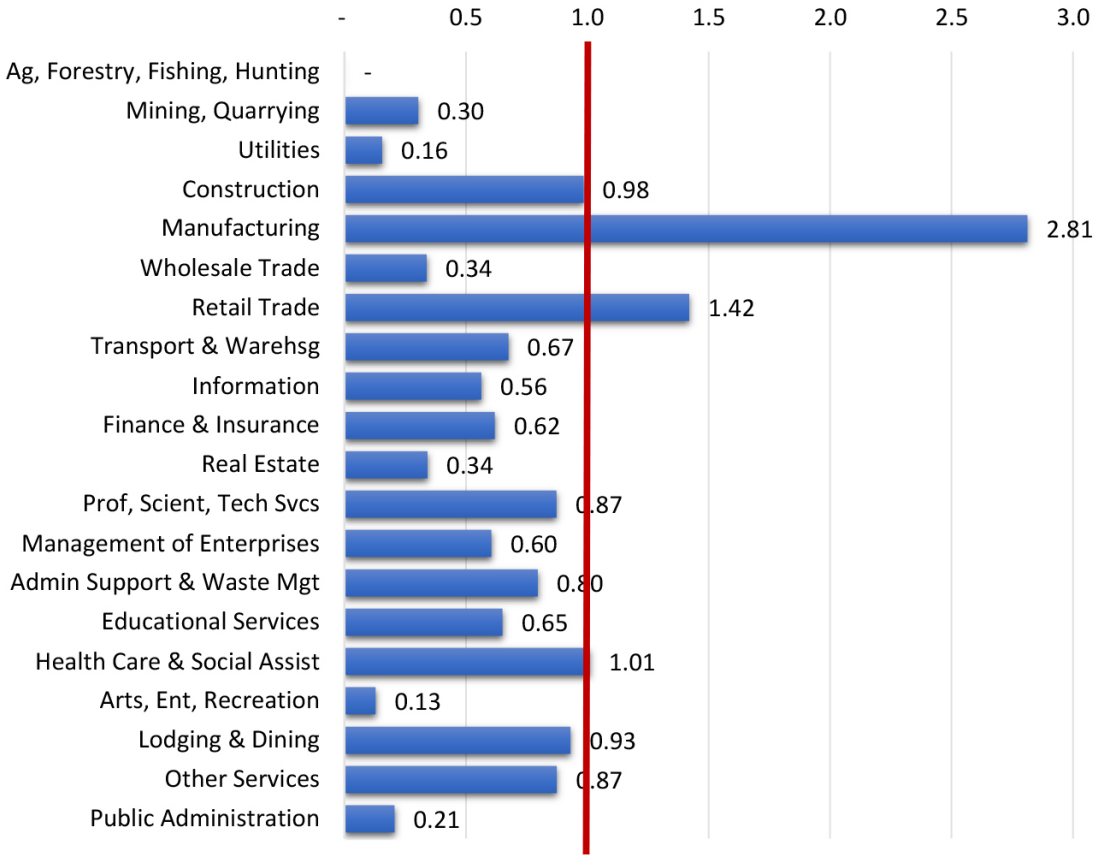
JOB LOCATION QUOTIENTS

The chart on the next page illustrates employment location quotients (LQs) by major economic sector in Washington. The larger economy against which the City's LQs are calculated is the St. Louis metropolitan area[4].

A location quotient compares the percent of jobs in a given economic sector in Washington to the percentage in that sector in the metropolitan area.

2.10. JOBS LOCATION QUOTIENTS: WASHINGTON COMPARED TO THE ST. LOUIS METROPOLITAN AREA, 2019

Source: U.S. Census On-the-Map



To illustrate Washington's relative strengths, its percentage is divided by the metro percentage in each sector. If the percentages are the same, then Washington's LQ equals 1.0. LQs exceeding 1.0 indicate relative strengths in the local economy (often referred to as net export sectors) while LQs of less than 1.0 are considered support sectors without significant ability to attract "new dollars" into the City. The support sectors are, of course, critically important in sustaining the overall economy, so they should never be discounted.

As **Figure 2.10** shows, Washington's greatest strength is in the manufacturing sector, which shouldn't be surprising to most readers. The City has a much higher share of jobs in manufacturing than the region as a whole, even though jobs in manufacturing have declined. The location quotient of 2.81 is quite large and demonstrates that manufacturing is a major reason for economic growth and success in Washington. Of course, this can also make Washington rather vulnerable to downturns in national or international manufacturing sectors. If the profits and employment in Washington's manufacturers are reduced, a substantially-negative impact on the City may result. This is why most economies (even at the City level) strive for more diversity in their location quotients.

Note that retail trade is also important because Washington serves as something of a "shopping center" for a geographic area extending well beyond the City's boundaries. That is, retail shows off as a net export industry for the City.

The sectors of construction and lodging/dining have LQs almost equal to 1.0, indicating that these have shares of employment almost identical to the shares throughout the metropolitan area. All the other sectors fall further and further below the "1.0 threshold" which gives them less importance in the general strength and diversity of the City's economy.

Sectors with LQs less than 1.0 can also indicate opportunities for growth. If Washington could attract a larger share of wholesale trade businesses, for example, this would have the dual effect of increasing the City's value in the regional wholesale trade sector while likely reducing the percentage of jobs in the manufacturing sector. Washington would thus become less "dependent" on manufacturing alone. Instead, it would have more relatively strong sectors[5],making it less vulnerable in economic downturns in other sectors.

Another way to analyze location quotients is to sum up the "absolute values" of the individual LQs[6]. By measuring the numerical differences between the standard of 1.0 to the various location quotients, then adding them, a single "diversity metric" is created. For Washington in 2019, the shown LQs in the 20 sectors achieve a sum of absolute values of 10.2. Franklin County's absolute value sum, when compared to the metro area in 2019, is 9.0, indicating that the county is slightly more resilient than Washington. This is not surprising. Larger geographic areas are expected to have more diversified economic structures than smaller areas.

5. Normally, local economies are compared to the U.S. national economy which is generally assumed to be almost "ideal" regarding distribution of jobs across sectors. The On-the-Map data is not available for the nation as a whole, however. Again, because metro St. Louis compares well with the nation, comparing Washington to the metro area is a good proxy for a national comparison.

6. Absolute values generally measure the distance from zero to the value, whether negative or positive. The number 1.5, for in-stance, has an absolute value of 1.5. So does negative 1.5. Absolute values are always expressed as positive measures. In the case of location quotients, however, the absolute value is a measure of each LQ's distance from 1.0.

Note, however, that different data sources can result in different indicators. The above information is from the Census Bureau's On-the-Map series. The Regional Data series of the U.S. Bureau of Economic Analysis (BEA) provides a deeper, and generally more accurate, set of data on employment, but only to the county level (or metropolitan level). Thus, LQs for the City of Washington cannot be determined with the BEA data, but LQs for Franklin County can be. And LQs for the St. Louis metro area can be created by comparing it to national data. On-the-Map does not provide national totals.

The BEA employment data for 2019 (same year as above) shows that Franklin County, when compared to the St. Louis metropolitan area, had a location quotient absolute value sum of 10.5, a bit higher than the On-the-Map metric. When compared to the entire U.S. economy, however, the county's metric improves to 8.7 (keeping in mind that "closer to 1.0" is preferred. The St. Louis metropolitan economy, when measured against the national economy, had a metric of 3.7. The metro economy is far more in sync with the national economy than Franklin County alone. By extension, Washington is probably even further from the national "ideal."

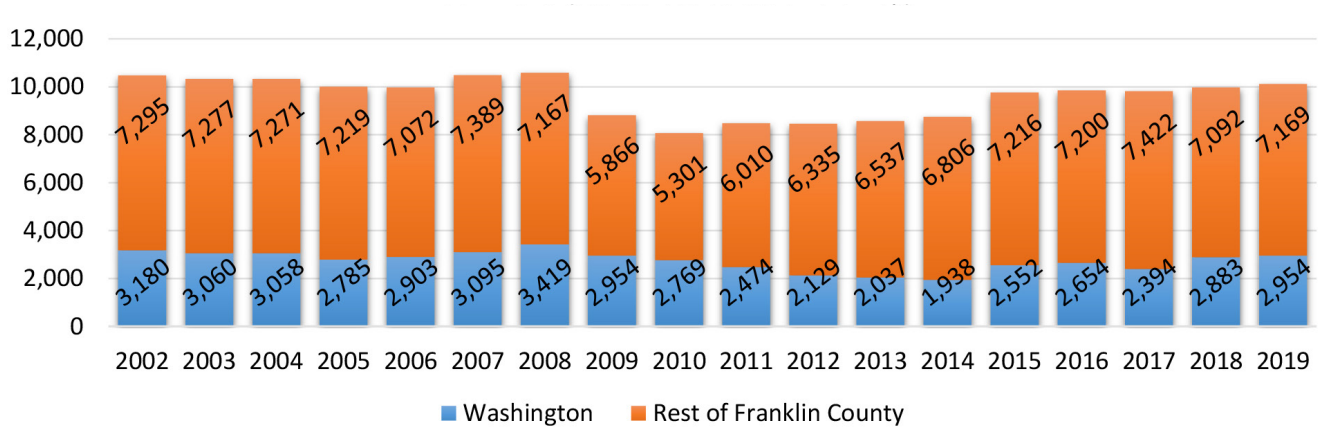
This is not to denigrate the Washington or Franklin County economies. They each contribute substantial strengths to, and benefit from, the more balanced metropolitan economy.

THE BACKBONE OF WASHINGTON: MANUFACTURING

Manufacturing is the predominant sector both in Washington and throughout Franklin County. But, as **Figures 2.11** and **2.12** demonstrate, the overall number of manufacturing jobs in Washington has been relatively stagnant over time (2002 to 2019), and Washington's share of all manufacturing jobs in the county has also been fairly consistent over time.

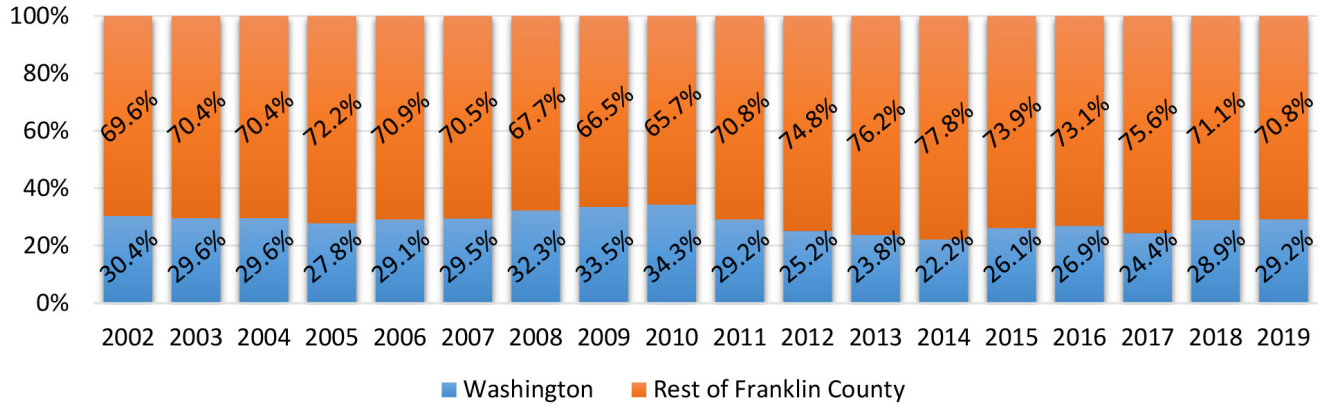
As of 2021 (two years later than shown above and the latest comprehensive data available from the BEA), Franklin County encompassed 9.4 percent of all manufacturing jobs in the St. Louis metropolitan area. This was notably higher than the 7.9 percent of all manufacturing jobs in 2001 (the beginning of this data series), but the average from 2001 to 2021 is just 9.1 percent, so Franklin County has not improved its position significantly in two decades.

2.11. MANUFACTURING EMPLOYMENT IN WASHINGTON & FRANKLIN COUNTY, 2002-2019
Source: U.S. Census On-the-Map



2.12. MANUFACTURING EMPLOYMENT IN WASHINGTON AS A PERCENT OF FRANKLIN COUNTY, 2002-2019

Source: U.S. Census On-the-Map



THE MANUFACTURING COMPOSITION OF WASHINGTON'S ECONOMY

The Community and Economic Development Department of the City of Washington maintains a list of businesses in the City. This inventory includes types of business as well as each firm's number of employees. **Figure 2.13** summarizes the 38 firms in Washington considered manufacturing companies according to their North American Industry Classification System (NAICS) codes. For example, there is one animal slaughtering firm in the City and five machine shops. All told, the 38 manufacturers are comprised of 20 separate 4-digit NAICS codes.

The City's full inventory of existing businesses contains 485 separate listings. Manufacturers, therefore, make up about eight percent of the City's enterprises. In contrast, manufacturing firms average 94 employees in Washington, while all other firms average just 14. Only local government (144 total/average) and health care (60 average) exceed the manufacturing sector in terms of average employees.

Figure 2.14 shows the number of employees in these 38 manufacturing firms by NAICS code. Manufacturing employment, from the City's list, totals 3,582. The previously discussed On-the-Map data from the U.S. Census Bureau for the year 2019 shows that there were 2,954 employees in Washington manufacturing firms, a difference of about 628. As also mentioned earlier, the On-the-Map data are almost universally undercounted because some employees and employers cannot be matched easily by their addresses.

The City's database shows that there were 10,230 people employed overall in Washington as of mid-2022. On-the-Map shows 12,135 employees in the City as of 2019. Unlike manufacturing, the City's totals are lower than the Census Bureau's. As a result, the City's data indicates that manufacturing jobs make up over a third (35.0 percent) of all jobs while On-the-Map says that, in 2019, manufacturing jobs comprised almost a quarter (24.3 percent) of all jobs in the City[7].

Other contrasts are important to bear in mind as the economic data are analyzed:

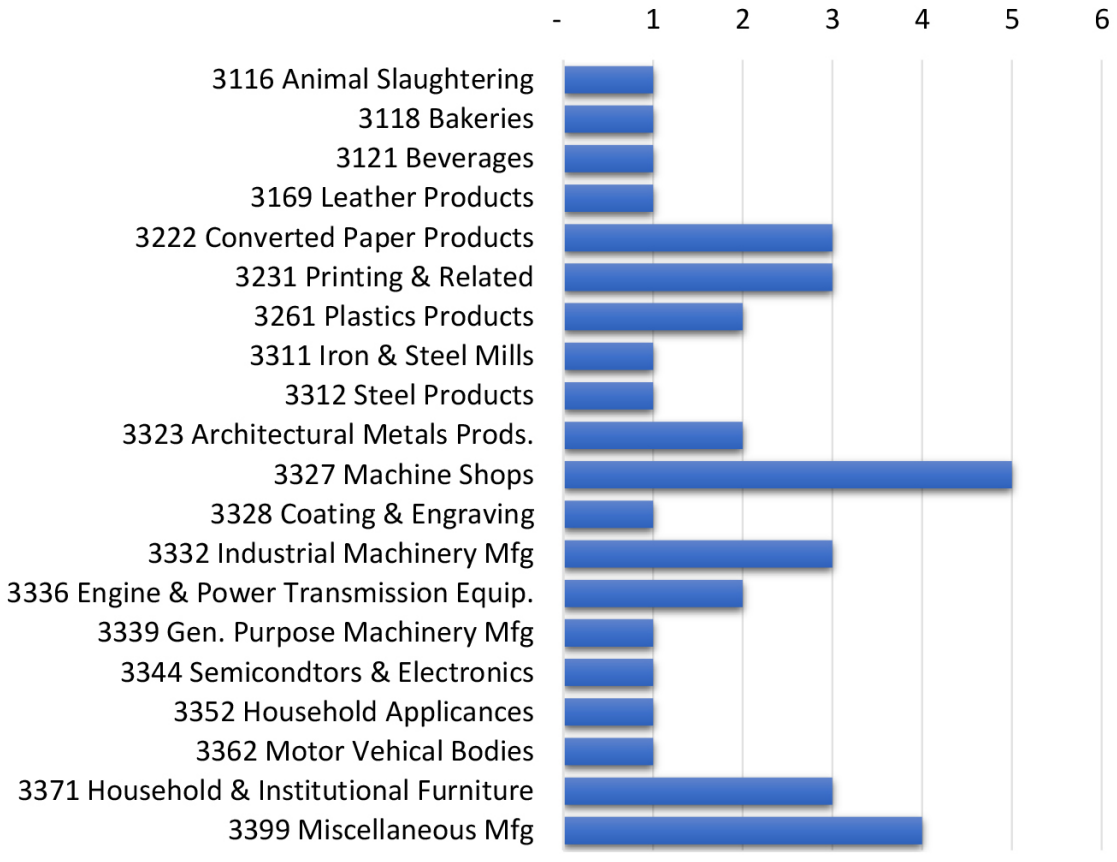
7. Some of the difference can be explained by different surveying and statistical techniques, some by different years of data (2019 vs. 2022). Later years have been sharply affected by the COVID-19 pandemic, which could also explain some differences.

- **Manufacturing** supports the greatest number and percentage of jobs in Washington.
  - **City:** 3,582 manufacturing jobs, 24.3 percent of the City's 10,230 jobs.
  - **Census:** 2,954 manufacturing jobs, 35.0 percent of the City's 12,135 jobs.
- **Health Care & Social Assistance** is the second largest employer by NAICS Code.
  - **City:** 1,855 jobs, 18.1 percent
  - **Census:** 2,006 jobs, 16.5 percent
- **Retail Trade** is the third largest employment sector in Washington.
  - **City:** 1,296 jobs, 12.7 percent
  - **Census:** 1,760 jobs, 14.5 percent

Please note that the employment projections discussed later in the Plan at the national level include 73 unique, four-digit NAICS codes in the manufacturing sector. Washington has firms in 20 of those codes.

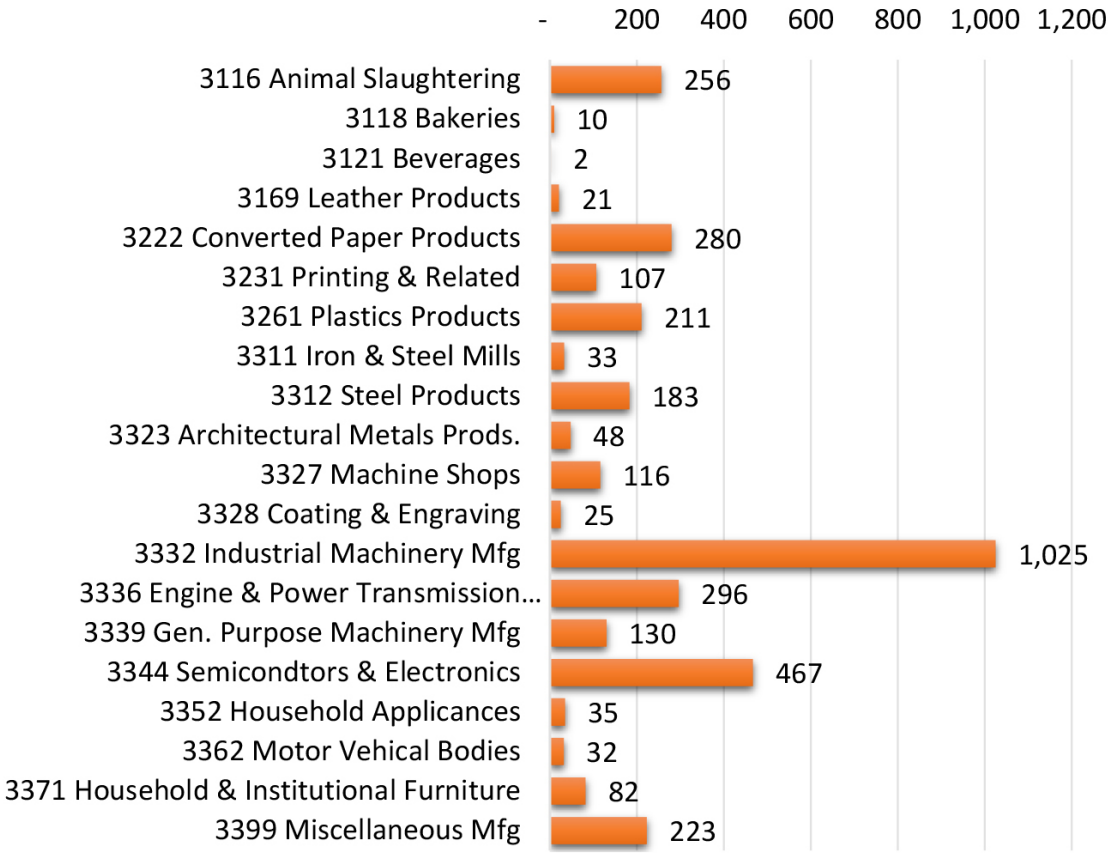
TRENDS IN COUNTY, METROPOLITAN, AND NATIONAL EMPLOYMENT

2.13. NUMBER OF MANUFACTURING FIRMS IN WASHINGTON BY NAICS CODE, JULY 2022
Source: City of Washington



2.14. EMPLOYMENT IN MANUFACTURING FIRMS IN WASHINGTON BY NAICS CODE, JULY 2022

Source: City of Washington



Employment in Franklin County (**Figure 2.15**) grew 15.0 percent between 2001 and 2021 based on latest available data from the BEA, which tracks all employment down to the county level (or groups of contiguous counties like metro areas and states[8]).

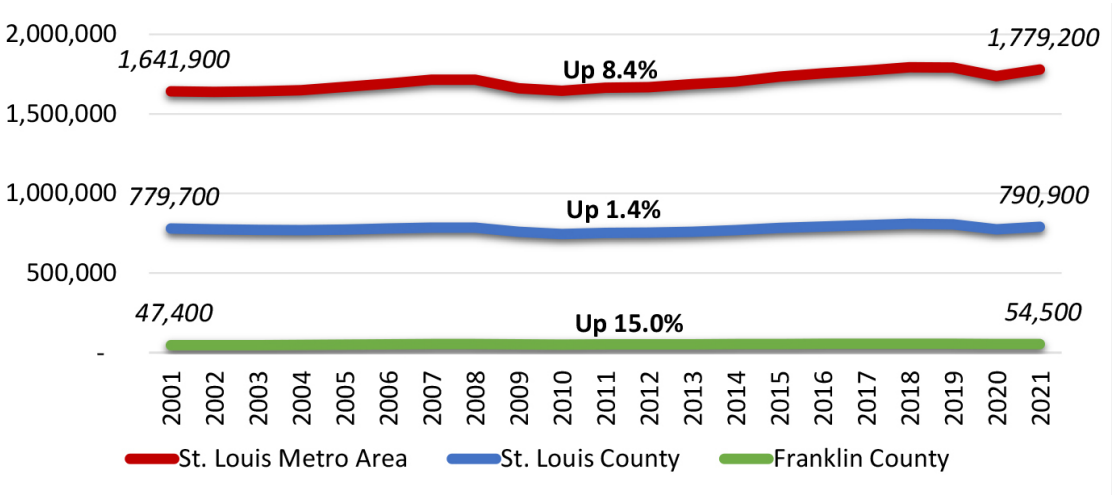
Franklin County's growth rate outpaced the metropolitan area as a whole (8.4%) and even St. Louis County (1.4%), where 44% of all metropolitan jobs are found (but down from 47% in 2001). As a result, Franklin County's share of the metropolitan employment expanded from 2.9% in 2001 to 3.1% in 2021.

In fact, Franklin County's employment growth rate exceeded the national growth rate from 2001 to about 2016, as illustrated in **Figure 2.16** that indexes job growth to "100" in 2001. In the subsequent two decades, the U.S. eventually reached 22% growth overall (about 1% per year) while Franklin County slowed a little bit to reach a two-decade rate of 15%. Missouri's jobs grew nine percent, the metro area eight percent (8.4%, more precisely, as shown earlier), and St. Louis County grew just over 1%.

8. These jobs encompass not only payroll jobs, which are reported on monthly in news reports and are relatively easy to track because the data relies on regularly supplied information on income tax withholdings. They also include all jobs that are not so readily tracked (self-proprietors, contractors) where tax information is not as current. Thus, there is a lag time between when payroll data is reported and when the BEA county-based data are reported. 2021 is the last available year. The time span shown here of 2001 to 2021 is consistent with reporting that uses NAICS (North American Industrial Classification System) definitions of economic sectors. Prior to 2001, sector definitions were based on the Standard Industrial Classification (SIC) system.

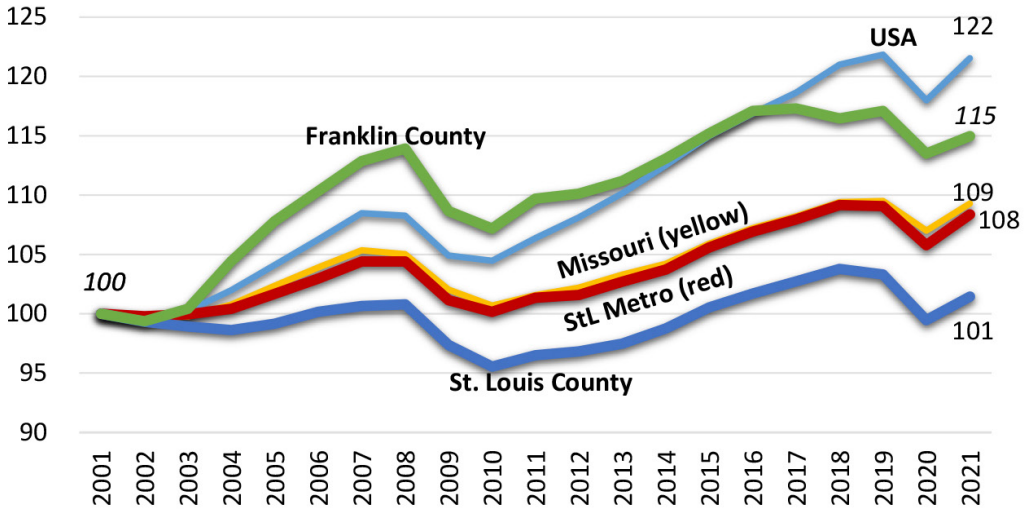
2.15. TOTAL EMPLOYMENT IN FRANKLIN COUNTY, ST. LOUIS COUNTY, AND THE ST. LOUIS METRO AREA, 2001-2021

Source: U.S. Bureau of Economic Analysis



2.16. TOTAL EMPLOYMENT GROWTH RATE COMPARISONS, 2001-2021

Source: U.S. Bureau of Economic Analysis



TRENDS IN MANUFACTURING EMPLOYMENT

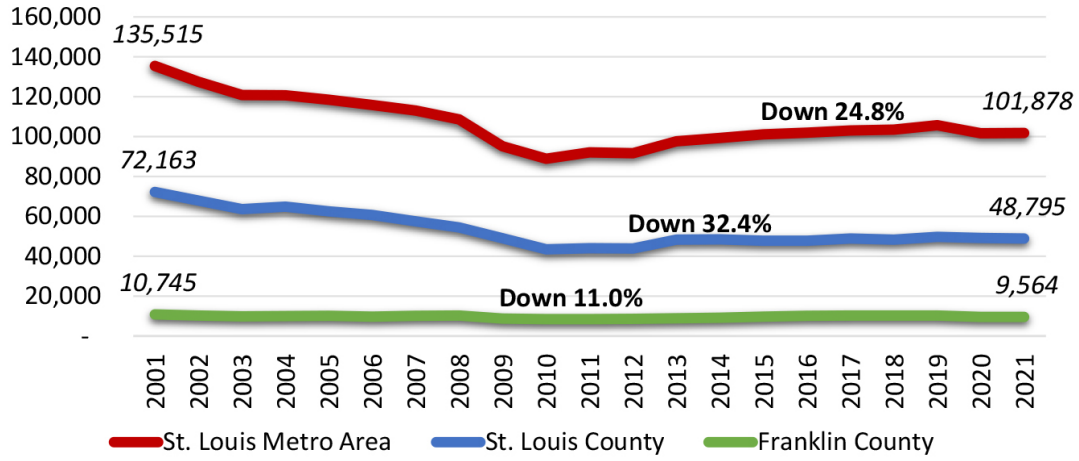
While there has generally been net growth in jobs in Franklin County and elsewhere in the metro region, manufacturing jobs have not been contributing to this growth. Manufacturing jobs declined in number in Franklin County by 11% between 2001 and 2021 (**Figure 2.17**), even as all jobs in the county increased by 15%. These manufacturing decreases, however, were not as severe as in the metro area as a whole (down by a quarter) or in St. Louis County (down by a third).

The region is not alone in these downturns. **Figure 2.18** compares manufacturing job declines by indexing 2001 to "100." This shows that Franklin County's index dropped from 100 to 89 in the two decades, or 11% as noted above. In the U.S. as a whole, manufacturing jobs dropped to an index of 77, or a 23% decline. Missouri fared only a little better with a decline of 19%.

In short, manufacturing jobs are still relatively important in Washington and Franklin County, but manufacturing jobs are not increasing virtually throughout the U.S. and certainly not within the St. Louis metro area.

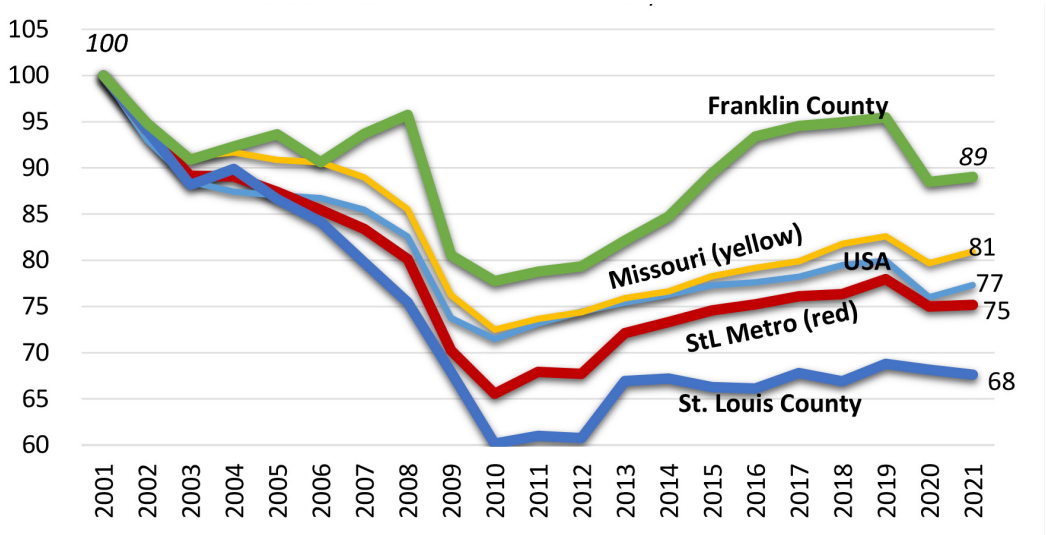
2.17. MANUFACTURING EMPLOYMENT IN FRANKLIN COUNTY, ST. LOUIS COUNTY, AND THE ST. LOUIS METRO AREA, 2001-2021

Source: U.S. Bureau of Economic Analysis



2.18. MANUFACTURING EMPLOYMENT GROWTH RATE COMPARISONS, 2001-2021

Source: U.S. Bureau of Economic Analysis



EMPLOYMENT AND OUTPUT PROJECTIONS: U.S.A.

The U.S. Bureau of Labor Statistics (BLS) produces projections of jobs by economic sector looking out ten years at a time and looking back ten years. The latest available projections are for the year 2031 based on 2021 data and looking back to 2011.

Forecasted growth in the nation is for 5.3 percent more jobs in 2031 than in 2021 (**Figure 2.19**). This is only about half the rate of increase of the prior ten years. National employment will still be increasing in the next decade, but at a much lower rate than in the past, averaging about a half percent per year rather than one percent per year[9]. Given those national projections, it is likely that the slower growing St. Louis area will experience even slower growth.

The BLS projections also show anticipated changes in output by economic sector (**Figure 2.20**). Output is the value of goods and services created in the economy. The projections show that the overall output growth rate for the next ten years is essentially the same as the past ten years, yet this will be accomplished with slower employment growth.

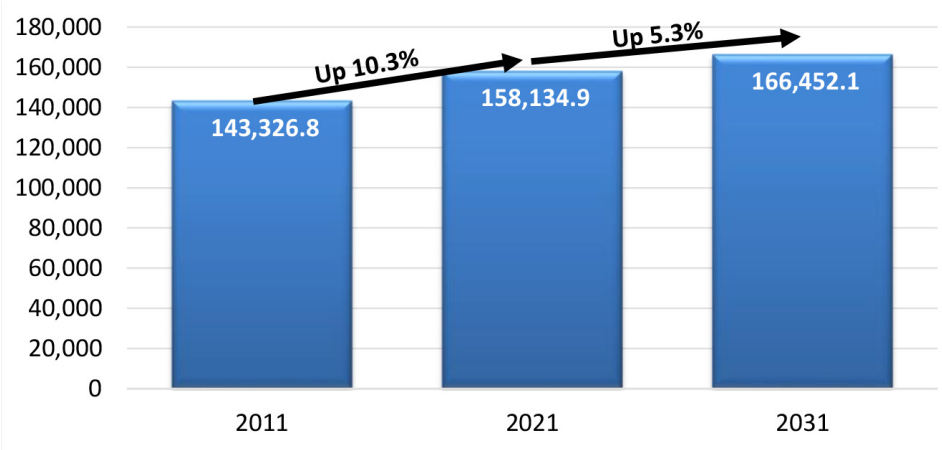
This added growth with fewer workers is the result of a projected increase in output (or productivity) per worker. In chained 2012 dollars, output per worker in the United States was, on average, $198,700 in 2011. This increased by 11% in 2021 to $220,700 per worker. It is projected to increase more rapidly—up 16 percent—by 2031 to $256,500 per worker. Thus, the productivity of workers (aided by better education, training, experience, and technological advances) will enable the U.S. economy to expand at least as strongly in the coming decade as in the last decade.

Of course, these projections are not guaranteed to come true, nor do they necessarily apply to greater St. Louis or Washington in the same proportions. Nevertheless, they are a highly researched indication of both challenges and opportunities in the American economy.

9. This is consistent with Census Bureau projections of the national population which show a dramatic decline in growth rate from 2020 to 2060.

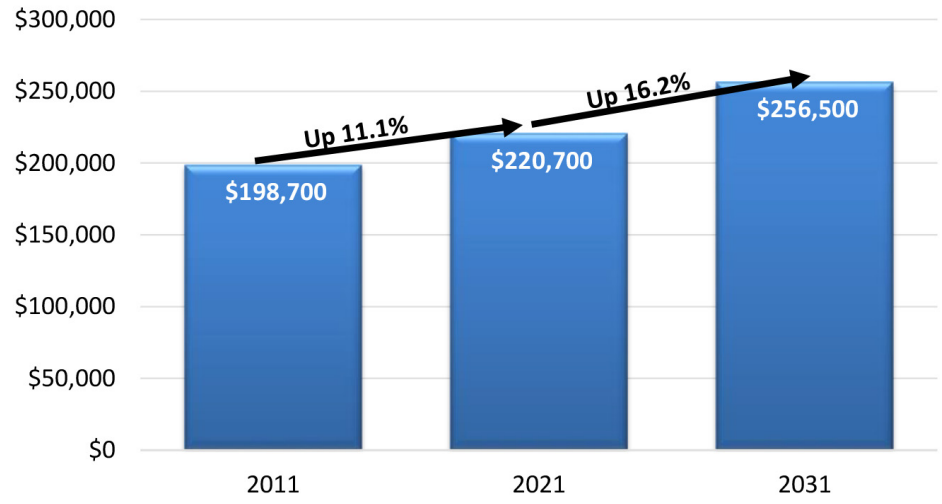
2.19. TRENDS AND PROJECTIONS: U.S. TOTAL EMPLOYMENT, 2011-2021-2031 (thousands)

Source: U.S. Bureau of Labor Statistics



2.20. TRENDS AND PROJECTIONS: U.S. TOTAL ECONOMIC OUTPUT PER JOB, 2011-2021-2031 (constant 2012 Dollars)

Source: U.S. Bureau of Labor Statistics



EMPLOYMENT AND OUTPUT PROJECTIONS: MANUFACTURING JOBS IN THE U.S.A.

The BLS projections also include projections in a wide range of economic sectors of the national economy. Of greatest interest here are the projections of manufacturing jobs and output. Again, the latest available projections are for the year 2031 based on 2021 data and looking back to 2011.

It is important to note the following when comparing databases. The ten-year projections come from the Bureau of Labor Statistics (BLS) while the detailed counts of jobs at the county-to-national levels come from the Bureau of Economic Analysis. The former is in the U.S. Department of Labor, the latter in the Department of Commerce. While statisticians in both agencies work closely together, their "totals" do not always fully match. The direction of trends and statistics, like percentages and ratios, are therefore often more important in analyzing different sources of information than the actual numbers.

The first thing to notice on **Figure 2.21** is that the BLS shows a 5.3% historical increase over the ten years of 2011 to 2021 while the BEA data (shown earlier) showed a decline in the 20 years between 2001 and 2021. In fact, the two sources are compatible. The BEA data for the same years as the BLS data (2011 to 2021) actually shows a 5.7% increase in manufacturing jobs after a decline in the prior decade. The BLS projections, however, indicate a slight (1.1%) decrease in manufacturing jobs between 2021 and 2031 even though overall job projections indicate a 5.3% increase.

Although manufacturing employment is projected to decrease in the coming decade, output is expected to increase by an impressive 18.0% (**Figure 2.22**), only a little slower than the 22.4% increase in output for the overall economy. In other words, there should be a rather large increase in labor productivity (better training and education, more skills, expanded use of technology, etc.) in the manufacturing sector in the next decade compared to the last.

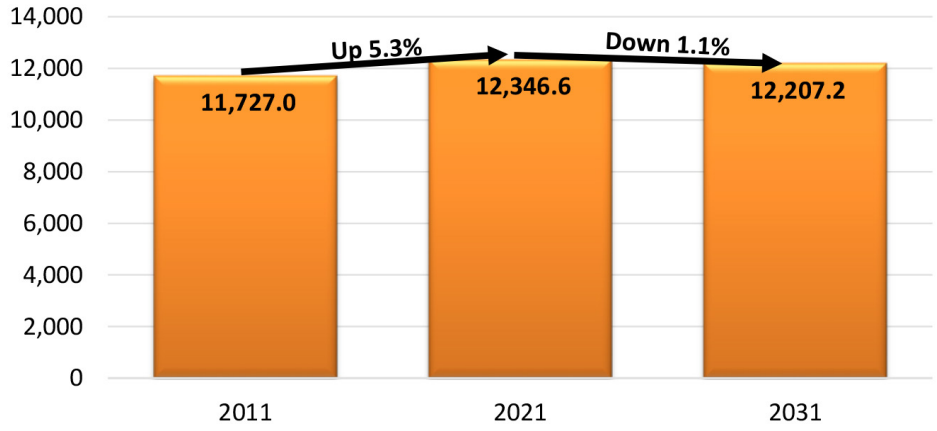
This added output growth with fewer workers would result from a remarkable increase in output per worker. In chained 2012 dollars, output per manufacturing worker in the U.S. was, on average, $483,000, about 2.4 times higher than the overall national average of $198,700 shown earlier. But manufacturing output-per-worker effectively stayed level between 2011 and 2021 (up only 0.4%).

However, output-per-worker is projected to increase by 19.3% in the manufacturing sector between 2021 and 2031 (**Figure 2.23**), three percentage points higher than the overall economy (16.2% increase). If all holds true, output-per-worker in manufacturing will increase from 2.20 times the average of all American worker to 2.25 times[10]. Still, employment in manufacturing would decline nationally by about 139,400 jobs between 2021 and 2031.

10. While a 19.3 percent increase in output-per-worker is impressive for manufacturing, it would be only the 9th largest increase in productivity growth the among 24 major economic sectors evaluated by BLS. The highest rate of increase would be in the retail trade sector at a 32.8 percent increase! As a consumer, look out for much more technology (and self service) when shopping while there would likely be fewer retail workers.

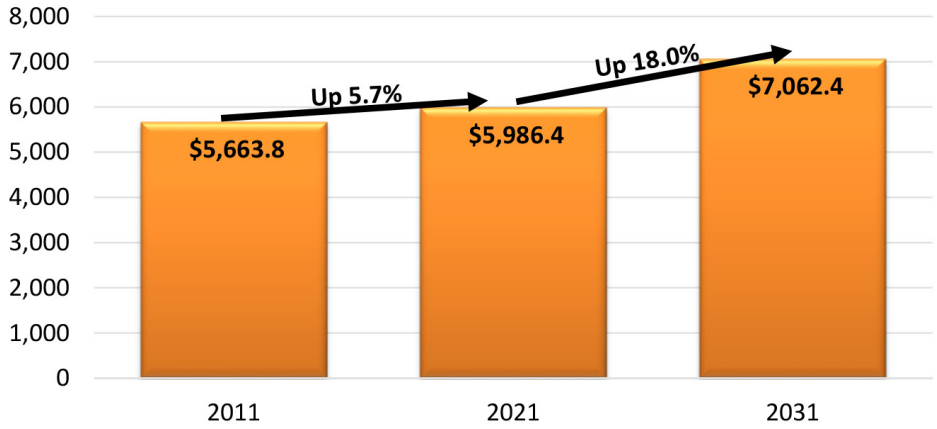
2.21. TRENDS AND PROJECTIONS: U.S. MANUFACTURING EMPLOYMENT, 2011-2021-2031 (thousands)

Source: U.S. Bureau of Labor Statistics



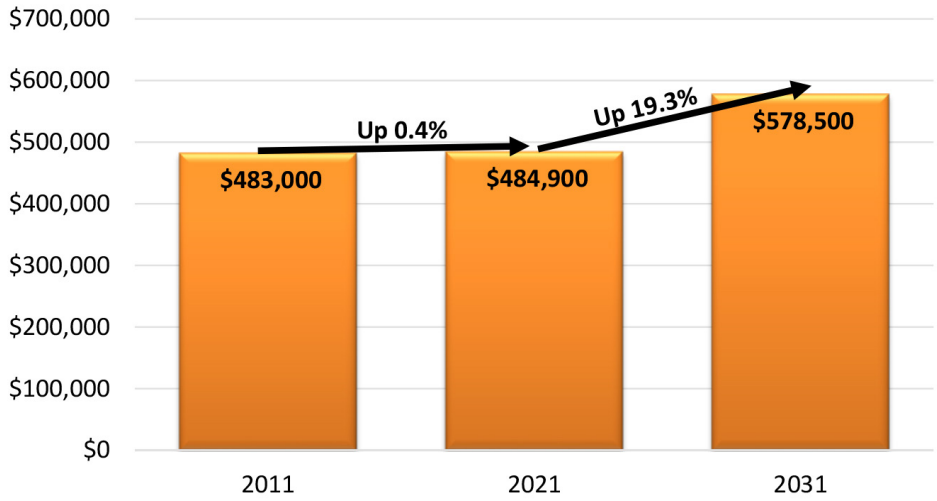
2.22. TRENDS AND PROJECTIONS: U.S. MANUFACTURING OUTPUT, 2011-2021-2031 (billions constant 2012 Dollars)

Source: U.S. Bureau of Labor Statistics



2.23. TRENDS AND PROJECTIONS: U.S. TOTAL ECONOMIC OUTPUT PER JOB (constant 2012 Dollars)

Source: U.S. Bureau of Labor Statistics



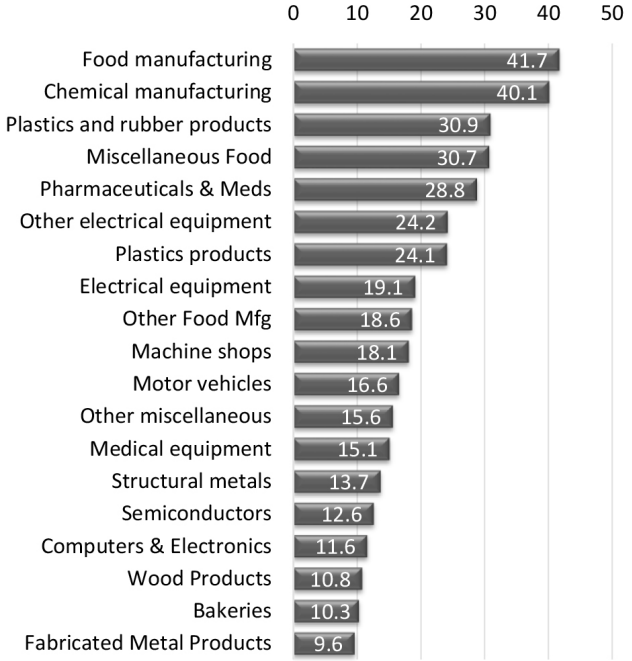
NOT ALL U.S. MANUFACTURING SECTORS ARE CREATED EQUAL

While "all" manufacturing jobs are projected to decline 1.1%, or 139,400 jobs, there are many sub-sectors of manufacturing that would increase in size, including the top 20 sectors shown in **Figure 2.24** (though some of these are overlapping). Overall, the food manufacturing sector would add 41,700 jobs while chemical manufacturers would add 40,100 jobs between 2021 and 2031.

At the other end of the spectrum, the entire machinery manufacturing sub-sector would lose 125,000 jobs, effectively nine out of ten net lost jobs in manufacturing over the present decade. The printing sub-sector, too, would be a substantial loser of 96,800 jobs[11] (**Figure 2.25**).

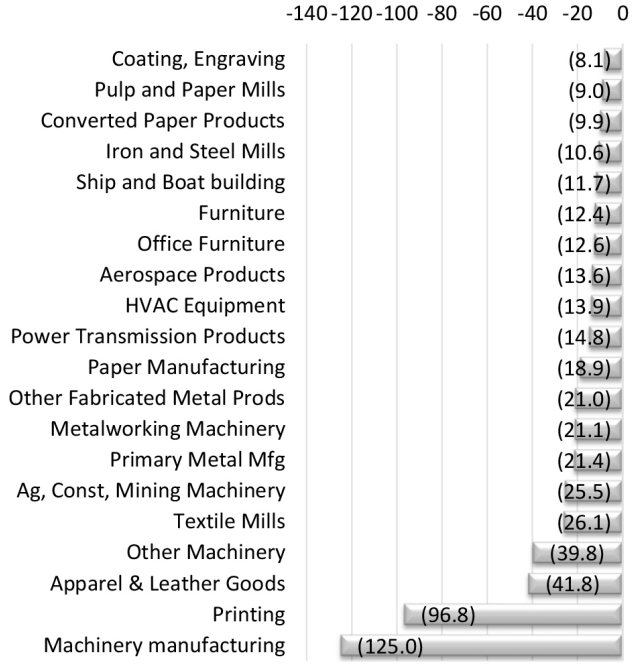
2.24. MANUFACTURING SECTORS ADDING THE MOST JOBS, USA, 2021-2031

Source: U.S. Bureau of Labor Statistics



2.25. MANUFACTURING SECTORS LOSING THE MOST JOBS, USA, 2021-2031

Source: U.S. Bureau of Labor Statistics

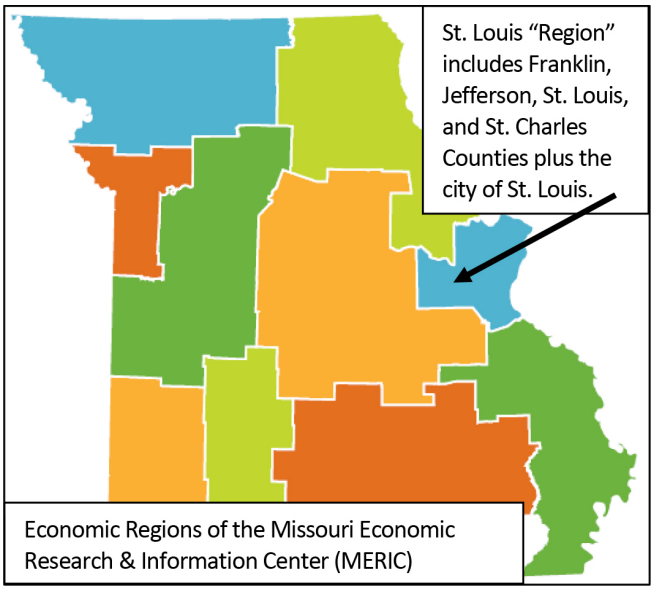


11. Obviously, these two sectors add to more than the net losses of all manufacturing but, as noted alongside, there are many sub-sectors where jobs are projected to increase.

SWITCHING TO ST. LOUIS REGIONAL PROJECTIONS

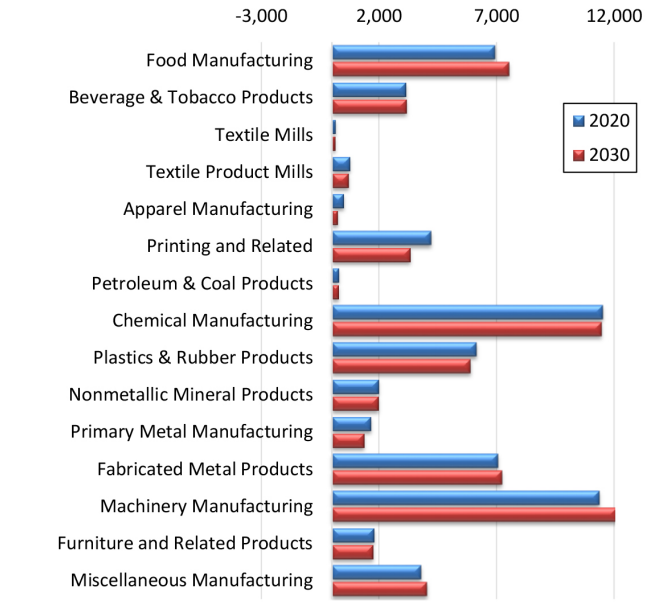
After the U.S. Bureau of Labor Statistics publishes its ten-year employment and occupational projections for the nation as a whole, state economic analysts typically produce their own projections within that national context. State projections, therefore, are usually a year behind the U.S. projections. The Missouri Economic Research and Information Center (MERIC), a component of the Missouri Department of Economic Development (DED), produces its state projections within ten "regions" of the state, illustrated below. This report focuses on the projections within the St. Louis region which encompasses Franklin, Jefferson, St. Louis, and St. Charles Counties, plus the City of St. Louis. Projections by MERIC are only at the regional and state level, not smaller areas like counties or cities.

For the five-county St. Louis region, MERIC projects that total employment will increase from 1,120,200 to 1,201,700 between 2020 and 2030, a net growth rate of 7.3%. This would be slightly faster growth than the U.S. projections for 2021 to 2031 of 5.3%[12].



2.26. MANUFACTURING JOB PROJECTIONS FOR THE ST. LOUIS REGION, 2020-2030

Source: Missouri Economic Research & Information Center



12. Note, however, that the U.S. BEA counted 1,388,700 total jobs in this MERIC-defined St. Louis region in 2020, some 268,500 more than counted by MERIC, another indicator of the challenges of a variety of data sources. Given that this "gap" is about one-fifth of the BEA count, the difference is generally consistent with gaps between payroll jobs (i.e., those generally tracked by income tax withholdings) and total jobs, the latter including self-proprietors, contractors, and others who do not necessarily provide the state and federal governments with monthly or quarterly withholding tax statements. The important factor in this analysis is the projected growth rate which can be assumed to be the same for both counts.

Manufacturing job projections aren't so robust, as shown in **Figure 2.26**. MERIC counted 91,580 manufacturing jobs in the region in 2020 and projects 91,470 in 2030, a small decline. But, importantly, five of the 15 manufacturing sub-sectors tracked by MERIC would add jobs over the decade:

- Food manufacturing would add 600 jobs in the region for an 8.6% growth rate. National projections in food manufacturing call for a much smaller 2.5% growth rate (2021 to 2031), but St. Louis is a key center of agricultural production with many strengths in the food production sector. So, the nation's growth is and should be heavily bolstered by greater St. Louis.
- Machinery manufacturing is projected by MERIC to add 740 jobs over the decade for a 6.5% growth rate. In sharp contrast, the national projections show a substantial decline in machinery manufacturing jobs of 11.9% from 2021 to 2031.
- Miscellaneous manufacturing in the St. Louis region would add 250 jobs for a 6.7% growth rate (national: 5.0% growth).
- Fabricated metal products manufacturing would add 170 jobs in the St. Louis region for a 2.4% growth rate (national: 0.7 percent growth).
- Beverage products manufacturing would add a small 25 jobs over the 2020s for growth of 0.76% (national: 2.9 percent growth).

The fastest growing economic subsector in St. Louis is expected to be Performing Arts, Spectator Sports, and Related Industries. This would add almost 2,000 more jobs over the decade for a massive 80 percent growth rate. It is part of the Arts, Entertainment, and Recreation sector which would grow by a combined 4,190 jobs, or 32.6 percent. This sector also includes museums and places of amusement.

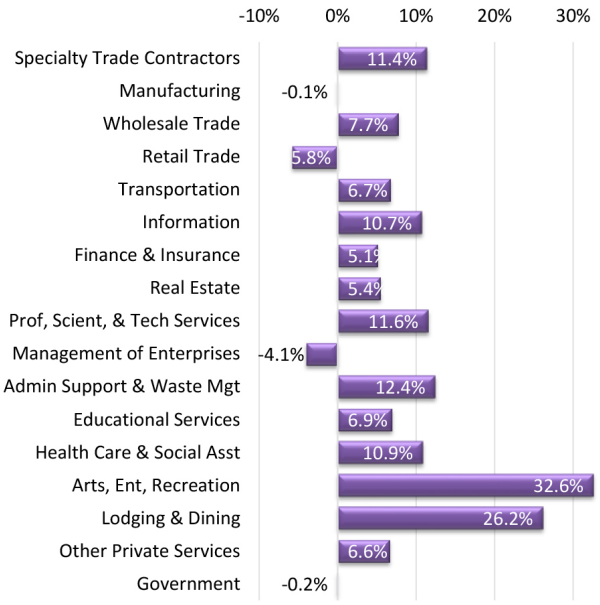
In second place for rate of growth in greater St. Louis is the Motion Picture and Sound Recording sub-sector, which would add 600 jobs for a 65 percent net growth rate. This is part of the Information sector which would grow just 10.7 percent overall because of a 17.3 percent drop in the Telecommunications sub-sector.

The greatest job gains are expected in Food Services and Drinking Places sub-sector with 17,780 more jobs (up 24.8 percent). This is part of the Accommodation and Food Services sector, which would add just under 21,000 more jobs for an overall growth rate of 26.2 percent over the decade. **Figures 2.27** and **2.28** illustrate job projections in the St. Louis Region for each of the major economic sectors.

If a goal is to identify where to invest resources where growth is most likely to happen, manufacturing might not automatically be on that list—at least from a jobs creation perspective. Yet this is the strength of Washington, and the City is well positioned to sustain that strength for the St. Louis area. The City has ample land for manufacturers and continues to develop more. It has a long and storied history of supporting manufacturing. Manufacturing will not be going away. It is vital to economic activity and wealth creation everywhere. Yet it is doing so with greater productivity per worker and fewer workers, while more urban and suburban areas shun manufacturing establishments. The sector's national productivity per worker is presently more than double that of the overall national economy and is projected to at least maintain (and perhaps slightly increase) that dominance by the year 2031.

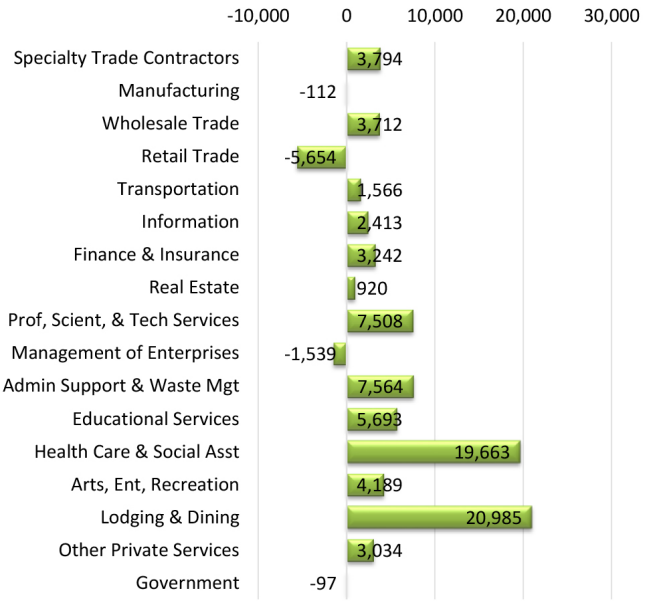
2.27. MAJOR ECONOMIC SECTOR JOB GROWTH RATE PROJECTIONS FOR THE ST. LOUIS REGION, 2020-2030

Source: Missouri Economic Research & Information Center



2.28. MAJOR ECONOMIC SECTOR JOB ADDITIONS FOR THE ST. LOUIS REGION, 2020-2030

Source: Missouri Economic Research & Information Center



2.8. Existing Transportation Conditions

The City of Washington and its regional and state partners are responsible for the development and maintenance of the City's interconnected, multi-modal transportation system. From state highways and arterial roads to residential streets, sidewalks, trails, and transit services, the transportation system in Washington provides residents and visitors alike with access to parks, schools, shopping, employment, and other important community destinations. Key elements of the transportation system are described below, including the roadway system, transit services, and bicycle and pedestrian infrastructure.

FUNCTIONAL CLASSIFICATION

Functional classification is the process by which streets and roads are classified according to their function within the transportation system. Roadway functions are based on a scale of mobility and access (**Figure 2.29**). Mobility is the ability to travel freely to a destination in a given amount of time. Access is the ability to travel to various destinations within a given amount of time. Most roads in the network provide a combination of mobility and access; however, the functional class of a roadway indicates its primary function. The East-West Gateway Council of Governments (EWG) describes the characteristics of roadway classifications as:

- **Arterial** – high-speed roadways with limited access
  - Principal – Interstate, Expressway, Other
  - Minor
- **Collector** – collects traffic from local roads and distributes traffic to arterials
  - Major
  - Minor