



# 2026

## State of Manufacturing in Southwestern Pennsylvania



### Strategy and Research

Allegheny Conference on Community  
Development

July 2026



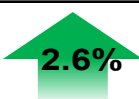
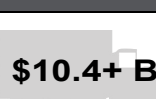
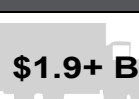
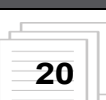
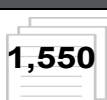
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## Snapshot

| Southwestern Pennsylvania Manufacturing Scorecard: 2024                                              |                                                                                                                                                                                                                                      |                                                                                                       |
|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| 2024 Gross Domestic Product                                                                          |                                                                                                                                                                                                                                      |                                                                                                       |
|  <b>5th</b>         | ...largest industry in the Pittsburgh MSA in terms of gross regional product (\$15.3B). Between 2023 and 2024, Pittsburgh manufacturing gross product decreased ...                                                                  |  <b>-1.5%</b>      |
|  <b>\$188,741</b>   | ...gross domestic product per manufacturing employee for SWPA is slightly below the Pennsylvania GDP per manufacturing employee. Since 2023, gross regional product per manufacturing employee has increased ...                     |  <b>1.6%</b>       |
| 2024 Employment                                                                                      |                                                                                                                                                                                                                                      |                                                                                                       |
|  <b>90,016</b>      | ...manufacturing employees. This accounts for 7.9% of total employment. Though long term manufacturing employment has declined, between 2023 and 2024, employment in manufacturing slightly declined ...                             |  <b>-0.4%</b>      |
|  <b>17.2%</b>       | ...of manufacturing employment is in Fabricated Metals. In addition, the concentration of Primary Metals employment is nearly ...                                                                                                    | <b>4x the national average</b>                                                                        |
|  <b>2.62</b>        | ... jobs are supported directly or indirectly by each manufacturing job in the region, which is approximately ...                                                                                                                    | <b>231,000+ jobs</b>                                                                                  |
| 2024 Establishments                                                                                  |                                                                                                                                                                                                                                      |                                                                                                       |
|  <b>2,830</b>     | ...manufacturing establishments. This ranks the SWPA 25th among all metropolitan areas. The concentration of manufacturing establishments in the region exceeds the nation by...                                                     |  <b>24.4%</b>    |
|  <b>22.5%</b>     | ...of establishments manufacture Fabricated Metal, the largest sub-sector by establishments. Food Manufacturing manufacturers has the largest increase in establishments in 2024, increasing by 9 locations, for a growth rate of... |  <b>3.9%</b>     |
| 2024 Wages                                                                                           |                                                                                                                                                                                                                                      |                                                                                                       |
|  <b>\$98,550</b>  | ...average annual wage for manufacturing employees. This is 0.40% <b>higher</b> than the average job in Southwestern Pennsylvania. Manufacturing wage growth in the region was comparable to the nation with an increase of...       |  <b>2.6%</b>     |
| 2024 Exports                                                                                         |                                                                                                                                                                                                                                      |                                                                                                       |
|  <b>\$10.4+ B</b> | ...billion in exports. Chemicals was the largest manufacturing export from the region, valued at...                                                                                                                                  |  <b>\$1.9+ B</b> |
| 2024 Expansions                                                                                      |                                                                                                                                                                                                                                      |                                                                                                       |
|  <b>20</b>        | ...announced manufacturing investments. These announcements are expected to generate an average of 146 jobs each, including new and retained jobs. In all, manufacturing expansions in 2024 expected to create 1,550 new jobs.       |  <b>1,550</b>    |

## Executive Summary

Manufacturing remains one of Southwestern Pennsylvania's (SWPA)<sup>1</sup> foundational industries, generating \$15.3 billion in gross regional product (GRP) and supporting more than 90,016 direct jobs in 2024. While manufacturing represents 7.3% and 7.9% of SWPA's GRP and employment, it continues to play an outsized role in exports, investment, and economic activity.

Since 2019, manufacturing productivity (+25.6%), wages (+18.6%), establishments (+1.2%), exports, and announced investments have generally improved. However, overall manufacturing output has grown substantially slower than in benchmark regions such as Cleveland and Charlotte. Much of this difference reflects industrial composition, as peer regions have expanded more rapidly in higher-growth manufacturing industries including chemicals, machinery, and transportation equipment.

SWPA enters its next phase of manufacturing from a position of established industrial strength. Expanding higher-value manufacturing industries, supporting innovation, growing the skilled workforce, and encouraging new business formation will be important to improving long-term competitiveness while building on the region's existing manufacturing base.

## Report Overview

This brief report provides a quantitative summary of the state of manufacturing in SWPA. The intention is to provide readers with a detailed overview of how the manufacturing sector is performing, and whether we are on the right growth trajectory. The report evaluates the sector across five key domains: (i) gross regional product; (ii) employment or jobs; (iii) establishments; (iv) wages; and (v) exports. Where possible, the report delves deeper into the sector to provide an assessment at the sub-sector level.

## Benchmarks

The focus of this report remains SWPA; however, benchmarking helps distinguish between challenges unique to SWPA and broader trends affecting manufacturing economies. Cleveland and Charlotte were selected because they represent two complementary comparisons that help evaluate SWPA's manufacturing competitiveness.

Cleveland serves as a peer legacy manufacturing economy, sharing SWPA's historical strengths in metals and industrial production. Comparing SWPA with Cleveland helps identify where performance reflects broader trends among mature manufacturing regions.

Charlotte represents a high-growth manufacturing economy that has diversified into advanced manufacturing industries – including chemicals, machinery, and transportation equipment – while experiencing strong population, business, and manufacturing growth. Comparing SWPA with Charlotte illustrates characteristics associated with faster-growing manufacturing economies.

Together, these benchmarks provide two distinct points of comparison: one measuring SWPA against a similar industrial peer and another against a rapidly expanding manufacturing economy.

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<sup>1</sup> Southwestern Pennsylvania comprises ten counties - Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Lawrence, Washington, and Westmoreland – that create the Pittsburgh metropolitan region.

## The State of Manufacturing in SWPA

### SWPA Gross Regional Product by Sector

Manufacturing is the 5<sup>th</sup> largest sector, contributing \$15.3 Billion to SWPA's total GRP in 2024. Output has increased 20.9% since the pandemic low, although that recovery ranked 10<sup>th</sup> among major industries. Compared to the national (2.3%) and Pennsylvania's (0.8%) year-over-year growth rate in Manufacturing GRP, SWPA underperformed while experiencing a -1.5% decline.

**Table 1: Gross Regional Product by sector for SWPA**

| GRP by Sector (in millions)                                       | 2019              | 2020              | 2021              | 2022              | 2023              | 2024              | 1-Year Change | 5-Year Change |
|-------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------|---------------|
| Finance, insurance, real estate, rental, and leasing              | 33,767.08         | 34,264.46         | 35,860.23         | 37,992.43         | 40,445.05         | 43,158.58         | 6.7%          | 27.8%         |
| Professional and business services                                | 24,240.49         | 23,452.93         | 26,249.94         | 28,814.05         | 31,115.45         | 31,840.29         | 2.3%          | 31.4%         |
| Educational services, health care, and social assistance          | 21,084.52         | 21,007.68         | 21,146.60         | 22,378.30         | 23,999.68         | 25,728.69         | 7.2%          | 22.0%         |
| Government and government enterprises                             | 13,745.14         | 13,728.71         | 14,031.22         | 14,107.08         | 14,788.19         | 15,487.82         | 4.7%          | 12.7%         |
| <b>Manufacturing</b>                                              | <b>14,376.96</b>  | <b>12,642.82</b>  | <b>13,058.88</b>  | <b>14,504.07</b>  | <b>15,512.35</b>  | <b>15,278.98</b>  | <b>-1.5%</b>  | <b>6.3%</b>   |
| Information                                                       | 8,181.09          | 7,962.93          | 9,796.02          | 9,829.08          | 9,900.96          | 10,231.09         | 3.3%          | 25.1%         |
| Retail trade                                                      | 11,350.75         | 12,070.87         | 13,873.50         | 14,786.09         | 16,227.43         | 16,760.59         | 3.3%          | 47.7%         |
| Wholesale trade                                                   | 10,996.97         | 10,826.94         | 11,958.73         | 13,163.13         | 13,755.52         | 14,288.57         | 3.9%          | 29.9%         |
| Transportation and warehousing                                    | 6,895.51          | 5,957.90          | 6,642.12          | 7,708.62          | 8,513.67          | 8,531.76          | 0.2%          | 23.7%         |
| Construction                                                      | 8,205.44          | 7,324.96          | 7,640.56          | 7,754.85          | 8,107.88          | 8,370.17          | 3.2%          | 2.0%          |
| Arts, entertainment, recreation, accommodation, and food services | 6,709.05          | 4,843.28          | 5,925.47          | 7,109.65          | 8,092.32          | 8,576.84          | 6.0%          | 27.8%         |
| Mining, quarrying, and oil and gas extraction                     | 5,714.59          | 4,402.78          | 6,945.99          | 9,724.31          | 8,383.42          | 8,122.50          | -3.1%         | 42.1%         |
| Utilities                                                         | 3,503.38          | 3,228.90          | 3,514.32          | 3,895.42          | 3,656.49          | 3,513.19          | -3.9%         | 0.3%          |
| Agriculture, forestry, fishing and hunting                        | 176.41            | 155.62            | 201.60            | 214.37            | 209.77            | 134.54            | -35.9%        | -23.7%        |
| <b>Total</b>                                                      | <b>168,947.37</b> | <b>161,870.78</b> | <b>176,845.17</b> | <b>191,981.43</b> | <b>202,708.16</b> | <b>210,023.59</b> | <b>3.6%</b>   | <b>24.3%</b>  |

### SWPA Gross Regional Product by Manufacturing Sub-Sector

Primary metal, chemical, machinery, fabricated metal products, and computer and electronic products were the top five sub-sectors of manufacturing by GRP in SWPA. Among the largest manufacturing industries, chemical manufacturing recorded the strongest growth over both the past year (+17.8%) and since 2019 (+77.6%), while primary metal manufacturing declined 9.2% from 2023. Petroleum and coal products and chemicals are the fastest growing sub-sectors in GRP for SWPA.

**Table 2: Gross Regional Product by sub-sector for SWPA**

| GRP by Sub-Sector of Manufacturing (in millions)             | 2019               | 2020               | 2021               | 2022               | 2023               | 2024               | 1-Year Change | 5-Year Change |
|--------------------------------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|
| Primary Metal Manufacturing                                  | \$2,361.22         | \$1,767.73         | \$2,272.31         | \$2,783.83         | \$2,758.61         | \$2,504.64         | -9.2%         | 6.1%          |
| Chemical Manufacturing                                       | \$1,136.93         | \$1,228.64         | \$1,466.60         | \$1,697.32         | \$1,714.01         | \$2,018.97         | 17.8%         | 77.6%         |
| Machinery Manufacturing                                      | \$1,732.27         | \$1,608.52         | \$1,641.62         | \$1,740.16         | \$1,984.25         | \$2,002.31         | 0.9%          | 15.6%         |
| Fabricated Metal Product Manufacturing                       | \$1,638.40         | \$1,463.13         | \$1,448.06         | \$1,671.00         | \$1,821.32         | \$1,852.86         | 1.7%          | 13.1%         |
| Computer and Electronic Product Manufacturing                | \$1,638.35         | \$1,674.93         | \$1,767.84         | \$1,629.04         | \$1,638.56         | \$1,640.77         | 0.1%          | 0.1%          |
| Petroleum and Coal Products Manufacturing                    | \$742.09           | \$335.86           | \$996.02           | \$1,608.98         | \$1,408.69         | \$1,366.14         | -3.0%         | 84.1%         |
| Electrical Equipment, Appliance, and Component Manufacturing | \$824.58           | \$811.48           | \$815.23           | \$861.71           | \$982.97           | \$1,035.60         | 5.4%          | 25.6%         |
| Miscellaneous Manufacturing                                  | \$740.52           | \$699.45           | \$702.21           | \$847.69           | \$906.52           | \$840.62           | -7.3%         | 13.5%         |
| Nonmetallic Mineral Product Manufacturing                    | \$695.39           | \$624.38           | \$648.27           | \$711.19           | \$746.52           | \$771.26           | 3.3%          | 10.9%         |
| Plastics and Rubber Products Manufacturing                   | \$604.87           | \$564.64           | \$556.84           | \$622.58           | \$665.66           | \$685.70           | 3.0%          | 13.4%         |
| Food Manufacturing                                           | \$474.03           | \$487.00           | \$500.96           | \$494.21           | \$583.41           | \$636.46           | 9.1%          | 34.3%         |
| Transportation Equipment Manufacturing                       | \$431.26           | \$326.65           | \$333.64           | \$351.98           | \$424.37           | \$424.05           | -0.1%         | -1.7%         |
| Printing and Related Support Activities                      | \$293.17           | \$242.73           | \$253.09           | \$269.83           | \$292.80           | \$318.06           | 8.6%          | 8.5%          |
| Beverage and Tobacco Product Manufacturing                   | \$190.11           | \$198.92           | \$240.49           | \$207.50           | \$256.96           | \$278.88           | 8.5%          | 46.7%         |
| Wood Product Manufacturing                                   | \$164.11           | \$179.38           | \$236.60           | \$248.36           | \$241.26           | \$234.08           | -3.0%         | 42.6%         |
| Paper Manufacturing                                          | \$142.27           | \$143.29           | \$142.59           | \$157.84           | \$168.40           | \$168.88           | 0.3%          | 18.7%         |
| Furniture and Related Product Manufacturing                  | \$87.33            | \$80.51            | \$83.65            | \$94.35            | \$95.86            | \$97.97            | 2.2%          | 12.2%         |
| Textile Product Mills                                        | \$60.30            | \$59.21            | \$71.39            | \$62.24            | \$66.28            | \$65.43            | -1.3%         | 8.5%          |
| Textile Mills                                                | \$18.97            | \$18.21            | \$20.24            | \$20.34            | \$21.03            | \$22.47            | 6.8%          | 18.5%         |
| Apparel Manufacturing                                        | \$10.29            | \$8.74             | \$11.34            | \$13.94            | \$15.28            | \$16.21            | 6.1%          | 57.5%         |
| Leather and Allied Product Manufacturing                     | \$1.73             | \$1.24             | \$1.63             | \$0.85             | \$0.73             | \$1.17             | 59.7%         | -32.7%        |
| <b>Total</b>                                                 | <b>\$13,986.44</b> | <b>\$12,523.41</b> | <b>\$14,209.01</b> | <b>\$16,094.08</b> | <b>\$16,792.75</b> | <b>\$16,981.35</b> | <b>1.1%</b>   | <b>21.4%</b>  |



**Box 1: Manufacturing Output: Strong Foundations, Slower Growth**

SWPA remains a significant manufacturing economy, but manufacturing output has grown at roughly one-third the rate of Cleveland and Charlotte since 2019.

| Region:    | Manufacturing GRP                               | Manufacturing GRP Growth (2023-2024) | Manufacturing GRP Growth (2019-2024) |
|------------|-------------------------------------------------|--------------------------------------|--------------------------------------|
| SWPA:      | \$15.3 billion (5 <sup>th</sup> overall sector) | -1.5%                                | +6.3%                                |
| Cleveland: | \$21.9 billion (3 <sup>rd</sup> overall sector) | +3.4%                                | +20.8%                               |
| Charlotte: | \$21.6 billion (3 <sup>rd</sup> overall sector) | +2.0%                                | +20.7%                               |

The difference appears to be driven largely by sub-sector composition. SWPA remains concentrated in primary metal manufacturing (16.4% of Manufacturing GRP), while Cleveland and Charlotte have larger concentrations in faster-growing industries including chemicals, machinery, and transportation equipment.

While SWPA remains heavily concentrated in traditional industries such as primary metal manufacturing, one notable exception is chemical manufacturing. Chemical manufacturing has been one of the region's fastest-growing manufacturing sub-sectors, increasing nearly 78% since 2019 and becoming the second-largest contributor to manufacturing GRP, generating \$2.02 billion in regional output. Chemical manufacturing in Cleveland and Charlotte contribute more to regional GRP with \$6.12 billion and \$3.86 billion. The benchmark regions continue to have a larger share of manufacturing output concentrated in chemicals and other advanced manufacturing industries such as machinery and transportation equipment. Continued growth in SWPA's chemical manufacturing base represents an important opportunity to further diversify the region's manufacturing economy.

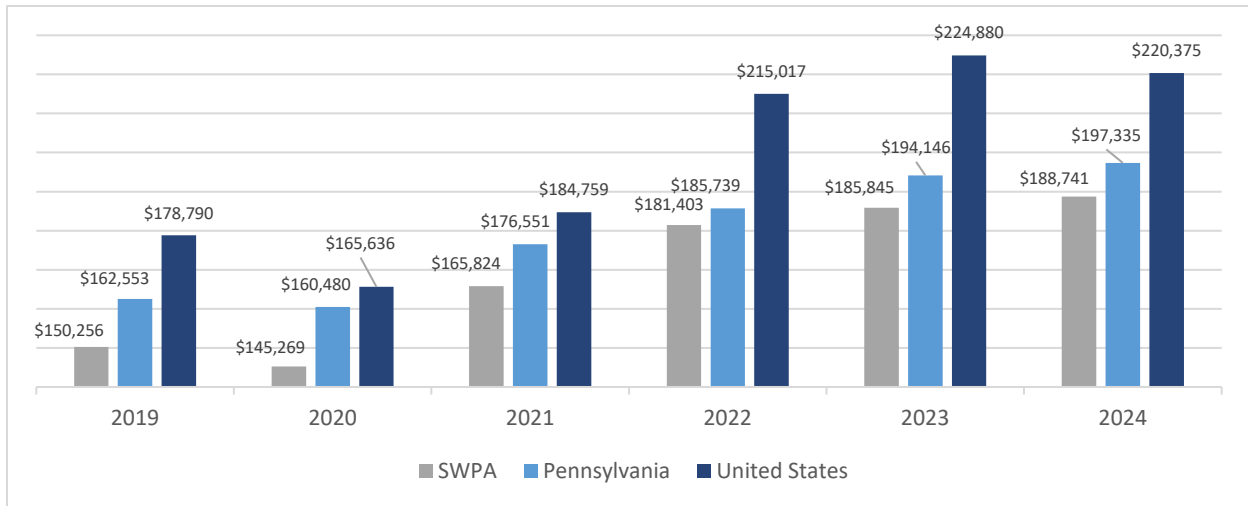
Manufacturing productivity remains below Pennsylvania and national averages but has grown faster over the past five years, increasing 25.6% compared with 21.4% statewide and 23.3% nationally. Year over year, SWPA matched Pennsylvania's productivity growth at 1.6%.

**Table 3: Productivity per worker in the manufacturing sector – Regional, State and National**

| Productivity per Worker | 2019         | 2020         | 2021         | 2022         | 2023         | 2024         | 1-Year Change | 5-Year Change |
|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|
| SWPA                    | \$150,255.68 | \$145,268.69 | \$165,823.97 | \$181,403.01 | \$185,845.40 | \$188,741.36 | 1.6%          | 25.6%         |
| Pennsylvania            | \$162,552.81 | \$160,480.19 | \$176,551.04 | \$185,738.95 | \$194,146.08 | \$197,335.23 | 1.6%          | 21.4%         |
| United States           | \$178,790.04 | \$165,635.90 | \$184,758.91 | \$215,017.44 | \$224,880.34 | \$220,374.70 | -2.0%         | 23.3%         |

The productivity gap between Pennsylvania and SWPA had been slowly closing and reduced to less than 1% in 2022. However, the productivity gap between Pennsylvania and SWPA has increased to 4.6% while the gap between SWPA and the United States has increased to 17% in 2024. This widening productivity gap may partly reflect SWPA's manufacturing composition, including a greater concentration in more labor-intensive manufacturing sub-sectors relative to higher-value, more capital-intensive manufacturing segments.

**Figure 1: Productivity per worker in the Manufacturing sector**



*Note: This chart visualizes the average economic productivity per manufacturing worker for SWPA, Pennsylvania, and the United States, over time.*

SWPA's productivity gap appears to be driven partly by its manufacturing specialization. SWPA's largest manufacturing employer, fabricated metal product manufacturing, generated approximately \$120,000 of output per worker in 2024 and accounted for 17.2% of manufacturing employment but only 12.1% of manufacturing GRP. In contrast, higher-productivity sub-sectors such as chemical manufacturing (\$472,000 per worker) and petroleum and coal products manufacturing (\$666,000 per worker) account for a disproportionately larger share of regional output relative to employment. These higher-value industries also represent a larger share of manufacturing activity in Cleveland and Charlotte, contributing to their stronger overall manufacturing output and productivity.



**Table 4: Productivity per worker in SWPA's manufacturing sub-sectors**

| Productivity by Sub-Sector of Manufacturing (in Thousands)   | 2019     | 2020     | 2021     | 2022     | 2023     | 2024     | 1-Year Change | 5-Year Change |
|--------------------------------------------------------------|----------|----------|----------|----------|----------|----------|---------------|---------------|
| Petroleum and Coal Products Manufacturing                    | \$343.79 | \$164.53 | \$497.37 | \$775.51 | \$681.63 | \$665.94 | -2.3%         | 93.7%         |
| Chemical Manufacturing                                       | \$254.48 | \$279.79 | \$341.52 | \$394.61 | \$401.08 | \$472.15 | 17.7%         | 85.5%         |
| Primary Metal Manufacturing                                  | \$207.32 | \$181.47 | \$245.96 | \$275.09 | \$264.76 | \$242.81 | -8.3%         | 17.1%         |
| Computer and Electronic Product Manufacturing                | \$185.00 | \$190.04 | \$202.51 | \$187.42 | \$189.13 | \$196.83 | 4.1%          | 6.4%          |
| Miscellaneous Manufacturing                                  | \$164.35 | \$174.95 | \$168.96 | \$183.36 | \$195.94 | \$195.86 | 0.0%          | 19.2%         |
| Electrical Equipment, Appliance, and Component Manufacturing | \$151.29 | \$151.41 | \$153.43 | \$165.54 | \$178.88 | \$186.93 | 4.5%          | 23.6%         |
| Machinery Manufacturing                                      | \$157.31 | \$152.72 | \$159.91 | \$165.17 | \$186.74 | \$185.69 | -0.6%         | 18.0%         |
| Transportation Equipment Manufacturing                       | \$169.95 | \$146.57 | \$139.58 | \$148.85 | \$164.75 | \$175.60 | 6.6%          | 3.3%          |
| Nonmetallic Mineral Product Manufacturing                    | \$132.10 | \$133.17 | \$140.70 | \$151.70 | \$155.74 | \$162.43 | 4.3%          | 23.0%         |
| Beverage and Tobacco Product Manufacturing                   | \$129.38 | \$139.34 | \$150.32 | \$123.77 | \$135.63 | \$143.83 | 6.0%          | 11.2%         |
| Wood Product Manufacturing                                   | \$87.02  | \$98.11  | \$132.11 | \$132.50 | \$136.51 | \$138.43 | 1.4%          | 59.1%         |
| Paper Manufacturing                                          | \$106.51 | \$110.01 | \$108.45 | \$114.43 | \$124.52 | \$127.83 | 2.7%          | 20.0%         |
| Plastics and Rubber Products Manufacturing                   | \$108.41 | \$107.12 | \$103.32 | \$113.44 | \$120.82 | \$124.73 | 3.2%          | 15.0%         |
| Fabricated Metal Product Manufacturing                       | \$100.71 | \$97.71  | \$98.78  | \$110.21 | \$117.32 | \$119.72 | 2.0%          | 18.9%         |
| Furniture and Related Product Manufacturing                  | \$88.10  | \$90.91  | \$92.58  | \$100.10 | \$106.39 | \$110.07 | 3.5%          | 24.9%         |
| Apparel Manufacturing                                        | \$97.49  | \$103.45 | \$104.84 | \$100.68 | \$100.37 | \$106.77 | 6.4%          | 9.5%          |
| Food Manufacturing                                           | \$86.59  | \$98.48  | \$96.12  | \$88.74  | \$102.36 | \$104.49 | 2.1%          | 20.7%         |
| Printing and Related Support Activities                      | \$89.92  | \$87.89  | \$93.65  | \$94.04  | \$96.31  | \$100.56 | 4.4%          | 11.8%         |
| Textile Product Mills                                        | \$74.20  | \$83.42  | \$94.71  | \$80.43  | \$85.98  | \$85.83  | -0.2%         | 15.7%         |
| Textile Mills                                                | \$67.05  | \$65.27  | \$68.09  | \$68.36  | \$79.81  | \$82.88  | 3.8%          | 23.6%         |

## SWPA Employment by Sector

The manufacturing sector is the 5<sup>th</sup> largest employer in SWPA, with a total of 90,016 salaried employees in 2024. The sector has seen a steady recovery from the pandemic lows but has not recovered to pre-pandemic levels of 2019. However, since 2020, manufacturing employment has grown by 4.3% but declined 0.4% year-over-year.

On average, each job in the manufacturing sector supports 2.57 additional jobs in the region<sup>2</sup>. This means that the 90,016 jobs in the manufacturing sector in 2024 supported an additional 231,422 jobs, including 141,406 indirect and induced jobs.

<sup>2</sup> The multiplier is from Lightcast's Regional Multipliers for 2024 for the 10-County SWPA region.

**Table 5: Top industries in SWPA by employment**

| Industry                                                                 | 2019 Jobs     | 2020 Jobs     | 2021 Jobs     | 2022 Jobs     | 2023 Jobs     | 2024 Jobs     | 2024 Percent of Total Employment | 1-Year Change | 5-Year Change |
|--------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------------|---------------|---------------|
| Health Care and Social Assistance                                        | 216,362       | 208,888       | 199,429       | 198,988       | 204,371       | 210,583       | 18.4%                            | 3.0%          | -2.7%         |
| Government                                                               | 122,709       | 118,832       | 118,157       | 118,129       | 119,573       | 120,999       | 10.6%                            | 1.2%          | -1.4%         |
| Retail Trade                                                             | 126,585       | 118,334       | 122,809       | 122,461       | 122,761       | 120,899       | 10.6%                            | -1.5%         | -4.5%         |
| Accommodation and Food Services                                          | 104,474       | 78,164        | 86,383        | 95,587        | 100,035       | 101,489       | 8.9%                             | 1.5%          | -2.9%         |
| <b>Manufacturing</b>                                                     | <b>93,122</b> | <b>86,269</b> | <b>85,738</b> | <b>88,779</b> | <b>90,419</b> | <b>90,016</b> | <b>7.9%</b>                      | <b>-0.4%</b>  | <b>-3.3%</b>  |
| Professional, Scientific, and Technical Services                         | 78,672        | 78,520        | 78,360        | 76,695        | 76,055        | 74,803        | 6.5%                             | -1.6%         | -4.9%         |
| Construction                                                             | 64,005        | 57,372        | 60,223        | 58,946        | 57,479        | 57,381        | 5.0%                             | -0.2%         | -10.3%        |
| Finance and Insurance                                                    | 59,250        | 58,613        | 56,365        | 51,682        | 46,179        | 49,868        | 4.4%                             | 8.0%          | -15.8%        |
| Administrative and Support and Waste Management and Remediation Services | 54,138        | 47,916        | 48,269        | 49,545        | 48,956        | 48,057        | 4.2%                             | -1.8%         | -11.2%        |
| Transportation and Warehousing                                           | 40,892        | 37,650        | 39,958        | 41,574        | 42,016        | 43,950        | 3.8%                             | 4.6%          | 7.5%          |
| Educational Services                                                     | 40,644        | 38,265        | 37,348        | 38,329        | 40,059        | 41,275        | 3.6%                             | 3.0%          | 1.6%          |
| Other Services (except Public Administration)                            | 40,864        | 34,809        | 36,445        | 38,124        | 39,256        | 39,821        | 3.5%                             | 1.4%          | -2.6%         |
| Management of Companies and Enterprises                                  | 38,308        | 33,482        | 38,192        | 40,103        | 39,706        | 37,036        | 3.2%                             | -6.7%         | -3.3%         |
| Wholesale Trade                                                          | 38,744        | 35,690        | 35,299        | 35,943        | 36,037        | 35,827        | 3.1%                             | -0.6%         | -7.5%         |
| Arts, Entertainment, and Recreation                                      | 22,392        | 15,434        | 18,240        | 21,331        | 21,572        | 22,498        | 2.0%                             | 4.3%          | 0.5%          |
| Information                                                              | 17,594        | 15,965        | 15,860        | 16,235        | 16,316        | 15,987        | 1.4%                             | -2.0%         | -9.1%         |
| Real Estate and Rental and Leasing                                       | 15,335        | 14,455        | 14,740        | 15,219        | 15,249        | 14,930        | 1.3%                             | -2.1%         | -2.6%         |
| Mining, Quarrying, and Oil and Gas Extraction                            | 14,862        | 11,752        | 10,886        | 10,398        | 10,843        | 10,513        | 0.9%                             | -3.0%         | -29.3%        |
| Utilities                                                                | 6,474         | 6,392         | 6,400         | 6,236         | 6,204         | 6,222         | 0.5%                             | 0.3%          | -3.9%         |
| Agriculture, Forestry, Fishing and Hunting                               | 1,443         | 1,413         | 1,625         | 1,887         | 1,785         | 2,042         | 0.2%                             | 14.4%         | 41.5%         |

#### Employment by Manufacturing Sub-Sector

Fabricated metal products, machinery, primary metal, computer and electronic products, and food were the top five sub-sectors of manufacturing by employment. These sectors have historically been SWPA's top manufacturing sub-sectors and collectively accounted for 57% of the total manufacturing jobs in the region.

Primary metal and food manufacturing saw increases in the number of jobs year-over-year. Among the top five manufacturing sub-sectors by employment, all declined since 2019 except food manufacturing. Primary metal manufacturing experienced the largest five-year employment decrease of 9.4%.

Miscellaneous manufacturing, the 9<sup>th</sup> largest sub-sector by employment, is largely driven by the region's Medical Equipment and Supplies Manufacturing industry, which accounts for more than two-thirds of the sub-sector's employment, or 3,162 jobs. Both other miscellaneous manufacturing and Medical

Equipment and Supplies Manufacturing experienced year-over-year employment declines, falling 4.1% and 8.3%, respectively.

**Table 6: Top manufacturing sub-sectors by employment**

| Industry                                                     | 2019 Jobs | 2020 Jobs | 2021 Jobs | 2022 Jobs | 2023 Jobs | 2024 Jobs | 2024 Percent of Manufacturing Employment | 1-Year Change | 5-Year Change |
|--------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------------------------------------|---------------|---------------|
| Fabricated Metal Product Manufacturing                       | 16,268    | 14,974    | 14,660    | 15,162    | 15,524    | 15,476    | 17.2%                                    | -0.3%         | -4.9%         |
| Machinery Manufacturing                                      | 11,012    | 10,533    | 10,266    | 10,535    | 10,626    | 10,783    | 12.0%                                    | 1.5%          | -2.1%         |
| Primary Metal Manufacturing                                  | 11,389    | 9,741     | 9,239     | 10,120    | 10,419    | 10,315    | 11.5%                                    | -1.0%         | -9.4%         |
| Computer and Electronic Product Manufacturing                | 8,856     | 8,813     | 8,729     | 8,692     | 8,664     | 8,336     | 9.3%                                     | -3.8%         | -5.9%         |
| Food Manufacturing                                           | 5,474     | 4,945     | 5,212     | 5,569     | 5,700     | 6,091     | 6.8%                                     | 6.9%          | 11.3%         |
| Electrical Equipment, Appliance, and Component Manufacturing | 5,450     | 5,360     | 5,313     | 5,206     | 5,495     | 5,540     | 6.2%                                     | 0.8%          | 1.6%          |
| Plastics and Rubber Products Manufacturing                   | 5,579     | 5,271     | 5,390     | 5,488     | 5,510     | 5,498     | 6.1%                                     | -0.2%         | -1.5%         |
| Nonmetallic Mineral Product Manufacturing                    | 5,264     | 4,689     | 4,608     | 4,688     | 4,793     | 4,748     | 5.3%                                     | -0.9%         | -9.8%         |
| Miscellaneous Manufacturing                                  | 4,506     | 3,998     | 4,156     | 4,623     | 4,627     | 4,292     | 4.8%                                     | -7.2%         | -4.7%         |
| Chemical Manufacturing                                       | 4,468     | 4,391     | 4,294     | 4,301     | 4,273     | 4,276     | 4.8%                                     | 0.1%          | -4.3%         |
| Printing and Related Support Activities                      | 3,260     | 2,762     | 2,702     | 2,869     | 3,040     | 3,163     | 3.5%                                     | 4.0%          | -3.0%         |
| Transportation Equipment Manufacturing                       | 2,538     | 2,229     | 2,390     | 2,365     | 2,576     | 2,415     | 2.7%                                     | -6.3%         | -4.8%         |
| Petroleum and Coal Products Manufacturing                    | 2,159     | 2,041     | 2,003     | 2,075     | 2,067     | 2,051     | 2.3%                                     | -0.7%         | -5.0%         |
| Beverage and Tobacco Product Manufacturing                   | 1,469     | 1,428     | 1,600     | 1,676     | 1,895     | 1,939     | 2.2%                                     | 2.3%          | 32.0%         |
| Wood Product Manufacturing                                   | 1,886     | 1,828     | 1,791     | 1,874     | 1,767     | 1,691     | 1.9%                                     | -4.3%         | -10.3%        |
| Paper Manufacturing                                          | 1,336     | 1,303     | 1,315     | 1,379     | 1,352     | 1,321     | 1.5%                                     | -2.3%         | -1.1%         |
| Furniture and Related Product Manufacturing                  | 991       | 886       | 904       | 942       | 901       | 890       | 1.0%                                     | -1.2%         | -10.2%        |
| Textile Product Mills                                        | 813       | 710       | 754       | 774       | 771       | 762       | 0.8%                                     | -1.1%         | -6.2%         |
| Textile Mills                                                | 283       | 279       | 297       | 298       | 264       | 271       | 0.3%                                     | 2.9%          | -4.2%         |
| Apparel Manufacturing                                        | 106       | 85        | 108       | 138       | 152       | 152       | 0.2%                                     | -0.2%         | 43.8%         |

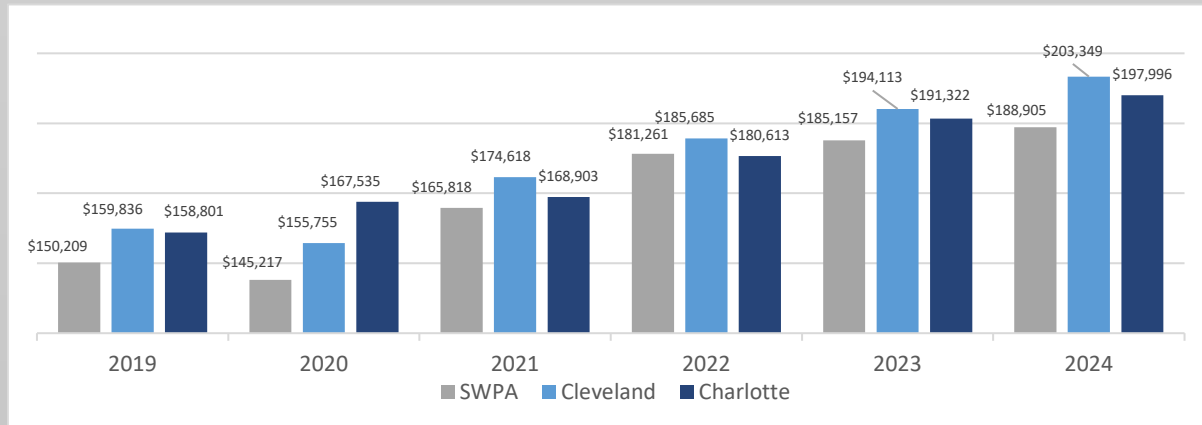
**Table 7: Miscellaneous manufacturing jobs**

| Industry                                            | 2019 Jobs | 2020 Jobs | 2021 Jobs | 2022 Jobs | 2023 Jobs | 2024 Jobs | 1-Year Change | 5-Year Change |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|---------------|
| <b>Miscellaneous Manufacturing</b>                  | 4,506     | 3,998     | 4,156     | 4,623     | 4,627     | 4,292     | -7.2%         | -4.7%         |
| <b>Medical Equipment and Supplies Manufacturing</b> | 3,321     | 2,961     | 3,073     | 3,480     | 3,448     | 3,162     | -8.3%         | -4.8%         |
| <b>Other Miscellaneous Manufacturing</b>            | 1,185     | 1,037     | 1,083     | 1,143     | 1,179     | 1,130     | -4.1%         | -4.6%         |

Note: Table 7 provides additional details on Medical Equipment and Supplies manufacturing, a key industry in SWPA that is otherwise grouped within the broader Miscellaneous Manufacturing category shown in Table 6.

## Box 2: Rising Productivity Despite Declining Manufacturing Employment

Manufacturing employment from 2019 to 2024 declined in all three regions – 3.3% in SWPA, 4.2% in Cleveland, and 3.2% in Charlotte – despite continued gains in manufacturing output and productivity. This reflects broader national trends in automation, capital investment, and technology that allow manufacturers to generate more output with fewer workers.



*Note: This chart visualizes the average economic productivity per manufacturing worker for SWPA, Cleveland MSA, and Charlotte MSA, over time.*

While SWPA's overall manufacturing productivity remains below Cleveland and Charlotte, the comparison varies considerably by manufacturing sub-sector. SWPA's chemical manufacturing generated approximately \$472,000 per worker in 2024, compared to \$544,000 in Cleveland and \$415,000 in Charlotte, while primary metal manufacturing produced \$243,000 per worker, exceeding both Cleveland (\$233,000) and Charlotte (\$216,000). Conversely, fabricated metal product manufacturing, SWPA's largest manufacturing employment sub-sector, generated approximately \$120,000 per worker, compared with \$141,000 in Cleveland and \$126,000 in Charlotte.

These comparisons suggest that SWPA's productivity challenge is driven less by productivity within individual sub-sectors and more by the region's overall industrial composition. Benchmark regions devote a larger share of manufacturing activity to higher-productivity sub-sectors such as chemicals, machinery, transportation equipment, and petroleum products. Expanding these industries while modernizing traditional manufacturing strengths could further improve regional productivity.

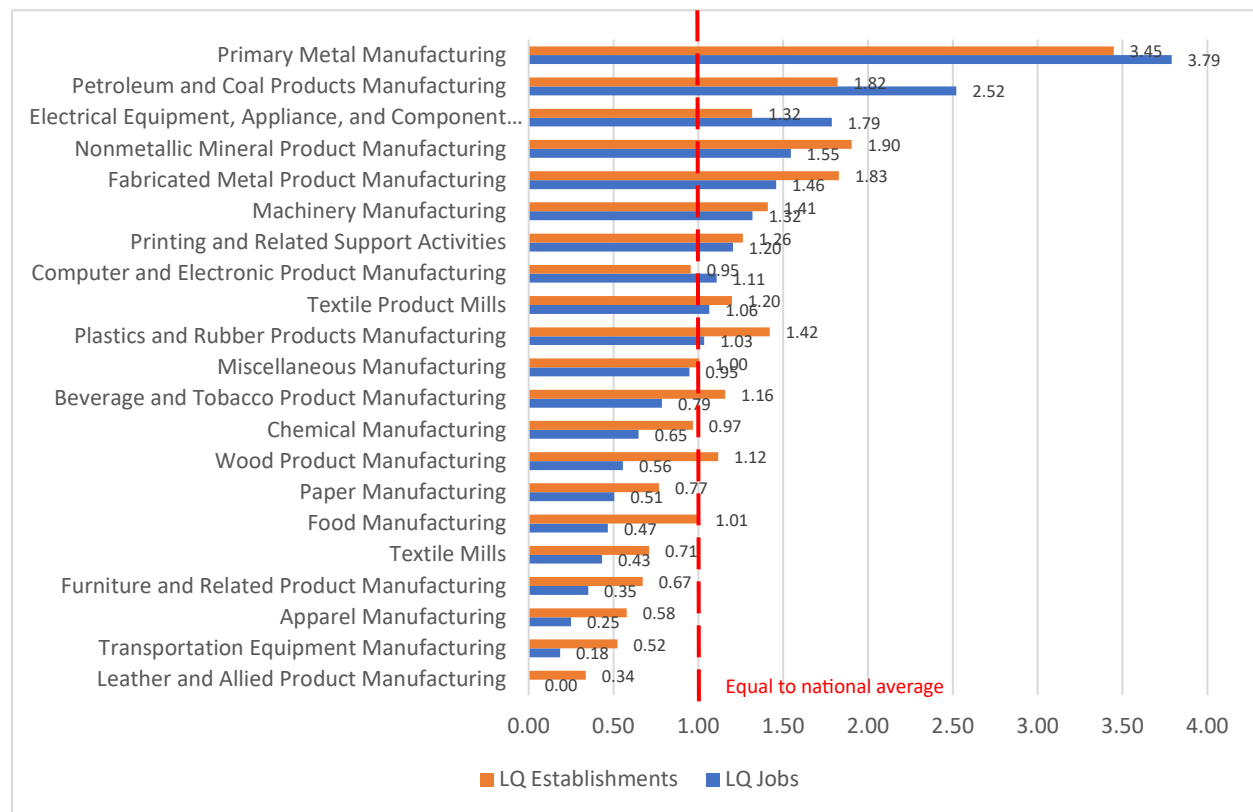
### Location Quotient<sup>3</sup> for Manufacturing Sub-Sectors

SWPA remains dominated by the Primary Metal Manufacturing sub-sector, closely followed by Petroleum and Coal Products Manufacturing in terms of employment concentration relative to US averages. In the case of Primary Metal Manufacturing, this share of employment in SWPA is nearly four

<sup>3</sup> The location quotient (LQ) is a measure of intensity of employment activity relative to the national average. An LQ of 1 means that the share of employment for an industry or sector is at par with the share of employment at the national level. Values below 1 mean that the industry employment is below the national average, and vice versa. LQ can be an indicator of regional specialization in certain industries.

times the concentration observed at the national level, which reinforces SWPA's concentration in a lower productivity sub-sector.

**Figure 2: Jobs and establishment location quotient for each manufacturing sub-sector for 2024**



*Note: This chart visualizes the LQ of manufacturing sub-sector establishments and the LQ of manufacturing sub-sector jobs. The red dashed line references where the LQ is the same as the national average. Sub-sectors with LQ beyond the line have a greater intensity of establishments and/or jobs than the national average.*

The LQs for jobs and establishments are highly correlated ( $R=0.94$ ). The clear outlier is Petroleum and Coal Products manufacturing with an establishment LQ of 1.82 and a jobs LQ of 2.52, suggesting the rate of employment generated per employer in this manufacturing sub-sector is significantly higher than the national average. In other words, this sub-sector is dominated by large companies. All other sub-sectors likely comprise many small establishments. Electrical equipment, appliance, and component manufacturing has seen the gap between establishment LQ (1.32) and jobs LQ (1.79) increase to indicate that the sub-sector is coalescing around larger companies in the region.

### SWPA Establishments by Sector

There was a total of 2,830 manufacturing establishments in the SWPA region in 2024, ranking it as the 10th largest sector. This placed the SWPA region 25<sup>th</sup> among all metropolitan areas. The benchmark manufacturing regions rank Cleveland as the 19<sup>th</sup> MSA (3,497 establishments) and Charlotte as the 20<sup>th</sup> MSA (3,360 establishments). Additionally, the location quotient for manufacturing establishments in the SWPA region is 1.244, meaning the concentration of manufacturing establishments in the region exceeds the national average by 24.4%.

**Table 8: Number of establishments in manufacturing over time**

| Industry                                                                 | 2019 Payrolled Business Locations | 2020 Payrolled Business Locations | 2021 Payrolled Business Locations | 2022 Payrolled Business Locations | 2023 Payrolled Business Locations | 2024 Payrolled Business Locations | 1-Year Change | 5-Year Change |
|--------------------------------------------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------|---------------|
| Health Care and Social Assistance                                        | 10,813                            | 11,159                            | 11,386                            | 11,433                            | 11,159                            | 10,992                            | -1.5%         | 1.7%          |
| Retail Trade                                                             | 8,077                             | 7,937                             | 7,844                             | 7,820                             | 7,805                             | 7,680                             | -1.6%         | -4.9%         |
| Professional, Scientific, and Technical Services                         | 6,812                             | 6,903                             | 7,040                             | 7,194                             | 7,268                             | 7,412                             | 2.0%          | 8.8%          |
| Other Services (except Public Administration)                            | 6,920                             | 6,957                             | 6,948                             | 7,048                             | 6,968                             | 6,934                             | -0.5%         | 0.2%          |
| Construction                                                             | 5,859                             | 5,883                             | 5,918                             | 6,029                             | 5,963                             | 5,943                             | -0.3%         | 1.4%          |
| Accommodation and Food Services                                          | 5,962                             | 5,889                             | 5,788                             | 5,854                             | 5,827                             | 5,851                             | 0.4%          | -1.9%         |
| Finance and Insurance                                                    | 3,677                             | 3,717                             | 3,727                             | 3,688                             | 3,628                             | 3,626                             | -0.1%         | -1.4%         |
| Administrative and Support and Waste Management and Remediation Services | 3,105                             | 3,108                             | 3,067                             | 3,143                             | 3,226                             | 3,285                             | 1.8%          | 5.8%          |
| Wholesale Trade                                                          | 3,182                             | 3,129                             | 3,045                             | 3,033                             | 2,963                             | 2,947                             | -0.5%         | -7.4%         |
| <b>Manufacturing</b>                                                     | <b>2,796</b>                      | <b>2,765</b>                      | <b>2,769</b>                      | <b>2,808</b>                      | <b>2,813</b>                      | <b>2,830</b>                      | <b>0.6%</b>   | <b>1.2%</b>   |
| Government                                                               | 2,724                             | 2,664                             | 2,657                             | 2,645                             | 2,653                             | 2,660                             | 0.3%          | -2.3%         |
| Real Estate and Rental and Leasing                                       | 2,257                             | 2,307                             | 2,326                             | 2,415                             | 2,442                             | 2,478                             | 1.5%          | 9.8%          |
| Transportation and Warehousing                                           | 1,631                             | 1,634                             | 1,654                             | 1,718                             | 1,712                             | 1,701                             | -0.6%         | 4.3%          |
| Arts, Entertainment, and Recreation                                      | 1,117                             | 1,110                             | 1,086                             | 1,145                             | 1,160                             | 1,166                             | 0.5%          | 4.4%          |
| Information                                                              | 839                               | 858                               | 878                               | 900                               | 949                               | 984                               | 3.7%          | 17.3%         |
| Management of Companies and Enterprises                                  | 812                               | 803                               | 839                               | 884                               | 951                               | 926                               | -2.6%         | 14.0%         |
| Educational Services                                                     | 800                               | 806                               | 784                               | 810                               | 834                               | 854                               | 2.4%          | 6.8%          |
| Mining, Quarrying, and Oil and Gas Extraction                            | 458                               | 434                               | 421                               | 415                               | 384                               | 375                               | -2.5%         | -18.1%        |
| Agriculture, Forestry, Fishing and Hunting                               | 225                               | 230                               | 234                               | 243                               | 251                               | 263                               | 4.5%          | 16.4%         |
| Utilities                                                                | 149                               | 150                               | 143                               | 153                               | 151                               | 147                               | -2.3%         | -1.3%         |

### Establishments by Manufacturing Sub-Sector

The top five manufacturing sub-sectors – fabricated metal products, machinery, food, miscellaneous, and printing and related – account for 55.5% of all manufacturing establishments in SWPA. Miscellaneous manufacturing is largely medical device manufacturing, which is a significant industrial activity in SWPA. With 638 establishments, fabricated metal product manufacturing is more than twice the size of the second-largest industry – machinery manufacturing (277) – and accounts for 22.5% of manufacturing establishments.

Among the top 10 sub-sectors, only food manufacturing (19.2%), miscellaneous manufacturing (4.4%), and chemical manufacturing (6.9%) experienced establishment growth since 2019. The largest establishment decreases for the top 10 sub-sectors occurred in fabricated metal product manufacturing (2.7%), machinery manufacturing (3.8%), and primary metal manufacturing (6.3%). These three sub-sectors also experienced declines in the number of workers over the five-year period.

**Table 9: Manufacturing establishments by sub-sector**

| Sub-Sector of Manufacturing                                  | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 1-Year Change | 5-Year Change |
|--------------------------------------------------------------|------|------|------|------|------|------|---------------|---------------|
| Fabricated Metal Product Manufacturing                       | 656  | 648  | 651  | 649  | 642  | 638  | -0.6%         | -2.7%         |
| Machinery Manufacturing                                      | 288  | 279  | 274  | 280  | 276  | 277  | 0.4%          | -3.8%         |
| Food Manufacturing                                           | 203  | 207  | 215  | 226  | 233  | 242  | 3.9%          | 19.2%         |
| Miscellaneous Manufacturing                                  | 206  | 204  | 208  | 213  | 214  | 215  | 0.5%          | 4.4%          |
| Printing and Related Support Activities                      | 205  | 205  | 191  | 196  | 195  | 201  | 3.1%          | -2.0%         |
| Nonmetallic Mineral Product Manufacturing                    | 194  | 191  | 189  | 193  | 192  | 192  | 0.0%          | -1.0%         |
| Computer and Electronic Product Manufacturing                | 145  | 138  | 139  | 136  | 135  | 142  | 5.2%          | -2.1%         |
| Chemical Manufacturing                                       | 131  | 129  | 132  | 132  | 135  | 140  | 3.7%          | 6.9%          |
| Primary Metal Manufacturing                                  | 127  | 122  | 121  | 120  | 120  | 119  | -0.8%         | -6.3%         |
| Plastics and Rubber Products Manufacturing                   | 118  | 120  | 120  | 122  | 121  | 117  | -3.3%         | -0.8%         |
| Beverage and Tobacco Product Manufacturing                   | 82   | 89   | 94   | 102  | 113  | 112  | -0.9%         | 36.6%         |
| Wood Product Manufacturing                                   | 101  | 104  | 103  | 100  | 100  | 103  | 3.0%          | 2.0%          |
| Electrical Equipment, Appliance, and Component Manufacturing | 86   | 87   | 86   | 85   | 85   | 80   | -5.9%         | -7.0%         |
| Furniture and Related Product Manufacturing                  | 73   | 69   | 68   | 69   | 69   | 70   | 1.4%          | -4.1%         |
| Transportation Equipment Manufacturing                       | 57   | 57   | 58   | 62   | 59   | 56   | -5.1%         | -1.8%         |
| Textile Product Mills                                        | 49   | 48   | 47   | 48   | 46   | 43   | -6.5%         | -12.2%        |
| Petroleum and Coal Products Manufacturing                    | 26   | 25   | 25   | 23   | 25   | 27   | 8.0%          | 3.8%          |
| Paper Manufacturing                                          | 20   | 22   | 22   | 23   | 24   | 25   | 4.2%          | 25.0%         |
| Apparel Manufacturing                                        | 13   | 10   | 13   | 15   | 19   | 21   | 10.5%         | 61.5%         |
| Textile Mills                                                | 13   | 11   | 11   | 12   | 10   | 11   | 10.0%         | -15.4%        |
| Leather and Allied Product Manufacturing                     | 4    | 3    | 4    | 3    | 3    | 3    | 0.0%          | -25.0%        |

**Box 3: Business Formation Lags Faster-Growing Manufacturing Regions**

Manufacturing establishments in SWPA have remained relatively stable over the past five years, while Charlotte experienced substantial growth in new manufacturing firms.

| Region:           | Manufacturing Establishments (2024) | Manufacturing Establishment Growth (2023-2024) | Manufacturing Establishment Growth (2019-2024) |
|-------------------|-------------------------------------|------------------------------------------------|------------------------------------------------|
| <b>SWPA:</b>      | <b>2,830</b>                        | <b>+0.6%</b>                                   | <b>+1.2%</b>                                   |
| <b>Cleveland:</b> | <b>3,497</b>                        | <b>+1.0%</b>                                   | <b>-0.1%</b>                                   |
| <b>Charlotte:</b> | <b>3,360</b>                        | <b>+3.6%</b>                                   | <b>+16.7%</b>                                  |

Growth in manufacturing establishments often reflects business formation, supplier expansion, and new investment activity. Charlotte's stronger establishment growth suggests a more rapidly expanding manufacturing ecosystem, while SWPA has largely maintained its existing industrial base.

Within SWPA, food manufacturing, beverage manufacturing, and chemical manufacturing recorded some of the strongest establishment growth, demonstrating opportunities in selected manufacturing sub-sectors despite relatively flat overall business growth. Manufacturing ecosystems grow not only through the expansion of existing firms, but also through the creation of new suppliers, startups, and specialized manufacturers. Accelerating business formation may therefore be as important to long-term competitiveness as expanding existing employers.



## SWPA Wages by Sector

The average annual wage of a manufacturing employee in SWPA was \$98,550 in 2024. This put manufacturing as the 8<sup>th</sup> best paying sector on average. The average wage of a manufacturing worker was about 0.4% above the average wage across all sectors in SWPA. Of the seven higher paying sectors than manufacturing, only two have experienced a year-over-year employment increases: Utilities (0.3%) and Finance and Insurance (8.0%). Additionally, all seven higher paying sectors experienced a decline in employment over the five-year period. This suggests that manufacturing employment declines are unlikely to be driven primarily by workers transitioning to higher-paying industries, as those industries have also experienced employment contraction.

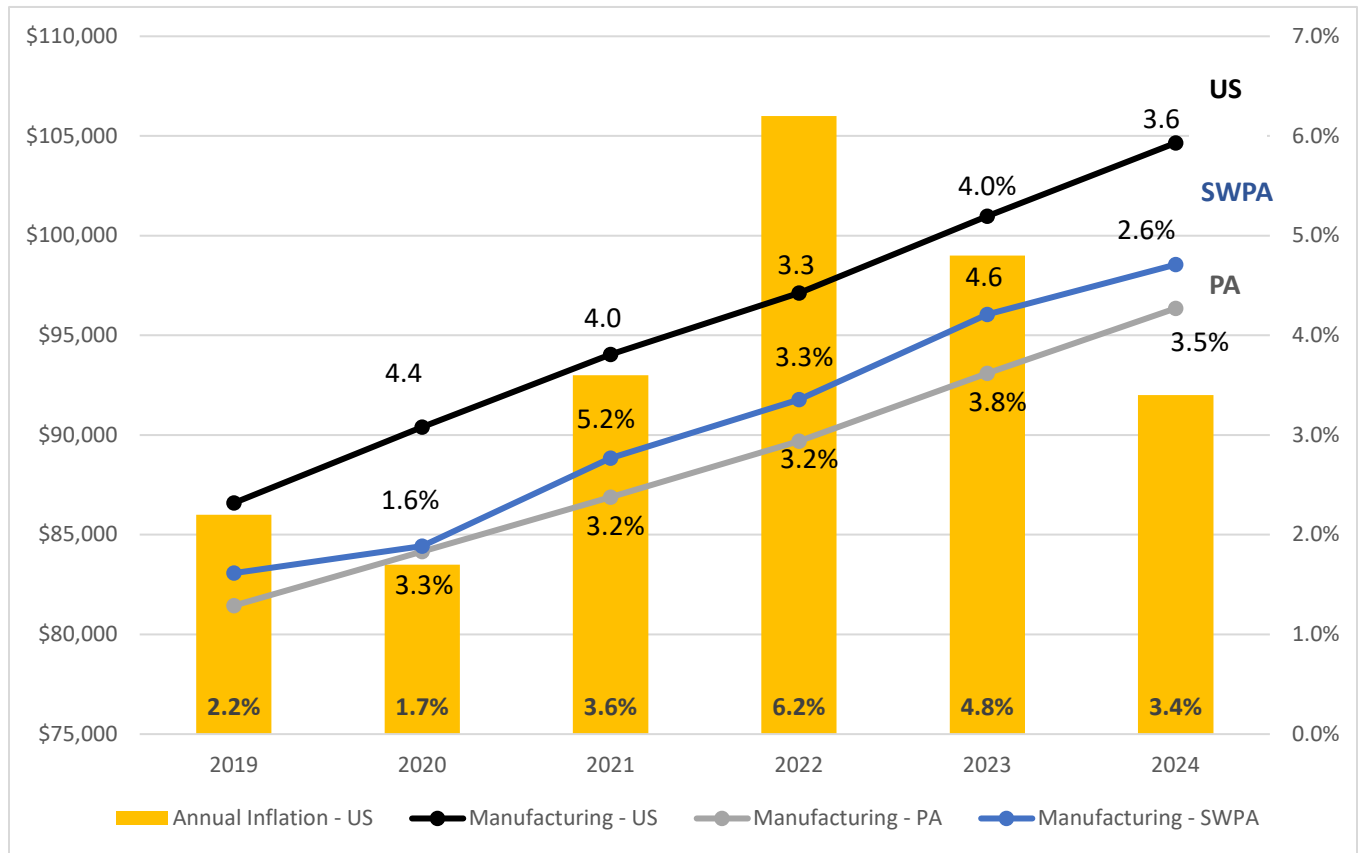
**Table 10: Wages in manufacturing vs other sectors**

| Average Earnings per Worker by Sector                                    | 2019            | 2020            | 2021            | 2022            | 2023            | 2024            | 1-Year Change | 5-Year Change |
|--------------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|---------------|
| Management of Companies and Enterprises                                  | \$149,919       | \$158,763       | \$170,783       | \$171,489       | \$190,321       | \$191,762       | 0.8%          | 27.9%         |
| Information                                                              | \$117,999       | \$123,602       | \$161,283       | \$151,290       | \$172,019       | \$184,017       | 7.0%          | 55.9%         |
| Utilities                                                                | \$151,566       | \$157,292       | \$157,743       | \$148,448       | \$140,658       | \$150,294       | 6.9%          | -0.8%         |
| Mining, Quarrying, and Oil and Gas Extraction                            | \$122,566       | \$121,204       | \$129,721       | \$130,522       | \$143,891       | \$147,453       | 2.5%          | 20.3%         |
| Finance and Insurance                                                    | \$103,618       | \$108,074       | \$114,468       | \$117,675       | \$127,367       | \$138,337       | 8.6%          | 33.5%         |
| Professional, Scientific, and Technical Services                         | \$105,306       | \$109,886       | \$112,888       | \$119,172       | \$124,539       | \$132,615       | 6.5%          | 25.9%         |
| Wholesale Trade                                                          | \$82,552        | \$85,230        | \$90,425        | \$94,846        | \$97,421        | \$100,420       | 3.1%          | 21.6%         |
| <b>Manufacturing</b>                                                     | <b>\$83,074</b> | <b>\$84,421</b> | <b>\$88,840</b> | <b>\$91,787</b> | <b>\$96,043</b> | <b>\$98,550</b> | 2.6%          | 18.6%         |
| Government                                                               | \$87,324        | \$91,500        | \$92,150        | \$91,716        | \$94,198        | \$97,437        | 3.4%          | 11.6%         |
| Construction                                                             | \$84,643        | \$86,057        | \$88,998        | \$88,168        | \$89,240        | \$93,860        | 5.2%          | 10.9%         |
| Educational Services                                                     | \$74,012        | \$77,903        | \$80,119        | \$81,196        | \$83,839        | \$86,016        | 2.6%          | 16.2%         |
| Real Estate and Rental and Leasing                                       | \$74,935        | \$81,675        | \$86,673        | \$84,994        | \$85,130        | \$85,534        | 0.5%          | 14.1%         |
| Health Care and Social Assistance                                        | \$63,632        | \$68,359        | \$70,230        | \$74,080        | \$75,547        | \$77,873        | 3.1%          | 22.4%         |
| Transportation and Warehousing                                           | \$65,332        | \$66,422        | \$67,522        | \$71,149        | \$73,689        | \$75,226        | 2.1%          | 15.1%         |
| Arts, Entertainment, and Recreation                                      | \$52,484        | \$59,371        | \$57,227        | \$61,057        | \$62,485        | \$64,779        | 3.7%          | 23.4%         |
| Administrative and Support and Waste Management and Remediation Services | \$47,609        | \$50,804        | \$53,084        | \$57,961        | \$62,187        | \$62,156        | -0.1%         | 30.6%         |
| Other Services (except Public Administration)                            | \$40,503        | \$43,865        | \$45,029        | \$47,677        | \$48,901        | \$50,299        | 2.9%          | 24.2%         |
| Agriculture, Forestry, Fishing and Hunting                               | \$38,250        | \$40,981        | \$43,447        | \$45,871        | \$49,006        | \$49,189        | 0.4%          | 28.6%         |
| Retail Trade                                                             | \$37,963        | \$41,713        | \$43,788        | \$44,903        | \$47,496        | \$48,357        | 1.8%          | 27.4%         |
| Accommodation and Food Services                                          | \$22,182        | \$22,189        | \$24,651        | \$25,870        | \$27,734        | \$28,916        | 4.3%          | 30.4%         |

Note: Average Earnings Per Worker represent total pre-tax labor earnings divided by total industry employment. Earnings include wages and salaries plus employer-paid supplements (e.g., benefits), but exclude non-labor income such as investment income, rental income, and Social Security. Data are derived primarily from the U.S. Bureau of Labor Statistics (QCEW) and the Bureau of Economic Analysis (BEA).

While the average annual wage in manufacturing in SWPA remained below the national average (\$104,652) in 2024, manufacturing wage growth matched or exceeded the national rate from 2021 through 2023. As a result, the wage gap narrowed during that period before widening slightly again in 2024 (see Figure 3). Despite these wage gains, manufacturing employment remains below pre-pandemic levels, suggesting that factors beyond compensation are contributing to the sector's workforce challenges. More broadly, the limited growth and scale of higher-paying industries in SWPA suggest that manufacturing employment declines are unlikely to be driven primarily by workers transitioning to better-paying sectors.

**Figure 3: Growth rate of wages in manufacturing**



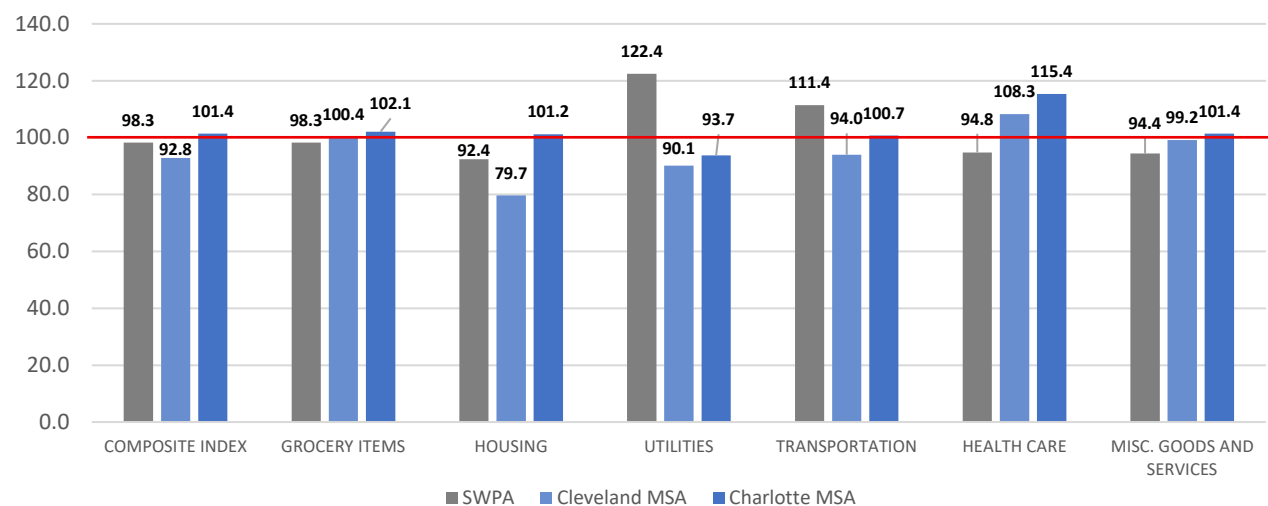
#### Box 4: Competitive Wages and Affordability Support Manufacturing Competitiveness

Manufacturing wages in SWPA are the highest among the benchmark regions while the region maintains an overall cost of living below the national average. Together, these factors provide manufacturing workers with comparatively strong purchasing power and represent a potential advantage when attracting and retaining skilled workers.

| Region:    | Manufacturing Avg. Annual Earnings per Worker (2024) | Manufacturing Avg. Wage Growth (2019-2024) | Cost of Living Index – Overall | Avg. Age of Manufacturing Worker |
|------------|------------------------------------------------------|--------------------------------------------|--------------------------------|----------------------------------|
| SWPA:      | \$98,550 (8 <sup>th</sup> overall sector)            | +18.6%                                     | 98.3                           | 44.9                             |
| Cleveland: | \$96,885 (8 <sup>th</sup> overall sector)            | +19.8%                                     | 92.8                           | 45.4                             |
| Charlotte: | \$92,332 (11 <sup>th</sup> overall sector)           | +21.1%                                     | 101.4                          | 45.0                             |

*Note: Average Earnings Per Worker represent total pre-tax labor earnings divided by total industry employment. Earnings include wages and salaries plus employer-paid supplements (e.g., benefits), but exclude non-labor income such as investment income, rental income, and Social Security. Data are derived primarily from the U.S. Bureau of Labor Statistics (QCEW) and the Bureau of Economic Analysis (BEA).*

SWPA's combination of competitive wages and relatively affordable living costs remains an important regional asset. Leveraging that advantage through workforce development, talent attraction, and continued investment in higher-growth manufacturing industries can help strengthen the region's long-term manufacturing competitiveness.



*Note: This chart visualizes the Cost-of-Living Index Scores as a composite and each category individually for SWPA, Charlotte MSA, and Cleveland, for 2025. The red line indicates the United States' national average benchmark at 100.*

## SWPA Exports

The region exported upwards of \$10.4 billion worth of goods and services in 2024, which was a 9.4% decrease over the previous year. This decrease was largely due to the decline in exports in the Minerals & Ores sector. Chemicals manufacturing increased over the previous year and the largest five-year increase in export volume.

**Table 11: Export value for the top five sub-sectors for the Pittsburgh Metropolitan Area**

| Sector (in Millions of USD)    | 2019            | 2020            | 2021            | 2022             | 2023             | 2024             | Percentage of Total | 1-Year Change | 5-Year Change |
|--------------------------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|---------------------|---------------|---------------|
| Minerals & Ores                | -               | 1,497.20        | 2,598.80        | 3,109.50         | 3,158.00         | 2,162.00         | 20.7%               | -31.5%        | 44.4%         |
| Chemicals                      | 1,298.00        | 1,158.60        | 1,551.30        | 2,087.70         | 1,812.30         | 1,948.50         | 18.6%               | 7.5%          | 68.2%         |
| Primary metal manufacturers    | <b>1,624.00</b> | <b>1,159.90</b> | <b>1,212.20</b> | <b>1,631.90</b>  | <b>1,874.80</b>  | <b>1,823.50</b>  | 17.4%               | -2.7%         | 57.2%         |
| Machinery                      | 881.90          | 756.30          | 905.10          | 855.40           | 998.40           | 1,039.20         | 9.9%                | 4.1%          | 37.4%         |
| Computer & electronic products | 739.40          | 723.50          | 859.60          | 830.70           | 857.20           | 1,029.70         | 9.8%                | 20.1%         | 42.3%         |
| All Others                     | -               | 2,249.50        | 2,342.60        | 2,673.00         | 2,837.80         | 2,451.10         | 23.4%               | -13.6%        | 9.0%          |
| <b>TOTAL</b>                   | <b>4,543.30</b> | <b>7,545.00</b> | <b>9,469.60</b> | <b>11,188.20</b> | <b>11,538.50</b> | <b>10,454.00</b> |                     | <b>-9.4%</b>  | <b>38.6%</b>  |

*Note: The International Trade Administration's data policies do not allow for data on 'Minerals & Ores' and 'All Others' categories for the year 2019 to be reported. The top five sub-sectors are not limited to the manufacturing sector.*

Pittsburgh MSA ranked 41<sup>st</sup> among all metropolitan areas. In 2024, chemicals were the largest exported manufacturing product from the region, constituting 18.6% of the total exports, valued at just under \$2 billion. Primary metal manufacturing exports, totaling \$1.8 billion, accounted for 17.4% of the total exports from the Pittsburgh MSA.

Computer and electronic products manufacturing experienced the largest 1-year growth with a 20.1% increase in export values. Chemicals manufacturers saw a 7.5% year-over-year increase in export value in 2024 while primary metal manufacturers saw a 2.7% decrease in export value. However, over a five-year period, both primary metal and chemicals manufacturers experienced large growth in exports of 57.2% and 68.2%, respectively. Chemicals manufacturing's trade volume growth reinforces the sub-sector's growing importance within SWPA's manufacturing economy.

## Announced Investments and Downsizings

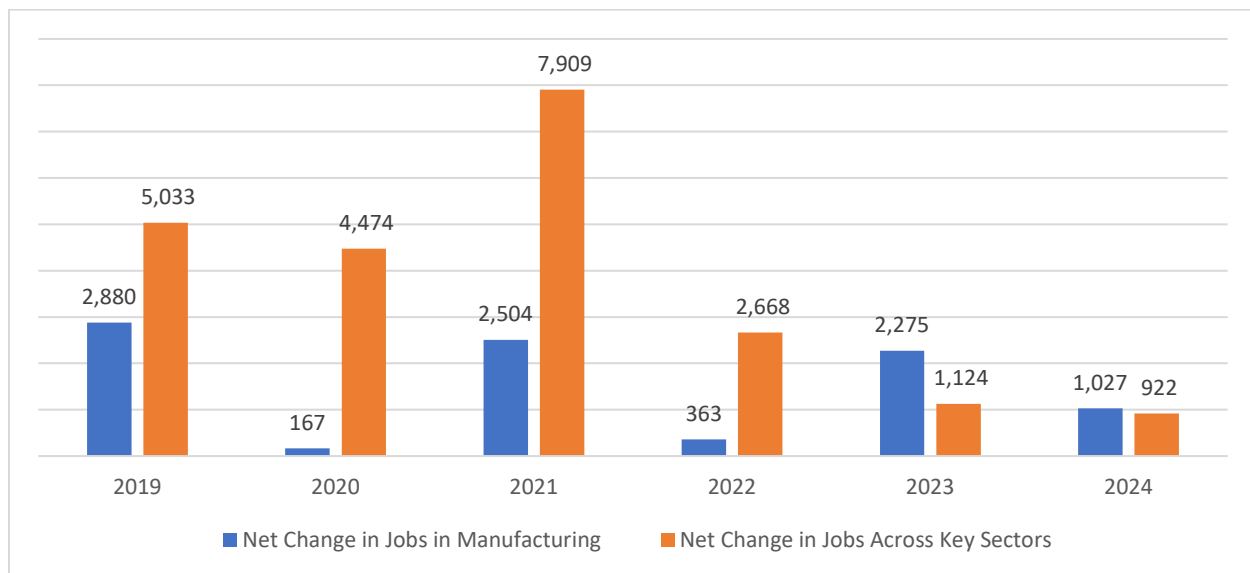
Manufacturing jobs accounted for roughly 66% of the total change in jobs across SWPA's key sectors in 2024. The total number of investment activity has declined since 2021, but capital investment has exceeded 2021 amounts in each of the subsequent years. The region has consistently added jobs across its five key sectors over the past several years, though in recent years the rate of job growth has slowed down. Manufacturing has also accounted for a larger proportion of total job growth over the past two years in 2023 and 2024.

**Table 12: Expansion and Downsizings in Advanced Manufacturing by Year**

| Year | Investments    |               |                    | Downsizings    |               | Net Change in Jobs in Manufacturing |
|------|----------------|---------------|--------------------|----------------|---------------|-------------------------------------|
|      | Total Activity | Jobs Impacted | Capital Investment | Total Activity | Jobs Impacted |                                     |
| 2019 | 62             | 2,966         | \$339,222,468      | 5              | -86           | 2,880                               |
| 2020 | 36             | 971           | \$76,521,040       | 9              | -804          | 167                                 |
| 2021 | 60             | 2,664         | \$220,322,741      | 2              | -160          | 2,504                               |
| 2022 | 27             | 713           | \$294,300,000      | 2              | -350          | 363                                 |
| 2023 | 26             | 3,056         | \$811,102,077      | 7              | -781          | 2,275                               |
| 2024 | 20             | 1,550         | \$439,800,000      | 9              | -523          | 1,027                               |

Note: The Allegheny Conference tracks investment announcements in the region. The jobs noted here are based on the Conference's internal tracking and estimation efforts.

**Figure 4: Net change in jobs in manufacturing vs all key sectors**



Note: The Allegheny Conference tracks investment announcements in the region. The jobs noted here are based on the Conference's internal tracking and estimation efforts. Key sectors include manufacturing, information technology and robotics, healthcare and life sciences, financial and business services, and energy.

## Key Takeaways

Manufacturing remains one of Southwestern Pennsylvania's foundational industries, generating \$15.3 billion in GRP, employing 90,016 workers, and exporting over \$10.4 billion in goods annually. Although manufacturing accounts for less than one-tenth of regional employment, it continues to serve as one of SWPA's largest traded sectors and a major driver of economic output, exports, and supply-chain activity.

While SWPA's manufacturing sector has become more productive, wages have increased, and business investment has remained strong, the region has not matched the manufacturing growth experienced in benchmark regions. Since 2019, manufacturing output has grown just over 6% in SWPA compared with roughly 21% in both Cleveland and Charlotte. Charlotte has also experienced substantially stronger growth in manufacturing establishments, indicating a more rapidly expanding manufacturing ecosystem.

Much of this difference appears to reflect industrial composition rather than manufacturing performance itself. SWPA remains heavily concentrated in legacy manufacturing industries such as primary metal and fabricated metal product manufacturing that continue to be regional strengths but have generally experienced slower long-term growth than advanced manufacturing industries. By comparison, benchmark regions devote larger shares of manufacturing activity to chemicals, machinery, transportation equipment, and other higher-growth industries. Encouragingly, chemical manufacturing has emerged as one of SWPA's fastest-growing manufacturing sub-sectors, demonstrating the region's ability to diversify into higher-value manufacturing activities.

Manufacturing productivity has continued to improve despite modest employment declines, a pattern observed across all benchmark regions. SWPA's productivity growth since 2019 has exceeded both Pennsylvania and the nation, suggesting that the region's competitiveness is constrained less by firm-level performance than by its overall mix of manufacturing industries. Continued automation, capital investment, and technological adoption will likely reinforce this trend.

SWPA enters its next phase of manufacturing development from a position of established industrial strength. Competitive wages, below-average living costs, stable business establishments, growing manufacturing sub-sector exports, and continued investment announcements provide a solid foundation for future growth. Strengthening long-term competitiveness will depend on expanding higher-value manufacturing sub-sectors, encouraging new business formation, supporting innovation, and continuing to develop and attract a skilled manufacturing workforce.

## Methodology

To conduct this analysis, the ACCD leveraged *Lightcast.io* as a data aggregator. The underlying data came from the following sources:

- Gross Regional Product: *Bureau of Economic Analysis* ([www.bea.gov](http://www.bea.gov))
- Employment: *Bureau of Labor Statistics* ([www.bls.gov](http://www.bls.gov))
- Establishments: *Bureau of Labor Statistics* ([www.bls.gov](http://www.bls.gov))
- Wages: *Bureau of Labor Statistics* ([www.bls.gov](http://www.bls.gov))
- Exports: *International Trade Administration* ([www.trade.gov](http://www.trade.gov))
- *Cost of Living Index*: C2ER ([www.c2er.org](http://www.c2er.org))
- Investments and Downsizings: *Allegheny Conference on Community Development*

While release dates of data often vary depending on the source, in all cases, the most recent available data was used. Comparisons include the most recent year-over-year change and the change from 2019.

ACCD maintains a live database of all business investments and downsizings in the region, which was also used in this brief report.



## Appendix: Manufacturing Benchmark Tables

**Appendix Table A1: Manufacturing Benchmark Comparison (2024)**

| Metric (2024)                              | SWPA        | Cleveland   | Charlotte   |
|--------------------------------------------|-------------|-------------|-------------|
| Manufacturing GRP (\$M)                    | \$15,278.98 | \$21,924.51 | \$21,574.28 |
| Manufacturing Rank in GRP                  | 5th         | 3rd         | 3rd         |
| 1-Year Manufacturing GRP Change            | -1.5%       | 3.4%        | 2.0%        |
| 5-Year Manufacturing GRP Change            | 6.3%        | 20.8%       | 20.7%       |
| Manufacturing Employment                   | 90,016      | 125,072     | 108,963     |
| Manufacturing Rank in Employment           | 5th         | 3rd         | 5th         |
| 1-Year Manufacturing Employment Change     | -0.4%       | -0.9%       | -1.4%       |
| 5-Year Manufacturing Employment Change     | -3.3%       | -4.2%       | -3.2%       |
| Manufacturing Wages                        | \$98,550    | \$96,885    | \$92,332    |
| Manufacturing Rank in Wages                | 8th         | 8th         | 11th        |
| 1-Year Manufacturing Wages Change          | 2.6%        | 5.7%        | 4.2%        |
| 5-Year Manufacturing Wages Change          | 18.6%       | 19.8%       | 21.1%       |
| Manufacturing Establishments               | 2,830       | 3,497       | 3,360       |
| Manufacturing Rank in Establishments       | 10th        | 10th        | 11th        |
| 1-Year Manufacturing Establishments Change | 0.6%        | 1.0%        | 3.6%        |
| 5-Year Manufacturing Establishments Change | 1.2%        | -0.1%       | 16.7%       |

**Appendix Table A2: Comparative Manufacturing Sub-Sector Composition (2024)**

| Top 5 Sub-Sectors by GRP |                                         |                                         |                                        | Top 5 Sub-Sectors by Employment |                                         |                                         |                                         |
|--------------------------|-----------------------------------------|-----------------------------------------|----------------------------------------|---------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
| GRP Rank                 | SWPA                                    | Cleveland                               | Charlotte                              | Employment Rank                 | SWPA                                    | Cleveland                               | Charlotte                               |
| 1                        | <b>Primary Metal (16.4%)</b>            | <b>Chemical (27.9%)</b>                 | <b>Chemical (17.9%)</b>                | 1                               | <b>Fabricated Metal Product (17.2%)</b> | <b>Fabricated Metal Product (20.8%)</b> | <b>Fabricated Metal Product (11.8%)</b> |
| 2                        | <b>Chemical (13.2%)</b>                 | <b>Fabricated Metal Product (16.7%)</b> | <b>Machinery (12.2%)</b>               | 2                               | <b>Machinery (12.0%)</b>                | <b>Machinery (12.7%)</b>                | <b>Machinery (11.5%)</b>                |
| 3                        | <b>Machinery (13.1%)</b>                | <b>Transportation Equipment (13.1%)</b> | <b>Transportation Equipment (8.5%)</b> | 3                               | Primary Metal (11.5%)                   | <b>Transportation Equipment (11.6%)</b> | <b>Transportation Equipment (10.5%)</b> |
| 4                        | <b>Fabricated Metal Product (12.1%)</b> | <b>Machinery (13.0%)</b>                | <b>Fabricated Metal Product (7.5%)</b> | 4                               | Computer and Electronic Product (9.3%)  | Chemical (9.0%)                         | Plastics and Rubber Products (9.6%)     |
| 5                        | Computer and Electronic Product (10.7%) | <b>Primary Metal (7.2%)</b>             | Plastics and Rubber Products (6.6%)    | 5                               | <b>Food (6.8%)</b>                      | Plastics and Rubber Products (7.0%)     | <b>Food (9.2%)</b>                      |

Note: Percentages shown in parentheses represent each sub-sector's share of total manufacturing GRP and employment in the corresponding metropolitan area in 2024. Additionally, the bold sub-sectors indicate overlap among MSAs.

**Appendix Table A3: Manufacturing Sub-Sector Productivity Comparison (2024)**

| SWPA Productivity Rank | Industry                                                     | SWPA            | Cleveland | Charlotte |
|------------------------|--------------------------------------------------------------|-----------------|-----------|-----------|
| 1                      | Petroleum and Coal Products Manufacturing                    | \$665.94        | \$979.04  | \$721.24  |
| 2                      | Chemical Manufacturing                                       | \$472.15        | \$543.83  | \$415.38  |
| 3                      | Primary Metal Manufacturing                                  | <b>\$242.81</b> | \$233.18  | \$215.79  |
| 4                      | Computer and Electronic Product Manufacturing                | \$196.83        | \$198.90  | \$204.41  |
| 5                      | Miscellaneous Manufacturing                                  | <b>\$195.86</b> | \$141.03  | \$158.98  |
| 6                      | Electrical Equipment, Appliance, and Component Manufacturing | \$186.93        | \$184.20  | \$188.18  |
| 7                      | Machinery Manufacturing                                      | \$185.69        | \$178.69  | \$209.99  |
| 8                      | Transportation Equipment Manufacturing                       | \$175.60        | \$198.60  | \$160.65  |
| 9                      | Nonmetallic Mineral Product Manufacturing                    | \$162.43        | \$216.20  | \$162.18  |
| 10                     | Beverage and Tobacco Product Manufacturing                   | \$143.83        | \$133.28  | \$172.00  |

Note: This table is sorted by SWPA Productivity and includes the top 10 sub-sectors in productivity for SWPA. Green highlighted cells indicate that SWPA has the highest productivity compared to the two benchmark regions.