

MEMORANDUM

TO: Mayor Jim Kenney of Philadelphia, Pennsylvania; Office of Economic Development

FROM: Stephanie Onuaja, Master of City Planning Student

DATE: November 24, 2021

RE: Employment Projections for 2029 for the City of Philadelphia

Our employment projections show that Philadelphia's economy is projected to grow by 18% from 2019 to 2029, reaching a total of 701,257 jobs. Through our analysis, we identified the industries that are leading this employment growth in Philadelphia and studied how these trends would continue. We have detailed our methodology and findings from our employment projections for Philadelphia.

Methodology

We carried out four forecasting methods to determine employment growth in the city of Philadelphia, taking into consideration different factors for each projection. The employment data for the projections were extracted from the Quarterly Census of Employment and Wages (QCEW) for Philadelphia and the US. The methods were as follows:

- 1) Trend Projection: This method uses historical employment trends to project future employment levels. We applied this method to determine the total employment numbers for Philadelphia in 2029 with the assumption that the trends identified in the historical data would continue.
- 2) Step-down Share: Taking the US as a parent geography, this method compares the local economy share to the national economy and assumes that the relationship would continue in the future.
- 3) Population-based model: This forecast projects employment growth using the rate at which the population grows. It assumes that jobs would follow people.
- 4) Shift-share Analysis: This method compares both the local employment levels and concentrations as well as local employment growth that can be attributed to a reference economy. Using the US as our reference economy, we calculate future employment levels based on the three factors: national economic growth effect, local industry mix effect, and local competitiveness effect. It allows us to create future scenarios about local and national factors to determine the appropriate forecast.

Philadelphia's economy is projected to add 105,686 jobs from 2019 to 2029

Our 2029 projections use the Shift-share Analysis-based Projection because it produces a thorough employment projection per sector considering the local and national factors that affect employment growth. The other projection methods, while simpler to calculate, provide projections that are less

nuanced. The Trend projection does not account for shifts in the local and macroeconomy as it relies on historical employment trends. The Step-down Share projection would require a continuous correlation of employment trends between Philadelphia and the US as the parent geography, which is not guaranteed. Finally, the Population-based projection relies on population trends to dictate employment trends, which may not always be accurate.

In our future Scenario 1 from Shift-share Analysis-based Projection, we assumed that the local and national trends between 2009 and 2019 would continue into 2029. This scenario was our preferred employment projection as the other two scenarios forecast job projects with the local and national trends at high and low extremes. According to Scenario 1, the private sector economy in Philadelphia is projected to grow from 595,571 jobs in 2019 to 701,257 jobs in 2029. The forecast suggests significant growth in specific employment sectors in 2029.

Employment Projections - Philadelphia 2029

Method	Employment Projection
Trend Projection	725,401
Step-down Share Projection	634,790
Population-based Projection	546,763
Shift-share Analysis-based Projection - <i>Scenario 1</i>	701,257
Shift-share Analysis-based Projection - <i>Scenario 2</i>	636,715
Shift-share Analysis-based Projection - <i>Scenario 3</i>	724,655

Sources

All employment data was extracted from the QCEW for Philadelphia and the US. The employment projections for 2024 and 2029 are from The U.S. Bureau of Labor Statistics (BLS) Projections overview and highlights, 2020–30. The population data from 2000-2020 was extracted from The US Census Bureau.

The Health Care and Social Assistance sector is leading the employment growth in Philadelphia

From 2009 to 2019, the Health Care and Social Assistance sector accounted for 45% of all new jobs added in Philadelphia. In 2029, we project that this sector will account for 41% of all new jobs city-wide. According to our cluster industry analysis for Philadelphia, we observed that there is a diversity in the types of jobs added to this sector in their characteristics and wages. Apart from the General Medical and Surgical Hospitals industry, the Specialty Hospitals or Other Hospitals industry and Services for the Elderly and Persons with Disabilities industry have grown significantly in Philadelphia. The Services for

the Elderly and Persons with Disabilities industry accounts for most jobs added to this industry cluster. With the projected growth in Philadelphia's middle-aged and older population. There would likely be an increase in the need for health care services catered to these age groups. Overall, this sector is one of Philadelphia's specializations and is projected to continue to add jobs to the local economy.

Other sectors essential to the employment growth in Philadelphia

The Accommodation and Food Services sector, Professional, Scientific, and Technical Services sector, and Administrative and Support and Waste Management and Remediation Services sector are also contributors to the employment growth in Philadelphia. Between 2009 and 2019, these sectors accounted for 20%, 17%, and 11% of all new jobs in Philadelphia, respectively. In 2029, they are projected to account for 20%, 16%, and 12% of all new jobs respectively. These sectors currently employ a large section of the population and are projected to continue to in 2029.

Conclusion

All the sectors identified in this report are essential to the continued development of Philadelphia's economy. Incentivizing the growth of these sectors and the industries that support them will ensure that the economic growth in Philadelphia is sustained. However, it can be observed that Philadelphia has a significant percentage of new jobs in lower-wage sectors such as the Accommodation and Food Services sector and industries such as the Services for the Elderly and Persons with Disabilities within the Health Care and Social Assistance sector. While this growth should be sustained, strategies need to be put in place to ensure equitable access to middle and higher-wage jobs for Philadelphians.

It is also vital to consider that the employment projections do not account for the substantial impacts of COVID-19 on the economy starting in 2020. Industries such as the Accommodation and Food Services were severely impacted by the pandemic, experiencing a decline in revenue and jobs throughout the country. This would surely influence the employment projections for Philadelphia in 2029. While the employment projections provide good insight into Philadelphia's future employment trends and sectors leading its growth, it is necessary to plan toward a diversification of jobs and industries in the city for a more sustainable economy.

2029 Philadelphia Scenario One: All national and local trends continue

		Philadelphia, 2019	National Economic Growth Factor (EGF)	Local Industry Mix, or Proportional Shift Factor (PSF)	Local Competitiveness, or Differential Shift Factor (DSF)	EGF+PSF+DSF (col D + col E + col F)	Philadelphia, 2029	Number of aggregate job growth
All	Total for all sectors	595,571	0.18				701,257	-48,808
11	Forestry, fishing, hunting, and agriculture support	0	0.18	-0.08	0.00	0.11	0	0
21	Mining, quarrying, and oil and gas extraction	0	0.18	-0.13	0.00	0.05	0	0
22	Utilities	1,567	0.18	-0.20	0.27	0.25	1,957	390
23	Construction	11,834	0.18	0.07	-0.03	0.22	14,457	2,623
31	Manufacturing	19,430	0.18	-0.10	-0.33	-0.25	14,536	-4,894
42	Wholesale trade	13,987	0.18	-0.12	-0.08	-0.02	13,656	-331
44	Retail trade	48,911	0.18	-0.11	0.00	0.07	52,499	3,588
48	Transportation and warehousing	25,806	0.18	0.20	-0.17	0.21	31,169	5,363
51	Information	11,176	0.18	-0.17	-0.10	-0.09	10,205	-971
52	Finance and insurance	29,608	0.18	-0.11	-0.22	-0.15	25,200	-4,408
53	Real estate and rental and leasing	10,344	0.18	-0.02	-0.03	0.13	11,693	1,349
54	Professional, scientific, and technical services	55,645	0.18	0.09	0.02	0.30	72,352	16,707
55	Management of companies and enterprises	11,984	0.18	0.12	-0.37	-0.07	11,100	-884
56	Administrative and Support and Waste Mang and Remediation Svcs	28,134	0.18	0.12	0.14	0.44	40,497	12,363
61	Educational services	58,359	0.18	0.03	-0.20	0.02	59,255	896
62	Health care and social assistance	168,646	0.18	0.09	-0.01	0.26	212,491	43,845
71	Arts, entertainment, and recreation	13,627	0.18	0.08	0.10	0.36	18,544	4,917
72	Accommodation and food services	62,412	0.18	0.08	0.07	0.34	83,578	21,166
81	Other services (except public administration)	24,101	0.18	-0.14	0.12	0.16	28,069	3,968