



UNDERSTANDING KING COUNTY'S MANUFACTURING SECTOR:

Preparing Our Workforce for Good Job Opportunities

EXECUTIVE SUMMARY

OCTOBER 2012





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To help build a more effective and responsive workforce system, Seattle Jobs Initiative (SJI) conducts and provides research analyzing trends within key sectors of the local labor market that are likely to impact opportunities for individuals to secure well-paying jobs within those sectors. Manufacturing has been a sector on which SJI has placed continuous attention, as it has been one that has offered an array of good jobs for those with less than a B.A. – what we term middle-wage jobs. Knowing that the sector has experienced a steady decline over the past decades, followed by a surprising “boom” locally since the end of the Great Recession in 2009, SJI decided to conduct a deep analysis of the sector to get underneath these trends and what they may mean for future employment opportunities in the industry.

This report presents an analysis of past, present and future trends in the manufacturing industry (with a focus on King County, Washington), with an eye toward providing insight into the stability of the sector’s recent upturn. The report first provides an analysis of industry trends over the past two decades, demonstrating which subsectors within the manufacturing sector hold the highest concentrations of jobs, which subsectors are projected to grow in terms of employment over the next five- and ten-year periods, and which subsectors have shown the greatest increases in productivity. Next, the report analyzes the demographic make-up of the manufacturing workforce in King County, including educational attainment, age, and race/ethnicity. The report then identifies opportunities for middle-wage jobs (those paying a median wage of at least \$17 per hour and requiring some training beyond high school but less than a B.A.) within the industry. Finally, the report seeks to identify projected supply and demand gaps within the manufacturing sector over the forthcoming five years, as well as training and certification efforts currently being utilized to aid in shrinking these gaps.

KEY FINDINGS:

Manufacturing Sector Overview

- The industry's share of jobs in within the Seattle metropolitan statistical area overall has decreased from approximately 18% in 1990 to 11% in 2012 – a 39% decline.
- During the recession, the industry declined (in terms of job growth in King County) by -12.3% but has seen an increase of 6.6% since its end in 2009.
- The Computer and Electronic Product subsector has experienced a drastic change in GDP from 259 million dollars in 1997 to 5,459 million dollars in 2010.
- Looking ahead, the industry is projected to experience a 10.9% increase in employment over the next ten years. This is compared to a -5.3% projected decrease in employment nationally.
- The Textile Mills industry subsector is projected to see the biggest change in employment with an increase of 52.2% over the period 2012-2022. However, the subsector holds the least amount of jobs within the industry as a whole.
- From the period 1997-2010, Washington State manufacturing output has increased 35%. At the same time, employment levels have decreased by 27%. This has led to an overall decrease in the employment-output ratio of 33%. This result indicates that over time, the industry has become more productive due to advances in technology.
- The Computer and Electronic Product, Petroleum and Coal, and Machinery Manufacturing subsectors have experienced the most prevalent declines in their employment-to-output ratios at 97%, 71%, and 66%, respectively.

Manufacturing Workforce Demographics

- The industry has higher education levels in King County vs. Washington State; 34% of the workforce holds a BA degree, compared to only 11% on the state level. In contrast, only 9% of King County's manufacturing workforce has less than a high school diploma compared to 33% for the state.
- Nearly three-fourths (71.3%) of the industry consists of white workers and that has statistic has not changed much in the last 10 years.
- The age demographics of the workforce are much older when compared to all other industries in King County. Those in the 45-54 age range account for 33% of manufacturing jobs compared to 23% of jobs in all other industries. Conversely, those in the 25-34 age range account for 24% of jobs in all other industries while manufacturing accounts for 17%.

Manufacturing Middle-Wage Jobs

- The median hourly wages of manufacturing occupations in King County (\$20.95 per hour) are more than \$2 higher than the nation's levels (\$18.30 per hour).
- The Transportation and Equipment Manufacturing subsector holds the highest concentration of middle-wage jobs, with a share of 52% of all manufacturing middle-wage occupations. Computer and Electronic Product Manufacturing subsector holds 14.8% of all middle-wage jobs in King County's manufacturing industry.

Manufacturing Supply and Demand

- There is a 1,972 projected shortage of skilled workers over the next five years within the industry. This calculation is exaggerated given that there are union apprenticeships that will be in the supply pool as well as a portion of the unemployed (7,000 unemployed in manufacturing currently).
- The projected shortage of workers indicates a skills gap that exists between qualified workers and actual skill levels.
- Efforts are being made by several organizations (CAMPS, MIC, Impact Washington, The Manufacturing Institute) in King County and throughout the nation to aid in bridging this gap.
- Specifically, the NAM-Endorsed Certification System implemented by the Manufacturing Institute is producing sound results. The system consists of five industry-based certifications. They are: National Career Readiness Certificate (NCRC), Manufacturing Skills Standards Council (MSSC) Production Technician Certification, National Institute of Metalworking Skills (NIMS), American Welding Society (AWS), and Society of Manufacturing Engineers (SME).
- The NIMS certification has been implemented at Shoreline Community College with satisfying results; 100% of the students who graduated from the program are currently employed. The program was able to provide students with good paying jobs, work closely with manufacturers, and also create new curriculum to meet industry needs.

Overall, SJI's analysis leads us to conclude that the manufacturing industry of King County is one of the strongest in the nation and will continue to perform well in the long term. Moreover, the sector should continue to offer multiple middle-wage job opportunities for workers with the right level of skills. Importantly, the industry as a whole – and particularly certain subsectors – are becoming demonstrably more reliant on advanced technology, requiring workers with increasingly technical skills. Already, there is a skills gap that exists between available jobs and an under-skilled workforce. Exacerbating this gap is the need to train and employ younger skilled workers in an effort to combat the aging manufacturing workforce. By addressing these issues the local workforce system – including workforce development organizations, community colleges, and sector employers – will help to maintain the strong manufacturing presence in King County.