

Unionized Jobs in Washington Supported by Trade



October 2015

Prepared for:



Prepared by:





Community Attributes tells data-rich stories about communities that are important to decision makers.

President and CEO: Chris Mefford

Lead Analyst: Spencer Cohen

Analyst:
Sudarshan Sampath

Community Attributes Inc.
1411 Fourth Avenue, Suite 1401
Seattle, Washington 98101

www.communityattributes.com

BACKGROUND AND PURPOSE

The Washington Council on International Trade (WCIT) has requested an analysis to estimate the number unionized jobs in Washington directly supported by trade.

Key findings presented in this memo are:

- In 2014, 421,100 jobs across the state were *directly supported by trade* (exports and imports).
- Of these jobs, 68,500 were unionized; which represents 14% of all unionized jobs in Washington.
- Unionized jobs represent one in six (16%) trade-related direct jobs.

Findings in this memo represent only direct jobs tied to trade—estimates do not include the broader set of jobs and activities that are associated with trade activities through multiplier effects.

Analytics are presented in more detail below, including data summaries and a technical appendix.

DIRECT TRADE-RELATED JOBS IN WASHINGTON, 2014

In 2014, approximately **421,100** jobs across Washington were directly supported by international trade, inclusive of both exports and imports. This represents about 14% of all jobs in the State of Washington. Furthermore, these jobs represent only employment directly supported by trade, and thus exclude additional jobs supported through supply chain transactions and household income expenditures.

Total jobs tied directly to exporting activities totaled 308,900. Imports directly supported 112,200 jobs statewide, including many retail and wholesaling activities that rely on imports as a primary source of inventory. Aerospace and software are the two largest exporting industries in Washington by revenue. Aerospace has about 71,220 jobs directly supported by trade while software has roughly 25,130 jobs directly supported by trade (**Exhibit 1**).

Exhibit 1. Total Jobs Directly Supported By Trade

Rank Industry	Direct Trade Jobs	% Share of Industry Employment
1 Aerospace product and parts manufacturing	71,220	76%
2 Restaurants	39,120	20%
3 Fruit and tree nut farming	26,350	29%
4 Software publishers	25,130	27%
5 Management of companies and enterprises	21,900	55%
<i>All other industries</i>	<i>237,380</i>	<i>10%</i>
Total	421,100	14%

Sources: U.S. Census Bureau, 2015; Trade Partnership, 2015; U.S. Bureau of Labor Statistics, 2015; Washington State Employment Security Department, 2015; Community Attributes Inc., 2015.

UNIONIZED JOBS IN WASHINGTON SUPPORTED BY TRADE

Unionized labor constitutes a large share of the Washington economy, with 490,112 union members. Union members accounted for 16.9% of the state's total labor force and represent 18.4% of all wage and salary workers in Washington in 2014. Union labor is represented in a wide range of tradeable industries in Washington, including aerospace, cargo handling and many types of services. Major unions include the International Association of Machinists 751 (31,100 members), the Society of Professional Engineering Employees in Aerospace (25,500 members), International Longshore Workers Union (2,000 members), the United Food and Commercial Workers (44,000 members) and the Teamsters 117 (16,000 members); the latter two unions are primarily focused on import-related trade activities.

Based on analytics presented in this analysis, approximately **68,500** unionized jobs are directly supported by trade. This represents about **14%** of all unionized jobs in Washington and **16%** of all jobs directly supported by trade in Washington, **or 1 in every 6 trade jobs across the state**. The top five sectors for unionized trade jobs account for a total of 50,900 trade-supported union jobs (**Exhibit 2**). Aerospace has the highest share of trade-supported union jobs, at almost half.

Exhibit 2. Top Five Unionized Trade Job Sectors

Rank	Industry	Unionized Trade Jobs	% Share of Industry Employment
1	Aerospace product and parts manufacturing	43,000	46%
2	Restaurants	2,400	1%
3	Support activities for water transportation	2,100	26%
4	Building equipment contractors	1,900	5%
5	Software publishers	1,500	4%
	<i>All other industries</i>	<i>17,600</i>	<i>1%</i>
	Total	68,500	2%

Sources: U.S. Census Bureau, 2015; Trade Partnership, 2015; U.S. Bureau of Labor Statistics, 2015; Washington State Employment Security Department, 2015; Community Attributes Inc., 2015.

Of the **68,500 unionized jobs directly supported by trade, about 52,700 jobs are tied to export activities**, with the remaining **15,800 tied to import activities**. Aerospace is a highly unionized industry and accordingly accounts for a significant share of total trade-related union jobs (60%). Similarly, support activities for water transportation include port-related work that is also heavily unionized (26%).

The top five trade-reliant sectors within the region are aerospace, restaurants, fruit and tree nuts, software publishers and management of companies and enterprises. Both aerospace and software publishers generate products that are exported from the region for use globally. Aerospace is the most unionized industry in the region, due to its share of total employment and number of unionized jobs. Software publishers are also important exporters in the region, but due to the nature of the work, the industry tends to have less unionized employment. Unlike aerospace, the fruit and tree nut industry has no unionized employment and therefore this industry, although supporting a large number of jobs through trade, does not have unionized trade jobs.

Other important unionized trade-reliant industries include restaurants, management of companies and enterprises, and building equipment contractors. Restaurants produce little to no products that are sent overseas. However, restaurants are an important component of the tourism sector, and by selling services to international tourists, bring in export dollars to the regional economy. Similarly, management of companies and enterprises is an industry that provides services to international businesses, bringing in export dollars to the region.¹

¹ This industry is defined by the U.S. Bureau of Labor Statistics as “establishments primarily engaged in holding the securities of (or other equity interests in) companies and enterprises for the purpose of owning a controlling interest or influencing the management decisions or establishments that administer, oversee, and manage other

Building equipment contractors are primarily tied to importing activities, due to the use of imported construction materials. This industry does not rank among the top 10 industries for total employment supported by trade, but a large proportion of employment within this industry is represented by unions. Therefore, this industry ranks highly in terms of unionized employment supported by trade.

SUMMARY OF FINDINGS

The analytics presented in this memo illustrate the large number of jobs in Washington that are both reliant on trade and are represented by a union. The largest share of unionized jobs in Washington directly supported by trade can be found in aerospace (43,000 jobs). Unionized trade jobs also extend into many other industries, such as management of companies and enterprises and building and equipment contractors, the latter more heavily shaped by import usage. Overall, more than one in six jobs directly supported by trade in Washington are unionized.

establishments of the company or enterprise that normally undertake the strategic or organizational planning and decision making role of the company or enterprise [and includes establishments that administer, oversee, and manage may hold the securities of the company or enterprise.”

APPENDIX: ESTIMATION METHODS

Statewide Export Estimation

The statewide trade estimation uses U.S. Census Bureau data for all goods, industry exports and data on services exports published by the Trade Partnership.² However, there are some issues with the goods export data because Seattle is a major port. Many goods exports are sent to Seattle warehouses before being exported overseas, which then classifies those goods as having *originated* in Washington even though they were not produced in the state. A good example of this is in the export of soybeans, which in the U.S. Census Bureau data is attributed to Washington but is not a crop grown in the state. Therefore it was important to discount the value of soybean exports when calculating Washington state's total exports. In terms of services exports, the Trade Partnership's data was only available from 2013. New estimates of services exports were derived by using employment growth factors across all industries to artificially grow the 2013 services exports to estimated 2014 values.

An issue occurred in instances where the reported exports from the U.S. Census Bureau and the Trade Partnership were actually higher than estimated output (i.e., total estimated business sales and related economic activity). In order to correct for these inconsistencies, an alternative export value was estimated using the export ratio of foreign exports to total output from the 2007 Washington Input-Output Model published by the Washington State Office of Financial Management. If the U.S. Census Bureau and Trade Partnership export data was greater than the estimated total state output for a given industry, the alternate estimated export measure was used instead.

Statewide Output and Jobs Tied to Trade Estimates

Statewide output is calculated by using a custom gross business income (GBI)-to-worker ratio multiplied by statewide employment across all industry sectors.³ Two different ratios were calculated: one used statewide GBI⁴ per industry and statewide employment per industry⁵ (statewide

² The Trade Partnerships data is not classified by NAICS codes but rather by industry groupings based on the United States Bureau of Economic Analysis. Industry share of exports are calculated by using BLS industry employment shares for each grouping.

³ For most industries the GBI reported by the Washington State Department of Revenue was sufficient for the analysis. Agriculture is unique because of the tax incentives which requires a different data source to account for agricultural output. That data source is the United States Bureau of Economic Analysis's agricultural gross receipts. Other industry output adjustments were made using a selected GBI-to-worker ratio.

⁴ GBI is taken from the Washington State Department of Revenue.

⁵ Industry employment figures reported by BLS are only covered jobs. This is problematic when calculating the GBI-to-worker ratio for agriculture because many of the workers in the agriculture industry are not covered jobs. Therefore it was important

GBI-to-worker ratio). The alternative output-to-worker ratio was calculated using the output and employment values reported in the 2007 Washington Input-Output Model scaled to 2014 dollars. The ratio was selected based on whether the calculated output-to-worker ratio derived from the 2007 I-O table was 1.2 times greater than the statewide GBI-to-worker ratio.

Once total output was calculated across all industries, a revised CAI output-to-worker ratio was calculated using the new output estimate. The new revised output-to-worker ratio was then used to find total jobs directly related to exports by dividing the revised output-to-worker ratio with estimated export data across all industries.

Estimating Jobs Directly Supported by Imports

Jobs directly supported by imports were calculated based on the import intensity of each industry grouping applied to non-export-related output. Estimates of import intensity were based on each of the 52 industry groupings reported in the 2007 Washington State Input-Output Model transactions table. This intensity ratio was then applied to the sector-based estimated output, minus exports, to estimate the share of total industry output supported by imports. Custom output-to-worker ratios were then applied to import-supported output to estimate import-supported direct jobs.

Estimating Unionized Jobs Tied to Trade

Unionized jobs tied to trade represent the share of all jobs supported by trade that are represented by a union. To estimate these jobs, CAI gathered data on union members across each major industry, drawing from data published by the U.S. Bureau of Labor Statistics and additional membership counts from major Washington unions. Custom estimates of unionization rates per industry were then applied to estimated direct trade jobs per industry to arrive at total unionized trade jobs across the state.

However, this was different in regards to support for water transportation activities. The International Longshoremen and Warehouse Union (ILWU) was assumed to be entirely supported by international trade. The ILWU represents approximately 2,000 workers in Washington; this value was an input in the analytics.

to scale agriculture employment to total employment levels using the total employment data reported in the 2007 Washington Input-Output Model.