

The Local and Regional Economic Impacts of the Port of Vancouver Marine Terminals and Non- Maritime Real Estate Tenants, 2018



Port of Vancouver USA

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*Summary of the Economic Impacts Created by
The Port of Vancouver Marine Terminals and Real Estate Tenants*

The Port of Vancouver, located on the Columbia River consists of five marine terminals and 13 berths, creating an international shipping gateway. These marine terminals handle automobiles, steel, grain, dry bulk cargoes and liquid bulk products, and provide the catalyst for economic activity throughout the region. In addition to the marine terminals owned by the Port of Vancouver, the Port also is home to an extensive and diverse range of non-maritime tenants. These tenants include industrial and manufacturing facilities, warehouse and distribution operations, commercial real estate tenants and agricultural tenants.

Because of this perceived economic contribution of the Port to the local and regional economy, the Port of Vancouver retained the services of Martin Associates to quantify the economic impact of the Port of Vancouver seaport and non-maritime real estate operations. This current study is an update of similar studies conducted by Martin Associates in 2000, 2005, 2010 and 2014. In the previous studies, as well as in this current study, separate studies were conducted for the two lines of business, and have been presented under separate cover. The combined impacts of the maritime and real estate activities are presented in the balance of this summary.

The impact analysis is based on a telephone survey of 131 marine and real estate tenants and firms providing services to the marine terminals and represents a 100% sample of the Port's tenants as well as the maritime community serving the Vancouver marine terminals. Local re-spending models were also developed to estimate the impact of local purchases by both individuals directly employed by Port tenants and vessel and cargo activity at the Port's marine terminals. Also quantified was the economic impact of the marine terminals on shippers and consignees using the marine terminals.

Economic activity due to the movement of marine cargo and vessel activity, or by non-maritime real estate tenants of the Port of Vancouver, contributes to the local and regional economy by providing employment and income to individuals, taxes to state, county and local governments and revenue to local and national firms engaged in producing goods and services. Exhibit E-1 illustrates the flow of economic activity from the maritime activity and real estate tenant activity at the Port of Vancouver.

Exhibit E-1
Flow of Economic Activity Throughout the Local Economy

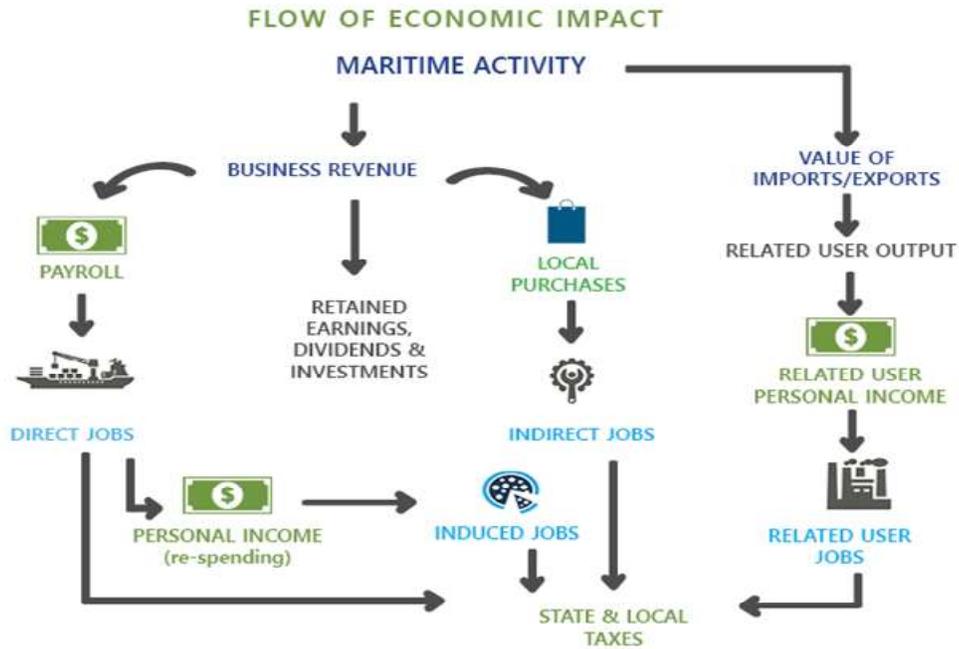


Exhibit I-1 illustrates the flows of economic impacts generated by a seaport and non-maritime real estate activity throughout the region's economy. As this figure shows, economic activity by seaport activity or by a firm or industry located on Port of Vancouver real estate initially creates business revenue. This revenue is in turn used for several purposes:

- To hire employees to produce the goods and provide the services;
- To pay stockholders dividends, retire debt, and invest;
- To buy goods from other firms, creating indirect jobs; and
- To pay taxes.

As can be seen from Exhibit E-1, the flow of economic impacts throughout an economy creates four separate and non-additive types of impacts. These are:

- Employment impact;
- Personal earnings impact;
- Business revenue impact; and
- Tax impact.

Direct jobs are those jobs held by employees of a particular firm, and are measured in terms of full-time equivalent workers. These are the number of jobs reported by a firm as paid employees. These direct employees are estimated directly from the survey of 131 Port of Vancouver marine and non-maritime tenants, as well as service providers.

Those directly employed by firms in a given industry receive wages and salaries. A portion of the wages and salaries is saved; another portion is used to pay personal taxes, while a final portion is used to purchase goods and services. A percentage of these purchases are made in the Vancouver metropolitan area, while some consumption purchases are made outside the area. These consumption purchases, in turn, generate additional jobs in those firms supplying the goods and services. The **induced jobs** measured in this study are only those generated in the Vancouver metropolitan area, which includes:

- The cities of Vancouver and Portland; and
- Clark County, Multnomah County (OR), Skamania County, Cowlitz County, Washington County (OR), and Clackamas County.

Jobs, which are created due to the purchases by firms, not individuals, are classified as **indirect jobs**. These jobs are estimated based on the local purchases made by the Port's real estate tenants and firms directly dependent upon seaport activity.

The **income impact** consists of the level of wage and salary earnings associated with the jobs created by maritime activity and real estate tenants, and is adjusted to reflect re-spending throughout the economy. The personal income impact is, for the most part, based on salary and annual earnings data provided from the survey conducted by Martin Associates. As described above, individuals directly employed by a firm use a portion of their income to purchase goods and services. A portion of these purchases is made from firms located in the Vancouver area, while another portion is used for out-of-region purchases. Re-spending of income within a geographical region is measured by an income multiplier. The size of the multiplier varies by region depending on the proportion of in-region goods and services purchased by individuals. The higher this percentage, the lower the income leakage out-of-region.¹

The **revenue impact** is the measure of direct business revenue received by seaport tenants and service providers and the gross sales generated by the non-maritime tenants of the Port of Vancouver. It is to be emphasized that this revenue impact is not necessarily money that remains within the Vancouver local economy. Only those portions of the revenue paid out in wages and salaries to those directly employed, used by the dependent firms and real estate tenants for local purchases of goods and services, and that portion of

¹ It is to be noted that different income multipliers are used to estimate the induced job impacts and the re-spending and consumption impacts for seaport activity and real estate activity. The income multipliers, as estimated for Martin Associates by the U.S. Bureau of Economic Analysis for the Vancouver regional economy, reflect the level of salary associated with each industry group, as well as the leakages of income from the Vancouver economy for the specific industry sector. Because of the higher direct wages and salaries associated with seaport activity, the direct income multiplier used to measure the impacts of the seaport activity is higher than the direct income multiplier associated with the non-maritime real estate tenants.

revenue paid in taxes to the local and county governments, can be defensibly identified as remaining in the local economy.

The *state, county and local tax revenues* generated by economic maritime activity at the Port's marine terminals and by the activity of the non-maritime real estate tenants of the Port of Vancouver comprise the tax impact.

In addition to the direct, induced and indirect impacts, the seaport activity also supports activity with regional exporters and importers using the Port of Vancouver's marine terminals. These impacts are classified as *influenced user impacts* in that the exporters and importers using the marine terminals can and do use other ports for the shipment and receipt of cargo. The influenced impacts measure the impact, or influence, of the Port's marine terminals at a given point in time, and if the Port's terminals were no longer used, these influenced users would use other ports to export and import cargo. Unlike the direct, induced, and indirect impacts, the influenced impacts would not necessarily be dislocated from the economy – instead, the impacts would no longer be influenced by the Port of Vancouver, but by another port.

Table E-1 summarizes the economic impacts of the Port of Vancouver.

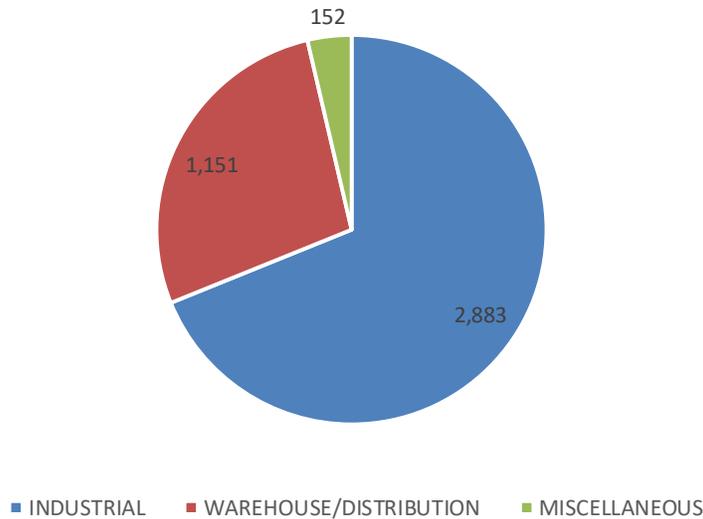
Table E-1
Summary of the Economic Impacts of the
Port of Vancouver

	NON- MARITIME REAL ESTATE	PORT OF VANCOUVER MARINE TERMINALS	TOTAL IMPACTS PORT OF VANCOUVER
JOBS			
DIRECT	1,452	2,458	3,910
INDUCED	787	2,421	3,209
INDIRECT	<u>1,946</u>	<u>1,274</u>	<u>3,220</u>
TOTAL	4,186	6,153	10,339
PERSONAL INCOME (Thousands)			
DIRECT	\$61,848	\$158,754	\$220,603
RE-SPENDING/LOCAL CONSUMPTION	\$67,110	\$319,112	\$386,222
INDIRECT	<u>\$78,494</u>	<u>\$67,986</u>	<u>\$146,480</u>
TOTAL	\$207,453	\$545,852	\$753,304
BUSINESS REVENUE (Thousands)			
	\$462,851	\$492,350	\$955,201
LOCAL PURCHASES (Thousands)			
	\$348,093	\$127,172	\$475,265
STATE/LOCAL TAXES (Thousands)			
	\$19,748	\$51,728	\$71,477
INFLUENCED MARITIME USER IMPACTS			
JOBS		13,729	13,729
INCOME (Thousands)		\$642,847	\$642,847
STATE/LOCAL TAXES (Thousands)		\$60,920	\$60,920
TOTAL ECONOMIC VALUE (Thousands)		\$2,416,405	\$2,416,405
BUSINESS REVENUE (Thousands)			
	\$462,851	\$492,350	\$955,201
RE-SPENDING/LOCAL CONSUMPTION (Thousands)			
	\$67,110	\$319,112	\$386,222
TOTAL ECONOMIC VALUE (Thousands)			
		<u>\$2,416,405</u>	<u>\$2,416,405</u>
TOTAL ECONOMIC ACTIVITY (Thousands)			
	\$529,961	\$3,227,866	\$3,757,828

The Port of Vancouver maritime and real estate tenant activity supported 24,068 total jobs in the local economy in 2018.

- 3,910 jobs are directly created by marine cargo activity and by the Port's non-maritime real estate tenants. The real estate tenants are responsible for 1,452 direct jobs, while the cargo and vessel activity creates 2,458 direct jobs.
- As the result of local purchases by the 3,910 directly employed workers, an additional 3,209 induced jobs are supported in the local economy to provide goods and services to those directly employed.
- 3,220 indirect jobs are also supported in the local economy as the result of the local purchases of goods and services by the firms directly dependent upon the cargo and vessel activity at the Port's marine terminals, as well as by the real estate tenants.
- About 45% of the directly employed reside in Vancouver, while another 32% reside in other parts of Clark County. About 15% of those directly employed live in Multnomah County.
- The activity at the marine terminals supported impacts with shippers/consignees shipping and receiving cargo via the Port of Vancouver marine terminals. These user impacts are considered influenced impacts, in that these impacts are not dependent upon the marine activity at the Port, and these users could and often do use other ports to ship and receive cargo. However, at a given point in time, these impacts represent the influence of the maritime activity at the Port of Vancouver. In 2018, the 8.6 million tons of cargo supported 13,729 jobs with port users. While the influenced firms and the jobs associated with these shippers/consignees, would not likely cease operations if the Port's marine terminals were unavailable for use, these firms would suffer a transportation cost penalty and suffer some degree of economic loss.
- With respect to the non-maritime real estate tenants, the majority of the 4,186 direct, induced and indirect job holders are generated by the industrial sector, as shown in Exhibit E-2. The industrial tenants engage in various manufacturing and fabrication of metals and plastics products, as well as electronics recycling.

Exhibit E-2
Distribution of Direct, Induced and Indirect Jobs by Non-Maritime Real Estate Tenant Sector



In 2018, the 8.6 million tons of cargo handled at the Port’s marine terminals and the revenue generated by the non-maritime tenants supported a total regional economic value of \$3.8 billion.

- The total economic value of the Port of Vancouver in 2018 consists of the direct business revenue received by the firms providing services to the cargo and vessels handled at the Port’s marine terminals and real estate firms; the re-spending and local consumption impact; and the related user output. Each of these components is independent of the other monetary impact measures. For example, the direct income is paid from direct revenue. Local purchases are also paid from direct revenue. Indirect income is paid from local purchases. Taxes are paid from business revenue and personal income including re-spending and indirect income.

Therefore, the total economic value of the Port of Vancouver in 2018 is estimated at about \$3.8 billion, and consists of \$955.2 million of direct revenue, \$386.2 million of re-spending and local consumption, and \$2.4 billion of the value of the output to the Washington/Oregon region that is supported by the cargo moving via the Port of Vancouver marine terminals. This \$2.4 billion includes the value added at each stage of producing an export cargo, as well as the value added at each stage of production for the firms using imported raw materials and intermediate products that flow via the marine terminals in the Vancouver Harbor and are consumed by industries within the region.

The local businesses made \$475.3 million of purchases from the local economy, supporting the 3,220 indirect jobs. These purchases are paid from the direct business revenue.

The Port of Vancouver generated \$753.3 million of wages and salaries and consumption activity in the local economy.

- The 3,910 direct employees earned \$220.6 million in wages and salaries, for an average salary of about \$56,415 per port-generated direct job. The direct average salary generated by seaport activity is significantly higher than that generated by the non-maritime real estate activity. Maritime activity generated an average salary of \$64,578, while the non-maritime real estate activity generated an average wage of \$42,595 per direct employee.
- When the re-spending effect of this direct income is considered, an additional \$386.2 million of income and regional consumption activity is created.
- The indirect job holders received \$146.5 million of wages and salaries.
- In addition, the 13,729 jobs with the influenced shippers/consignees using the Port's marine terminals received \$642.8 million of wages and salaries.

A total of \$132.4 million of state and local tax revenue was supported by the activity at the Port of Vancouver.

- The Port of Vancouver's marine cargo activity and the economic activity created by its non-maritime tenants generated a total \$71.5 million of state and local taxes.
- The activity with the influenced users of the marine terminals supported an additional \$60.9 million in state and local tax revenue.

Between 2014 and 2018, the direct impacts of the Port of Vancouver increased by nearly 672 jobs, and \$61.4 million of direct personal wage and salary income. Direct jobs generated by the Port's maritime activity grew by 519 direct jobs over the period reflecting the growth of nearly 1.5 million tons of cargo. Jobs with the non-maritime real estate tenants increased by 153 jobs over the same period.

When comparing the local economic value of a direct job to the local community, the direct income, re-spending impact and indirect income impact was divided by the direct jobs generated in each line business lines in which the Port operates – maritime sector, and the non-maritime real estate sectors of miscellaneous, warehousing and distribution and manufacturing/industrial sectors. Exhibit E-3 demonstrates the economic value of each direct job to the local community. As this exhibit shows that for each direct job created by maritime activity, the local economy receives nearly \$222,040 of total economic activity. This economic value is significantly greater than the value generated by the direct jobs in the non-maritime real estate sector.

Exhibit E-3
Total Local Economic Impact per Direct Job (\$1,000)



This analysis is an update of the 2000, 2005, 2010 and 2014 economic impact analyses of the Port of Vancouver, also conducted by Martin Associates. For the most part, the same methodology has been used to measure the economic impacts generated by activity at the Port of Vancouver in the years 2000, 2005, 2010, 2014 and the current 2018 study. Therefore, direct comparisons can be made between various study years. Exhibit E-4 shows the Port of Vancouver’s historical economic impacts from the first study in 2000 to the current 2018 study.

E-4
Port of Vancouver Historical Economic Impacts

	2000	2005	2010	2014	2018
Jobs					
Total	4,023	15,580	16,996	20,201	24,068
Direct	1,397	2,268	2,337	3,237	3,910
Indirect	1,936	1,413	1,915	2,759	3,220
Induced	690	2,231	1,855	2,658	3,209
Related	N/A	9,668	10,889	11,547	13,729
Total Personal Income					
	\$192.4 M	\$763.6 M	\$859.6 M	\$1.1 B	\$1.4 B
Direct	\$61.1 M	\$98.8 M	\$116.3 M	\$159.2 M	\$220.6 M
Responding and Local Consumption	\$67.5 M	\$240.7 M	\$238.3 M	\$313.4 M	\$386.2 M
Indirect	\$63.8 M	\$47.6 M	\$95 M	\$111.4 M	\$146.5 M
Related	N/A	\$376.5 M	\$410 M	\$495.4 M	\$642.8 M
Total SALT					
	\$22.5 M	\$80.8 M	\$80.8 M	\$102.7 M	132.4 M
State & Local Taxes	\$15.8 M	\$41.6 M	\$42.2 M	\$55.5 M	\$71.5 M
Related	\$6.7 M	\$40.2 M	\$38.6 M	\$47.2 M	\$60.9 M
Total Economic Activity					
	\$341 M	\$1.6 B	\$1.6 B	\$2.9 B	\$3.8 B
Direct Business Revenue	\$229.1 M	\$939.9 M	\$551 M	\$766.7 M	\$955.2 M
Local Purchases	\$111.9 M	\$96.1 M	\$160.7 M	\$397.2 M	\$475.3 M
Related user economic activity	N/A	\$658 M	\$952.1 M	\$1.8 B	\$2.4 B

Between 2000 and 2018 the Port has shown significant growth. Total jobs supported by the Port of Vancouver grew from 15,580 in 2005 to 24,068 in 2018. It must be noted related impacts were not calculated in the 2000 study year. Direct Jobs grew from 1,397 to 3,910 between 2000 and 2018. The total economic activity of the Port of Vancouver grew from \$1.6 billion in 2005 to \$3.8 billion in 2018 and the state and local taxes generated by the Port of Vancouver grew from \$15.8 million in 2000 to \$71.5 million in 2018.

In conclusion, it is to be emphasized that this study is designed to provide a framework that the Port of Vancouver can use in formulating and guiding the future development of Port-owned marine terminals and industrial and commercial real estate property in order to continue to maximize the Port of Vancouver's economic contribution to the local and regional economy.