



2018 Economic Impact of Marine Cargo Activity at the Port of Houston: *Executive Summary*

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Overview of the Port of Houston

The Port of Houston consists of public marine terminals owned by the Port of Houston Authority (PHA) as well as private marine terminals located along the Houston Ship Channel. The public marine terminals are those owned and operated by, leased by and otherwise affiliated with PHA. These include the Houston Public Grain Elevator #2, the Fentress Bracewell Barbours Cut Container Terminal, the Bayport Container Terminal, the Bulk Materials Handling Plant, Jacintoport, the Care Terminal, the PHA Terminals in the Houston Turning Basin and the Woodhouse Terminal. Private terminals include the petroleum refineries, general cargo terminals, (e.g. Manchester Terminal, Greensport Terminal, etc.), the petrochemical plants and the dry bulk/fertilizer terminals.

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Economic Impact Analysis Methodology

Martin Associates was retained by the Port of Houston Authority of Harris County, Texas (PHA) to measure the local and regional economic impacts generated by cargo and vessel activity at the Port of Houston Authority's marine terminals as well as the impacts generated at the private marine terminals along the Houston Ship Channel.

The impacts are measured for the year 2018 and separate economic impact models have been developed to measure the impacts generated by the PHA facilities and the impacts generated by the total marine cargo and vessel activity at both the public and private marine terminals. These economic models can be used to estimate annual updates, as well as to test the sensitivity of the impacts to changes in such factors as marine cargo tonnage levels, labor productivity and work rules, new marine facilities development and expansion and the impacts of harbor and channel deepening. The

models can also be used to compare the economic impacts of marine activity.

For the most part, the same methodology has been used to estimate the 2018 economic impacts as was used to estimate the economic impacts of the Port of Houston in 2014. Therefore, the results of this study can be directly compared to those of the earlier study, which measures the economic impacts of activity in 2014.

The study is based on interviews with 986 firms providing services to the cargo and vessels handled at the PHA's marine terminals and the private terminals along the Houston Ship Channel. The data collected from the interviews was then used to develop operational models of the PHA public and private marine terminals.

2018 Economic Impact of the Port of Houston - Summary of Results

1,350,695 jobs generated
by Port activity

- Direct Jobs: 67,039
- Induced Jobs: 102,882
- Indirect Jobs: 55,103
- Related Jobs: 1,125,671

\$339.0 billion of total
economic value - 20.6% of
State GDP

- \$25.1 billion of direct business revenue
- \$12.6 billion of re-spending of direct income and local consumption purchases
- \$301.3 billion of output supported with related port users

\$5.7 billion of state and
local taxes

- \$1.5 billion of direct, induced and indirect state and local taxes
- \$4.2 billion of state and local taxes with related exporters and importers supported by port activity

2018 Port of Houston Economic Impact Results

The public and private marine terminals at the Port of Houston supported 1,350,695 direct, induced, indirect and related jobs in the state of Texas in 2018. Of these 1,350,695 jobs, **67,039 direct jobs** are generated by the marine cargo and vessel activity, of which 77 percent reside in Harris County. The cargo activity at the PHA facilities creates 21,109 direct jobs. In addition, there are 45,929 direct jobs created by the movement of cargo at the private terminals.

As the result of local and regional purchases by those 67,039 individuals holding the direct jobs, an additional **102,882 induced jobs** are supported in the regional economy. An additional **55,103 indirect jobs** were supported by \$5.7 billion of local purchases by businesses supplying services at the marine terminals and by businesses dependent upon the marine terminals.



Jobs related to the marine cargo imported and exported via the public and private marine terminals accounted for 1,125,671 jobs. These jobs with Texas importers and exporters are considered to be related to activities at the public and private marine terminals, but the degree of dependence on these terminals is less direct than the direct, induced and indirect impacts. These jobs include the portion of jobs at importing and exporting firms that are

directly associated with the cargo moved via the Port of Houston marine terminals, but not generated by the actual port operations. It is the demand for the product that generates the employment and other impacts with the shippers/consignees.

The **total economic value to the state of Texas** resulting from the marine cargo activity at the public and private marine terminals in 2018 is estimated at **\$339.0 billion**. This consists of the direct business revenue of \$25.1 billion, the re-spending and local consumption impact of \$12.6 billion and the related user output of \$301.3 billion. This dollar value represents the sphere of influence of the public and private marine terminals in 2018 and accounts for 20.6 percent of the \$1.6 trillion Gross Domestic Product (GDP) for the state of Texas.

Direct wages and salaries of \$4.7 billion were received by those 67,039 directly employed, resulting in an average annual salary of \$69,565. This salary compares to an average statewide salary of \$48,700. As the result of re-spending this income, an additional \$12.6 billion of income and consumption expenditures were created. The 55,103 indirect job holders received \$2.2 billion of indirect wages and salaries. An additional \$54.7 billion was received by related port users. In total, **about \$74.3 billion of total personal wages and salaries** were supported by maritime activity at the public and private terminals located at the Port of Houston.

State and local taxes supported by activity at the marine terminals totaled nearly **\$5.7 billion**, which includes \$1.5 billion of direct, induced and indirect state and local tax revenue as well as nearly \$4.2 billion of state and local taxes that were supported by the economic activity of related users of the cargo moving through the port.

2018 Port of Houston Economic Impact Results – Port of Houston Authority Terminals

Of the 1,350,695 jobs held by Texas residents that are related to marine cargo and vessel activity at the Port of Houston, **698,177 jobs are supported by activity at the Port of Houston Authority terminals**. Of these 698,177 total jobs, **21,109 direct jobs are generated by marine cargo activity at the PHA terminals**. As the result of local purchases by these 21,109 directly employed individuals, an additional 32,222 induced are generated in the local economy.

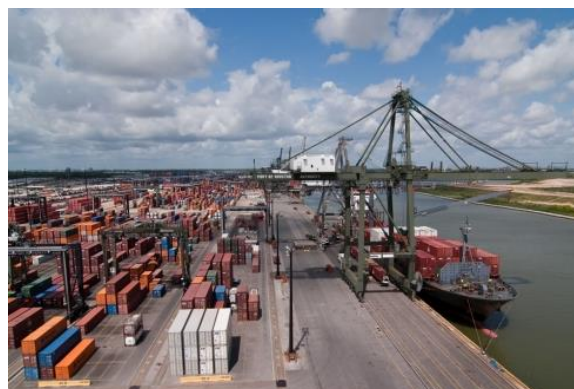


About \$1.8 billion of local purchases by firms providing services to the PHA marine terminals supported an additional **17,351 indirect jobs**. The balance, 627,494 jobs are classified as related jobs and are with importers and exporters and supporting firms using the Port of Houston Authority terminals in 2018.

In 2018, marine cargo activity at the PHA terminals supported a total of **\$173.4 billion of total economic value in the state of Texas**. Of the \$173.4 billion, \$5.4 billion is the direct business revenue received by the firms directly dependent upon the marine cargo activity at the PHA terminals. An additional **\$164.1 billion represents the value of the output to the state of Texas** that is supported by the cargo moving via the Port of Houston Authority marine

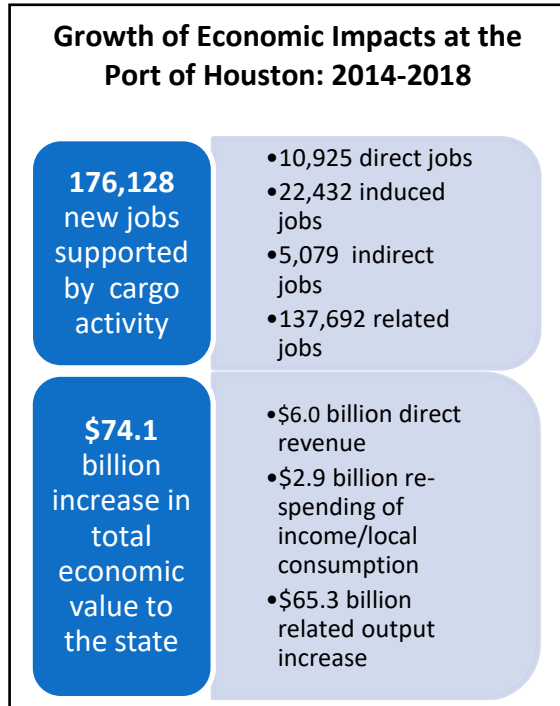
terminals. This includes the value added at each stage of producing an export cargo, as well as the value added at each stage of production for the firms using imported raw materials and intermediate products that flow via the marine terminals and are consumed within the state. The remainder, \$4.0 billion, represents the personal re-spending and local personal consumption impact.

Marine cargo activity at the PHA owned, leased or affiliated facilities **supported \$36.3 billion of total personal wage and salary income and local consumption expenditures for Texas residents**. This includes \$6.1 billion of direct, indirect and re-spending and local consumption expenditures, while the remaining \$30.2 billion was received by the related port users as personal income.



A total of \$464.9 million of direct, induced and indirect state and local tax revenue was generated by maritime activity at the public terminals along the Houston Ship Channel. In addition, \$2.3 billion of state and local taxes was supported due to the economic activity of the related users of the cargo moving via the public marine terminals.

2014 vs. 2018 Impact Marine Cargo Comparison



Between 2014 and 2018, total cargo handled at the public and private terminals at the Port of Houston increased by 53.2 million tons. The gain in cargo over the period was with bulk

cargo, primarily petroleum and liquid bulk cargoes, as well as containerized and break bulk cargo. As the result of the overall growth in cargo, direct jobs increased by 10,925 new jobs since 2014. Induced jobs grew by 22,432 jobs, reflecting the growth in the direct jobs, as well as the increase in the average direct income from \$61,707 in 2014 to \$69,565 in 2018. This growth in average income resulted in an increase in the re-spending impact. When direct, induced and indirect jobs are considered, the port activity at the public and private marine terminals increased by about 38,436 jobs primarily due to the growth in jobs associated with the growth in bulk and containerized cargo. Jobs with importers and exporters using the public and private marine terminals grew by 137,692 jobs, also reflecting the growth in containerized cargo.

The total economic value in the state of Texas supported by the marine cargo activity at the Port of Houston grew by nearly \$74.1 billion and state and local taxes supported by the marine cargo activity grew by \$636 million since 2014.

Conclusion

The public and private marine terminals at the Port of Houston continue to be an economic engine for the Houston area, Harris County and the state of Texas. The importance of the port's public and private marine terminals to the state is underscored by the fact that the total value of the economic impact of the public and private marine terminals is measured at \$339.0 billion, 20.6 percent of the State's Gross Domestic Product. Furthermore, the marine cargo activity at the Port of Houston public and private marine terminals supported 1,350,695 jobs in the state of Texas.