



PORT NOLA
THE PORT OF NEW ORLEANS

2024 ECONOMIC IMPACTS

The Economic Impacts of Marine Cargo
Activity at The New Orleans Port District
and The Port Of New Orleans

Conducted by:



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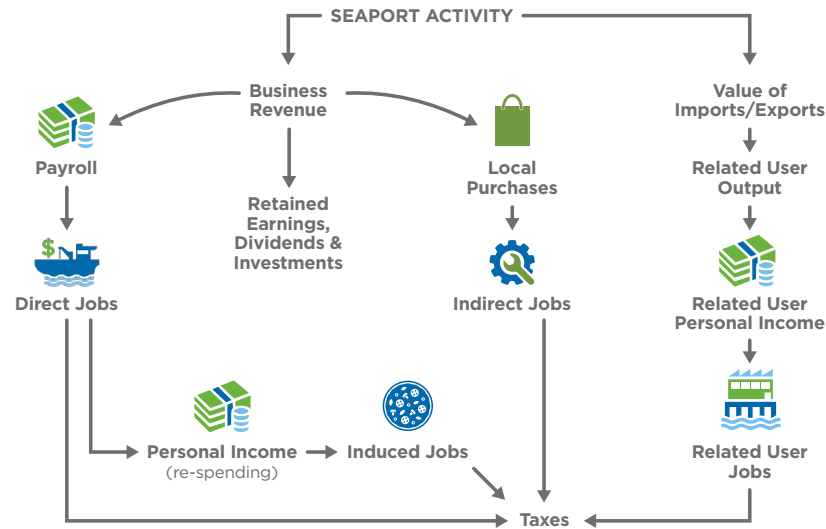
EXECUTIVE SUMMARY

Martin Associates was retained by the Port of New Orleans to estimate the economic impacts generated by marine cargo activity at the public and private marine terminals located within the tri-parish New Orleans Port District. This District consists of a tri-parish port district established By Act 70 in 1896, and consists of the marine cargo terminals located within Orleans, Jefferson and St. Bernard parishes. The purpose of the analysis is to quantify the economic value of the Port District to the national and state economies. The New Orleans Port District is home to public marine terminals which are owned, leased, or operated by the Port of New Orleans, as well as the marine terminals and industries dependent upon the movement of cargo within the district located within the Orleans, Jefferson and St. Bernard Parish. The key terminals owned by the Port of New Orleans include the Napoleon Avenue Container Terminal, the break bulk terminals at Louisiana Avenue, First Street, Nashville Avenue, Harmony Street, and the bulk soybean operation at the Alabo Street terminal. Private terminals include the Avondale Gateway Terminal and Cornerstone Chemical Company located in Jefferson Parish, the PBF Energy/Chalmette Refinery, the Valero Refinery and the Tate & Lyle North America/Domino Sugar Terminal in Orleans Parish; and the marine terminals located within the St. Bernard Port Harbor and Terminal District which include the Chalmette, Violet, Meraux, and Arabi terminals located in St. Bernard Parish. The impacts measured consist of jobs, personal earnings, business revenue, value of output, and state, local and federal taxes. The impacts are presented for the total New Orleans Port District at the state and national levels, as well as separately for the Port of New Orleans owned and leased terminals as well as the Port's commercial real estate holdings. The analysis does not include the impacts generated by the cruise activity at the Port of New Orleans.



The 2024 analysis is based on detailed interviews with and data collected from 207 firms using the marine terminals within the Port District as well as those providing maritime services to the vessels and cargo activity. Based on the data collected through from these 207 firms, which were used to develop the direct impacts, economic impact models were also developed for the Port of New Orleans owned terminals as well as the other terminals located throughout the Port District to reflect the unique operations at each of the Port of New Orleans' marine terminals within the Port District. These economic impact 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 improvement projects. The models can also be used to compare the economic impacts of marine activity with non-maritime development of waterfront land.

Exhibit E-1: Flows of Economic Impacts through the Economy



Martin Associates has used this same methodology to estimate the economic impacts for nearly every port in the United States and Canada, and since 1986 has conducted more than 800 such economic impact studies worldwide. The methodology developed and used by Martin Associates has been reviewed and used by the U.S. Council of Economic Advisors, the Federal Reserve Board, and the International Trade Commission.

Exhibit E-1 graphically demonstrates how maritime activity within the Port of New Orleans District impacts the state and national economies. As this exhibit indicates, the marine cargo and vessel activity initially generate business revenue to the firms supplying marine services. This revenue is used to purchase employment (direct jobs) to provide the services, to pay stockholders and for retained

earnings and to purchase goods and services from local firms, as well as national and international firms (creating indirect jobs with these firms). Businesses also pay taxes from the business revenue.

The employees hired by the firms receive wages and salaries (personal income), a portion of which is saved, while another portion is used to buy goods and services such as food, housing, clothing, health care, etc. These purchases create a re-spending impact throughout the economy, known as the personal income multiplier. As a result of these local purchases, additional jobs (known as induced jobs) are created in the local economy. Local purchases are also made by the firms directly dependent upon the marine terminals within the Port of New Orleans District, as well as firms providing services to the terminal operations such as stevedores/terminal operators, pilots, barge operations and tug assists, trucking firms and railroads, steamship lines and agents and freight forwarders. The local purchases by directly dependent firms create indirect jobs. Finally, federal, state, and local taxes are paid by individuals employed with the firms providing the services to the marine terminals and by the firms directly dependent upon the marine traffic within the Port of New Orleans District.

As demonstrated by Exhibit E-1, four types of impacts are measured:

- Jobs;
- Employee earnings;
- Business revenue; and
- State, local, and federal taxes.

With respect to jobs, four types of job impacts are measured. These are direct, induced, indirect and related jobs. The job impacts are defined as follows:

- Direct jobs are those jobs with local firms providing support services to the maritime cargo activity and those firms directly dependent upon the shipment and receipt of cargo within the Port District. These jobs are dependent upon this activity and would suffer immediate dislocation if the marine cargo activity along the terminals within the Port District were to cease. These direct jobs include jobs with railroads and trucking companies moving cargo to and from the marine terminals, employment with the companies directly dependent upon the cargo moving on the Port District for production and manufacturing purposes such as the jobs with the refineries and petrochemical manufacturing facilities directly dependent on the receipt and shipments of raw materials and products via the Port District, members of the International Longshoremen's Association (ILA) and non-ILA dockworkers, barge operations, tug assist and pilots, steamship agents, freight forwarders, ship chandlers, warehouse operators, terminal operators and stevedores.
- Induced jobs are jobs created locally and throughout the regional economy due to purchases of goods and services by those directly employed. These jobs are with grocery stores, the local construction industry, retail stores, health care providers, local transportation services, federal, local and state government agencies providing public services and education to those directly employed and businesses providing professional and business services in support of those directly employed. These goods and services would also be discontinued if seaport activity were to cease.
- Indirect jobs are those jobs generated in the local economy as the result of local purchases by the firms directly dependent upon seaport activity. These jobs include jobs in local office supply firms, equipment and parts suppliers, maintenance and repair services,

insurance companies, consulting, and other business services. If port operations were discontinued, these indirect purchases and the associated jobs and income would also be discontinued.

- Related jobs are jobs that are determined to be related to physical cargo that is shipped and received via the Port District. These jobs include the portion of jobs at firms that are directly associated with the cargo moved via the terminals within the Port District. It is the demand for the product that generates the employment and other impacts with the shippers/consignees. See "related user impacts" below for more details. The majority of the related jobs are associated with the container activity, and the shipment and receipt of petroleum and petrochemical products. The personal income impact consists of wages and salaries and includes a re-spending effect (purchases of goods and services by those directly employed) as well as the wages paid to indirect jobs holders, while business revenue consists of total business receipts by firms providing services in support of the marine activity. Local, state, and federal taxes include taxes paid by individuals, as well as firms dependent upon the marine cargo activity as well as by the users of the Port District.

In addition to the direct impacts, induced and indirect impacts, marine cargo at the marine terminals within the Port District also supports activity with regional exporters and importers using these marine terminals. These impacts are classified as related user impacts in that the shippers and consignees using the marine terminals can and do use other ports for the shipment and receipt of cargo. The related user impacts are the jobs, income, revenue, and federal, state, and local taxes related to the value and tonnage of the cargo shipped and received via the marine terminals on the Port District, and does not include the total employment, revenue and taxes with the importers and exporters, only that portion associated

with the cargo moved via the marine terminals. If the Port District's terminals were no longer used by these shippers and consignees then these related users would use other ports to ship and receive cargo. Unlike the direct, induced, and indirect impacts, the related impacts would not necessarily be dislocated from the economy – instead, the impacts would no longer be related to the cargo activity within the Port District.

The study is based on interviews with and data collected from over 200 firms providing services to the cargo and vessels handled at the marine terminals, refineries, chemical plants, and other water dependent industries located within the tri-parish New Orleans Port District. The data collected from the interviews was then used to develop an operational model of the marine terminals, manufacturing facilities, refineries and marine service providers within the Port District. The 2024 economic impacts of the Port District have been estimated separately for the state of Louisiana and the entire United States. A separate impact analysis was also conducted for the Port of New Orleans owned facilities including the industrial and commercial real estate leased from the Port of New Orleans.

Summary of the Economic Impacts Generated by the Tri-Parish New Orleans Port District

The economic impacts supported by the marine cargo activity at the terminals within the Port of New Orleans Port District are summarized in Exhibit E-2. The impacts are estimated at the national and state level.

Specifically, the marine cargo and vessel activity within the tri-parish Port of New Orleans District supported the following economic impacts:

Exhibit E-2: Summary of the Economic Impacts Supported by Marine Cargo Activity Within the Port of New Orleans Tri-Parish District

| | NATIONAL | LOUISIANA |
|--|----------------------|---------------------|
| JOBS | | |
| Direct | 14,603 | 14,603 |
| Induced | 24,703 | 17,828 |
| Indirect | 7,934 | 6,315 |
| Related | 294,910 | 83,641 |
| TOTAL | 342,150 | 122,386 |
| PERSONAL INCOME (\$1,000) | | |
| Direct | \$1,184,901 | \$1,184,901 |
| Re-spending/Local Personal Consumption | \$4,730,836 | \$2,671,241 |
| Indirect | \$365,565 | \$290,963 |
| Related | \$14,177,893 | \$3,807,196 |
| TOTAL | \$20,459,195 | \$7,954,302 |
| TOTAL ECONOMIC VALUE (\$1,000) | | |
| Direct Business Revenue | \$3,052,506 | \$3,052,506 |
| Re-spending/Local Personal Consumption | \$4,730,836 | \$2,671,241 |
| Related Output | \$93,692,874 | \$25,790,541 |
| TOTAL | \$101,476,216 | \$31,514,288 |
| LOCAL PURCHASES (\$1,000) | | |
| | \$794,932 | \$794,932 |
| STATE AND LOCAL TAXES (\$1,000) | | |
| Direct, Induced, Indirect | \$502,538 | \$321,885 |
| Related | \$1,855,599 | \$485,155 |
| TOTAL | \$2,358,138 | \$807,040 |
| FEDERAL TAXES (\$1,000) | | |
| Direct, Induced, Indirect | \$793,378 | \$556,483 |
| Related | \$4,525,072 | \$1,235,001 |
| TOTAL | \$5,318,450 | \$1,791,483 |

Totals may not add due to rounding. Includes impacts generated by the retail and commercial lease tenants of the Port of New Orleans

In 2024, 342,150 jobs in the United States are supported by the cargo moving via the marine terminals located within the Port District. Of the 342,150 jobs in the United States, 122,386 jobs are supported in the state of Louisiana, which represents about 6.4% of statewide employment in 2024.

- Of the 342,150 jobs supported in the United States, marine cargo activity along the Port District generated **14,603 direct jobs**. These jobs are generated in the tri-parish area.
- In addition to the direct jobs generated by the marine cargo activity, purchases by these direct jobs supported **24,703 induced jobs** in the United States, of which 17,828 induced jobs were created in the state of Louisiana.
- As the result of the \$794.9 million of purchases by the firms dependent on the terminals within the New Orleans Port District, an additional **7,934 indirect jobs** are supported in the United States, of which 6,315 indirect jobs were supported in the State.
- The balance of the jobs, **294,910 jobs are classified as related jobs** and are with shippers and consignees and supporting firms using the marine cargo moving via the Port District. Of these user jobs, 83,641 jobs are in the state of Louisiana.

In 2024, marine cargo activity within the Port District supported a total of \$101.5 billion of total economic value to the United States economy, of which \$31.5 billion of total economic value was supported in the state of Louisiana. This represents about 8.3% of the \$377.8 billion Louisiana Gross Domestic Product in 2024.

- Of the \$101.5 billion total economic value, \$3.1 billion is the direct

business revenue received by the firms directly dependent upon the marine terminals within Port District and those firms providing maritime services and inland transportation services to the cargo handled at the marine terminals and the vessels calling these terminals.

- An additional \$93.7 billion represents the value of the output to the United States that is created due to the cargo moving via the Port District. 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 United States. Of the \$93.7 billion of output at the national level, containerized cargo, copper and liquid bulk cargo (primarily petroleum and petrochemical products) create the majority of the value of output.
- In addition, \$4.7 billion of the re-spending of personal income and local consumption purchases are supported in the U.S. economy.

These components (the direct business revenue impact, the value of output and the re-spending of personal income and local consumption purchases) are additive and represent independent monetary impacts supported by the cargo and vessel activity. Other dollar value impact measures are not included in the total economic value since they are interdependent. Direct income is not included since it is part of the direct business impact and similarly, local purchases by the firms are from the direct business revenue generated by port activity and also used to pay indirect income. Finally, taxes are paid by the individuals from the direct, induced, indirect and related income and the direct business revenue and the



related output, and thus not added with the value of output and re-spending of income.

Marine activity within tri-parish New Orleans Port District supported \$20.5 billion of total personal wage and salary income and local consumption expenditures in the national economy.

This includes \$6.3 billion of direct, indirect, induced, and local consumption expenditures, while the remaining \$14.2 billion was received by the related port users. The 14,603 direct job holders received \$1.2 billion of direct wage and salary income, for a direct annual salary of \$81,141. This compares to \$55,130, which is the mean annual salary in 2024 for all workers in the state of Louisiana, as reported by the U.S. Bureau of Labor Statistics.¹

1 U.S. Bureau of Labor Statistics, May, 2024 Occupational Employment and Wage Statistics

A total of \$2.4 billion of state and local tax impacts was generated throughout the United States by maritime activity at the marine terminals within the Port District. Of the \$2.4 billion of state and local tax impacts, about \$807 million of state and local tax revenue was generated in the state of Louisiana.

With respect to federal tax revenue, the marine cargo activity within the tri-parish New Orleans Port District supported \$5.3 billion of federal tax revenue at the national level, of which \$1.8 billion of the federal tax revenue was supported by the activity in the state of Louisiana.

Distribution by State of the Economic Impacts Generated by the Tri-Parish New Orleans Port District

The national economic impacts supported by the marine cargo activity within the tri-parish New Orleans Port District were allocated to each state in the United States using a combination of S&P Transearch data that identified truck, rail, and domestic waterborne movements of cargo between the marine terminals and associated manufacturing facilities and refineries in each state. The national economic impacts were estimated by commodity and then allocated to a state level, using the above noted data. The commodity specific impacts were summed to total U.S. impacts by state - jobs, income, revenue, total economic value, and federal/state/local taxes. Exhibit E-3 on the next page shows the national economic impacts supported by the cargo activity handled at the marine terminals within the New Orleans Port District in 2024 by state. While the greatest impacts are supported

Exhibit E-3: National Economic Impact of Tri-Parish New Orleans Port District by State

| STATE | JOBS | INCOME (MILLIONS) | OUTPUT (MILLIONS) | STATE/LOCAL TAXES (MILLIONS) | FEDERAL TAXES (MILLIONS) | STATE | JOBS | INCOME (MILLIONS) | OUTPUT (MILLIONS) | STATE/LOCAL TAXES (MILLIONS) | FEDERAL TAXES (MILLIONS) |
|-------|---------|-------------------|-------------------|------------------------------|--------------------------|-------------|----------------|-------------------|--------------------|------------------------------|--------------------------|
| LA | 122,386 | \$7,954.3 | \$31,514.3 | \$807.0 | \$1,791.5 | WI | 1,625 | \$91.2 | \$552.1 | \$11.3 | \$25.8 |
| TX | 36,794 | \$2,397.5 | \$12,822.8 | \$297.8 | \$675.6 | VA | 1,596 | \$90.9 | \$488.4 | \$11.3 | \$25.5 |
| MS | 28,375 | \$1,653.9 | \$8,531.9 | \$206.4 | \$464.7 | NC | 1,475 | \$121.0 | \$910.2 | \$14.9 | \$34.2 |
| IL | 28,347 | \$1,326.6 | \$6,973.0 | \$163.3 | \$376.0 | MI | 1,380 | \$76.2 | \$524.2 | \$9.4 | \$21.6 |
| AL | 13,427 | \$771.8 | \$4,145.9 | \$96.3 | \$216.9 | AZ | 1,151 | \$68.5 | \$404.2 | \$8.5 | \$19.3 |
| FL | 12,980 | \$769.6 | \$4,166.3 | \$96.0 | \$216.3 | NE | 926 | \$47.1 | \$226.9 | \$5.8 | \$13.3 |
| MO | 8,755 | \$431.4 | \$2,626.5 | \$53.2 | \$122.2 | NH | 854 | \$54.3 | \$301.8 | \$6.8 | \$15.2 |
| AR | 8,563 | \$464.4 | \$2,487.0 | \$57.8 | \$130.7 | KS | 760 | \$48.1 | \$284.6 | \$5.9 | \$13.6 |
| IN | 8,560 | \$415.7 | \$2,248.2 | \$51.1 | \$117.8 | UT | 628 | \$34.5 | \$169.7 | \$4.3 | \$9.7 |
| TN | 7,415 | \$391.7 | \$2,232.8 | \$48.3 | \$111.0 | DC | 577 | \$31.2 | \$157.5 | \$3.9 | \$8.7 |
| OH | 7,063 | \$358.3 | \$1,972.0 | \$44.2 | \$101.4 | SD | 434 | \$22.2 | \$110.4 | \$2.8 | \$6.2 |
| KY | 5,679 | \$288.7 | \$1,746.0 | \$35.5 | \$81.8 | NV | 357 | \$20.2 | \$104.0 | \$2.5 | \$5.7 |
| IA | 5,526 | \$267.0 | \$1,420.4 | \$33.0 | \$75.5 | CT | 251 | \$18.1 | \$152.3 | \$2.2 | \$5.1 |
| PA | 5,368 | \$284.2 | \$1,530.6 | \$35.2 | \$80.2 | ID | 242 | \$14.8 | \$67.3 | \$1.8 | \$4.2 |
| CA | 4,174 | \$361.2 | \$2,623.2 | \$44.6 | \$102.1 | ME | 235 | \$12.3 | \$62.1 | \$1.5 | \$3.4 |
| MD | 3,877 | \$208.7 | \$1,030.4 | \$26.1 | \$58.5 | ND | 218 | \$10.0 | \$59.3 | \$1.2 | \$2.8 |
| GA | 3,791 | \$333.8 | \$2,408.2 | \$41.3 | \$94.3 | RI | 182 | \$9.6 | \$48.1 | \$1.2 | \$2.7 |
| NJ | 3,396 | \$179.5 | \$903.6 | \$22.5 | \$50.3 | NM | 165 | \$9.1 | \$43.8 | \$1.1 | \$2.5 |
| MN | 2,917 | \$132.8 | \$935.8 | \$16.4 | \$37.6 | WA | 165 | \$12.4 | \$72.4 | \$1.5 | \$3.5 |
| OK | 2,113 | \$105.8 | \$841.6 | \$13.0 | \$29.9 | OR | 106 | \$14.8 | \$122.4 | \$1.8 | \$4.2 |
| SC | 2,079 | \$176.2 | \$1,317.5 | \$21.8 | \$49.8 | DE | 103 | \$5.5 | \$30.6 | \$0.7 | \$1.5 |
| CO | 1,844 | \$103.1 | \$509.8 | \$12.9 | \$28.9 | WY | 82 | \$4.3 | \$22.2 | \$0.5 | \$1.2 |
| WV | 1,730 | \$87.8 | \$464.9 | \$10.9 | \$24.8 | VT | 48 | \$2.6 | \$12.7 | \$0.3 | \$0.7 |
| NY | 1,713 | \$84.0 | \$586.4 | \$10.4 | \$23.7 | MT | 41 | \$2.3 | \$10.9 | \$0.3 | \$0.7 |
| MA | 1,680 | \$90.1 | \$498.9 | \$11.3 | \$25.3 | TOT. | 342,150 | \$20,459.2 | \$101,476.2 | \$2,358.1 | \$5,318.5 |



in the state of Louisiana, significant impacts are supported in Texas, Mississippi, Illinois and Alabama, reflecting the utilization of the Port of New Orleans to move containers to and from Mississippi, iron and steel products and petrochemical products to and from the state of Texas, and grain, particularly soybeans from the state of Illinois.

Summary of the Economic Impact of the Cargo Activity at the Port of New Orleans Owned Marine Terminals

The public marine terminals owned by the Port of New Orleans handle containerized cargo, iron and steel products, break bulk, iron and steel products, and rubber, lumber, dry bulk cargo, bulk grain, miscellaneous metals, miscellaneous break bulk cargo and project cargo. The same methodology was used to estimate the economic impacts generated by cargo activity at the Port of New Orleans owned terminals as was used to estimate the economic impacts of the cargo activity handled at the marine terminals within the tri-parish New Orleans Port District. The impact of the cargo activity at the Port owned terminals are estimated at the national and state of Louisiana levels of detail, and shown in Exhibit E-4.

Exhibit E-4: Economic Impacts of the Port of New Orleans Owned Marine Terminals

| | NATIONAL | LOUISIANA |
|--|---------------------|---------------------|
| JOBS | | |
| Direct | 8,825 | 8,825 |
| Induced | 12,818 | 9,344 |
| Indirect | 3,846 | 3,064 |
| Related | 173,554 | 68,594 |
| TOTAL | 199,043 | 89,827 |
| PERSONAL INCOME (\$1,000) | | |
| Direct | \$598,680 | \$598,680 |
| Re-spending/Local Personal Consumption | \$2,390,288 | \$1,349,663 |
| Indirect | \$177,232 | \$141,168 |
| Related | \$8,044,569 | \$3,186,296 |
| TOTAL | \$11,210,768 | \$5,275,807 |
| TOTAL ECONOMIC VALUE (\$1,000) | | |
| Direct Business Revenue | \$1,161,867 | \$1,161,867 |
| Re-spending/Local Personal Consumption | \$2,390,288 | \$1,349,663 |
| Related Output | \$48,894,194 | \$19,491,835 |
| TOTAL | \$52,446,349 | \$22,003,366 |
| LOCAL PURCHASES (\$1,000) | | |
| | \$383,440 | \$383,440 |
| STATE AND LOCAL TAXES (\$1,000) | | |
| Direct, Induced, Indirect | \$250,684 | \$159,210 |
| Related | \$1,018,166 | \$388,970 |
| TOTAL | \$1,268,850 | \$548,179 |
| FEDERAL TAXES (\$1,000) | | |
| Direct, Induced, Indirect | \$388,047 | \$268,535 |
| Related | \$2,433,114 | \$967,672 |
| TOTAL | \$2,821,161 | \$1,236,206 |

Totals may not add due to rounding. Includes commercial real estate impacts leased from the Port of New Orleans



In 2024, 199,043 jobs in the United States are supported by the cargo moving via the Port of New Orleans owned marine terminals, including the impacts generated by commercial real estate leased from the Port and excluding the impacts of cruise activity, retail/hotels on Port property. Of the 199,043 jobs in the United States, 89,827 jobs are supported in the state of Louisiana.

Marine cargo activity at the Port of New Orleans owned marine terminals supported a total of \$52.4 billion of total economic value to the United States economy, of which \$22.0 billion of total economic value was supported in the state of Louisiana.

Marine cargo activity at the Port of New Orleans owned terminals supported \$11.2 billion of total personal wage and salary income and local consumption expenditures in the national economy. This includes \$3.2 billion of direct, indirect, induced, and local

consumption expenditures, while the remaining \$8.0 billion was received by the related port users. The 8,825 direct job holders received \$598.7 million of direct wage and salary income, for a direct annual salary of \$67,838. This compares to \$55,130, which is the mean annual salary in 2024 for all workers in the state of Louisiana, as reported by the U.S. Bureau of Labor Statistics.

A total of \$1.3 billion of state and local tax impacts was generated throughout the United States by maritime activity at the Port of New Orleans owned terminals. Of the \$1.3 billion of state and local tax impacts, \$548.2 million of state and local tax revenue was generated in the state of Louisiana.

With respect to federal taxes, \$2.8 billion of federal taxes was supported in the national economy, of which \$1.2 billion of federal taxes was supported within the state of Louisiana.

I. EMPLOYMENT IMPACTS OF THE TRI-PARISH NEW ORLEANS PORT DISTRICT

In this chapter, the employment generated by maritime activity at the marine terminals within the tri-parish New Orleans Port District are described. The chapter is organized as follows:

- First, the total employment that is in some way related to the marine cargo activity within the Port District is estimated.
- Second, the subset of total employment that is judged to be totally dependent (i.e., direct jobs) on port activity is analyzed as follows:
 - The direct job impact is estimated in terms of key economic sectors, i.e., surface transportation sector, maritime services sector, shippers/consignees' sector and Port Authority sector.
 - The direct job impact is estimated by detailed job category, i.e., trucking, rail, dependent shippers/consignees, ILA/dockworkers, freight forwarders/ customhouse brokers, steamship agents, chandlers, warehousemen, stevedores and terminal operators, surveyors, marine construction and ship repair, etc.
 - The direct job impact is estimated for each of the key commodities/commodity groups.
- Induced and indirect jobs are estimated at the national and state levels.
- Finally, jobs related to the marine activity within the Port District are described.



1. TOTAL EMPLOYMENT IMPACT

In 2024, 342,150 jobs in the United States are supported by the cargo moving via the marine terminals located within the tri-parish New Orleans Port District. Of the 342,150 jobs in the United States, 122,386 jobs are supported in the state of Louisiana.

- Of the 342,150 jobs supported in the United States, marine cargo activity along the Port District generated **14,603 direct jobs**.
- In addition to the direct jobs generated by the marine cargo activity, purchases by these direct jobs supported **24,703 induced jobs** in the United States, of which 17,828 induced jobs were created in the state of Louisiana.
- As the result of the \$794.9 million of purchases by the firms dependent on the activity within the Port District, an additional **7,934 indirect jobs** are supported in the United States, of which 6,315 indirect jobs were supported in the State.

- The balance of the jobs, **294,910 jobs are classified as related jobs** and are with shippers and consignees and supporting firms using the marine cargo moving via the Port District marine terminals. Of these user jobs, 83,641 jobs are in the state of Louisiana.

2. DIRECT JOB IMPACTS

As a result of the marine cargo activity within the tri-parish New Orleans Port District, 14,603 full-time jobs were directly created.² In this section the direct jobs are analyzed in terms of:

- Distribution by economic sector and job category; and
- Distribution by commodity group.

2.1 JOB IMPACTS BY SECTOR AND JOB CATEGORY

Exhibit I-1 presents the distribution of the 14,603 direct jobs by sector and job category. Barge operations represent the largest direct job generator, followed by direct jobs with marine equipment and construction/repair activity, dependent shippers/consignees, terminal operations and real estate tenants.

2.2 DIRECT JOB IMPACTS BY COMMODITY

Most of the 14,603 jobs considered to be generated by port activity can be related to the handling of specific commodities or commodity groups. Certain employment categories such as government employees, employees with marine construction and ship repair, real estate tenants and the miscellaneous maritime services firms cannot be identified with a specific commodity. As a result, employment in these groups (which totaled 4,674 jobs) was not allocated to commodity groups.

² Jobs are measured as full-time equivalent jobs. For example if person works 50% of the time, that is equivalent to 0.5 direct jobs.

Exhibit I-1: Direct Employment Impacts by Job Category

| IMPACT CATEGORY | JOBS |
|---|---------------|
| SURFACE TRANSPORTATION | |
| Rail | 273 |
| Truck | 1,554 |
| SUBTOTAL | 1,827 |
| MARITIME SERVICES | |
| Terminals | 1,873 |
| ILA | 560 |
| Tug Assists / Pilots | 181 |
| Maritime Services / Agents / Construction | 412 |
| Forwarders | 305 |
| Warehouse | 876 |
| Government | 347 |
| Marine Equipment / Construction | 1,898 |
| Barge | 2,321 |
| SUBTOTAL | 8,772 |
| DEPENDENT SHIPPERS / CONSIGNEES | 1,890 |
| TENANTS | 1,867 |
| PORT AUTHORITY | 247 |
| TOTAL | 14,603 |

Totals may not add due to rounding

Exhibit I-2 presents the direct employment impacts in terms of commodity groups. This exhibit indicates that in 2024, liquid bulk products handled at the terminals within the Port District generated the largest number of direct jobs, 1,929. The majority of these jobs are with refineries and petrochemical companies located within the Port District directly dependent upon the shipment and receipt of petroleum and petrochemical products via the marine terminals within the Port District. The movement of containerized cargo created the next largest job impact, followed by the handling of dry bulk cargo including sugar, ores and aggregates.

Exhibit I-2: Distribution of Direct Job Impact by Commodity

| COMMODITY | JOBS |
|------------------|---------------|
| Liquid Bulk | 1,929 |
| Containers | 1,898 |
| Dry Bulk | 1,761 |
| Fertilizer | 1,290 |
| Grain | 1,043 |
| Iron and Steel | 833 |
| Aluminum | 455 |
| Copper | 184 |
| Other Metals | 163 |
| Rubber | 135 |
| Other Break Bulk | 133 |
| Forest Products | 73 |
| Project Cargo | 32 |
| Non-Allocated | 4,674 |
| TOTAL | 14,603 |

Totals may not add due to rounding

3. INDUCED JOBS

The 14,603 directly employed individuals due to the marine cargo and vessel activity within the Port District received wages and salaries, a part of which was used to purchase goods and services such as food, housing, clothing, transportation services, etc. As a result of these purchases, 24,703 jobs in the national economy were supported, of which 17,828 were generated in the state of Louisiana. The majority of the induced jobs are with state and local government agencies

providing school, health care, police and fire protection, other community and social services, as well as firms providing business and personal services. The next largest induced job impact occurs in the local food industry (restaurant and groceries).

4. INDIRECT JOBS

In addition to the induced jobs generated by the purchases of 14,603 directly employed individuals, the firms providing the direct services and employing the 14,603 direct jobs make purchases for goods and services. These purchases by the firms dependent upon the public and private marine facilities generate additional local jobs – indirect jobs. Based on interviews with the port service providers and terminal operators, these firms made \$794.9 million of local purchases in 2024. These direct purchases created an additional 7,934 indirect jobs in the national economy, of which 6,315 were generated in the state of Louisiana. These purchases include expenditures for equipment and parts, maintenance and repair services, office supplies, raw materials, fuel, and utilities. Care is taken to avoid any double counting of indirect jobs already included in direct jobs.

5. RELATED JOBS

It is estimated that 294,910 jobs with companies using the terminals in tri-parish Port District ship and receive waterborne cargo classified as related to the cargo activity along the Port District. The majority of the related user jobs are supported by the shipment and receipt of containerized cargo, followed by the export of grain, the shipment and receipt of petroleum and petrochemical products, and imported iron and steel products.

II. REVENUE, INCOME AND TAX IMPACTS OF THE TRI-PARISH NEW ORLEANS PORT DISTRICT

The marine activity at the terminals within the tri-parish New Orleans Port District generated revenue for firms in each of the economic sectors. For example, revenue is received by the railroads and the trucking companies within the surface transportation sector as a result of moving export cargo to the marine terminals and distributing the imported commodities inland after receipt at the marine terminals. The refineries and chemical production facilities receive revenue from the production of products, and the firms in the maritime services sector receive revenue from arranging for transportation services, cargo handling, providing services to vessels in port and repairs to vessels calling the port facilities.

1. REVENUE IMPACT – TOTAL ECONOMIC ACTIVITY

In 2024, marine cargo activity within the Port District supported a total of \$101.5 billion of total economic value to the U.S. economy, of which \$31.5 billion was generated in the state of Louisiana. Of the \$101.5 billion, \$3.1 billion is the direct business revenue received by the firms directly dependent upon the terminals within the Port District and those providing maritime services and inland transportation services to the cargo handled at the marine terminals and the vessels calling the terminals, as well as ship and rig repair, and barge fleet and line haul operations. An additional \$93.7 billion represents the value of the output to the nation that is created due to the cargo moving via the 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. The majority of these user impacts are associated with the shipment and receipts of containerized cargo, followed by the shipment and receipt of petroleum and chemical products, and the export of grain. Of the \$93.7 billion of user related output, \$25.8 billion is supported in the state of Louisiana. In addition to the direct business revenue and the related user value of output, \$4.7 billion of the re-spending of personal income and consumption purchases were generated. These components are additive and represent independent monetary impacts supported by the cargo and vessel activity. Other dollar value impact measures are not included in the total economic value since they are interdependent. Direct income is not included since it is part of the direct business impact and similarly, local purchases by the firms are from the direct business revenue generated by port activity and also used to pay indirect income. Finally, taxes are paid by the individuals from the direct, induced, indirect and related income and the direct business revenue and the related output.

The balance of this section focuses only on the \$3.1 billion direct revenue impact generated from the provision of transportation services the value of direct revenue from dependent shippers/ consignees' activities within the Port District. It is important to emphasize that the direct business revenue does not include the value of the cargo moving via the marine facilities.

1.1 DIRECT REVENUE IMPACTS BY ECONOMIC SECTOR

In 2024, the cargo and vessel activity within the tri-parish New Orleans Port District generated \$3.1 billion of direct business revenue to the firms providing cargo handling and vessel services and the value of output by the shippers/consignees' dependent upon the cargo activity at the terminals within the Port District.

1.2 DIRECT REVENUE IMPACTS BY ECONOMIC SECTOR AND JOB CATEGORY

Exhibit II-1 presents the distribution of the \$3.1 billion of directly generated revenue across the various port sectors and job categories.

The majority of the direct revenue is received by the maritime service sector firms, of which barge operations generated the largest direct revenue impact, followed by the revenue generated with dependent shippers/consignees (primarily refineries, chemical manufacturing facilities and sugar refining).

2. PERSONAL EARNINGS IMPACT

In the previous section of this chapter, the total revenue generated by port activity was identified. As described earlier, the personal income received by those directly dependent upon port activity along the Port District is paid from the business revenue received by the firms supplying direct services at the marine terminals.

The direct income impact is estimated by multiplying the average annual earnings (excluding benefits) of each port participant, i.e., truckers, dependent shippers/consignees, steamship agents, pilots, towing firm employees, longshoremen, warehousemen, etc., by the corresponding number of direct jobs in each category. The individual annual earnings in each category multiplied by the corresponding job impact resulted in the \$1.2 billion direct personal income (wage and salary earnings) impact.

The impact of the re-spending of this direct income for local purchases is estimated using personal earnings multipliers for the specific geographic regions. The personal earnings multipliers are based on data supplied by the Bureau of Economic Analysis (BEA)

Exhibit II-1: Direct Revenue by Sector and Category

| IMPACT CATEGORY | REVENUE (\$1,000) |
|---|--------------------|
| SURFACE TRANSPORTATION | |
| Rail | \$40,644 |
| Truck | \$405,074 |
| SUBTOTAL | \$445,718 |
| MARITIME SERVICES | |
| Terminals | \$286,805 |
| Tug Assists / Pilots | \$89,341 |
| Maritime Services / Agents / Construction | \$58,585 |
| Forwarders | \$92,462 |
| Warehouse | \$242,318 |
| Government | NA |
| Marine Equipment / Construction | \$39,070 |
| Barge | \$444,803 |
| SUBTOTAL | \$1,253,384 |
| DEPENDENT SHIPPERS / CONSIGNEES | \$925,700 |
| TENANTS | \$326,725 |
| PORT AUTHORITY | \$100,979 |
| TOTAL | \$3,052,506 |

Totals may not add due to rounding

for the U.S. and the state of Louisiana. The BEA estimates that for every one dollar earned by direct employees generated by activity at the marine terminals, an additional \$3.99 of personal income and consumption expenditures would be created at the national levels and \$2.25 at the State level. Hence, a personal earnings multiplier of 4.99 was used to estimate the additional consumption and income

impact due to re-spending at the national levels, 3.25 at the state of Louisiana level. This additional re-spending of the direct income generates the 24,703 induced jobs at the national levels and 17,828 induced jobs within the state of Louisiana.³

In addition to the direct and induced personal income and consumption impact, wages and salaries were received by the indirect employees. Using wage and salary data for these indirect employees as reported by the U.S. Bureau of Economic Analysis, RIMS II at each geographic level, it is estimated that \$365.6 million and, \$291.0 million of indirect wages and salaries were created by the marine cargo and vessel activity at the national and state levels of geographic detail.

In addition, the related job holders received \$14.2 billion of personal wages and salaries at the national level and \$3.8 billion at the state level. These wages and salaries for the related users are similarly based on average wage rates for the respective related user industry categories as reported by the BEA, RIMS II.

3. LOCAL PURCHASES

Each of the firms surveyed were asked to provide a breakdown of expenditures for equipment, parts, office supplies, business services, utilities, raw materials, maintenance and repair, new construction, etc. Based on the reported expenditures, it is estimated that \$794.9 million of purchases were made by the firms directly dependent upon maritime cargo activity within the New Orleans Port District.

³ It is to be emphasized that the re-spending impact at geographic levels does not represent the earnings of the induced jobs at the respective geographic levels, as it also includes the value of the purchases of the goods and services.

The purchases were combined with the relevant jobs to revenue multipliers for each related user industry at the three levels of geographic detail. The indirect job impacts are greatest at the national level since the total indirect jobs at the national level are based on the national multipliers applied to the \$794.9 million of purchases, followed by the indirect jobs at the state level, which represents the impact of the \$794.9 billion of purchases in the state of Louisiana and the various stages of value added at the state level to deliver the final goods and services.

4. TAX IMPACTS

Tax impacts are tax payments to the federal, state, and local governments by firms and by individuals whose jobs are directly dependent upon and supported (induced and indirect jobs) by activity at the marine terminals. The tax impacts are based on the state of Louisiana tax rates for state sales taxes, state income and corporate taxes, and other miscellaneous state taxes. The federal taxes include income and corporate taxes, based on the average federal income tax levy rate and a 15% profit margin for the corporate tax rate. At the national level, the state and local taxes are based on the average national tax rates for the above noted taxes.

The marine cargo and vessel activity within the Port District supported \$2.4 billion of state and local taxes at the national level, and \$807.0 million at the state of Louisiana level. With respect to the federal taxes, the marine cargo and vessels activity supported \$5.3 billion of federal tax revenue at the national levels and \$1.8 billion at the state level.

V. THE ECONOMIC IMPACT OF THE PORT OF NEW ORLEANS OWNED MARINE TERMINALS AND REAL ESTATE

In this chapter, the economic impacts of the Port of New Orleans owned marine terminals and real estate holdings are presented. The key terminals owned by the Port of New Orleans are the Napoleon Avenue Container Terminal, the break bulk terminals at Louisiana Avenue, First Street, Nashville Avenue, Harmony Street, and the bulk soybean operation at the Alabo Street terminal. The key cargoes handled by the Port of New Orleans terminals are containers, iron and steel imports, imported grain, rubber, forest products, and project cargo. The same methodology was used to estimate the economic impacts of the Port of New Orleans owned terminals and real estate as was used to estimate the economic impacts of the tri-parish New Orleans Port District. The impacts are estimated at the national and state of Louisiana levels of detail, and are presented in Exhibit V-1.

In 2024, 199,043 jobs in the United States are supported by the cargo moving via the Port of New Orleans owned marine terminals, including the impacts generated by Port owned real estate. Of the 199,043 jobs in the United States, 89,827 jobs are supported in the state of Louisiana.

- Of the 199,043 jobs supported in the United States, the marine cargo activity at the Port owned terminals and real estate generated **8,825 direct jobs**.
- In addition to the direct jobs generated by the marine cargo activity, purchases by these direct jobs supported **12,818 induced jobs** in the

Exhibit V-1: Economic Impacts of the Port of New Orleans Owned Marine Terminals

| | NATIONAL | LOUISIANA |
|--|---------------------|---------------------|
| JOBS | | |
| Direct | 8,825 | 8,825 |
| Induced | 12,818 | 9,344 |
| Indirect | 3,846 | 3,064 |
| Related | 173,554 | 68,594 |
| TOTAL | 199,043 | 89,827 |
| PERSONAL INCOME (\$1,000) | | |
| Direct | \$598,680 | \$598,680 |
| Re-spending/Local Personal Consumption | \$2,390,288 | \$1,349,663 |
| Indirect | \$177,232 | \$141,168 |
| Related | \$8,044,569 | \$3,186,296 |
| TOTAL | \$11,210,768 | \$5,275,807 |
| TOTAL ECONOMIC VALUE (\$1,000) | | |
| Direct Business Revenue | \$1,161,867 | \$1,161,867 |
| Re-spending/Local Personal Consumption | \$2,390,288 | \$1,349,663 |
| Related Output | \$48,894,194 | \$19,491,835 |
| TOTAL | \$52,446,349 | \$22,003,366 |
| LOCAL PURCHASES (\$1,000) | | |
| | \$383,440 | \$383,440 |
| STATE AND LOCAL TAXES (\$1,000) | | |
| Direct, Induced, Indirect | \$250,684 | \$159,210 |
| Related | \$1,018,166 | \$388,970 |
| TOTAL | \$1,268,850 | \$548,179 |
| FEDERAL TAXES (\$1,000) | | |
| Direct, Induced, Indirect | \$388,047 | \$268,535 |
| Related | \$2,433,114 | \$967,672 |
| TOTAL | \$2,821,161 | \$1,236,206 |

Totals may not add due to rounding

United States, of which 9,344 induced jobs were created in the state of Louisiana.

- As the result of the \$383.4 million of purchases by the firms dependent on the cargo activity at the Port of New Orleans marine cargo operations, an additional **3,846 indirect jobs** are supported in the United States, of which 3,064 indirect jobs were supported in the State.
- The balance of the jobs, **173,554 jobs are classified as related jobs** and are with shippers and consignees and supporting firms using the marine cargo moving via the Port's owned terminals. Of these user jobs, 68,594 jobs are in the state of Louisiana.

In 2024, marine cargo and Port owned real estate activity supported \$52.5 billion of total economic value to the United States economy, of which \$22.0 billion of total economic value was supported in the state of Louisiana.

- Of the \$52.5 billion total economic value to the U.S. economy, \$1.2 billion is the direct business revenue received by the firms directly dependent upon the Port-owned facilities.
- An additional \$48.9 billion represents the value of the output to the United States that is created due to the cargo moving via the Port-owned 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 United States. Of the \$48.9 billion of the value of output supported nationwide, \$19.5 billion was supported in the state of Louisiana.

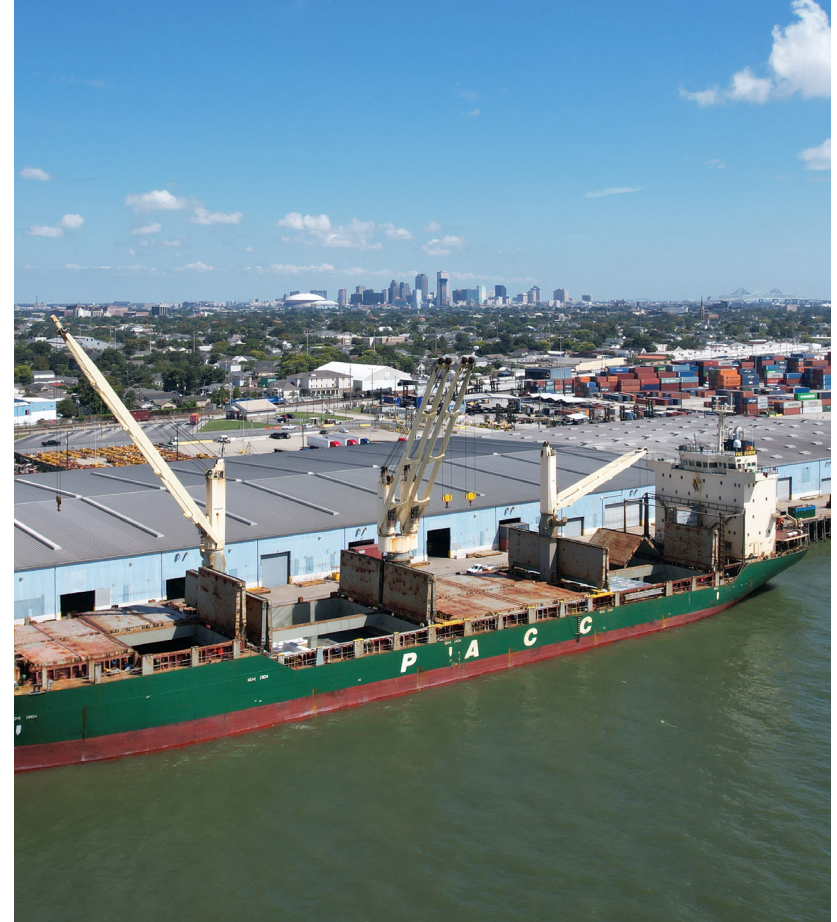


- In addition, \$2.4 billion of the re-spending of personal income and local consumption purchases are supported in the U.S. economy, of which about \$1.4 billion occurs in the state of Louisiana. These components (the value of output, direct business revenue, and the re-spending of personal income and local consumption purchases) are additive and represent independent monetary impacts supported by the cargo and vessel activity. Other dollar value impact measures are not included in the total economic value since they are interdependent. Direct income is not included since it is part of the direct business impact and similarly, local purchases by the firms are from the direct business revenue generated by port activity and also used to pay indirect income. Finally, taxes are paid by the individuals from the direct, induced, indirect and related income and the direct business revenue and the related output, and thus not added with the value of output and re-spending of income.

Marine cargo and real estate activity at the Port-owned facilities supported \$11.2 billion of total personal wage and salary income and local consumption expenditures in the national economy. This includes \$3.2 billion of direct, indirect, induced, and local consumption expenditures, while the remaining \$8.0 billion was received by the related port users. The 8,825 direct job holders received \$598.7 million of direct wage and salary income, for a direct annual salary of \$67,838. This compares to \$55,130, which is the mean annual salary in 2024 for all workers in the state of Louisiana, as reported by the U.S. Bureau of Labor Statistics.

A total of \$1.3 billion of state and local tax impacts was generated throughout the United States by maritime and real estate activity at the Port of New Orleans owned facilities. Of the \$1.3 billion of state and local tax impacts, \$548.2 million of state and local tax revenue was generated in the state of Louisiana.

With respect to federal taxes, \$2.8 billion of federal taxes was supported in the national economy, of which \$1.2 billion of federal taxes was supported within the state of Louisiana.



APPENDIX: ECONOMIC IMPACT METHODOLOGY

Martin Associates was retained by the Port of New Orleans to estimate the economic impacts generated by marine cargo activity at the public and private marine terminals located within the tri-parish New Orleans Port District. This District consists of a tri-parish port district established By Act 70 in 1896, and consists of the marine cargo terminals located within Orleans, Jefferson and St. Bernard parishes. The purpose of the analysis is to quantify the economic value of the Port District to the national and state economies. The New Orleans Port District is home to public marine terminals which are owned, leased, or operated by the Port of New Orleans, as well as the marine terminals and industries dependent upon the movement of cargo within the district located within the Orleans, Jefferson and St. Bernard Parish. The key terminals owned by the Port of New Orleans include the Napoleon Avenue Container Terminal, the break bulk terminals at Louisiana Avenue, First Street, Nashville Avenue, Harmony Street, and the bulk soybean operation at the Alabo Street terminal. Private terminals include the Avondale Gateway Terminal and Cornerstone Chemical Company located in Jefferson Parish, the PBF Energy/Chalmette Refinery, the Valero Refinery and the Tate & Lyle North America/Domino Sugar Terminal in Orleans Parish; and the marine terminals located within the St. Bernard Port Harbor and Terminal District which include the Chalmette, Violet, Meraux, and Arabi terminals located in St. Bernard Parish. The impacts measured consist of jobs, personal earnings, business revenue, value of output, and state, local and federal taxes. The impacts are presented for the total New Orleans Port District at the state and national levels, as well as separately for the Port of New Orleans owned and leased terminals as well as the Port's commercial real estate holdings. The analysis does not include the impacts generated by the cruise activity at the Port of New Orleans.

The methodology used in this analysis has been developed by Martin Associates and has been used to estimate the economic impacts of seaport activity at public and private marine terminals of more than 800 United States and Canadian ports as well as ports throughout the world. The methodology has been used in studies that have been presented before the International Trade Commission, the Council of Economic Advisors, the Federal Reserve Board, the Canadian Justice Department, and several U.S. Presidents.

The remainder of this chapter presents an overview of the economic impact analysis and consists of the following sections:

- Flow of economic impacts through the local and regional economies;
- The structure of the impact analysis;
- Summary of the methodology; and
- Commodities included in the analysis.

1. FLOW OF IMPACTS

Waterborne activity at a seaport contributes to the local and regional economy by generating business revenue to local and national firms providing vessel and cargo handling services at the marine terminals. These firms, in turn, provide employment and income to individuals and pay taxes to state and local governments. Exhibit A-1 shows how activity at marine terminals generate impacts throughout the local, state, and national economies. As this exhibit indicates, the impact of a seaport on a local, state, or national economy cannot be reduced to a single number, but instead, the seaport activity creates several impacts. These are the revenue impact, employment impact, personal income impact and tax impact.

These impacts are non-additive. For example, the income impact is a part of the revenue impact and adding these impacts together would result in double counting. Exhibit A-1 shows graphically how marine cargo activity shipped and received at the marine terminals located within the tri-parish Port District generate the economic impacts.

1.1 BUSINESS REVENUE IMPACT

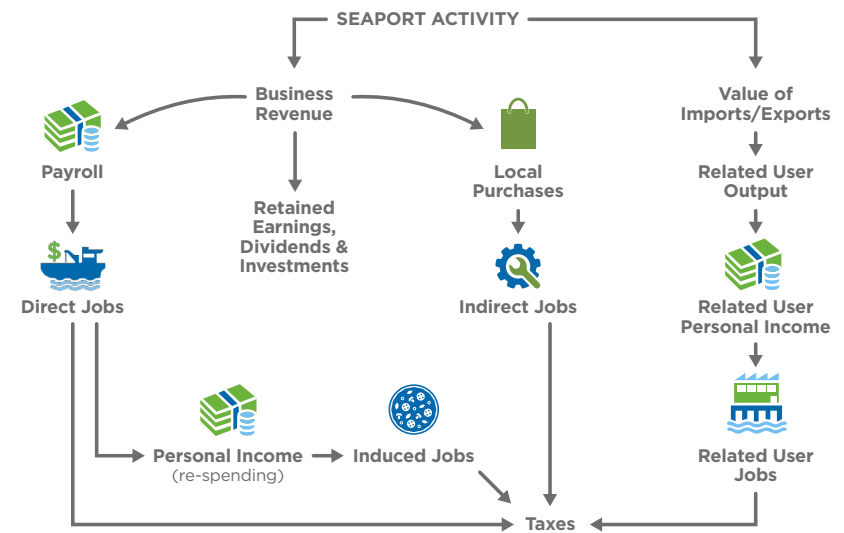
At the outset, activity at the port generates business revenue for firms which provide services. This business revenue impact is dispersed throughout the economy in several ways. It is used to hire people to provide the services, to purchase goods and services and to make federal, state, and local tax payments. The remainder is used to pay stockholders, retire debt, make investments, or is held as retained earnings. It is to be emphasized that the only portions of the revenue impact that can be definitely identified as remaining in the local economy are those portions paid out in salaries to local employees, for local purchases by individuals and businesses directly dependent on the seaport, in contributions to federal, state and local taxes, in lease payments to the Port of New Orleans by tenants and wharfage and dockage fees paid by the steamship lines to the Port of New Orleans and to the privately owned and operated terminals along the Port District.

1.2 EMPLOYMENT IMPACT

The employment impact of seaport activity consists of four levels of job impacts:

- Direct employment impact – jobs directly generated by the marine cargo activity along the Port District. Direct jobs generated by marine cargo include jobs with railroads and trucking companies moving cargo between inland origins and destinations and

Exhibit A-1: Flow of Economic Impacts Generated



the marine terminals, employees of refineries, chemical plants and other manufacturing plants shipping and receiving cargo; longshoremen and dockworkers; steamship agents, freight forwarders, barge operations, pilots, tug assist companies, stevedores, etc. It is to be emphasized that these are classified as directly generated in the sense that these jobs would experience near term dislocation if the activity within the Port District were to be discontinued.

- Induced employment impact – jobs created throughout the local economy because individuals directly employed due to seaport activity spend their wages locally on goods and services such as food, housing, and clothing. These jobs are held by residents located throughout the State and the United States.

- Indirect employment impact – jobs created locally due to purchases of goods and services by firms, not individuals. These jobs are estimated directly from local purchases data supplied to Martin Associates by the over 200 companies interviewed as part of this study and include jobs with local office supply firms, maintenance and repair firms, parts, and equipment suppliers, etc. It is to be emphasized that special care was taken to avoid double counting, since the current study counts certain jobs as direct (i.e., trucking jobs, jobs with railroads, jobs with insurance companies and admiralty law firms, etc.) which are often classified as indirect by other approaches, notably the input/output model approach.
- Related jobs are jobs that are determined to be related to physical cargo that is shipped and received via the marine terminals in 2024. These jobs include the portion of jobs at importing and exporting firms that are directly associated with the cargo moved via the Port District.

1.3 PERSONAL INCOME IMPACT

The personal income impact is the measure of employee wages and salaries (excluding benefits) received by individuals directly employed due to seaport activity. Re-spending of these earnings throughout the regional economy for purchases of goods and services is also estimated. This, in turn, generates additional jobs – the induced employment impact. This re-spending impact is measured at the national and state levels using a national and state personal earnings multipliers, which reflects the percentage of purchases by individuals that are made within each geographical region based on personal income multipliers for the water transportation sector developed for each geographical region by the U.S. Bureau of Economic Analysis, RIMSII. The re-spending

effect varies by region – a larger re-spending effect occurs in regions that produce a relatively large proportion of the goods and services consumed by residents, while lower re-spending effects are associated with regions that import a relatively large share of consumer goods and services (since personal earnings “leak out” of the region for these out-of-regional purchases). Therefore, the re-spending impact is the largest at the national level, followed by the state level. The re-spending impact at each geographic level generates the induced jobs at each geographic level.

1.4 FEDERAL, STATE AND LOCAL TAX IMPACTS

Tax impacts are tax payments to the federal, state, and local governments by firms and by individuals whose jobs are directly dependent upon and supported (induced and indirect jobs) by activity at the marine terminals. The tax impacts are based on the state of Louisiana tax rates for state sales taxes, state income and corporate taxes, and other miscellaneous state taxes. The federal taxes include income and corporate taxes, based on the average federal income tax levy rate and a 15% profit margin for the corporate tax rate. At the national level, the state and local taxes are based on the average national tax rates for the above noted taxes.

1.5 RELATED USER IMPACTS

In addition to the direct impacts, induced and indirect impacts also support activity with regional exporters and importers using the marine terminals located along the New Orleans Port District. These impacts are classified as **related user impacts** in that the shippers and consignees using the marine terminals can and do use other ports for the shipment and receipt of cargo. The related user impacts are the jobs, income, revenue, and federal, state, and local taxes related to the value and tonnage of the cargo shipped and

received via the marine terminals, and does not include the total employment, revenue and taxes with the importers and exporters, only that portion associated with the cargo moved via the marine terminals. If the Port District's terminals were no longer used by these shippers and consignees then these influenced users would use other ports to ship and receive cargo. Unlike the direct, induced, and indirect impacts, the related impacts would not necessarily be dislocated from the economy – instead, the impacts would no longer be related to the Port District.

Finally, the direct, induced, and indirect port sector job, income, revenue, and tax impacts associated with each of the cargoes for which related shipper/consignee impacts estimated were subtracted from the total related impacts (by commodity and cargo type). This was done to avoid double counting, as the related shipper/consignee impacts include impacts at each logistical stage of handling the imported and exported cargo, such as the port activity and the trucking and rail activity to move the cargo to and from each port and the induced and indirect jobs associated with the direct port activity.

2. IMPACT STRUCTURE

The four types of economic impacts are created throughout various business sectors of the state and local economies. Specifically, three distinct economic sectors are impacted as a result of activity at the marine terminals. These are the:

- Surface Transportation Sector;
- Maritime Services Sector;
- Shippers/Consignees using the Port; and
- Port Authority.

Within each sector, various participants are involved. Separate impacts are estimated for each of the participants. A discussion of each of the economic impact sectors is provided below, including a description of the major participants in each sector.

2.1 THE SURFACE TRANSPORTATION SECTOR

The surface transportation sector consists of both the railroad and trucking industries. The trucking firms and railroads are responsible for moving the various cargoes between the marine terminals and the inland origins and destinations. In addition, pipelines also move liquid petroleum and chemical products to and from the refineries and petrochemical facilities. Line haul barge operations are included in the maritime service sector

2.2 THE MARITIME SERVICES SECTOR

This sector consists of numerous firms and participants performing functions related to the following maritime services:

- Cargo Marine Transportation;
- Vessel Operations;
- Cargo Handling; and
- Federal, State and Local Government Agencies

A brief description of the major participants in each of these four categories is provided below:

- Cargo Marine Transportation – Participants in this category are involved in arranging for inland and water transportation for export or import freight. The freight forwarder/customhouse broker is the major participant in this category. The freight forwarder/customhouse broker arranges for the freight to be delivered between the terminals and inland destinations, as well

as the ocean transportation. This function performed by freight forwarders and customhouse brokers is most prevalent for general cargo commodities.

- Vessel Operations – This category consists of several participants. The steamship agents provide a number of services for the vessel as soon as it enters the port; the agents arrange for pilot services and towing, for medical and dental care of the crew and for ship supplies. The agents are also responsible for vessel documentation. In addition to the steamship agents arranging for vessel services, those providing the services include:
 - Chandlers – supply the vessels with ship supplies (food, clothing, nautical equipment, etc.);
 - Towing firms – provide the tug service to guide the vessel to and from port; these firms sometimes are involved in domestic barge operations; these firms also provide barge linehaul operations, fleetings and cleaning operations
 - Pilots – assist in navigating the vessels within the Port District to and from the marine terminals;
 - Bunkering firms – provide fuel to the vessels;
 - Marine surveyors – inspect the vessels and the cargo;
 - Shipyards/marine construction firms – provide repairs, either emergency or scheduled as well as marine pier construction and dredging.
- Cargo Handling – This category involves the physical handling

of the cargo at the terminals between the land and the vessel. Included in this category are the following participants:

- Longshoremen – include members of the International Longshoremen’s Association (ILA), as well as non-ILA dockworkers that are involved in the loading and unloading of cargo from the vessels, as well as handling the cargo prior to loading and after unloading. ILA members operate mainly at the public terminals owned by Port of New Orleans.
- Stevedoring firms – manage the longshoremen (union and non-union labor) and cargo-handling activities. Stevedoring services at the marine terminals are provided by private stevedoring companies.
- Terminal operators – are often stevedoring firms who operate the maritime terminals where cargo is loaded and off-loaded.
- Warehouse operators – store cargo after discharge or prior to loading and consolidate cargo units into shipment lots.
- Government Agencies – This service sector involves federal, state, and local government agencies that perform services related to cargo handling and vessel operations at the Port District. U.S. Customs and Border Protection, Bureau of Immigration, U.S. Department of Labor, U.S. Department of Agriculture, U.S. Coast Guard, the Army Corps of Engineers and U.S. Department of Commerce employees are involved. These services are provided by the government offices located in the New Orleans area and allocated to the tri-parish Port District based on volume of cargo and vessel traffic moving on the Lower Mississippi River and handled at the terminals within the Port District.

2.3 SHIPPERS/CONSIGNEES

Two categories of shippers and consignees are considered in the analysis: those that are totally dependent on the public and privately-owned marine terminals and those located throughout the regional economy whose business is only related to the port. Those in the first category would most likely shut down operations if the marine terminals were not available for their use, while those in the second category would ship or receive materials via another port. Related jobs consist of jobs with consumers and producers of containerized cargo, users and producers of petroleum and chemical products, fabrication firms and oil exploration operations utilizing iron and steel imports, users of coppers imports, users and producers and consumers of break bulk and project cargo and farmers producing the grain for export. Dependent shippers/consignees include employees and activity of the oil refineries and petrochemical plants that are dependent upon the receipt of petroleum and chemicals by vessel/barge and the shipment of refined product and chemicals by vessel/barge; sugar refinery operations and end user confectionery manufacturing activity, coffee roasters, etc. For this current study, the majority of related shippers and consignees are with producers of containerized cargo (including consumer goods as well as chemical and plastic resins), farmers throughout the U.S. exporting grain, the elevators in the Port District, petroleum refineries and petrochemical plants (excluding the value of shipments that move via container), and manufacturers utilizing high value copper and aluminum imports.

2.4 PUBLIC PORT AUTHORITY

The Port Authority Sector includes those individuals employed by the Port of New Orleans and the St. Bernard Port harbor and Terminal District. Revenue and capital expenditures by these entities are included in the analysis to estimate marine construction activity impacts.



3. SUMMARY OF METHODOLOGY

The purpose of this section is to provide a summary of the methodological approach used to estimate the economic impacts of the vessel and cargo activity at the public and private terminals located along the tri-parish New Orleans Port District.

3.1 DATA COLLECTION

The cornerstone of the Martin Associates' approach is the collection of detailed baseline impact data from firms providing services at the public and private marine terminals and facilities along the Port District. To ensure accuracy and defensibility, the baseline impact data were collected from interviews with over 200 firms in the Port District maritime community. These firms represent the universe of firms providing services along the Port District as well

as those dependent shippers/consignees such as the refineries and petrochemical plants. For the most part, multiple interviews were conducted with several persons in each firm.

3.2 DIRECT JOBS, INCOME AND REVENUE IMPACTS

The results of these interviews were then used to develop the baseline direct job, revenue and income impacts for the economic sectors and job categories associated with the marine terminals, service providers, as well as the dependent shippers/consignees such as the refineries and petrochemical firms.

This baseline survey data was also used to develop operational models which can be used to update the impacts of the Port District marine terminals and private terminals on an annual basis and to evaluate the impacts of changes in:

- Marine cargo tonnage, by commodity;
- Seaport labor productivity and work rules;
- Modal distribution of seaport cargo (what percent of the inland transportation of a commodity is truck versus rail), as well as the geographical distribution of each commodity;
- Vessel calls and vessel size; and
- New carrier services.

Also, the operational models can be used to evaluate alternative facilities expansion projects and new marine terminal construction, as well as the impacts associated with channel dredging and widening.

3.3 INDUCED IMPACTS

Induced impacts are those generated by the purchases of the individuals employed as a result of seaport activity. For example, a portion of the personal earnings received by those directly

employed due to activity at the marine terminals is used for purchases of goods and services, both regionally, as well as out-of-the region. These purchases, in turn, create additional jobs in the region which are classified as induced. To estimate these induced jobs, a personal earnings multiplier was developed from data provided by the Bureau of Economic Analysis, Regional Income Division. The personal earnings multipliers are used to estimate the total personal earnings generated in the state of Louisiana and the United States as a result of the marine activity along the Port District. A portion of this total personal earnings impact is then next allocated to specific purchases (as determined from consumption data developed from the U.S. Bureau of Labor Statistics, Consumer Expenditure Survey). These purchases are next converted into retail and wholesale induced jobs in the national and state economies.

Induced jobs are not estimated at lower levels of purchasing rounds (after the wholesale round) since it is not possible to trace with a sufficient degree of accuracy, geographically, where purchases at the remaining levels occur. However, about 80 percent of the consumption will likely occur at the first two rounds of purchases, which are most likely local retail and wholesale purchases.

3.4 INDIRECT IMPACTS

Indirect impacts include indirect jobs, personal income and state and local taxes. These indirect impacts are generated in the local, state, and national economy as the result of purchases by firms that are directly dependent upon cargo and vessel activity at the marine terminals, including the shippers/consignees located within the tri-parish New Orleans Port District. These purchases are for goods and services such as office supplies and equipment, maintenance and repair services, communications and utilities, transportation services and other professional services. To estimate the indirect economic



impact, purchases, by type of purchase, were collected from each of the firms interviewed. These purchases were then combined with employment to sales ratios in supplying industries at the national and state level of detail, as developed from the U.S. Bureau of Economic Analysis Regional Input-Output Modeling System. The indirect job ratios also account for the in-state and national spin-off effects from multiple rounds of supply chains that are required to provide the purchased goods and services by the dependent firms.

3.5 RELATED IMPACTS

Related impacts measure the jobs, income, revenue and state and local taxes with shippers and consignees moving cargo through the Port District's marine terminals. These jobs are classified as related jobs since the firms using the marine terminals for the movement of cargo can and do use other seaports and marine terminals. For example, the consumers and producers of containerized cargo use other ports to ship and receive containerized cargo including the

Ports of Houston, Los Angeles and Long Beach and the Port of Mobile. Farmers using the district grain elevators use other ports for grain export, including Houston and Galveston. The importers of forest products vis the District terminals import via other ports such as Port Arthur and Beaumont, while project cargo importers can and do use other ports such as Houston, Galveston, and Corpus Christi to move wind energy product and dimensional cargo to inland wind farms and major project construction sites. As a result, jobs with these shippers and consignees cannot be counted as dependent upon the marine terminals located along the Port District, but are instead classified as related and the terminals support these related impacts, not generate the related impacts.

These jobs are estimated based on the value per ton of the commodities shipped and received only via the Port District and the associated jobs to value of output ratios for the respective producing and consuming industries located in the state and national economies. The value per ton of each of the key commodities moving via the Port District was developed from the U.S. Census Bureau, USA Trade On-Line. The average value per ton for each commodity moving over marine terminals was then multiplied by the respective tonnage moved in 2024. Ratios of jobs to value of output for the corresponding consuming and producing industries were developed by Martin Associates from the U.S. Bureau of Economic Analysis, Regional Input-Output Modeling System for the U.S. economy and the state of Louisiana. These jobs to value coefficients include the national and in-state spin-off impacts that would occur in order to produce the export commodity or use the import commodity in production. The percentages of each commodity that is produced or consumed in the state of Louisiana and all other states throughout the U.S. were next developed from the interviews with manufacturers and

the S&P Transearch data base, which provided detailed origin and destination volume flows by water, truck, and rail for each of the marine cargo commodities shipped and received via the terminals within the Port District. The ratios of jobs to value of export or import cargo at each geographic level of detail were then combined with the value of the respective commodities moving via the marine terminals to estimate related jobs and the spin-off jobs by each state in the U.S. and the state of Louisiana. Similarly, the respective income and output multipliers were used to estimate the related personal income impact as well as the total value of economic output and taxes generated by the cargo activity shipped and received at the marine terminals by geographic region. It is to be emphasized that care was taken to control for double counting of the direct, induced, and indirect impacts.

4. COMMODITIES INCLUDED IN THE ANALYSIS

A major use of an economic impact analysis is to provide a tool for port development planning. As a port grows, available land and other resources for port facilities become scarce and decisions must be made as to how to develop the land and utilize the resources in the most efficient manner. Various types of facility configurations are associated with different commodities. For example, certain types of dry bulk cargo require covered storage and special dust removing equipment, while project cargo requires open storage; and liquid bulk requires tank storage.

An understanding of the commodity's relative economic value in terms of employment and income to the local community, the cost of providing the facilities and the relative demand for the different commodities is essential in making future port development plans. Because of this need for understanding relative commodity impacts,

economic impacts are estimated for the following commodities or cargo handling types moving over the terminals within the tri-parish New Orleans Port District:

- Containers
- Iron and steel products
- Aluminum
- Copper
- Miscellaneous Metals
- Forest products
- Project cargo (wind energy pieces, over dimensional cargoes)
- Grain
- Fertilizer
- Break bulk rubber
- Dry bulk including ores and aggregates
- Liquid bulk including petroleum and petroleum products, chemical products
- Miscellaneous break bulk/general cargo

It should be emphasized that commodity-specific impacts are not estimated for each of the economic sectors described in the last section. Specific impacts by commodity could not be allocated to individual commodities with any degree of accuracy for the marine construction and government sectors and commercial real estate tenants.



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