# THE 2023 LOCAL AND REGIONAL ECONOMIC IMPACTS OF PORT*MIAMI*


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# I. INTRODUCTION AND SUMMARY

Handling 9.7 million tons of cargo and 7.5 million cruise passengers in calendar year 2023, Port*Miami* is a leading cargo and cruise port located in Miami, Florida. Port*Miami* operates as a landlord port and maintains lease agreements with its cargo terminal operators including Seaboard Marine, POMTOC, and South Florida Container Terminal. Port*Miami* is considered the closest U.S. port to Latin America and the Caribbean which also serve as its largest markets followed by Asia, Europe and the Mediterranean.

Port*Miami* serves as global headquarters for Carnival Cruise Lines, Royal Caribbean Cruises, Norwegian Cruise Lines, MSC Cruises and Virgin Cruises. In 2023, the cruise services that called Port*Miami*'s nine cruise terminals, carried 7.5 million people to and from popular cruising destinations such as the Bahamas, Caribbean, and Mexico. Over the past 3 years, Port*Miami* opened 3 new cruise terminals – Norwegian's Terminal B "Pearl of Miami", Carnival's Terminal F and Virgin's Terminal V "Palm Grove". Future development includes the current construction of MSC's Terminal AA/AAA, which is projected to open in 2025, as well as the recently approved Royal Caribbean's Terminal G, which is scheduled to open in late 2027.

Martin Associates was retained by Port*Miami* to measure the local and regional economic impacts generated by maritime activity at the marine cargo and cruise terminals at Port*Miami*. Economic impacts generated at the cargo facilities include the impacts generated by both cargo activity and cruise activity for the calendar year 2023. The study employs methodology and definitions that have been used by Martin Associates to measure the economic impacts of seaport activity at more than 800 ports in the United States and Canada, as well as at the leading airports in the United States. It is to be emphasized that only measurable impacts are included in this study. To ensure defensibility, the Martin Associates' approach to the economic impact analysis is based on data developed through an extensive interview and telephone survey program of the Port's tenants and the firm's providing cargo and cruise services at Port*Miami*.

As part of the 2023 economic impact study, a survey of 1,100 cruise passengers and 220 cruise vessel crew was conducted to develop passenger spending profiles pre-and post-cruise as well as the spending characteristics of the vessel crew during each port call at Port*Miami*. Specific re-spending models have been developed for the Miami-Dade County area to reflect the unique economic and consumer profiles of the regional economy. The resulting impacts reflect the uniqueness of the individual Port operations, as well as the surrounding regional economy, and are based on detailed surveys of the Port's service providers to both cargo and cruise activity.

This study uses the same methodology that was used by Martin Associates to measure the economic impacts of the Port in 2012 and 2016, so direct comparisons can be made with the previous studies.

## 1. IMPACT DEFINITIONS

The impacts are measured separately for Port*Miami*'s cargo and cruise activity.

The impacts are measured in terms of:

- Jobs (direct, induced, indirect and related shipper/consignee (related users));
- Personal income;
- Business revenue; and
- State and local taxes.

Each impact measurement is described below:

- **Direct, Induced and Indirect jobs -** ***Direct jobs*** are those that would not exist if activity at the Port's cargo and cruise facilities were to cease. Direct jobs created by marine cargo activity at the Port's terminals are those jobs with the firms directly providing cargo handling and vessel services, including trucking companies, terminal operators and stevedores, members of the International Longshoremen's Association (ILA), stevedores and customshouse brokers, vessel agents, pilots and tug assist companies. Direct employees created by the cruise operations include the jobs with the firms providing the direct vessel services – chandlers, pilots, longshoremen, line handlers, local advertising firms, caterers, liquor wholesalers, linen companies, security firms, waste disposal firms, parking, local transportation -- as well as the firms providing services to the passengers on the vessels -- hotels, taxi cabs, restaurants and tour packages. Also included are impacts generated at the regional airports due to the cruise passengers arriving via air.

  - ***Induced jobs*** are jobs created in the Miami-Dade County area by the purchases of goods and services by those *individuals* directly employed by each of the Port's lines of business. These jobs are based on the local purchase patterns of Miami-Dade County area residents. The induced jobs are jobs with grocery stores, restaurants, health care providers, retail stores, local housing/construction industry, and transportation services, as well as with wholesalers providing the goods to the retailers.

  - ***Indirect jobs*** are created throughout the Miami-Dade County area as the result of purchases for goods and services by the *firms* directly impacted by Port*Miami* activity, including the tenants, terminal operators and the firms' providing services to cargo and cruise passenger operations. The indirect jobs are measured based on actual local purchase patterns of the directly dependent firms, and occur with such industries as utilities, office supplies, contract service providers, maintenance and repair, and construction.

- ***Related shipper/consignee (related user) jobs*** are jobs with shippers and consignees (exporters and importers) using the marine terminals for shipment and receipt of cargo. These related user jobs measure the impact of the port at a given point of time as these importers and exporters can and do you use other ports for export and import. Only the impact of the level of activity through Port*Miami* on the employment, income and revenue of the importers and exporters is measured, and should the Port not be available for export or import, these importers/exporters would divert their cargo through other ports, albeit at an increase in logistics costs. To this end, the related user impacts are used to measure the current sphere of influence of the Port at a given point in time, and are not "generated" by the Port in the same sense as the direct, induced and indirect impacts.

- **Personal income impact** consists of wages and salaries received by those directly employed by Port activity, and includes a re-spending impact which measures the personal consumption activity in the Miami-Dade County Area of those directly employed as the result of Port*Miami* cargo and cruise activity. Indirect personal income measures the wages and salaries received by those indirectly employed.

- **Business revenue** consists of total business receipts by firms providing services in support of the marine cargo and cruise activity. **Local purchases for goods and services** made by the directly impacted firms are also measured. These local purchases by the dependent firms create the indirect impacts.

- **State and local taxes** include taxes paid by individuals as well as firms dependent upon Port*Miami* cargo and cruise activity.

## 2. METHODOLOGY

The impacts of Port*Miami* were estimated based on telephone and personal interviews with approximately 500 firms in the Miami-Dade County Area. This represents the universe of the marine cargo, and cruise related businesses in the Miami-Dade County Area[1]. The direct impacts are measured at the firm level of detail, and aggregated to develop the impacts for each of the Port's lines of business (cargo and cruise). Each firm surveyed provided Martin Associates with detailed employment levels (both full time and part time), annual payroll, local purchases and annual revenue. To develop an accurate profile of the expenditure patterns of cruise passengers, Martin Associates conducted surveys of 1,100 cruise passengers and 220 crew. The surveys were designed to reflect the composition of the cruise services calling the Port in terms of length of cruises as well as size of vessel. The surveys were conducted between December 8th, 2023 and December 13th, 2023.

[1]This current study includes a more rigorous analysis of the freight forwarding and consolidation industry supporting the cargo activity at Port*Miami*, and further includes the dependent cruise lines' headquarters impacts associated with cruise activity at Port*Miami*.

The induced impacts are based on the current expenditure profile of residents in the Miami-Dade County/Miami Area, as estimated by the U.S. Bureau of Labor Statistics, "Consumer Expenditure Survey". This survey indicates the distribution of consumer expenditures over key consumption categories for Miami-Dade County residents. The consumption categories are:

- Housing;
- Food at Restaurants;
- Food at Home;
- Entertainment;
- Health Care;
- Home Furnishings; and
- Transportation Equipment and Services.

The estimated consumption expenditure generated because of the re-spending impact, is distributed across these consumption categories. Associated with each consumption category is the relevant retail and wholesale industry. Jobs-to-sales ratios in each industry are then computed for Miami-Dade County, and induced jobs are estimated for the relevant consumption categories. It is to be emphasized that induced jobs are only estimated at the retail and wholesale level, since these jobs are most likely generated in the Miami-Dade County region. Further levels of induced jobs are not estimated since it is not possible to defensibly identify geographically where the subsequent rounds of purchasing occur.

The “Consumer Expenditure Survey” does not include information to estimate the job impact with supporting business services, legal, social services, state and local governments and educational services. To estimate this induced impact, a ratio of state of Florida employment in these key service industries to total state of Florida employment is developed. This ratio is then used with the direct and induced consumption jobs to estimate induced jobs with business/financial services, legal, educational, governmental and other social services.

The indirect impacts are estimated based on the local purchases by the directly dependent firms, combined with indirect job, income and revenue coefficients for the supplying industries in the state of Florida as developed for Martin Associates by the U.S. Bureau of Economic Analysis, Regional Input/Output Modeling System.

## 3. ECONOMIC IMPACT MODELS

The impacts are measured for calendar year 2023. New cargo and cruise impact models have been developed as part of this study. The models provide a framework to test the sensitivity of the impacts to changes in economic conditions and facility utilization. It is to be emphasized that this study is designed to provide a framework which Port*Miami* can use in formulating and guiding the future development of Port facilities, as well as to evaluate the impacts of changing levels of services, passenger levels and cargo throughput.

### 3.1. Marine Cargo Sensitivity

The cargo impact model is designed to test the sensitivity of impacts to changes in such factors as marine tonnage levels, seaport productivity and work rules, new marine facilities development, inland distribution patterns of marine cargo, number of vessel calls and the introduction of new ocean carrier service. The cargo impact model can also be used to assess the impact of developing a parcel of land as a marine terminal versus other non-cargo land uses. The marine cargo impact model can be used to assess the economic benefits of increased maritime activity due to infrastructure development and the opportunity cost of not undertaking specific maritime investments such as dredging, new terminal development, and capital investments in equipment.

### 3.2. Cruise Activity Sensitivity

The cruise service impact model provides a tool by which the Port can evaluate changes in the types of cruises being offered, the size of vessels deployed, the number of passengers per cruise, the share of passengers staying overnight in Miami-Dade County area hotels prior to or after the cruise, and the number of multi-day cruises with varied itineraries. The cruise model can also be used to quantify the potential impact of new services, by size of vessel and type of cruise. Finally, the cruise impact model along with the marine cargo model can be used to evaluate the economic impact of a marine terminal for use as a cruise terminal versus a cargo terminal.

## 4. SUMMARY OF RESULTS

Exhibit I-1 summarizes the results of the economic impact analysis of Port*Miami*.

Exhibit I-1
Economic Impact of Port*Miami* Cargo and Cruise Activity, Calendar Year 2023

| | CARGO | CRUISE | TOTAL |
|---|---|---|---|
| JOBS | | | |
| DIRECT | 7,734 | 21,689 | 29,423 |
| INDUCED | 7,253 | 13,651 | 20,904 |
| INDIRECT | 3,198 | 9,969 | 13,167 |
| USER JOBS | 276,584 | NA | 276,584 |
| **TOTAL JOBS** | **294,770** | **45,309** | **340,078** |
| | | | |
| PERSONAL INCOME (1,000) | | | |
| DIRECT | $573,901 | $1,000,924 | $1,574,825 |
| RE-SPENDING/CONSUMPTION | $1,381,896 | $2,080,388 | $3,462,284 |
| INDIRECT | $157,253 | $344,512 | $501,766 |
| USER INCOME | $12,446,298 | NA | $12,446,298 |
| **TOTAL INCOME AND CONSUMPTION (1,000)** | **$14,559,349** | **$3,425,824** | **$17,985,173** |
| | | | |
| VALUE OF ECONOMIC ACTIVITY (1,000) | | | |
| BUSINESS SERVICES REVENUE | $1,819,588 | $7,971,622 | $9,791,210 |
| RE-SPENDING/CONSUMPTION | $1,381,896 | $2,080,388 | $3,462,284 |
| USER OUTPUT | $48,162,297 | NA | $48,162,297 |
| **TOTAL VALUE OF ECONOMIC ACTIVITY (1,000)** | **$51,363,782** | **$10,052,009** | **$61,415,791** |
| | | | |
| **LOCAL PURCHASES (1,000)** | **$445,328** | **$482,877** | **$928,206** |
| | | | |
| STATE & LOCAL TAXES (1,000) | | | |
| DIRECT, INDUCED AND INDIRECT | $208,077 | $376,905 | $584,982 |
| USER TAXES | $1,637,506 | NA | $1,637,506 |
| **TOTAL STATE AND LOCAL TAXES (1,000)** | **$1,845,583** | **$376,905** | **$2,222,488** |

*Totals in exhibits may not add due to rounding

In calendar year 2023, cargo and cruise activity at Port*Miami* supported 340,078 jobs in the state of Florida. Of these jobs, 29,423 jobs were directly created, while 20,904 jobs were induced jobs throughout the state of Florida to support the purchase of goods and services by the 29,423 directly dependent employees. The 13,167 indirect jobs were generated in the local economy because of the $928.2 million of regional purchases made by companies directly dependent on the Port. The cargo moving via Port*Miami* supported 276,584 jobs throughout the state of Florida with importers and exporters located in the state. These jobs are classified as related to Port*Miami,* and are created because of the demand for the product, not the use of the Port. Should Port*Miami* not be available for use by these importers and exporters, other ports would be used and in the short term the related jobs would not be impacted. In contrast the direct, induced and indirect jobs would be dislocated should the cargo not move via Port*Miami*.

The 29,423 direct jobs received $1.6 billion of direct wage and salary income, for average earnings of $53,524 per direct employee. As the result of local purchases with this $1.6 million of direct wages and salaries, an additional $3.5 billion of income and local consumption expenditures were created in the State. It is this re-spending impact that supported the 20,904 induced jobs[2]. The indirect jobs holders received $501.8 million. In total, nearly $18.0 billion of personal income was created as the result of Port*Miami* operations, including the nearly $12.5 billion received by those employed with the users of the Port.

***In calendar year 2023, marine cargo and cruise activity at PortMiami a total of $61.4 billion of total economic activity in the state of Florida. This represents 3.9 percent of the $1.6 trillion state of Florida GDP in 2023, 4th Quarter.***

Of the $61.5 billion, $9.8 billion is the direct business revenue received by the firms directly dependent upon the port and providing services to the cargo handled at the marine terminals and cruise vessels and passengers at Port*Miami*. An additional $48.2 billion represents the value of the output to the state of Florida that is created due to the cargo moving via Port*Miami* 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 majority of these user impacts are associated with containerized cargo. In addition, $3.5 billion of the re-spending of personal income and local consumption purchases are supported in the local and state economy. These components are additive and represent independent monetary impacts supported by the cargo and cruise vessel activity. Other dollar value impact measures are not included in the value of total economic activity to the state since they are interdependent. For example, direct income is not included since it is part of the direct business revenue impact and similarly, local purchases by the firms are from the direct business revenue generated by port activity, which are also used to pay indirect income. Finally, taxes are paid by the individuals associated with the direct, induced, indirect and related income as well as from the direct business revenue and the related output.

As a result of the cargo and cruise activity at Port*Miami*, a total of $2.2 billion of state and local tax revenue was generated, of which nearly $1.6 billion is attributed to the related users of the Port.

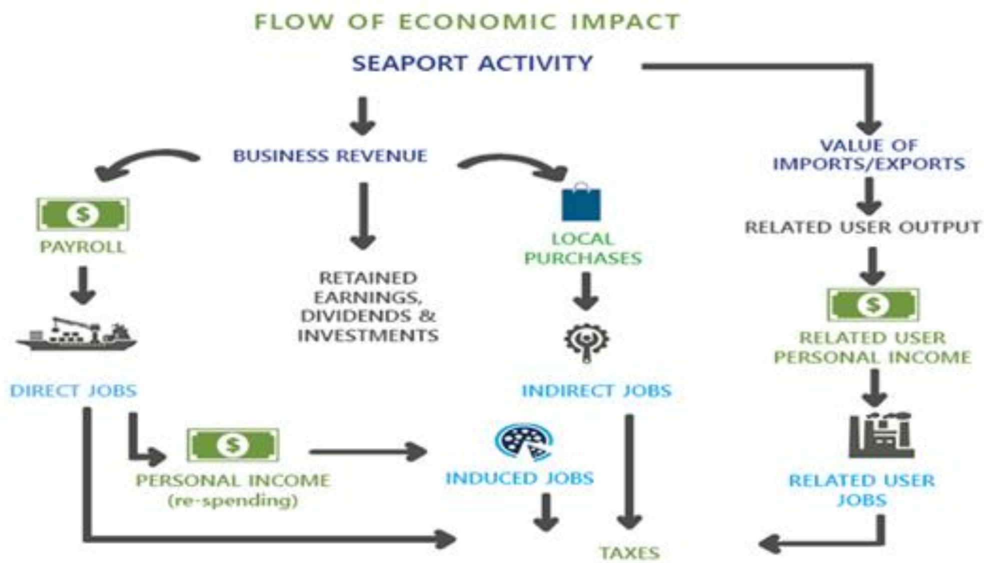
Since the 2016 Martin Associates' economic impact study of Port*Miami*, the overall economic impact of the Port has increased. The total jobs related to the cargo and cruise activity at Port*Miami* increased by approximately 15,727 jobs and the value of the economic activity at the Port to the state increased by $20.0 billion, from $41.4 billion in 2016 to $61.4 billion in calendar year 2023. This growth in economic impact is driven by the increase of nearly 2.1 million cruise passengers. Cargo volume remained nearly constant at 9.7 million tons, an increase of about 369,000 tons of containerized cargo since 2016.

[2] The induced income impact also includes local consumption expenditures as well as induced wages, and should not be divided by induced jobs to estimate the average salary per induced job. This would overstate the average salary.

## II. ECONOMIC IMPACTS OF MARINE CARGO ACTIVITY

Waterborne cargo 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 II-1 shows how activity at marine terminals generates 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 II-1 shows graphically how activity at Port*Miami*'s marine terminals generates the four impacts.

Exhibit II-1
Flow of Economic Impacts Generated by Marine Activity




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 stock-holders, 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 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 state and local taxes, in lease payments to Port*Miami* by tenants, and wharfage and dockage fees paid to the Port.

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

- ***Direct employment impact*** -- jobs directly generated by seaport activity. Direct jobs generated by marine cargo include jobs with trucking companies and railroads moving cargo between inland origins and destinations and the marine terminals, longshoremen and dockworkers, steamship agents, freight forwarders, 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 at Port*Miami* marine terminals 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 region, since they are estimated based on local and regional purchases.

- ***Indirect Jobs*** -- are 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 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 shipper/consignee (related user) jobs*** -- jobs with shippers and consignees (exporters and importers) using the marine terminals for shipment and receipt of cargo. These related user jobs measure the impact of the port at a given point of time as these importers and exporters can and do use other ports for export and import. Only the impact of the level of activity through Port*Miami* on the employment, income and revenue of the importers and exporters is measured, and should the Port not be available for export or import, these importers/exporters would divert their cargo through other ports, albeit at an increase in logistics costs. To this end, the related user impacts are used to measure the current sphere of influence of the Port at a given point in time, and are not "generated" by the Port in the same sense as the direct, induced and indirect impacts.

The personal earnings 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 throughout the region is estimated using a regional personal earnings multiplier, which reflects the percentage of purchases by individuals that are made within the Miami-Dade County region. 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). The direct earnings are a measure of the local impact since they are received by those directly employed by seaport activity.

The business revenue impact consists of total business receipts by firms providing services in support of the marine cargo and cruise activity. Local purchases for goods and services made by the directly impacted firms are also measured. These local purchases by the dependent firms create the indirect impacts.

Tax impacts are payments to the state and local governments by firms and by individuals whose jobs are directly dependent upon and supported (induced jobs) by activity at the marine terminals.

## 1. IMPACT STRUCTURE

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

- Surface Transportation Sector;
- Maritime Services Sector;
- Port*Miami*; and
- Related Shippers/Consignees.

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.

### 1.1. The Surface Transportation Sector

The surface transportation sector consists of both the trucking and railroad industries. The trucking firms and railroads are responsible for moving the various cargoes between the marine terminals and the inland origins and destinations.

### 1.2. 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/customshouse broker is the major participant in this category. The freight forwarder/customshouse 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 customshouse brokers is most prevalent for containerized and general cargo commodities. In addition, freight forwarders often perform cargo consolidation and deconsolidation activity, particularly for cargo moving on the U.S.-Caribbean/Central American trade lanes

- Vessel Operations

  This category consists of several participants. The steamship agents provide many 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;
  - Pilots - assist in navigating the vessels to and from Port*Miami*'s marine terminals;
  - Bunkering firms - provide fuel to the vessels;
  - Marine surveyors - inspect the vessels and the cargo; and
  - 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;

- Stevedoring firms - manage the longshoremen and cargo-handling activities. Stevedoring services at Port*Miami* are provided by private stevedoring companies;

- Marine Terminal operators - are often stevedoring firms who operate the maritime terminals where cargo is loaded and off-loaded. Included in this category are terminal operators such as POMTOC; and

- Warehouse operators - store cargo after discharge or prior to loading and consolidate cargo units into shipment lots. In many cases the freight forwarders and consolidators are also involved in warehousing activity.

- 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. Customs and Border Protection (CBP), Bureau of Immigration, U.S. Department of Labor, U.S. Department of Agriculture, U.S. Coast Guard, and the U.S. Army Corps of Engineers are involved. These services are provided by the government offices located in the Miami-Dade County area.

### 1.3. Port*Miami*

Port*Miami*, a division of Miami-Dade County, includes those individuals employed whose purpose is to oversee port activity at the Port's marine and cruise terminals.

### 1.4. Related Shipper/Consignees of Port*Miami*

Related jobs consist of jobs with related shippers/consignees shipping and receiving cargo through the public and private marine terminals at Port*Miami*. The majority of these users are attributed to containerized cargo moving through the Port. Only the user industry activity that can be linked to the movement of cargo (either raw materials or finished products) through Port*Miami* is considered in this related user impact.

## 2. 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 and activities. For example, dry containers require open storage area and container yard equipment, including top pick equipment, rubber-tired gantry cranes and yard hostlers. Refrigerated containerized cargo requires refrigeration (reefer) plugs on the yard as well as fumigation and temperature-controlled warehouse storage capacity. In contrast, cruise operations require on-dock terminal development, parking, and secure passenger and luggage area, as well as areas for crew, bus and cab access, and finally berth space that can and does compete with cargo needs.

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 both dry and refrigerated/perishable commodities.

## 3. MARITIME CARGO EMPLOYMENT IMPACTS

The employment generated by maritime cargo activity at Port*Miami* is estimated.

- First, the total employment that is in some way related to the activities at the public marine terminals is estimated;
- Second, the subset of total employment that is judged to be <u>totally</u> dependent (i.e., direct jobs) on port activity is analyzed as follows:
  - The direct job impact is estimated by detailed job category, i.e., trucking, ILA/dockworkers, freight forwarders/customshouse brokers/warehouse and consolidators, steamship agents, chandlers, surveyors, etc;
  - The direct job impact is estimated based on the residency of those directly employed;
- Induced and indirect jobs are estimated;

It is estimated that in calendar year 2023, 294,770 jobs are supported by cargo activity at the marine terminals at Port*Miami*. Of the 294,770 jobs:

- 7,734 jobs are directly generated by activities at the marine terminals and if such activities should cease, these jobs would be discontinued over the short term.
- 7,253 jobs (induced jobs) are supported by the local purchases of the 7,734 individuals directly generated by port activity at the marine terminals. An additional 3,198 indirect jobs were supported by $445.3 million of purchases in the regional and state economy by firms providing direct cargo handling, cruise passenger and vessel services.

- 276,584 jobs are related to cargo exported and imported via the public and private marine terminals. These jobs are with related shippers/consignees of Port*Miami*, and are concentrated with jobs related to the movement of containerized cargo through Port*Miami*.

### 3.1. Direct Marine Cargo Job Impacts

In 2023, about 9.7 million tons of waterborne cargo moved via the marine terminals at Port*Miami*. As a result of this activity, 7,734 full-time jobs were directly created[3]. In this section the jobs are analyzed in terms of:

- Distribution by job category; and
- Distribution by county and state of residency.

These distributions are developed in more detail below.

#### 3.1.1. Direct Job Impacts by Category

Exhibit II-2 presents the distribution of the 7,734 direct jobs by type of job. The Exhibit indicates that the majority of direct jobs are with trucking jobs moving cargo to and from the terminals, followed by maritime services providers including freight forwarders, surveyors, chandlers, and consolidators, followed by

Exhibit II-2
Cargo Employment Impacts by Sector and Job Category, Calendar Year 2023

| | | DIRECT JOBS |
|---|---|---|
| **SURFACE TRANSPORTATION** | | |
| | **RAIL** | 214 |
| | **TRUCK** | 2,420 |
| **MARITIME SERVICES** | | |
| | **TERMINAL EMPLOYEES** | 312 |
| | **ILA/DOCKWORKERS** | 574 |
| | **TOWING/BUNKERING** | 80 |
| | **PILOTS** | 29 |
| | **AGENTS** | 65 |
| | **MARITIME SERVICES/FREIGHT FORWARDERS/CONSOLIDATORS** | 2,330 |
| | **WAREHOUSING/CONTAINER REPAIR** | 706 |
| | **GOVERNMENT/PORTMIAMI ADMINISTRATION** | 559 |
| | **MARINE CONSTRUCTION/DREDGING** | 446 |
| **TOTAL** | | **7,734** |

Totals may not add due to adding

[3]Jobs are measured in terms of full-time worker equivalents. If a worker is employed only 50 percent of the time by activity at Port*Miami* marine cargo terminals, then this worker is counted as .5 jobs.

### 3.1.2. Distribution of Direct Cargo Jobs by Place of Residency

To underscore the geographic scope of the impacts generated by the marine terminals, Exhibit II-3 shows the distribution of the residency of the direct jobs by county. Most the direct jobs, 70.38 percent, are held by residents of Miami-Dade County, followed by residents of Broward County.

Exhibit II-3
Distribution of Direct Jobs by Jurisdiction, Calendar Year 2023

| County | SHARE | DIRECT JOBS |
|---|---|---|
| **Miami-Dade County** | 70.38% | 5,443 |
| **Broward** | 25.59% | 1,979 |
| **Palm BeachCounty** | 0.66% | 51 |
| **Other FL** | 2.50% | 194 |
| **Other US** | 0.87% | 67 |
| | | |
| **TOTAL** | **100.00%** | **7,734** |

### 3.2. Induced Jobs

The 7,734 directly employed individuals due to activity at the public and private marine terminals received wages and salaries, a part of which was used to purchase local goods and services such as food, housing, clothing, transportation services, etc. Because of these local purchases, 7,253 jobs in the regional economy were supported. The majority of the induced jobs are with local and regional private sector social services, business services, educational services and state and local government agencies, followed by jobs in the food and restaurant sector, and then jobs in the construction and home furnishings sector.

### 3.3. Indirect Jobs

In addition to the induced jobs generated by the purchases by directly employed individuals, the firms providing the direct services and employing the 7,734 direct jobs make local purchases for goods and services. These local purchases by the firms' dependent upon the public and private marine facilities generate additional local jobs -- indirect jobs. Based on interviews with the nearly 500 firms, these firms made $445.3 million of local and in-state purchases in 2023. These direct local purchases created an additional 3,198 indirect jobs in the local economy.

### 3.4. Related Shipper/Consignee Jobs

It is estimated that about 276,584 jobs are supported in Florida with shippers/consignees that use Port*Miami*. It is important to emphasize that the user jobs are supported by the cargo moving only via Port*Miami* in 2023, and do not include jobs supported by cargo moving via other ports that are consumed or produced by in-state shippers/consignees and manufacturers.

To estimate jobs with users of Port*Miami*, the following methodology was used. First, the key cargoes handled at Port*Miami* moving via dry and refrigerated containers were identified from USA TradeOn-Line. The majority of imported containerized cargo consists of consumer products such as apparel, alcoholic beverages, ceramic tiles and stone and fresh fruit and vegetables. For export containers, key commodities include scrap metal and scrap wastepaper/paperboard, fresh fruits and vegetables, and new and used apparel, garments and yarn, and beverages. The average value per ton of each commodity was also developed from USA TradeOn-Line. An average value per ton of containerized cargo imports and exports handled at the Port was then estimated.

Export producing industries were then identified for the key commodities associated with the export containers. The imported containers were associated with the retail sector. Using the Bureau of Economic Analysis, RIMS II model for the state of Florida, jobs to value of output ratios were developed for the relevant export producing and import consuming sectors. For imported goods associated with retail operations, the average retail margins were applied to the value of the imported containerized cargo.

The values of import and export containers moving via Port*Miami* were next estimated by multiplying the value per container by the number of full containers moved via Port*Miami*. The total values of each type of container move via the Port's marine facilities were then adjusted to reflect the percentage of containers originating or destined for local port users, as determined from the terminal operators and steamship lines.

About 90 percent of the containerized cargo exported via the Port is estimated to originate in Florida, the balance moving from other states, particularly used clothing and yarn from the Carolinas. About 95 percent of the imports were consumed in Florida. Combining this local share with the value of dry export and import containers, and the relevant jobs-to-value of shipment ratios, it is estimated that about 276,584 jobs are with in-state users of Port*Miami* for the shipment and receipt of containerized cargo. These firms are only users of the Port and are not classified as dependent upon the Port, since they typically use multiple ports for marine transportation. Also, included in this related job estimate are the jobs required to support the production and packaging of the exports as well as the distribution and use of the imports.

The total value of the economic impact created by the cargo moving via the Port is estimated at $48.2 billion, and includes the value generated at each stage of the production of the export commodities moving via the Port, as well as the value created at each stage of the retail and distribution stages of the imported cargo. The income associated with the 276,584 related users in the State is estimated at $12.5 billion, and the state and local taxes associated with the related jobs and income is $1.6 billion.

It is to be emphasized that these related user jobs measure the impact of Port*Miami* at a given point of time as these importers and exporters can and do you use other ports for export and import. Only the impact of the level of activity through Port*Miami* on the employment, income and revenue of the importers and exporters is measured, and should the Port not be available for export or import, these importers/exporters would divert their cargo through other ports, albeit at an increase in logistics costs. To this end, the related user impacts are used to measure the current sphere of influence of the Port at a given point in time, and are not "generated" by the Port in the same sense as the direct, induced and indirect impacts.

Finally, the direct, induced and indirect port sector job, income, and tax impacts associated with the cargoes for which related shipper/consignee jobs were estimated were subtracted from the total related impacts. This avoids the problem of double counting since the related shipper/consignee impacts include impacts at each 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 the Port as well as the induced and indirect impacts associated with the direct port activity.

## 4. ECONOMIC OUTPUT DIRECT BUSINESS REVENUE, PERSONAL INCOME AND TAX IMPACTS

The 9.7 million tons of cargo handled at the marine terminals included in the study 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 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. Port*Miami* receives revenue from terminal leases and port charges such as wharfage and dockage assessed on cargo and vessels. In addition, revenue is received by shippers/consignees from the sales of cargo shipped or received via the marine cargo terminals and from the sales of products made with raw materials received through the terminals.

The value of output created by in-state related shippers/consignees of the Port is attributed to the state of Florida, and the local purchases by these related shippers/consignees from other firms within the state are also included in this related user output measure, as defined by the in-state output coefficients (for the user industries) developed from the U.S. Bureau of Economic Analysis, Regional Input-Output Modeling System (RIMS II).

### 4.1. Value of Economic Activity

In 2023, $51.4 billion of economic activity in the State was related to cargo activity at the Port. Of the $51.4 billion, $1.8 billion is the direct business revenue received by the firms directly dependent upon the Port and providing maritime services and inland transportation services to the cargo handled at the marine terminals and the cargo vessels calling the Port, while $1.4 billion is the re-spending and local consumption impact. The remaining $48.2 billion represents the value of the output to the state of Florida that is related to the cargo moving via Port*Miami*. 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 Port*Miami* and are consumed by industries within the state of Florida. The balance of the discussion focuses on the $1.8 billion of direct business revenue generated from the provision of services to the cargo and vessels handled at Port*Miami*.

### 4.1.1 Direct Business Revenue Impact by Sector

In calendar year 2023, the cargo activity at the Port*Miami* generated $1.8 billion of direct business revenue to the firms providing cargo handling and cargo vessel services. Exhibit II-4 presents the direct business revenue generated by cargo activity in 2023. This revenue includes the revenue received by firms providing services to the commodity and vessel activity at the cargo terminals, and includes revenue received by trucking firms, stevedores, Port*Miami*, chandlers, forwarders, consolidators, agents, pilots, towing companies, etc. Not included is the revenue from the use/value of the cargo moving via the marine terminals, as this is included in the related shipper/consignee output.

The firms involved in trucking, received the largest revenue impact, followed by freight forwarding, consolidation and maritime services, trucking, warehousing/container repair.

Exhibit II-4
Direct Revenue Generated by Port Cargo Activity, Calendar Year 2023

| | | REVENUE (1,000) |
|---|---|---|
| **SURFACE TRANSPORTATION** | | |
| | **RAIL** | $63,235 |
| | **TRUCK** | $546,392 |
| **MARITIME SERVICES** | | |
| | **TERMINAL EMPLOYEES** | $135,883 |
| | **TOWING/BUNKERING** | $154,320 |
| | **PILOTS** | $4,197 |
| | **AGENTS** | $3,585 |
| | **MARITIME SERVICES/FREIGHT FORWARDERS/CONSOLIDATORS** | $512,498 |
| | **WAREHOUSING/CONTAINER REPAIR** | $225,876 |
| | **GOVERNMENT/PORT ADMINISTRATION** | $84,402 |
| | **MARINE CONSTRUCTION/DREDGING** | $89,200 |
| **TOTAL** | | **$1,819,588** |

## 5. PERSONAL EARNINGS IMPACT

The income impact is estimated by multiplying the average annual earnings (excluding benefits) of each port participant, i.e., truckers, 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 $573.9 million in personal wage and salary earnings. It is important to emphasize that the average annual earnings of a cargo-dependent job is about $74,201. These relatively high paying jobs will have a much greater economic impact in the local economy through stimulating induced jobs than will a job paying lower wages.

The impact of the re-spending of this direct income for local purchases is estimated using a personal earnings multiplier. The personal earnings multiplier is based on data supplied by the Bureau of Economic Analysis (BEA), Regional Input-Output Modeling System (RIMS II). The BEA estimates that for every $1.00 earned by direct employees generated by activity at the marine terminals, an additional $2.41 of personal income and consumption expenditures would be created as a result of re-spending the income for purchases of goods and services produced locally. Hence, a personal earnings multiplier of 3.41 was used to estimate the direct income and re-spending/consumption impact of nearly $2.0 billion, inclusive of the re-spending effect. This additional re-spending of the direct income generates the 7,253 induced job impact.

The 3,198 indirect job holders earned $157.3 million in indirect wages and salaries. The 276,584 related shipper/consignees of the cargo moving via the Port received nearly $12.5 billion of personal income.

Therefore, the total personal income impact, including the direct income, the consumption impact and indirect income created by Port*Miami* marine cargo activity is estimated at nearly $14.6 billion.

## 6. TAX IMPACTS

State and local tax impacts are based on per employee tax burdens which are developed at the county, local and state jurisdictional levels. These tax-per-employee burdens are essentially tax indices that are used to allocate total taxes at each level of government to economic activity generated by the marine terminals. To estimate the per employee tax indices, total taxes received at each governmental level in Florida was developed from the Tax Foundation, which reports total state and local taxes from all sources as a percent of total personal income. In addition, an estimate was developed to measure the corporate tax impact on the net revenue of the businesses supplying services to the cargo and vessels handled at the Florida public ports. The business tax impacts are based on data developed from the U.S. Bureau of Census, State and Local Government Finances by Level of Government.

Cargo activity generated $208.1 million of state, county and local taxes. As a result of the economic activity created by the related shipper/consignees, an additional $1.6 billion of state and local taxes were associated with the importers/exporters using the Port.

# III. ECONOMIC IMPACTS OF CRUISE SERVICE AT PORT*MIAMI*

In calendar year 2023, 1,132 cruise vessel calls were recorded at Port*Miami*, carrying approximately 7.5 million total passengers. It is important to note that these are all cruise calls by homeported vessels in contrast to in-transit calls and do not include one-day cruises. The key difference between an in-transit call and a homeport call is the fact that a vessel home porting will take on passengers and supplies at Port*Miami*, while a vessel making an intermediate in-transit call typically does not take on or discharge passengers. These intermediate in-transit vessels typically do not take on supplies from local chandlers and caterers or use local services such as advertising, maintenance and repair, linen services, etc. Hence, a call by a homeported vessel will generate a greater economic impact than an in-transit call.

To measure the economic impact of the cruise service, Martin Associates developed a cruise impact model. The model can be used to test the sensitivity of the impacts to changes in the percent of passengers flying into Miami versus the percent of passengers driving to the Port, the share of passengers staying in hotels prior to and after the cruise, the local expenditures by passengers while in hotels either before or after the cruise, and the local purchases by the cruise lines for food, liquor, and other supplies and services. The impact of changes in the mix of the size of vessels and the number of cruises by size of vessel and itinerary can also be evaluated using the model. To develop an accurate profile of the expenditure patterns of cruise passengers, Martin Associates conducted surveys of 1,100 cruise passengers and 220 crew. The surveys were designed to reflect the composition of the cruise services calling the Port in terms of length of cruises as well as size of vessel. The surveys were conducted between December 8$^{th}$, 2023 and December 13$^{th}$, 2023.

## 1. ECONOMIC IMPACT STRUCTURE

Cruise service related to the home porting of a vessel contributes to the local and regional economies by providing employment and income to individuals, tax revenues to local and state governments, and revenue to businesses engaged in providing operational services and supplies to the vessels and passengers. The flow of cruise industry-generated economic impacts throughout an economy creates four separate and non-additive types of impacts. These four types of impacts are:

- ***Employment Impact*** – represents the number of full-time equivalent jobs generated by cruise activity at Port*Miami*. This consists of jobs directly generated by the home porting of cruise vessels as well as induced jobs, or jobs created in the Miami-Dade County area due to the purchase of goods and services by those individuals directly dependent upon cruise activity.

- ***Income Impact*** - the level of earnings associated with the jobs created by cruise activity, and adjusted to reflect re-spending throughout the economy.

- ***Revenue Impact*** - the sales generated by firms engaged in supplying services and materials to the vessels while in port, as well as firms in the Miami-Dade County visitor industry that supply services to cruise passengers staying in hotels before and after the cruise. The value of the cruise tickets is not included as a revenue impact.

- ***Tax Impacts*** – includes the state and local tax revenues generated by cruise activity. These are taxes paid by individuals and firms directly dependent upon the cruise activity.

## 2. IMPACT CATEGORIES

The impacts are generated in firms throughout many sectors of the local and regional economy. Separate impacts are estimated for each of the various economic categories supplying goods and services to the cruise ships and passengers.

The typical expenditure profile of a cruise line while in port provides an understanding of the types of firms involved in providing goods and services to the vessel and its passengers. To develop these expenditure profiles, Martin Associates conducted interviews with Carnival Cruise Lines, Royal Caribbean International, Celebrity Cruises, Norwegian Cruise Lines, MSC Cruises and Virgin Cruises currently serving Port*Miami*. The interviews focused on typical expenditure profiles of a vessel while in port, as well as the dependency of Miami based employment with the cruise lines on the cruise activity at Port*Miami*. A discussion of the expenditure profiles follows:

The expenditure categories are:

- Food and Beverage - This category includes wholesale food and liquor distributors. It is to be emphasized that in some cases the non-perishable food brought on board at the beginning of a cruise is not necessarily purchased locally, but instead based on contractual relationships and is trucked in from out of the area. Similarly, in some cases, liquor is purchased from in-bound warehouses, and not from local distributors. Interviews with the cruise operators identified the amount spent locally. In 2023, more than $450 million was spent by the cruise vessels on food and beverages purchases from area vendors. Of that, more than $370 million was spent by the cruise lines on food supplies, the majority of which are domestically supplied.

- Logo Items and Retail Concessions - These items are typically purchased under contract and are trucked into the port of embarkation. The cruise lines spent about $72 million on purchases for concession sales on board.

- Flowers - Local wholesale flower distributors supply flowers for each cruise, and in 2023, the cruise lines calling Port*Miami* made about $5.6 million of purchases for flowers.

- Public Relations and Advertising - Contracts are usually developed with local advertising firms to promote the cruise. This is especially the case for the local cruises providing daily cruise services.

- Parking - Local parking management companies provide parking services for the passengers.

- Taxis/buses - Local taxis and buses provide transportation between the airport and the ship or between the hotel and the ship for air/sea passengers.

- Security - Security services are hired while the ship is in port.

- Linen services - Contracts are developed with local laundries for linen and laundry services. Nearly $20 million of local purchases from linen suppliers were made by the cruise lines in 2023.

- Pilots - Guide the cruise ships into the terminal.

- Tugs - Tug services are required for certain cruise ships to assist in docking and undocking. However, most cruise vessels require minimal, if any, tug assists.

- Stevedoring and Line Handling - Are required in loading and unloading baggage and ship stores and in securing and unsecuring the ship at dock.

- Garbage Disposal - Solid waste and other refuse that cannot be discharged at sea will be disposed by local refuse collectors. In 2023, the cruise lines calling the Port spent about $5 million on such services.

- Bunkers - Fuel will be purchased from local bunkering companies, and it is estimated that more than $750 million was spent in 2023 by the cruise lines calling Port*Miami*.

- Water- Most cruise ships manufacture water at sea, but will still purchase some water locally prior to departure.

**Visitor Industry** – Passengers from areas not within driving distance will likely stay in hotels either before or after the cruise. These individuals will typically purchase incidental retail items before or after the cruise and eat in local hotel restaurants while in the Miami-Dade County area. These air/sea passengers will take Uber/LYFT/cabs/buses from the airport to the hotel or ship, as well as taxis between the hotel and the ship and throughout the city. In addition to passengers impacting the local visitor industry, the ship's crew will also impact the local industry. For example, the crew will likely purchase personal incidentals while in port. Also, a portion of the crew could be rotated on each sailing. The new crew could stay in a local hotel up arrival, while the departing crew could also stay in a hotel prior to leaving the area. To capture these characteristics, the results of the passenger and crew surveys were used to develop passenger profiles for cruises of different voyage lengths – 3-4-day cruise, 5-9-day cruise, and 10-15-day cruises. Key findings of the passenger survey indicated that:

- Approximately 38%-46% of the non-resident cruise passengers will spend a night pre- or post-cruise, staying an average of 1.6 nights (either pre- or post-cruise) in a hotel or paid lodging.
- The average expenditures per day *per passenger* is $126 for the 3-4-day voyages, $118 for the 5-9-day voyages and $102 for the 10-15-day voyages. Paid lodging and food and beverage make up the majority of the expenses while in the Miami area.

In addition, the passengers arriving via the Miami International Airport and the Ft. Lauderdale Airport also generate impacts on site at the airports, including jobs with airlines (ticket agents, baggage, concessions, taxis, security, etc.). To estimate the impact on the Airport, Martin Associates used our economic impact model for the Miami International Airport to develop ratios of airport impacts to passenger levels that were used to convert the number of cruise passengers arriving via air into regional airport impacts due to the Miami cruise operations in 2023[4]. Approximately 80% of the passengers arrive in Miami via air to take a cruise from Port*Miami* and 80% of these fly-in passengers use Miami International Airport.

## 3. IMPACT SUMMARY

During calendar year 2023, 1,132 cruises left the Port carrying 7.5 million total passengers. The economic impact of the cruise vessel calls at Port*Miami* is presented in Exhibit III-1

Exhibit III-1
Economic Impact of Cruise Operations at Port*Miami,* Calendar Year 2023

| | CRUISE |
|---|---|
| JOBS | |
| DIRECT | 21,689 |
| INDUCED | 13,651 |
| INDIRECT | 9,969 |
| **TOTAL JOBS** | **45,309** |
| | |
| PERSONAL INCOME (1,000) | |
| DIRECT | $1,000,924 |
| RE-SPENDING/CONSUMPTION | $2,080,388 |
| INDIRECT | $344,512 |
| **TOTAL INCOME AND CONSUMPTION (1,000)** | **$3,425,824** |
| | |
| VALUE OF ECONOMIC ACTIVITY (1,000) | |
| BUSINESS SERVICES REVENUE | $7,971,622 |
| RE-SPENDING/CONSUMPTION | $2,080,388 |
| **TOTAL VALUE OF ECONOMIC ACTIVITY (1,000)** | **$10,052,009** |
| | |
| **LOCAL PURCHASES (1,000)** | **$482,877** |
| | |
| **TOTAL STATE AND LOCAL TAXES (1,000)** | **$376,905** |

[4] The Economic Impact of the Miami-Dade County Aviation Department, by Martin Associates, 2016.

## 4. JOB IMPACTS

The cruise activity at Port*Miami* created 45,309 total jobs. Of these 45,309 jobs, 21,689 were direct job holders, 13,651 were induced jobs supported by local purchases of the 21,689 directly employed, while another 9,969 indirect jobs were supported in local industries that supply services and goods to the tourism industry catering to the passengers as well as to the chandlers and other firms supplying services and goods to the vessels while in Port.

## 5. PERSONAL INCOME IMPACT

The 21,689 direct job holders received $1.0 billion of direct wages and salaries, for an annual salary of $46,149. As the result of the purchases made locally with this income, (which supported the 13,651 induced jobs, an additional $2.1 billion of local income and consumption expenditures was created throughout the local and state economies. The 9,969 indirectly employed workers were paid $344.5 million, for a total wage and salary income impact of $3.4 billion, including the consumption and respending impact.

## 6. VALUE OF CRUISE BUSINESS ACTIVITY

The total value of economic activity in the state of Florida generated by the calendar year 2023 cruise activity at Port*Miami* is estimated at $10.1 billion. This value of total economic activity consists of the nearly $8.0 billion direct business revenue received by local businesses supplying food, beverages, and marine services to the cruise lines and the services supplied by the regional airports handling those cruise passengers arriving in Miami by air. In addition, the cruise activity generated an additional $2.1 billion of re-spending and consumption activity, which is not part of the direct business revenue. Together, the direct business revenue plus the re-spending/local consumption impact generated a total of $10.1 billion of economic activity in the state of Florida in 2023.

In addition, another $482.9 million of local purchases in the Miami-Dade County area were made by those firms providing direct services to the cruise lines in order to support the services and goods supplied to the cruise lines by these firms. These local purchases supported the 9,969 indirect jobs in the local economy.

## 7. TAX REVENUE

Finally, as the result of cruise activity at Port*Miami* during the cruise season, $376.9 million of state and local tax revenue was collected.

# IV. COMPARISON OF ECONOMIC IMPACTS FROM 2016 TO 2023

Since the 2016 Martin Associates' economic impact study of Port*Miami*, the overall economic impact of the Port has increased. The total jobs related to the cargo and cruise activity at Port*Miami* increased by approximately 15,727 jobs and the total value of the economic activity at the Port increased by $20 billion, from $41.4 billion in 2016 to nearly $61.4 billion in calendar year 2023.[5] This growth in economic impact is driven by the increase of 2.6 million passengers using the Port in 2023, while cargo activity grew by about 20,000 container moves from 584,056 containers in 2016 to 604,431 in 2023. Direct, induced and indirect jobs generated by cargo activity in calendar year 2023 grew by 2,713 jobs since 2016. However, related user jobs supported by the containers moved via Port*Miami* declined despite the growth of 20,000 containers since 2016, reflecting the reduced number of jobs generated by $1 million of output in 2023 compared to 2016 for the state of Florida, in the relevant user industries associated with the commodities handled at the Port[6].

Exhibit IV-1

Change in Economic Impacts from 2016 to 2023 at Port*Miami*

| | CARGO CHANGE | CRUISE CHANGE | TOTAL CHANGE |
|---|---|---|---|
| JOBS | | | |
| DIRECT | 453 | 7,073 | 7,525 |
| INDUCED | 1,816 | 4,961 | 6,777 |
| INDIRECT | 444 | 3,781 | 4,225 |
| USER JOBS | (2,801) | NA | -2,801 |
| **TOTAL JOBS** | **(89)** | **15,815** | **15,727** |
| | | | |
| PERSONAL INCOME (1,000) | | | |
| DIRECT | $220,386 | $460,718 | $681,104 |
| RE-SPENDING/CONSUMPTION | $686,814 | $1,150,385 | $1,837,200 |
| INDIRECT | $49,971 | $134,455 | $184,426 |
| USER INCOME | $2,683,212 | NA | $2,683,212 |
| **TOTAL INCOME AND CONSUMPTION** | **$3,640,382** | **$1,745,558** | **$5,385,941** |
| | | | |
| VALUE OF ECONOMIC ACTIVITY (1,000) | | | |
| BUSINESS SERVICES REVENUE | $502,615 | $3,526,205 | $4,028,820 |
| RE-SPENDING/CONSUMPTION | $686,814 | $1,150,385 | $1,837,200 |
| USER OUTPUT | $14,138,872 | NA | $14,138,872 |
| **TOTAL VALUE OF ECONOMIC ACTIVITY** | **$15,328,302** | **$4,676,591** | **$20,004,892** |
| | | | |
| **LOCAL PURCHASES (1,000)** | **$158,959** | **$167,051** | **$326,010** |
| | | | |
| **TOTAL STATE AND LOCAL TAXES** | **$523,406** | **$194,931** | **$718,337** |

5 A major reason for the increase in the value of economic output is the growth in the value of the cargo user output. Between 2016 and 2023, the value of the containerized cargo increased by nearly 28 per cent, reflecting inflationary pressure. The Consumer Price Index as developed by the U.S. Bureau of Labor Statistics for the Southern Region of the U.S. increased by 27 percent between 2016 and 2023.

6 The U.S. Bureau of Economic Analysis, RIMSII for the state of Florida indicates that the relevant jobs to output coefficients for the related users importing and exporting through Port*Miami* declined by about 20 percent since 2016, reflecting increased productivity and the impacts of COVID on the workforce.

Overall, Port*Miami* is an important economic force in the state of Florida, contributing $61.4 billion of total economic activity and supporting 340,078 jobs in the state of Florida. The $61.4 billion dollar value of economic activity of the Port represents 3.9 percent of the $1.6 trillion state of Florida GDP in 4th Quarter 2023. In order to continue to grow the economic significance of the Port, continued investment in cargo and cruise terminal infrastructure will be required, ensuring that Port*Miami* continues as a world class cruise and cargo port, capable of handling the next generation of cruise and container vessels.