THE ECONOMIC IMPACTS OF PORT OF CORPUS CHRISTI



Report Prepared for

PORT CORPUS CHRISTI®

January 2020 Update

TEXAS A&M UNIVERSITY CORPUS CHRISTI | SOUTH TEXAS ECONOMIC DEVELOPMENT CENTER

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Final Report Version: January 2020

Prepared for:

PORT CORPUS CHRISTI®

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EXECUTIVE SUMMARY

Summary of Regional Economic Impacts

	2015	2018	2019
EMPLOYMENT (Jobs)	**76,377**	**88,447**	**98,793**
Direct	13,770	15,555	17,374
Indirect	16,212	17,147	19,153
Induced	14,456	19,668	21,969
Related Users	31,938	36,078	40,298
PERSONAL INCOME (Millions)	**$4,712**	**$5,572**	**$6,224**
BUSINESS REVENUE (Millions)	**$15,034**	**$16,983**	**$18,969**
STATE AND LOCAL TAXES (Millions)	**$353**	**$399**	**$446**

Economic activity at the Port of Corpus Christi generated the following impacts on the regional economy of Texas in 2019:

A total of **98,793** full-time-equivalent (FTE) job positions in Texas are related in different ways to economic activity within the Port District and cargo shipments through the public and private marine terminals at the Port. This represents a gain of 10,345 jobs, or 12%, from year 2018, due in large part to increases in cargo and oil shipments. Out of the total employment impact, the Port generates 17,374 *direct* jobs (i.e., positions for shipment and production activities within the Port district), 19,153 *indirect* jobs (i.e., positions supported by suppliers of goods and services to facilities in the Port district), and 21,969 *induced* jobs (e.g., positions generated by multiple rounds of income and thus spending gains across the regional economy). In addition, 40,298 jobs are created in Texas from shippers and consignees (i.e., related users) using the Port's facilities to transport cargo.

Economic activity at the Port generates a total of approximately **$19 billion** in business revenues (or gross sales) within the State of Texas as the broadest measure of regional economic activity, in which approximately $2 billion represents the direct impact on business revenues. The business and employment impacts support **$6.2 billion** in personal income (e.g.,

wages/salaries and benefits) in Texas, with $836 million generated directly from Port activity.

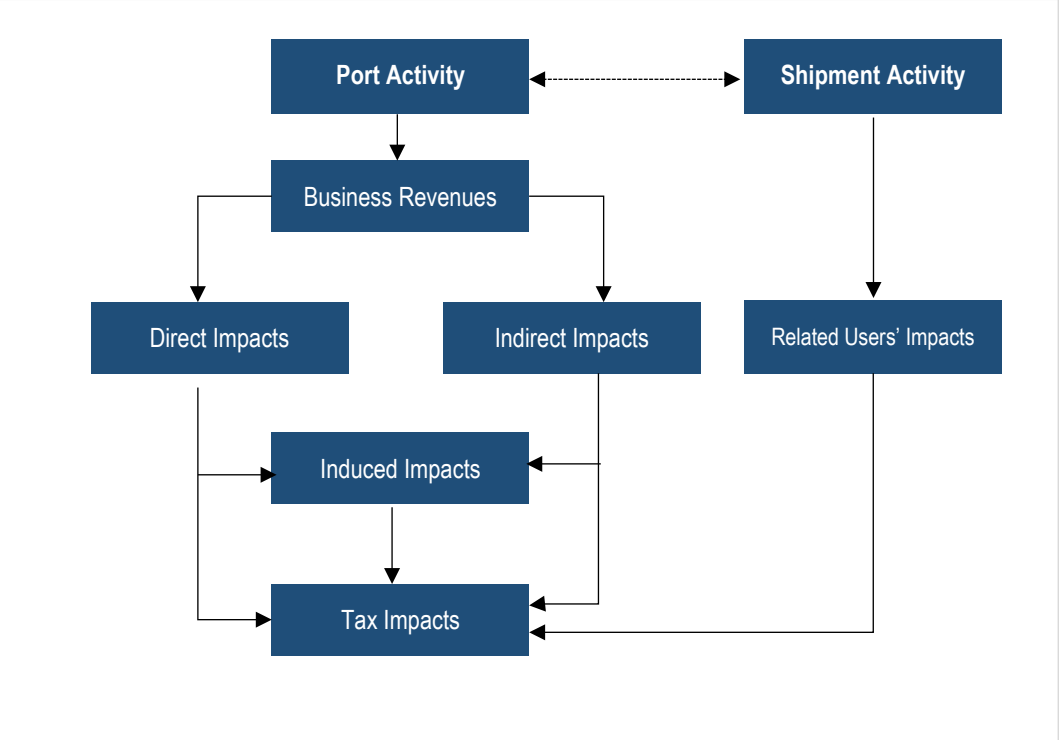
As a result of the Port's impact on income and spending of businesses and households, the State of Texas and local taxing entities together are projected to receive **$446 million in state and local tax revenues** annually.

In Texas, the Port's activity contributes the most economic benefits to the Corpus Christi metro area. Economic activity at the Port generates a total of 81,135 jobs, $13.9 billion in business revenues, and $5 billion in personal income in Corpus Christi. While the Port of Corpus Christi Authority directly hires 237 full-time-equivalent (FTE) employees for operations and administration, the total employment impact of the Port accounts for more than one-third (38%) of the metro area's labor force.

METHODOLOGY

This report is prepared for the Port of Corpus Christi Authority by the South Texas Economic Development Center at Texas A&M University-Corpus Christi. The objective is to provide an update on the economic impacts generated by activities at the Port of Corpus Christi, particularly maritime activity at the marine terminals located within the Port District. As for the previous update conducted in 2019, the methodology follows the framework outlined in previous economic impact studies conducted by Martin Associates, *The Economic Impacts of Port of Corpus Christi* (1994, 2003, 2009, 2012, and 2015). This approach allows for a consistent comparison of the measures of impacts with earlier reports and with other Texas ports.

Flows of Economic Impacts



Economic impacts are measured for the State of Texas and the Corpus Christi metro area in year 2019. Measures are in the form of employment, personal income, business revenue, and state and local tax revenues. As the above schematic diagram shows, there are four types of impacts from the perspective of economic activity. In addition to (1) *direct* activity at the Port (i.e., jobs that exist solely due to the operation of the Port), economic impacts are measured in

the form of (2) *indirect* impact (i.e., jobs generated as a result of local purchases by firms directly dependent on Port activity); (3) *induced* impact (i.e., jobs generated due to purchases of local goods and services by businesses and their employees directly or indirectly tied to Port activity); and (4) impacts related to shippers and consignees for inbound and outbound shipments through the Port (i.e., *user-related* jobs created by the demand for shipped cargo but not the demand for port facilities).

Martin Associates has previously conducted economic analysis for the State of Texas Port and Maritime Transportation System. This consulting firm has also prepared a separate report for the Port of Corpus Christi Authority to quantify the economic impacts generated by economic activity within the Port District. To facilitate comparisons with past impact studies as well as studies for other Texas ports, our scope of analysis and empirical methodology follow closely those documented in detail by Martin Associates.

In brief, economic activity at the Port generates business revenues for firms that produce goods and services. To generate revenues, these firms hire employees, purchase goods and services from other local businesses, make tax payments to various taxing entities, and pay wharfage, dockage and other fees to the Port of Corpus Christi Authority. These expenditures generate spin-off, or multiplier, effects on the level of employment, personal income, and tax revenues in the local economy of Corpus Christi, the rest of Texas, and beyond.

Economic impacts arise from activity in four sectors:

Surface Transportation: This sector consists of the railroad, trucking and pipeline transportation industries directly tied to the Port. These businesses transport cargoes and oil and gas between the marine terminals at the Port and inland facilities.

Maritime Services: This sector consists of four types of businesses and agencies: (1) freight forwarders and customs house brokers for inland and water transportation; (2) those involved in vessel operations (e.g., steamship agents, chandlers for ship supplies, towing companies for tug services, pilots for assistance in vessel navigation along the Inner Harbor, bunkering firms for supplying fuels to vessels, marine surveyors for inspecting vessels and cargo, marine construction firms for providing ship channel repairs and dredging); (3) those involved in the physical handling of cargo loaded between the land and vessels (e.g., longshoremen, stevedoring firms, terminal and warehouse operators); and (4) employees of government agencies located at the Port (e.g.,

U.S. Customs, Coast Guard, the Army Corps of Engineers, Department of Agriculture).

Shippers/Consignees: This sector first includes shippers and consignees that operate solely because of the existence of the marine terminals and other facilities in the Port District. They include oil refineries, petrochemical plants, steel mills and other facilities that rely on the shipment of materials and products through the Port. In addition to those facilities heavily dependent on the operation of the Port, there are shippers and consignees (e.g., producers of project cargo, farmers for grain exports) that benefit from the Port's facilities. If those marine terminals are not available, they may simply run their business through another port.

Port of Corpus Christi Authority: In 2019, the Authority employed 237 FTE individuals (including interns), who oversaw port activity and facilitated various operations at the Port-owned marine terminals.

DATA

Data of firms and facilities located in the Port District are obtained from a multitude of sources, including

- Port of Corpus Christi's *Port Directory*, annual reports and customer/tenant lists;
- Economic Modeling System Inc.'s (EMSI) database for businesses and employment by industry and by occupation; and
- Baseline data from Martin Associates' 2015 impact report.

Estimates for indirect and induced impacts on regional employment, personal income, and business revenues are derived from applying the IMPLAN regional economic model for the State of Texas and the Corpus Christi metro area, respectively.

Estimates for Port related-users draw from the framework and data linkages documented in Martin Associates' 2015 report.

EMPLOYMENT IMPACTS

In 2019, a total of 122.2 million tons of waterborne cargo moved through the Port of Corpus Christi. This amount of maritime activity directly supported an estimated 17,374 full-time-equivalent job positions. The following is a breakdown of the direct employment impacts by sector:

Direct Employment Impacts by Sector

SECTOR:	2015	2018	2019
SURFACE TRANSPORTATION	**1,436**	**1,082**	**1,068**
Rail	88	98	71
Truck	1,348	984	998
MARITIME SERVICES	**12,130**	**14,254**	**16,069**
Terminal	4,504	3,845	3,836
International Longshoremen's Association	43	45	49
Tug Assist	55	55	60
Pilots	18	18	20
Agents	56	56	61
Misc. Maritime Services/Construction	3,293	5,627	7,355
Freight Forwarders	61	62	66
Warehouse	40	45	49
Government	3,406	3,858	3,877
Barge/Bunkers	404	388	363
Chandler/Surveyors	250	256	335
PORT OF CORPUS CHRISTI AUTHORITY	**202**	**218**	**237**
TOTAL	**13,770**	**15,555**	**17,374**

An estimated total of 1,068 direct jobs are involved in rail and truck transportation, and another 16,069 direct jobs are in various types of maritime services. A total of 7,355 jobs are in miscellaneous maritime services, particularly marine construction. Another 3,836 employees work in the Port District's private terminal sites, including refineries, manufacturing plants and oil storage facilities.

The 3,877 direct jobs with government agencies include civilian personnel working in the Naval Air Station Corpus Christi located in the Port District. Government agencies and marine construction firms together account for most of the 3,604 additional direct jobs since 2015.

The majority of direct employment impact is associated with the handling of specific commodities. The following presents the distribution of direct jobs by commodity:

Direct Employment Impacts by Commodity

COMMODITY:	2015	2018	2019
Steel	42	70	77
Military	3	147	78
Project/Machinery	105	94	59
Other Break Bulk	43	94	180
Alumina	310	2	0
Bulk Grain	279	208	149
Iron Ore/Bauxite	255	212	31
Other Dry Bulk	559	645	1,077
Refined Products	2,969	3,325	3,583
Crude Oil/Condensate	882	913	1,158
Chemical/Fertilizer	1,373	1,566	1,648
Not Allocated	6,952	8,278	9,334
TOTAL	**13,770**	**15,555**	**17,374**

The commodity group that generates the most direct jobs is refined products, which include mostly petroleum products produced from the refineries located in the Port District. The next category consists of chemical products and liquid fertilizer produced by the Port's chemical plants. In 2019, outbound shipments crude oil was up 45% from the previous year, and increases in shipments of steel products offset the decrease in alumina shipments following the shutdown of an alumina refinery. More than half of direct jobs do not belong to any specific commodity. Those are employees of government agencies, shipyards, and the marine construction industry.

The majority of regional economic impacts occur in the Corpus Christi metro area. The following table presents the distribution of direct jobs by workers' areas of residence. Over 60% of direct jobs are held by residents in Nueces County and the city of Corpus Christi, and San Patricio County accounts for another 30% of direct jobs. In addition to direct jobs in counties of the Coastal Bend region, 553 direct jobs, or 3%, are created in other parts of Texas. Another 60 direct jobs are located in other parts of the nation.

Direct Employment by Location, 2019

GEOGRAPHY:	Jobs	% Total
Aransas County	233	1.3%
Bee County	20	0.1%
Jim Wells County	25	0.1%
Kleberg County	330	1.9%
Live Oak County	43	0.2%
Nueces County	10,914	62.8%
Refugio County	54	0.3%
San Patricio County	5,142	29.6%
Other Texas	553	3.2%
Other U.S.	60	0.3%
TOTAL	**17,374**	**100.0%**

BUSINESS REVENUES

The total of 122.2 million tons of waterborne cargo that moved through the Port of Corpus Christi in 2019 generated business revenues, personal income, and tax revenues. The following shows the direct impact on business revenues by commodity.

Direct Business Revenue by Commodity (thousands)

COMMODITY:	2015	2018	2019
Steel	$6,900	$11,522	$12,620
Military	$152	$7,462	$3,951
Project/Machinery	$34,691	$31,171	$19,393
Other Break Bulk	$4,546	$9,952	$19,076
Alumina	$3,088	$24	$0
Bulk Grain	$101,208	$75,491	$54,197
Iron Ore/Bauxite	$8,050	$6,685	$980
Other Dry Bulk	$80,009	$92,270	$154,124
Refined Products	$205,949	$230,620	$248,564
Crude Oil/Condensate	$325,643	$337,199	$427,561
Chemical/Fertilizer	$62,959	$71,817	$75,558
Not Allocated	$906,661	$1,091,154	$1,179,228
TOTAL	**$1,739,855**	**$1,965,369**	**$2,195,252**

Economic activity at the Port directly supports approximately $2.2 billion in business revenues. The values of the commodities moving through the Port are not included, because those dollar values are determined by final demand for the products, not the use of marine facilities.

In 2019, crude oil and petrochemical products generated the most impacts on business revenues. The impacts arose from processing and shipment of crude oil, and pipeline transportation through the refineries and the value added in the production process. The total revenue impact in 2019 represented a 26% increase from that in 2015.

Including indirect and induced effects as well as revenues from related users of the Port's facilities, the total economic impact on the Texas economy is an estimated **$19 billion**. Out of this statewide impact from the Port, the Corpus Christi metro area accounts for $13.9 billion.

PERSONAL INCOME

The Port of Corpus Christi's impact on regional employment and business revenues in turn contributes to more personal income associated with increases in job positions and wage earnings. Estimates for impact on personal income are drawn from applying the personal income multipliers of the IMPLAN model customized respectively for the State of Texas and the Corpus Christi metro area.

The following shows the breakdown of the total impact on personal income in Texas:

Impact on Texas Personal Income (Millions)

PERSONAL INCOME:	2015	2018	2019
Direct	$662	$748	$836
Indirect	$787	$1,076	$1,201
Induced	$1,754	$2,044	$2,283
Related User Income	$1,509	$1,704	$1,904
TOTAL	**$4,712**	**$5,572**	**$6,224**

A total of 17,374 direct jobs associated with the Port's activity in 2019 supported an estimated total of $836 million in personal income. Including indirect, induced and related user income, the total impact of **$6.2 billion in Texas personal income** in 2019 represented an 18% increase from the 2015 level. For the Corpus Christi metro area, the annual personal income impact is estimated at approximately $5 billion.

TAX IMPACTS

The Port of Corpus Christi's impact on business and personal incomes in turn generates an impact on state and local tax revenues. As for personal income impacts, estimates for tax impacts are derived from the tax multipliers of the IMPLAN model.

Impact on State and Local Tax Revenues (Millions)

STATE AND LOCAL TAXES:	2015	2018	2019
Direct	$50	$56	$63
Indirect	$59	$67	$75
Induced	$132	$149	$166
Related User Taxes	$113	$128	$143
TOTAL	**$353**	**$399**	**$446**

The total impact on state and local tax revenues is estimated at **$446 million** for 2019. For the Corpus Christi metro area, the annual tax impact is $327 million.

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