ECONOMIC IMPACT *of* GEORGIA'S DEEPWATER PORTS

Fiscal Year Twenty-Seventeen

INDEX

THE ECONOMIC IMPACT OF GEORGIA'S DEEPWATER PORTS ON GEORGIA'S ECONOMY IN FY 2017

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EXECUTIVE SUMMARY

THE ECONOMIC IMPACT OF GEORGIA'S DEEPWATER PORTS ON GEORGIA'S ECONOMY IN FY 2017

This summary highlights some of the findings regarding the economic impact of Georgia's deepwater ports on Georgia's economy in fiscal year 2017. The ensuing chapters contain the comprehensive technical report.

The statewide economic impact of Georgia's deepwater ports in fiscal year 2017 includes:

$106 BILLION IN SALES (11 PERCENT OF GEORGIA'S TOTAL SALES);

$44 BILLION IN STATE GDP (8 PERCENT OF GEORGIA'S TOTAL GDP);

$25 BILLION IN INCOME (6 PERCENT OF GEORGIA'S TOTAL PERSONAL INCOME);

439,220 FULL- AND PART-TIME JOBS (9 PERCENT OF GEORGIA'S TOTAL EMPLOYMENT);

$5.9 BILLION IN FEDERAL TAXES;

$1.4 BILLION IN STATE TAXES; AND

$1.5 BILLION IN LOCAL TAXES.

These economic impacts demonstrate that continued emphasis on imports and exports through Georgia's deepwater ports translates into jobs, higher incomes, greater production of goods and services, and revenue collections for government. Ports operations help preserve Georgia's manufacturing base, support Georgia's agricultural economy, and foster growth of the state's massive logistics, distribution, and warehousing cluster.


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OUTPUT (SALES) IMPACTS

Measured in the simplest and broadest terms, the total economic impact of Georgia's deepwater ports on Georgia's economy is $106 billion, which is almost 11 percent of Georgia's output in FY 2017. Out of the total, $63.4 billion represents initial spending, or direct economic impact; $43.0 billion is indirect and induced spending, or the re-spending (multiplier) impact. Dividing the FY 2017 total output impact ($106 billion) by initial spending ($63.4 billion) yields an average multiplier value of 1.68. On average, therefore, every dollar initially spent by the ports industry and ports users generates an additional 68 cents for the state's economy.

STATE GDP (VALUE ADDED) IMPACTS

Measured in terms of GDP or value added, Georgia's deepwater ports contribute $44 billion to the state's economy in fiscal year 2017, which is over 8 percent of Georgia's total GDP. Out of the total, $20.8 billion represents the direct effects of initial spending, or the direct economic impact; $22.9 billion is indirect and induced spending, or the re-spending (multiplier) impact.

INCOME IMPACTS

Measured in terms of income, Georgia's deepwater ports contributed $25 billion to the state's economy in fiscal year 2017, which is almost 6 percent of Georgia's total personal income. Of the total, $11.3 billion represents the direct effects of initial spending, or the direct economic impact; $13.4 billion is indirect and induced spending, or the re-spending (multiplier) impact.

EMPLOYMENT IMPACTS

The economic impact of Georgia's deepwater ports probably is most easily understood in terms of its effects on employment. Measured in these terms, Georgia's deepwater ports support 439,220 full- and part-time jobs, which is over 9 percent of Georgia's total employment (as defined by a survey of households). This means that more than one job out of every eleven is in some way dependent on the ports. Of the FY 2017 total employment impact, 180,189 jobs represent the direct effects of initial spending, or the direct economic impact; 259,031 jobs constitute the indirect and induced effect of spending, or the re-spending impact.

STATE TAX IMPACT

The total economic impact of Georgia's deepwater ports on tax collections by state government in fiscal year 2017 is $1.4 billion.

LOCAL TAX IMPACT

The total economic impact of Georgia's deepwater ports on tax collections by local governments in fiscal year 2017 is $1.5 billion.

FEDERAL TAX IMPACTS

The total economic impact of Georgia's deepwater ports on tax collections by the federal government in fiscal year 2017 is $5.9 billion.

Deepwater ports are one of Georgia's strongest economic engines, fostering the development of virtually every industry. The ports are especially supportive of other forms of transportation, manufacturing, wholesale/distribution centers, and agriculture. The outstanding performance of Georgia's deepwater ports relative to other American ports reflects strong competitive advantages that allowed Georgia's ports to expand their share of activities. These advantages are largely the result of strategic investments in port facilities by the State of Georgia over many years.

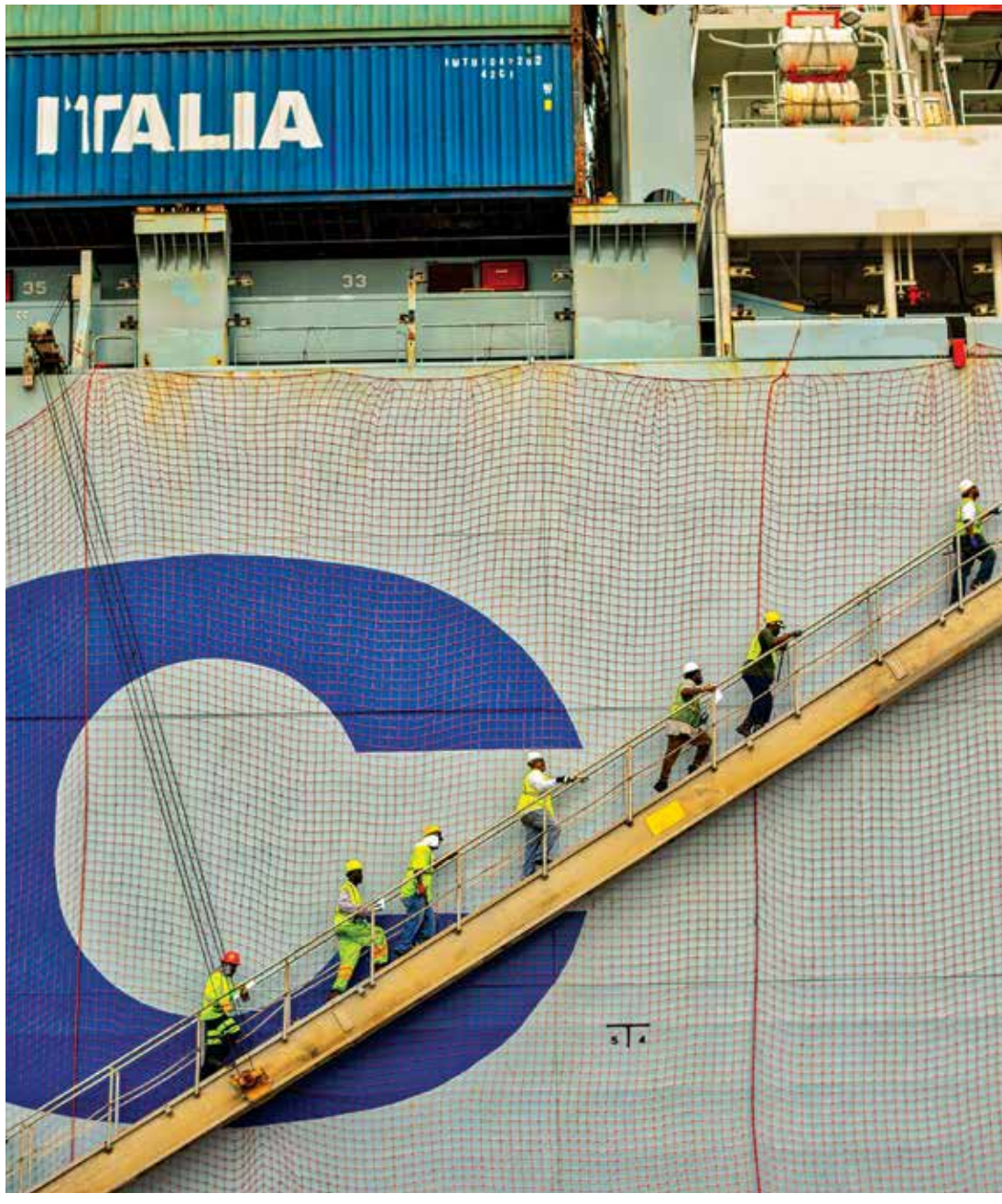
CHAPTER 1

INTRODUCTION

Georgia's deepwater ports industry consists of public marine terminals in Savannah and Brunswick owned by the Georgia Ports Authority as well as private marine terminals. Georgia's deepwater ports are thriving, and Savannah's port is one of the fastest growing container ports in the world. The superb performance of Georgia's ports relative to other ports reflects strong comparative advantages that allowed them to expand their shares of regional and national waterborne cargo traffic. These comparative advantages are the result of a series of strategic expansions over many years.

It is obvious that Georgia's deepwater ports create substantial economic impacts on the state in terms of output (sales), state GDP, income, employment, and tax revenues for federal, state, and local governments. This study provides a quantitative assessment of the changes in overall economic activity because of the presence and operations of Georgia's deepwater ports in fiscal year 2017.

The facilities owned by the Georgia Ports Authority in Savannah and Brunswick will be referred to as the Port of Savannah and the Port of Brunswick, respectively; and cargo volumes, expenditures, and impact estimates for these facilities will be reported separately from those for private facilities/docks. The amounts expressed in this report (including the executive summary and appendices) are reported in current dollars (2017).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CHAPTER 2

ECONOMIC IMPACT HIGHLIGHTS

The fundamental finding of this study is that the strategic decisions by state government to invest public resources in the two deepwater ports have contributed to substantial economic activity in Georgia. The statewide economic impact of the deepwater ports in fiscal year 2017 includes:

$106 BILLION IN SALES (11 PERCENT OF GEORGIA'S TOTAL SALES);

$44 BILLION IN STATE GDP (8 PERCENT OF GEORGIA'S TOTAL GDP);

$25 BILLION IN INCOME (6 PERCENT OF GEORGIA'S TOTAL PERSONAL INCOME);

439,220 FULL- AND PART-TIME JOBS (9 PERCENT OF GEORGIA'S TOTAL EMPLOYMENT);

$5.9 BILLION IN FEDERAL TAXES;

$1.4 BILLION IN STATE TAXES; AND

$1.5 BILLION IN LOCAL TAXES.

Measured in the simplest and broadest possible terms, the total economic impact of Georgia's deepwater ports on Georgia's economy is $106 billion. This amount represents the combined impact of the ports industry and ports users on output, which can be thought of as the equivalent of business revenue, sales, or gross receipts. The $106 billion output impact accounts for almost 11 percent of Georgia's total output in FY 2017. Out of the $106 billion, $5 billion (5 percent) represents the results from the ports industry and $101 billion (95 percent) represents the results from ports users.

Of the FY 2017 total output impact, $63 billion represents initial spending, or direct economic impact; and $43 billion is indirect and induced spending, or the re-spending (multiplier) impact. Dividing the FY 2017 total output impact ($106 billion) by initial spending ($63 billion) yields an average multiplier value of 1.68. On average, therefore, every dollar initially spent by either the ports industry and ports users generates an additional 68 cents for the economy.

Expressed in other dimensions, the ports industry and port users together support $44 billion in state GDP and $25 billion in income, which account for 8 percent and 6 percent of Georgia's GDP and total personal income, respectively. The total economic impact on employment is 439,220 full- and part-time jobs. The combined impact of the ports industry and ports users on state tax collections is $1.4 billion. The combined impact of the ports industry and ports users on local tax collections is $1.5 billion. The combined impact on federal tax collections is $5.9 billion.

Container traffic is the primary source of economic impact. Indeed, the distribution of total economic impacts of cargo-based activity at the Georgia Ports Authority's facilities in Savannah and Brunswick by mode of cargo indicates that containerized cargo accounts for 92 percent of the reported economic impacts. Auto/vehicle cargo accounts for 4 percent of the reported impacts, and breakbulk cargo accounts for 2 percent of the reported impacts. Dry bulk and liquid bulk cargoes each account for about 1 percent of reported impacts.

CHAPTER 3

THE CONCEPT OF PORT ECONOMIC IMPACT

The total economic impact of Georgia's deepwater ports consists of (1) direct spending by the ports industry, (2) direct spending by ports users, and (3) the secondary or indirect and induced spending — often referred to as the multiplier effects — created as direct expenditures by either the ports industry or ports users are re-spent.

The ports industry is defined to include economic activity (spending) that involves the transportation of waterborne cargo and ports services, including the ports themselves, the companies engaged in deepwater transportation as well as companies that provide ship services, and companies that provide inland transportation of waterborne cargo. Ports investment (capital expenditures) for additions and/or improvements to Georgia's deepwater ports also is included as part of the ports industry. This definition of the ports industry is identical to the definition used by the U.S. Department of Transportation, Maritime Administration in the *MARAD Port Economic Impact Kit*. Thus, the ports industry includes activities that take place on the vessel, at the terminal, and during the inland movement of cargo. Since the firms and enterprises that provide these activities locate in Georgia because of the existence of the ports, all of their activity (spending) can be counted as direct economic impact.

Ports users are mainly manufacturers, agricultural/forestry firms, wholesalers, distributors, and warehousing and storage firms that use the ports to transport materials and/or products. Although most users are importers and exporters, some ship materials or products to and/or from domestic locations. All of the economic activity (spending) generated by ports users whose decision to locate, remain, and/or expand in Georgia hinges on the presence of these deepwater ports can be counted as direct economic impact. However, since most ports users are only partially dependent on the presence of Georgia's deepwater ports, only a portion of their total economic activity is counted as direct economic impact. For example, firms that use Georgia's deepwater ports due to cost advantages

over other ports or other modes of transportation are only partially dependent on Georgia's ports. In addition, users that only ship a portion of their production and materials through Georgia's deepwater ports are only partially dependent on the ports. To avoid double counting, ports users' activity is defined to exclude their transportation expenditures associated with the waterborne cargo that is handled by Georgia's ports industry.

Secondary spending often is referred to as the multiplier effect of direct spending. There are two types of secondary spending: indirect spending and induced spending. Indirect spending refers to the changes in inter-industry purchases as Georgia's industries respond to the additional demands triggered by spending by either the ports industry or ports users. It consists of the ripples of activity that are created when the ports industry or ports users purchase goods or services from other industries located in the state. Induced spending refers to the additional demands triggered by spending by households as their income increases due to changes in production. Basically, the induced impact captures the ripples of activity that are created when households spend more due to the increases in their earnings that were generated by the direct and indirect spending.

The sum of the direct, indirect, and induced economic impacts is the total economic impact, which often is expressed in terms of output (sales), state GDP, income, or employment. Output is gross receipts or sales, plus or minus inventory. Total output impacts are the most inclusive, largest, measure of economic impact. Because of their size, output impacts typically are emphasized in economic impact studies and receive much media attention. One problem with output as a measure of economic impact, however, is that it includes the value of inputs produced by other industries, which means that there inevitably is some double counting of economic activity. The other measures of economic impact (GDP, income, and

employment) are free from double counting and provide a much more realistic measure of the true economic impact of Georgia's deepwater ports.

State GDP is value added, which consists of employee compensation, proprietor income, other property income, and indirect business taxes. Value added is equivalent to gross output (sales or receipts and other operating income, commodity taxes, and inventory change) minus intermediate inputs (consumption of goods and services purchased from other industries or imported). It is often referred to as the state-level counterpart of the nation's gross domestic product (GDP). Income is all forms of employment income, including wages, salaries, and proprietors' incomes. It does not include non-wage compensation (e.g., pensions and health insurance), transfer payments (e.g., welfare or social security benefits), or unearned income (e.g., dividends, interest, and rent). Employment includes total wage and salary employees as well as self-employed individuals. It encompasses both full- and part-time jobs and is measured in annual average jobs.

CHAPTER 4

METHODOLOGY

Estimating the economic impact of Georgia's deepwater ports involved two distinct steps. First, data regarding tonnage by type and capital expenditures were obtained from the Georgia Ports Authority. The tonnage and capital expenditure data were imported into the U.S. Department of Transportation's MARAD Port Economic Impact Kit to estimate the direct, indirect, induced, and total economic impacts of the ports industry. Second, ports users' spending was estimated. Ports users were surveyed to determine the degree to which they depend on Georgia's deepwater ports. To help correct for non-response and/or incomplete responses and to update the analysis, several types of government and administrative data were used to assess the proportion of revenue or sales in various industries that could be attributed to ports usage. The IMPLAN Online economic impact assessment software system was used to estimate the indirect and induced economic impacts of the ports-related portion of spending by users. Finally, the statewide economic impact estimates were allocated to individual counties based on (1) each county's economic structure and (2) PIERS trade data regarding county-level imports and exports (measured in terms of short tons).

ESTIMATING THE PORTS INDUSTRY'S ECONOMIC IMPACT

A revised version of the U.S. Department of Transportation's MARAD port economic impact model that was built specifically for Georgia was used to estimate the direct, indirect, and induced economic impact of spending by the ports industry. A general discussion of the model, including its structure, methods, and use can be found in the two-volume *MARAD Port Economic Impact Kit*.

The Georgia Ports Authority provided the fiscal year 2017 data on cargo volume (import and export) by mode of transportation for the Savannah and Brunswick facilities that the MARAD model required. The cargo volume reported for the Port of Savannah includes data for the Garden City and Ocean terminals. The cargo volume reported for the Port of Brunswick includes data for Mayor's Point Terminal,

Colonel's Island, and the Brunswick East River/ Lanier docks. Table 1 summarizes cargo volume for autos, containerized cargo, breakbulk cargo, dry bulk cargo, and liquid bulk cargo. Cargo volume is expressed on a per-vehicle basis for auto/vehicle cargo; a per-TEU (Twenty Foot Equivalent Unit) basis for containerized cargo; and a per-short ton (2,000 pounds) for breakbulk, dry bulk, and liquid bulk. In addition, the Georgia Ports Authority provided estimates of cargo volume for the private facilities/docks based on an analysis of data obtained from PIERS (Table 2). The Georgia Ports Authority also provided capital expenditures (ports investment) in FY 2017 for the facilities that it owns. Capital expenditures by the private facilities/docks are not included in this analysis, however.

ESTIMATING THE PORTS USERS' ECONOMIC IMPACT

Data and insights from two surveys were used to estimate the port users' economic impacts. For example, the Selig Center in collaboration with the Georgia Governor's Development Council and the Center of Innovation for Logistics conducted a survey in Spring/Summer 2014 of representatives from Georgia's strategic industries (as well as economic development and transportation experts) regarding Georgia's ports and their impact on transportation competitiveness. In addition, a confidential survey of the entire population of users of the Georgia Ports Authority's facilities was conducted in 2003 to identify the industries that utilize the ports, their sales, and the extent to which they depend on the ports. *The Economic Impact of Georgia's Deepwater Ports on Georgia's Economy in FY 2003* (April 2004) contains both the survey instrument and a brief summary of responses. Secondary sources of information supplemented and updated the information obtained from the two surveys. These secondary sources include: (1) The U.S. Department of Commerce, Bureau of Economic Analysis' historical data on gross domestic product and output, gross state product, and personal income. (2) The U.S. Department of Labor's and the Georgia Department of Labor's data on employment by industry. (3) U.S. Department of Transportation, Maritime Administration, Office of Ports and Domestic Shipping on the economic impact of ports users at the national level. (4) Studies of the economic impacts of the U.S. Deepwater Port System prepared for the American Association of Port Authorities. (5) The Georgia Department of Community Affairs and the Department of Industry Trade and Tourism's summary information from their survey of manufacturers regarding their international trade activity and current and future exports of their products. (6) County-level data provided by PIERS regarding the volume of imports and exports for Georgia.

Based on an analysis of both the survey and secondary information sources, it was determined that port-related sales (output) totaled $66 billion in Georgia in fiscal year 2017, or about 6.5 percent of Georgia's total output that year. Manufacturers were estimated to account for about 82 percent of port-related sales, while wholesale/distribution/warehousing/storage activities accounted for about 12 percent of port-related sales, and agriculture, forestry, fishing, and mining accounted for the remaining 6 percent.

The IMPLAN Online modeling system (2016 State Package for Georgia) was used to estimate the indirect and induced economic impact of ports users' direct expenditures in fiscal year 2017. A detailed discussion of the IMPLAN modeling system, including its structure, methods, and use, can be found at www.implan.com.


GATE 4
OVERSIZE LOAD

CHAPTER 5

THE RESULTS

Table 3 reports the total economic impact of Georgia's deepwater ports on output, GDP, income, and employment. Table 4 reports the direct, indirect plus induced, and the total economic impacts of Georgia's deepwater ports in terms of output, income, and gross state product. Similarly, Table 5 and Table 6 report the employment and tax impacts, respectively. Table 7 reports the overall multiplier values for output, employment, income, and GDP. Table 8 reports the total economic impacts of cargo-based activity by mode of cargo at the Georgia Ports Authority's operations in Savannah and Brunswick. Table 9 shows the ports industry's employment impact by occupation. Table 10 details the employment impact of port users by industry. Table 11 reports the total employment impact by county. Appendices 1-21 report the more detailed tabulations of the economic impact of Georgia's deepwater ports.

OUTPUT IMPACTS

Measured in the broadest terms, the total economic impact of the Port of Savannah and the Port of Brunswick on Georgia's economy is $106 billion, which is almost 11 percent of Georgia's output in FY 2017.

Out of the total, $5 billion (5 percent) represents the results from the ports industry, of which the GPA's operations at the Port of Savannah contribute 88 percent. Ports users' total output impact, however, is twenty greater than that of the ports industry — $101 billion. Indeed, ports users account for 95 percent of the total output impact of Georgia's deepwater ports.

Of the FY 2017 total output impact, $63 billion represents initial spending, or direct economic impact; $43 billion is indirect and induced spending, or the re-spending (multiplier) impact. Dividing the FY 2017 total output impact ($106 billion) by initial spending ($63 billion) yields an average multiplier value of 1.68. On average, therefore, every dollar initially spent by either the ports industry or ports users generates an additional 68 cents for the state's economy.

STATE GDP (VALUE ADDED) IMPACTS

Measured in terms of State GDP or value added, Georgia's deepwater ports contributed $44 billion to the state's economy in FY 2017, which is 8 percent of Georgia's total GDP. Out of the total GDP impact, $2 billion (6 percent) represents the results from the ports industry. The GPA's operations at the Port of Savannah contribute 84 percent of this amount. However, the $41 billion GDP impact attributed to ports users is almost 17 times greater than that of the port industry, so users account for 94 percent of the total GDP impact of Georgia's deepwater ports.

Of the FY 2017 total GDP impact, $21 billion represents the direct effects of initial spending, or the direct economic impact; $23 billion is indirect and induced spending, or the re-spending (multiplier) impact. Dividing the FY

2017 total GDP impact ($44 billion) by the direct GDP impact ($21 billion) yields an average multiplier value of 2.10. On average, therefore, every dollar of direct GDP produced by the ports industry and ports users yields an additional 110 cents for the state's economy.

INCOME IMPACTS

Measured in terms of income, Georgia's deepwater ports contributed $25 billion to the state's economy in fiscal year 2017, which is 6 percent of Georgia's total personal income. Out of the total, $2 billion (7 percent) represents the results from the ports industry. The GPA's operations at the Port of Savannah contribute 87 percent of this amount, but ports users' $23 billion income impact is over thirteen times greater. Indeed, users account for 93 percent of the total income impact of Georgia's deepwater ports.

Of the FY 2017 total income impact, $11 billion represents the direct effects of initial spending, or the direct economic impact; $13 billion is indirect and induced spending, or the re-spending (multiplier) impact. Dividing the FY 2017 total income impact ($25 billion) by the direct income impact ($11 billion) yields an average multiplier value of 2.19. On average, therefore, every dollar of direct income produced by the ports industry and ports users generates an additional 119 cents for the state's economy.

EMPLOYMENT IMPACTS

The economic impact of Georgia's deepwater ports probably is most easily understood in terms of its effects on employment. Measured in these terms, Georgia's deepwater ports support 439,220 full- and part-time jobs, which equals 9 percent of Georgia's total employment — based on the household survey definition of employment.

This means that about one job out of every eleven is in some way dependent on the ports. Out of the 439,220 jobs, 38,727 (9 percent) represent the results from the ports industry. The GPA's operations at the Port of Savannah contribute 87 percent of these 38,727 jobs, but ports users' 400,493-job impact is over ten times greater, so users account for 91 percent of the total employment impact of Georgia's deepwater ports.

Of the FY 2017 total employment impact, 180,189 jobs represent the direct effects of initial spending, or the direct economic impact; 259,031 jobs constitute the indirect and induced effect of spending, or the re-spending (multiplier) impact. Dividing the FY 2017 total job impact (439,220 jobs) by the direct job impact (180,189 jobs) yields an average multiplier value of 2.44. On average, therefore, each job created directly by the ports industry and ports users yields an additional 1.4 jobs in the state.

STATE TAX IMPACT

Spending by the ports industry and ports users generate substantial tax revenue for Georgia's state government. The total economic impact of Georgia's deepwater ports on tax collections by state government in fiscal year 2017 is $1.4 billion.

LOCAL TAX IMPACT

Spending by the ports industry and ports users generate substantial tax revenue for Georgia's local governments. The total economic impact of Georgia's deepwater ports on tax collections by local governments in fiscal year 2017 is $1.5 billion.

FEDERAL TAX IMPACT

Spending by the ports industry and ports users generate substantial tax revenue for the federal government. The total economic impact of Georgia's deepwater ports on tax collections by the federal government in fiscal year 2017 is $5.9 billion.

CHAPTER 6

COMPARISONS TO PREVIOUS ESTIMATES

In 2015, the Georgia Ports Authority retained the University of Georgia's Terry College of Business to estimate the economic impact of Georgia's deepwater ports on the state's economy. Economic impact estimates for FY 2014 were published in *The Economic Impact of Georgia's Deepwater Ports: FY 2014* (2015). The methods used were very similar to those used in this study. The FY 2014 impacts of Georgia's deepwater ports were 369,193 full- and part-time jobs, $84 billion in sales, $33 billion in state GDP, and $20 billion in income. The job impact therefore is 19 percent higher in FY2017 than in FY2014. Over that same period, the total number of jobs in Georgia increased by 8 percent. Thus, the employment impact of Georgia's deepwater ports rose faster than the overall number of jobs in Georgia, implying that Georgia's deepwater ports are increasingly important drivers of statewide employment growth. From FY 2014 through FY 2017, the additional 70,027 jobs supported by Georgia's deepwater ports account for 21 percent of statewide job growth, or one of every five net new jobs created.

In 2012, the Georgia Ports Authority retained the University of Georgia's Terry College of Business to estimate the economic impact of Georgia's deepwater ports on the state's economy. Economic impact estimates for FY 2011 were published in *The Economic Impact of Georgia's Deepwater Ports: FY 2011* (2012). The methods used were very similar to those used in this study. The FY 2011 impacts of Georgia's deepwater ports were 352,146 full- and part-time jobs, $66.9 billion in sales, $32.4 billion in state GDP, and $18.5 billion in income.

In 2010, the Georgia Ports Authority retained the University of Georgia's Terry College of Business to estimate the economic impact of Georgia's deepwater ports on the state's economy. Economic impact estimates for FY 2009 were published in *The Economic Impact of Georgia's Deepwater Ports on Georgia's Economy in FY 2009* (2010). The methods used were very similar to those used in this study. The FY 2009 impacts of Georgia's deepwater ports were $61.7 billion in sales, $26.8 billion in state GDP,

$15.5 billion in income, and 295,443 full- and part-time jobs.

In 2007, the Georgia Ports Authority retained the University of Georgia's Terry College of Business to estimate the economic impact of Georgia's deepwater ports on the state's economy. Economic impact estimates for FY 2006 were published in *The Economic Impact of Georgia's Deepwater Ports on Georgia's Economy* (2007). The methods used were very similar to those used in this study as well as to those used in the study cited in the previous paragraph. The FY 2006 impact of Georgia's deepwater ports were $55.8 billion in sales, $24.8 billion in state GDP, $14.9 billion in income, and 286,476 full- and part-time jobs.

In 2004, the Georgia Ports Authority retained the University of Georgia's Terry College of Business and Savannah State University to estimate the economic impact of Georgia's deepwater ports on the state's economy. Economic impact estimates for FY 2003 were published in *The Economic Impact of Georgia's Deepwater Ports on Georgia's Economy in FY 2003* (April 2004). The study found that the FY 2003 impact of Georgia's deepwater ports were $35.4 billion in sales, $17.1 billion in gross state product, $10.8 billion in income, and 275,968 full- and part-time jobs.

In 1997, Booz-Allen & Hamilton, Inc. conducted a study and published its results (for 1996) in *Economic Impacts of Georgia's Deepwater Ports of Savannah and Brunswick* (March 20, 1998). Instead of using actual cargo volumes and standard macroeconomic input-output modeling systems (e.g., MARAD Port Economic Impact Kit, IMPLAN, RIMS, or REMI) to measure direct, indirect, and induced economic impacts, Booz-Allen & Hamilton relied primarily on direct survey methods, which they said is "somewhat unique." Due to the unique character of their methods as well as the use of non-conventional definitions of standard economic impact terms, it is very difficult to make meaningful direct comparisons of their results to the results of this study, or to those of other port economic impact studies.

Booz-Allen & Hamilton found that the total economic impact of Georgia's deepwater ports on output (sales) and employment were $22.3 billion and 76,672 jobs, respectively. Their estimates of the economic impact on tax collections by state and local governments was $569 million, and that the economic impact on wages was $1.7 billion. The estimates produced by the Terry College of Business (based on data for FY 2003) were considerably larger. The order of magnitude of Booz-Allen & Hamilton's output impact ($22.3 billion), however, appears to be somewhat reasonable considering that: (1) the Port of Savannah and the Port of Brunswick both experienced exceptionally rapid growth in cargo volumes from 1996-2003 (implying that direct spending by the ports industry was much smaller in 1996 than it was in 2003); (2) Georgia's overall economy was much smaller in 1996 than it was in 2003 (implying that ports-related impacts were much smaller in 1996 than in 2003); (3) the survey-based approach did not capture all of the direct economic impacts; (4) the survey-based approach is incapable of capturing many of the indirect economic impacts; and (5) the survey-based approach does not capture any of the induced economic impacts.

In 1999, Georgia Southern University applied more conventional input-output modeling techniques to re-estimate the ports' 1996 economic impact. However, it appears that they relied on Booz-Allen & Hamilton's estimate of direct economic impact. Nonetheless, Georgia Southern's use of the REMI model to re-estimate both the indirect and induced economic impacts more fully captured the indirect and induced economic impacts of the direct spending (as estimated by Booz-Allen & Hamilton). Consequently, their impact estimates were higher than those produced by Booz-Allen & Hamilton.

CHAPTER 7

CLOSING COMMENT

This study investigates the economic impact of Georgia's deepwater ports, and finds substantial economic impacts in terms of output (gross receipts or sales), state GDP, income, employment, state and local tax revenues, and federal tax revenues. The findings are based on analytical methods that are standard in regional economics and economic consulting.

TABLE 1

CARGO VOLUME BY MODE OF TRANSPORTATION AT THE GEORGIA PORTS AUTHORITY'S FACILITIES IN SAVANNAH AND BRUNSWICK (IMPORT AND EXPORT) IN FY 2017

CARGO TYPE	MODE	GPA TOTAL	SAVANNAH	BRUNSWICK	PERCENT OF TOTAL BY MODE
Autos	Long Dist. Truck	10,707	10,707	0	2%
	Short Dist. Truck	504,420	18,638	485,782	78%
	Rail	131,755	10,310	121,445	20%
	Total	**646,882**	**39,655**	**607,227**	**100%**
Containerized	Long Dist. Truck	1,540,580	1,540,580	0	40%
	Short Dist. Truck	1,657,030	1,657,030	0	43%
	Rail	654,133	654,133	0	17%
	Total	**3,851,743**	**3,851,743**	**0**	**100%**
Breakbulk	Long Dist. Truck	319,004	298,392	20,612	25%
	Short Dist. Truck	570,652	529,373	41,279	45%
	Rail	374,045	332,821	41,224	30%
	Total	**1,263,701**	**1,160,586**	**103,115**	**100%**
Dry Bulk	Long Dist. Truck	575,323	0	575,323	51%
	Short Dist. Truck	7,198	0	7,198	1%
	Rail	539,670	0	539,670	48%
	Total	**1,122,191**	**0**	**1,122,191**	**100%**
Liquid Bulk	Long Dist. Truck	146,757	0	146,757	14%
	Short Dist. Truck	173,738	170,743	2,995	17%
	Rail	727,903	727,903	0	69%
	Total	**1,048,398**	**898,646**	**149,752**	**100%**

Note: Cargo Volume is expresssed on a per-vehicle basis for auto/vehicle cargo; a per-TEU ("Twenty-Foot Equivalent") basis for containerized cargo; a per-short ton (2,000 pounds) basis for breakbulk, dry bulk, and liquid bulk cargo. Cargo volume is for the public facilities owned by the Georgia Ports Authority and does not include cargo volume for private facilities/docks. Breakbulk does not include autos, which are reported separately.

Source: Estimated by the Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), 2018.

TABLE 2

CARGO VOLUME FOR PRIVATE FACILITIES/DOCKS IN SAVANNAH AND BRUNSWICK (IMPORT AND EXPORT) IN FY 2017

CARGO TYPE	TOTAL
Breakbulk	2,769,081
Dry Bulk	1,213,377
Liquid Bulk	787,247
Total	**4,769,705**

Note: Cargo volume is expressed on a per-short ton (2,000 pounds) basis. Cargo volume is for the privately-owned facilities/docks and does not include cargo volume for facilities owned by the Georgia Ports Authority.

Source: Estimated by the Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), 2018.

TABLE 3

SUMMARY OF THE ECONOMIC IMPACT OF GEORGIA'S DEEPWATER PORTS, FISCAL YEAR 2017 (MILLIONS OF 2017 DOLLARS)

TOTAL ECONOMIC IMPACT ON:	OUTPUT	STATE GDP	INCOME	EMPLOYMENT (JOBS)
Port Industry	4,973	2,435	1,722	38,727
Savannah Cargo-Based Activity	4,358	2,133	1,506	33,849
Brunswick Cargo-Based Activity	265	129	86	1,945
Port Investment	58	30	25	457
Private Facilities/Docks	292	143	105	2,476
Port Users	101,417	41,333	22,999	400,493
Total Output/Revenue Impact	**106,390**	**43,768**	**24,721**	**439,220**

Note: The port industry refers to firms/enterprises located in Georgia because of the ports' existence. Savannah and Brunswick Cargo-Based Activity and Port Investment refer to impacts generated by the public facilities owned by the Georgia Ports Authority. Private Facilities/Docks refers to impacts generated by privately-owned facilities/docks. Port users are firms/enterprises that utilize port facilities (primarily importers and exporters).

Source: Estimated by the Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), 2018.

TABLE 4

THE ECONOMIC IMPACT OF GEORGIA'S DEEPWATER PORTS ON OUTPUT (REVENUE), INCOME, AND STATE GDP IN GEORGIA, FISCAL YEAR 2017
(MILLIONS OF 2017 DOLLARS)

	DIRECT ECONOMIC IMPACT ON OUTPUT/REVENUE	INDIRECT & INDUCED ECONOMIC IMPACT ON OUTPUT/REVENUE	TOTAL ECONOMIC IMPACT ON OUTPUT/REVENUE
Port Industry	3,236	1,737	4,973
Savannah Cargo-Based Activity	2,838	1,520	4,358
Brunswick Cargo-Based Activity	172	92	265
Port Investment	35	24	58
Private Facilities/Docks	191	101	292
Port Users	60,189	41,227	101,417
Total Output/Revenue Impact	**63,425**	**42,964**	**106,390**

	DIRECT ECONOMIC IMPACT ON INCOME	INDIRECT & INDUCED ECONOMIC IMPACT ON INCOME	TOTAL ECONOMIC IMPACT ON INCOME
The Port Industry	1,152	569	1,722
Savannah Cargo-Based Activity	1,007	498	1,506
Brunswick Cargo-Based Activity	56	30	86
Port Investment	17	8	25
Private Facilities/Docks	72	33	105
The Port Users	10,147	12,852	22,999
Total Income Impact	**11,299**	**13,421**	**24,721**

	DIRECT ECONOMIC IMPACT ON STATE GDP	INDIRECT & INDUCED ECONOMIC IMPACT ON STATE GDP	TOTAL ECONOMIC IMPACT ON STATE GDP
The Port Industry	1,585	849	2,435
Savannah Cargo-Based Activity	1,390	743	2,133
Brunswick Cargo-Based Activity	83	45	129
Port Investment	18	12	30
Private Facilities/Docks	94	49	143
The Port Users	19,235	22,099	41,333
Total State GDP	**20,820**	**22,948**	**43,768**

Note: The port industry refers to firms/enterprises located in Georgia because of the ports' existence. Savannah and Brunswick Cargo-Based Activity and Port Investment refer to impacts generated by the public facilities owned by the Georgia Ports Authority. Private Facilities/Docks refers to impacts generated by privately-owned facilities/docks. Port users are firms/enterprises that utilize port facilities (primarily importers and exporters).

Source: Estimated by the Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), 2018.

TABLE 5

THE ECONOMIC IMPACT OF GEORGIA'S DEEPWATER PORTS ON EMPLOYMENT IN GEORGIA, FISCAL YEAR 2017
(FULL- & PART-TIME JOBS)

	DIRECT ECONOMIC IMPACT ON EMPLOYMENT (full- and part-time jobs)	INDIRECT & INDUCED ECONOMIC IMPACT ON EMPLOYMENT (full- and part-time jobs)	TOTAL ECONOMIC IMPACT ON EMPLOYMENT (full- and part-time jobs)
The Port Industry	25,338	13,389	38,727
Savannah Cargo-Based Activity	22,123	11,725	33,849
Brunswick Cargo-Based Activity	1,242	703	1,945
Port Investment	277	181	457
Private Facilities/Docks	1,696	780	2,476
The Port Users	154,851	245,642	400,493
Total Employment Impact	**180,189**	**259,031**	**439,220**

Note: The port industry refers to firms/enterprises located in Georgia because of the ports' existence. Savannah and Brunswick Cargo-Based Activity and Port Investment refer to impacts generated by the public facilities owned by the Georgia Ports Authority. Private Facilities/Docks refers to impacts generated by privately-owned facilities/docks. Port users are firms/enterprises that utilize port facilities (primarily importers and exporters).

Source: Estimated by the Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), 2018.

TABLE 6

THE ECONOMIC IMPACT OF GEORGIA'S DEEPWATER PORTS ON TAX COLLECTIONS IN GEORGIA, FISCAL YEAR 2017
(MILLIONS OF 2017 DOLLARS)

	FEDERAL TAXES	STATE TAXES	LOCAL TAXES
Port Industry	527.6	99.3	102.6
Savannah Cargo-Based Activity	462.2	87.1	90.1
Brunswick Cargo-Based Activity	26.5	5.0	5.2
Port Investment	7.1	1.2	1.1
Private Facilities/Docks	31.8	6.0	6.2
Port Users	5,416.4	1,333.4	1,368.8
Total	**5,944.0**	**1,432.7**	**1,471.4**

Note: The port industry refers to firms/enterprises located in Georgia because of the ports' existence. Savannah and Brunswick Cargo-Based Activity and Port Investment refer to impacts generated by the public facilities owned by the Georgia Ports Authority. Private Facilities/Docks refers to impacts generated by privately-owned facilities/docks. Port users are firms/enterprises that utilize port facilities (primarily importers and exporters).

Source: Estimated by the Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), 2018.

TABLE 7

OVERALL MULTIPLIERS FOR OUTPUT, EMPLOYMENT, INCOME, AND STATE GDP

	OUTPUT MULTIPLIER VALUE	EMPLOYMENT MULTIPLIER VALUE	INCOME MULTIPLIER VALUE	STATE GDP MULTIPLIER VALUE
Port Industry	1.537	1.528	1.495	1.536
Savannah Cargo-Based Activity	1.536	1.530	1.496	1.535
Brunswick Cargo-Based Activity	1.541	1.566	1.536	1.554
Port Investment	1.657	1.650	1.471	1.667
Private Facilities/Docks	1.529	1.460	1.458	1.521
Port Users	1.685	2.586	2.267	2.149
Total	**1.677**	**2.438**	**2.188**	**2.102**

Note: The port industry refers to firms/enterprises located in Georgia because of the ports' existence Savannah and Brunswick Cargo-Based Activity and Port Investment refer to impacts generated by the public facilities owned by the Georgia Ports Authority. Private Facilities/Docks refers to impacts generated by privately-owned facilities/docks. Port users are firms/enterprises that utilize port facilities (primarily importers and exporters).

Source: Estimated by the Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), 2018.

TABLE 8

DISTRIBUTION OF TOTAL ECONOMIC IMPACTS OF CARGO-BASED ACTIVITY AT THE PORTS OF SAVANNAH AND BRUNSWICK BY MODE OF CARGO, FISCAL YEAR 2017

MODEL/IMPACT	OUTPUT/REVENUE (MIL. $2014)	GROSS STATE PRODUCT (MIL. $2014)	INCOME (MIL. $2014)	EMPLOYMENT (JOBS)
Containerized	4,232	2,070	1,460	32,803
Breakbulk	100	50	38	909
Auto/Vehicle	204	101	66	1,494
Dry Bulk	48	22	15	338
Liquid Bulk	30	18	12	250
Total	**4,614**	**2,261**	**1,592**	**35,794**
PERCENT OF TOTAL				
Containerized	91.7%	91.5%	91.7%	91.6%
Breakbulk	2.2%	2.2%	2.4%	2.5%
Auto/Vehicle	4.4%	4.5%	4.2%	4.2%
Dry Bulk	1.0%	1.0%	0.9%	0.9%
Liquid Bulk	0.7%	0.8%	0.8%	0.7%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: Estimated by the Selig Center for Economic Growth, Terry College of Business, University of Georgia (ww.selig.uga.edu), 2018

TABLE 9

PORT INDUSTRY EMPLOYMENT IMPACT BY OCCUPATION IN GEORGIA

OCCUPATIONAL CATEGORY	PORT INDUSTRY IMPACT (FULL- AND PART-TIME JOBS)
Executive, administrative, and managerial	**3,191**
Managerial and Administrative	2,399
Management support	792
Professional speciality	**1,195**
Engineers	194
Architects and surveyors	19
Life scientists	13
Computer, math, and operations research	200
Physical scientists	29
Religious workers	65
Social scientists	14
Social and recreation workers	45
Lawyers and judicial workers	33
Teachers, librarians, and counselors	194
Health diagnosing	18
Health assessment and treatment	98
Writers, artists, and entertainers	146
All other professionals	127
Technicians and related support	**375**
Health	135
Engineering	137
Other technicians	103
Marketing and sales	**2,929**
Cashiers	673
Counter and rental clerks	139
Insurance sales agents	50
Marketing and sales worker supervisors	360
Models, demonstrators, product promoters	27
Parts salespersons	32
Real estate agents and brokers	17
Retail salespersons	738
Sales engineers	5
Securities, commodities, financial services sales	25
Travel agents	8
All other sales and related	856
Administrative Support	**6,360**
Adjusters, investigators, and collectors	303
Communications equipment operators	59
Computer operators	29
Information clerks	246
Mail clerks and messengers	182
Postal clerks and mail carriers	44

OCCUPATIONAL CATEGORY	PORT INDUSTRY IMPACT (FULL- AND PART-TIME JOBS)
Administrative Support (Continued)	
Material recording, scheduling, dispatch, distributing	1,641
Records processing	1,157
Secretaries, stenographers, typists	627
Other administrative support	2,074
Service	**2,881**
Cleaning and building service	417
Food preparation and service	1,757
Health service	138
Personal service	93
Private household workers	46
Protective service	417
Agriculture, forestry, and fishing	**160**
Production, craft, and repair	**4,472**
Blue collar worker supervisors	1,027
Construction trades	375
Extractive and related workers	29
Mechanics, installers, and repairers	1,842
Machinery mechanics, installers, and repairers	160
Vehicle and mobile equipment mechanics	785
Other mechanics, installers, and repairers	255
Precision Production	**322**
Plant and systems	**28**
Operators, fabricators, and laborers	**16,814**
Numerical control machine tool operators	3
Combination machine tool setters, etc.	3
Machine setters, operators, and tenders	342
Hand Workers, including assemblers	379
Transportation and material moving machine/vehicle	12,761
Helpers, laborers, and material movers, hand	3,324
Total all occupations	**38,727**

Note: The port industry refers to firms/enterprises located in Georgia because of the ports' existence.

Source: Estimated by the Selig Center for Economic Growth, Terry College of Business, University of Georgia (wws.selig.uga.edu), 2018

TABLE 10

PORT USERS EMPLOYMENT IMPACT BY INDUSTRY IN GEORGIA, FISCAL YEAR 2017

IMPACTED INDUSTRY	EMPLOYMENT (FULL- AND PART-TIME JOBS)
Agriculture, Forestry, Fishing	36,280
Mining	2,536
Utilities	1,522
Construction	3,647
Manufacturing	126,518
Wholesale Trade	23,934
Retail Trade	22,102
Transportation & Warehousing	31,477
Information	4,476
Finance & Insurance	13,223
Real Estate, Rental, Leasing	11,025
Services & Government	123,755
Total	**400,493**

Note: Port users are firms/enterprises that utilized ports facilities (primarily importers and exporters).

Source: Estimated by the Selig Center for Economic Growth, Terry College of Business, University of Georgia (wws.selig.uga.edu), 2018

TABLE 11

THE ECONOMIC IMPACT OF GEORGIA'S DEEPWATER PORTS ON COUNTY-LEVEL EMPLOYMENT IN GEORGIA, FISCAL YEAR 2017 (FULL- AND PART-TIME JOBS)

COUNTY	EMPLOYMENT (JOBS)	COUNTY	EMPLOYMENT (JOBS)
Appling, GA	616	Dooly, GA	324
Atkinson, GA	202	Dougherty, GA	3,863
Bacon, GA	351	Douglas, GA	3,842
Baker, GA	53	Early, GA	499
Baldwin, GA	1,264	Echols, GA	43
Banks, GA	351	Effingham, GA	2,386
Barrow, GA	1,683	Elbert, GA	693
Bartow, GA	4,206	Emanuel, GA	605
Ben Hill, GA	553	Evans, GA	390
Berrien, GA	346	Fannin, GA	640
Bibb, GA	8,898	Fayette, GA	3,948
Bleckley, GA	256	Floyd, GA	3,450
Brantley, GA	426	Forsyth, GA	6,200
Brooks, GA	277	Franklin, GA	792
Bryan, GA	1,083	Fulton, GA	77,418
Bulloch, GA	4,436	Gilmer, GA	678
Burke, GA	780	Glascock, GA	47
Butts, GA	575	Glynn, GA	5,566
Calhoun, GA	107	Gordon, GA	2,236
Camden, GA	1,307	Grady, GA	566
Candler, GA	279	Greene, GA	535
Carroll, GA	3,581	Gwinnett, GA	34,466
Catoosa, GA	1,290	Habersham, GA	1,225
Charlton, GA	177	Hall, GA	7,275
Chatham, GA	39,025	Hancock, GA	146
Chattahoochee, GA	1,045	Haralson, GA	584
Chattooga, GA	583	Harris, GA	515
Cherokee, GA	6,202	Hart, GA	604
Clarke, GA	5,409	Heard, GA	200
Clay, GA	51	Henry, GA	6,042
Clayton, GA	12,827	Houston, GA	4,726
Clinch, GA	199	Irwin, GA	181
Cobb, GA	32,772	Jackson, GA	2,204
Coffee, GA	1,483	Jasper, GA	233
Colquitt, GA	1,204	Jeff Davis, GA	3,502
Columbia, GA	3,329	Jefferson, GA	648
Cook, GA	341	Jenkins, GA	140
Coweta, GA	3,733	Johnson, GA	165
Crawford, GA	134	Jones, GA	423
Crisp, GA	712	Lamar, GA	360
Dade, GA	305	Lanier, GA	133
Dawson, GA	725	Laurens, GA	1,627
Decatur, GA	724	Lee, GA	596
DeKalb, GA	28,797	Liberty, GA	4,306
Dodge, GA	456	Lincoln, GA	134

TABLE 11 (CONTINUED)

THE ECONOMIC IMPACT OF GEORGIA'S DEEPWATER PORTS ON COUNTY-LEVEL EMPLOYMENT IN GEORGIA, FISCAL YEAR 2017 (FULL- AND PART-TIME JOBS)

COUNTY	EMPLOYMENT (JOBS)	COUNTY	EMPLOYMENT (JOBS)
Long, GA	107	Thomas, GA	1,649
Lowndes, GA	4,244	Tift, GA	1,639
Lumpkin, GA	713	Toombs, GA	1,047
McDuffie, GA	599	Towns, GA	323
McIntosh, GA	202	Treutlen, GA	118
Macon, GA	263	Troup, GA	4,534
Madison, GA	394	Turner, GA	222
Marion, GA	129	Twiggs, GA	196
Meriwether, GA	505	Union, GA	680
Miller, GA	155	Upson, GA	562
Mitchell, GA	595	Walker, GA	1,330
Monroe, GA	677	Walton, GA	1,967
Montgomery, GA	177	Ware, GA	5,229
Morgan, GA	694	Warren, GA	142
Murray, GA	901	Washington, GA	2,980
Muscogee, GA	7,708	Wayne, GA	3,203
Newton, GA	2,647	Webster, GA	44
Oconee, GA	1,072	Wheeler, GA	120
Oglethorpe, GA	195	White, GA	712
Paulding, GA	2,212	Whitfield, GA	5,677
Peach, GA	866	Wilcox, GA	156
Pickens, GA	736	Wilkes, GA	270
Pierce, GA	394	Wilkinson, GA	557
Pike, GA	316	Worth, GA	329
Polk, GA	1,016		
Pulaski, GA	264	**Total for Georgia**	**439,220**
Putnam, GA	536		
Quitman, GA	35		
Rabun, GA	446		
Randolph, GA	179		
Richmond, GA	8,698		
Rockdale, GA	2,921		
Schley, GA	95		
Screven, GA	324		
Seminole, GA	211		
Spalding, GA	1,994		
Stephens, GA	777		
Stewart, GA	108		
Sumter, GA	1,371		
Talbot, GA	83		
Taliaferro, GA	25		
Tattnall, GA	906		
Taylor, GA	208		
Telfair, GA	292		
Terrell, GA	235		

Note: The allocation of port users' jobs to the counties is partially based on the location of the company on the bill of lading and is not necessarily the origin/destination of the cargo.

Source: Estimated by the Selig Center for Economic Growth, Terry College of Business, University of Georgia (wws.selig.uga.edu), 2018


HORIZON HIGHWAY

TABLE A-1

OVERALL SAVANNAH & BRUNSWICK FY 2017
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	5,058.8	18.0	485.1	838.6
Agri. Serv., Forestry, & Fish	1,987.4	34.0	888.9	1,097.7
Mining	7,130.0	62.0	1,024.6	2,463.2
Construction	57,554.8	150.0	7,911.7	17,760.2
Manufacturing	299,982.1	814.0	47,607.9	87,419.0
Trans. & Public Utilities	3,206,541.7	24,924.0	1,140,280.5	1,581,027.3
Wholesale	117,995.8	591.0	47,983.4	50,133.8
Retail Trade	256,917.0	3,988.0	94,462.8	149,551.5
Finance, Ins., & Real Estate	284,453.2	1,426.0	90,929.2	181,387.9
Services	349,754.7	3,568.0	148,767.2	170,038.3
Government	35,280.1	216.0	11,259.2	19,662.9
Check total	-0.1	-2.0	1.3	-0.1
Total	**4,622,655.8**	**35,793.0**	**1,591,599.1**	**2,261,380.5**
Distribution of Economic Impact				
1. Direct Impact	3,010,260.6	23,365.0	1,063,343.9	1,472,723.9
2. Indirect & Induced Impacts	1,612,251.1	12,428.0	528,255.1	788,656.5
3. Total Economic Impact	4,622,655.8	35,794.0	1,591,599.1	2,261,380.5
4. Multipliers (e.g., 3/1)	1.536	1.532	1.497	1.536
Composition of Gross State Product				
1. Wages (Net of Taxes)				1,406,891.0
2. Taxes, Total				355,352.2
a. Local Taxes				58,970.7
b. State Taxes				53,029.5
c. Federal Taxes				261,348.4
3. Profits, dividends, rent and other				499,137.2
4. Total Gross State Product (1+2+3)				2,261,380.5
Tax Accounts				
Total				676,016.3
Local				95,304.2
State				92,049.1
Federal				488,663.5
Check total				-0.6
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				11.9
Income				528,300.8
State Taxes				30,553.9
Local Taxes				31,634.4
Gross State Product				750,621.9
Initial Expenditure in Dollars				3,012,676,078.0

TABLE A-2

SAVANNAH FY 2017
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	4,770.7	17.0	457.8	791.2
Agri. Serv., Forestry, & Fish	1,908.3	33.0	853.7	1,051.6
Mining	6,683.0	58.0	960.1	2,308.7
Construction	53,291.8	140.0	7,320.2	16,448.5
Manufacturing	282,295.2	768.0	44,896.8	82,357.1
Trans. & Public Utilities	3,031,502.8	23,644.0	1,082,876.1	1,496,701.5
Wholesale	111,701.5	561.0	45,423.8	47,459.7
Retail Trade	243,012.5	3,772.0	89,351.4	141,462.9
Finance, Ins., & Real Estate	267,048.2	1,342.0	85,837.1	170,102.8
Services	328,238.6	3,338.0	138,982.4	159,473.7
Government	27,621.4	176.0	8,677.2	14,686.1
Check total	-0.1	1.0	-0.1	0.4
Total	**4,358,074.1**	**33,848.0**	**1,505,636.7**	**2,132,843.3**
Distribution of Economic Impact				
1. Direct Impact	2,837,863.2	22,123.0	1,007,457.9	1,389,537.0
2. Indirect & Induced Impacts	1,520,066.8	11,725.0	498,179.0	743,306.2
3. Total Economic Impact	4,358,074.1	33,849.0	1,505,636.7	2,132,843.3
4. Multipliers (e.g., 3/1)	1.536	1.530	1.494	1.535
Composition of Gross State Product				
1. Wages (Net of Taxes)				1,330,993.3
2. Taxes, Total				336,071.3
a. Local Taxes				55,770.2
b. State Taxes				50,154.6
c. Federal Taxes				230,146.2
3. Profits, dividends, rent and other				465,778.7
4. Total Gross State Product (1+2+3)				2,132,843.3
Tax Accounts				
Total				639,416.3
Local				90,141.2
State				87,066.5
Federal				462,208.8
Check total				-0.3
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				11.9
Income				530,161.0
State Taxes				30,657.6
Local Taxes				31,740.3
Gross State Product				751,011.3
Initial Expenditure in Dollars				2,839,961,595.9

TABLE A-3

BRUNSWICK FY 2017
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	288.2	1.0	27.3	47.3
Agri. Serv., Forestry, & Fish	79.1	1.0	35.2	46.0
Mining	447.0	4.0	64.4	154.5
Construction	4,263.0	10.0	591.6	1,311.7
Manufacturing	17,686.9	46.0	2,711.0	5,061.9
Trans. & Public Utilities	175,038.9	1,280.0	57,404.5	84,325.8
Wholesale	6,294.3	30.0	2,559.6	2,674.1
Retail Trade	13,904.5	216.0	5,111.3	8,088.7
Finance, Ins., & Real Estate	17,405.0	84.0	5,092.1	11,285.1
Services	21,516.1	230.0	9,784.8	10,564.6
Government	7,658.7	40.0	2,582.0	4,976.8
Check total	0.0	-3.0	1.4	-0.6
Total	**264,581.7**	**1,945.0**	**85,962.4**	**128,537.2**
Distribution of Economic Impact				
1. Direct Impact	172,397.4	1,242.0	55,886.0	83,186.9
2. Indirect & Induced Impacts	92,184.3	703.0	30,076.1	45,350.3
3. Total Economic Impact	264,581.7	1,945.0	85,962.4	128,537.2
4. Multipliers (e.g., 3/1)	1.535	1.566	1.538	1.545
Composition of Gross State Product				
1. Wages (Net of Taxes)				75,897.7
2. Taxes, Total				19,280.8
a. Local Taxes				3,200.5
b. State Taxes				2,874.9
c. Federal Taxes				31,202.2
3. Profits, dividends, rent and other				33,358.5
4. Total Gross State Product (1+2+3)				128,537.2
Tax Accounts				
Total				36,600.0
Local				5,163.0
State				4,982.6
Federal				26,454.7
Check total				-0.3
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				11.3
Income				497,713.9
State Taxes				28,848.7
Local Taxes				29,893.2
Gross State Product				744,217.8
Initial Expenditure in Dollars				172,714,482.1

TABLE A-4

AUTOS SAVANNAH & BRUNSWICK FY 2017
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	225.9	1.0	21.4	37.1
Agri. Serv., Forestry, & Fish	63.6	1.0	28.5	37.1
Mining	222.6	2.0	33.4	78.3
Construction	3,652.6	10.0	507.8	1,123.3
Manufacturing	11,518.3	35.0	2,042.2	3,556.9
Trans. & Public Utilities	135,636.1	980.0	44,054.1	65,994.2
Wholesale	4,316.1	21.0	1,755.1	1,833.8
Retail Trade	10,676.7	166.0	3,924.8	6,210.4
Finance, Ins., & Real Estate	14,068.5	66.0	3,969.7	9,178.4
Services	16,573.5	175.0	7,611.1	8,113.1
Government	7,226.7	36.0	2,442.6	4,736.7
Check total	0.0	-1.0	0.0	-0.1
Total	**204,180.5**	**1,494.0**	**66,390.7**	**100,899.5**
Distribution of Economic Impact				
1. Direct Impact	132,651.7	949.0	43,029.0	65,586.3
2. Indirect & Induced Impacts	71,384.9	544.0	23,361.6	35,313.2
3. Total Economic Impact	204,180.5	1,494.0	66,390.7	100,899.5
4. Multipliers (e.g., 3/1)	1.539	1.574	1.543	1.538
Composition of Gross State Product				
1. Wages (Net of Taxes)				58,425.6
2. Taxes, Total				15,083.1
a. Local Taxes				2,562.9
b. State Taxes				2,274.9
c. Federal Taxes				10,245.4
3. Profits, dividends, rent and other				27,390.8
4. Total Gross State Product (1+2+3)				100,899.5
Tax Accounts				
Total				28,459.1
Local				4,078.4
State				3,902.6
Federal				20,478.2
Check total				-0.1
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				11.2
Income				498,911.9
State Taxes				29,327.5
Local Taxes				30,648.6
Gross State Product				758,238.6
Initial Expenditure in Dollars				133,070,927.3

TABLE A-5

BREAKBULK SAVANNAH & BRUNSWICK FY 2017
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	119.7	0.0	11.5	19.7
Agri. Serv., Forestry, & Fish	46.6	1.0	21.0	25.9
Mining	234.8	2.0	33.1	80.4
Construction	1,288.4	3.0	176.8	397.8
Manufacturing	8,343.0	20.0	1,156.1	2,274.4
Trans. & Public Utilities	54,630.7	444.0	19,877.7	27,266.1
Wholesale	2,581.1	13.0	1,049.7	1,096.6
Retail Trade	5,999.4	93.0	2,206.5	3,492.2
Finance, Ins., & Real Estate	6,563.3	33.0	2,064.8	4,197.0
Services	18,606.3	291.0	10,431.9	10,043.7
Government	1,613.0	9.0	537.2	1,007.3
Check total	-0.6	0.0	1.7	0.0
Total	**100,026.9**	**909.0**	**37,564.6**	**49,901.1**
Distribution of Economic Impact				
1. Direct Impact	65,183.3	637.0	26,129.9	32,743.0
2. Indirect & Induced Impacts	34,843.3	273.0	11,434.9	17,158.2
3. Total Economic Impact	100,026.9	909.0	37,564.6	49,901.1
4. Multipliers (e.g., 3/1)	1.535	1.427	1.438	1.524
Composition of Gross State Product				
1. Wages (Net of Taxes)				33,396.4
2. Taxes, Total				8,195.8
a. Local Taxes				1,391.6
b. State Taxes				1,247.7
c. Federal Taxes				5,556.3
3. Profits, dividends, rent and other				8,309.1
4. Total Gross State Product (1+2+3)				49,901.1
Tax Accounts				
Total				15,764.2
Local				2,249.3
State				2,168.8
Federal				11,346.1
Check total				0.0
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				13.9
Income				575,661.0
State Taxes				33,236.4
Local Taxes				34,468.8
Gross State Product				764,713.7
Initial Expenditure in Dollars				65,254,686.0

TABLE A-6

CONTAINER SAVANNAH & BRUNSWICK FY 2017
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	4,623.4	17.0	443.5	767.1
Agri. Serv., Forestry, & Fish	1,855.9	32.0	830.2	1,022.3
Mining	6,296.9	55.0	906.2	2,176.7
Construction	51,465.5	135.0	7,067.8	15,885.5
Manufacturing	270,164.3	743.0	43,374.7	79,206.6
Trans. & Public Utilities	2,959,866.4	23,106.0	1,057,293.3	1,460,355.4
Wholesale	108,251.2	544.0	44,020.6	45,993.8
Retail Trade	235,734.8	3,658.0	86,675.2	137,227.8
Finance, Ins., & Real Estate	259,014.5	1,302.0	83,319.4	164,964.3
Services	308,804.7	3,047.0	128,379.5	149,114.1
Government	25,475.4	165.0	7,963.2	13,338.7
Check total	0.0	2.0	-0.4	0.4
Total	**4,231,553.0**	**32,802.0**	**1,460,274.1**	**2,070,051.6**
Distribution of Economic Impact				
1. Direct Impact	2,754,919.9	21,412.0	976,235.3	1,348,038.0
2. Indirect & Induced Impacts	1,476,633.1	11,390.0	484,038.7	722,013.6
3. Total Economic Impact	4,231,553.0	32,803.0	1,460,274.1	2,070,051.6
4. Multipliers (e.g., 3/1)	1.536	1.532	1.496	1.536
Composition of Gross State Product				
1. Wages (Net of Taxes)				1,290,673.8
2. Taxes, Total				326,164.4
a. Local Taxes				54,090.5
b. State Taxes				48,646.8
c. Federal Taxes				223,427.0
3. Profits, dividends, rent and other				453,213.4
4. Total Gross State Product (1+2+3)				2,070,051.6
Tax Accounts				
Total				620,370.1
Local				87,426.0
State				84,446.4
Federal				448,497.8
Check total				-0.1
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				11.9
Income				529,708.5
State Taxes				30,632.6
Local Taxes				31,713.4
Gross State Product				750,902.8
Initial Expenditure in Dollars				2,756,750,450.0

TABLE A-7

DRY BULK SAVANNAH & BRUNSWICK FY 2017
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	49.3	0.0	4.7	8.1
Agri. Serv., Forestry, & Fish	11.7	0.0	5.0	6.8
Mining	188.7	2.0	26.0	64.2
Construction	575.0	1.0	79.4	177.2
Manufacturing	5,126.3	9.0	550.6	1,243.4
Trans. & Public Utilities	31,206.8	230.0	10,483.9	14,764.8
Wholesale	1,541.9	7.0	627.1	655.0
Retail Trade	2,489.9	39.0	915.2	1,448.5
Finance, Ins., & Real Estate	2,692.8	14.0	876.7	1,710.6
Services	3,275.5	31.0	1,332.4	1,572.0
Government	646.8	4.0	213.8	398.3
Check total	0.1	-1.0	0.1	-0.4
Total	**47,804.7**	**338.0**	**15,114.8**	**22,049.3**
Distribution of Economic Impact				
1. Direct Impact	31,450.5	214.0	9,850.5	14,148.6
2. Indirect & Induced Impacts	16,354.1	124.0	5,264.3	7,900.5
3. Total Economic Impact	47,804.7	338.0	15,114.8	22,049.3
4. Multipliers (e.g., 3/1)	1.520	1.579	1.534	1.558
Composition of Gross State Product				
1. Wages (Net of Taxes)				13,438.3
2. Taxes, Total				3,296.8
a. Local Taxes				518.9
b. State Taxes				480.1
c. Federal Taxes				20,294.9
3. Profits, dividends, rent and other				5,313.9
4. Total Gross State Product (1+2+3)				22,049.3
Tax Accounts				
Total				6,342.1
Local				863.9
State				850.6
Federal				4,627.7
Check total				-0.1
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				10.7
Income				479,888.3
State Taxes				27,007.6
Local Taxes				27,427.8
Gross State Product				700,055.2
Initial Expenditure in Dollars				31,496,484.0

TABLE A-8

LIQUID BULK SAVANNAH & BRUNSWICK FY 2017
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	40.6	0.0	3.9	6.6
Agri. Serv., Forestry, & Fish	9.6	0.0	4.2	5.6
Mining	187.0	1.0	25.9	63.6
Construction	573.3	1.0	79.8	176.5
Manufacturing	4,830.1	7.0	484.4	1,137.6
Trans. & Public Utilities	25,201.7	164.0	8,571.5	12,646.9
Wholesale	1,305.5	6.0	530.8	554.6
Retail Trade	2,016.2	32.0	741.0	1,172.6
Finance, Ins., & Real Estate	2,114.2	11.0	698.6	1,337.6
Services	2,494.7	24.0	1,012.3	1,195.5
Government	318.2	2.0	102.4	181.8
Check total	0.3	-2.0	-0.1	0.0
Total	**39,090.8**	**250.0**	**12,255.0**	**18,479.0**
Distribution of Economic Impact				
1. Direct Impact	26,055.2	153.0	8,099.3	12,208.0
2. Indirect & Induced Impacts	13,035.6	97.0	4,155.7	6,271.0
3. Total Economic Impact	39,090.8	250.0	12,255.0	18,479.0
4. Multipliers (e.g., 3/1)	1.500	1.634	1.513	1.514
Composition of Gross State Product				
1. Wages (Net of Taxes)				10,957.0
2. Taxes, Total				2,611.9
a. Local Taxes				406.8
b. State Taxes				380.1
c. Federal Taxes				1,824.9
3. Profits, dividends, rent and other				4,910.1
4. Total Gross State Product (1+2+3)				18,479.0
Tax Accounts				
Total				5,080.8
Local				686.6
State				680.6
Federal				3,713.7
Check total				-0.1
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				9.6
Income				469,476.8
State Taxes				26,073.2
Local Taxes				26,304.6
Gross State Product				707,910.4
Initial Expenditure in Dollars				26,103,530.8

TABLE A-9

GARDEN CITY BREAKBULK
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	1.2	0.0	0.1	0.1
Agri. Serv., Forestry, & Fish	0.4	0.0	0.1	0.3
Mining	2.4	0.0	0.3	0.9
Construction	12.2	0.0	1.7	3.7
Manufacturing	83.3	0.0	11.4	22.6
Trans. & Public Utilities	522.2	4.0	189.8	258.1
Wholesale	25.3	0.0	10.4	10.8
Retail Trade	58.6	1.0	21.6	34.1
Finance, Ins., & Real Estate	64.3	0.0	20.1	41.1
Services	187.3	3.0	105.4	101.3
Government	16.3	0.0	5.5	10.2
Check total	0.0	-1.0	0.1	0.1
Total	**973.5**	**9.0**	**366.3**	**483.1**
Distribution of Economic Impact				
1. Direct Impact	633.4	6.0	254.8	315.6
2. Indirect & Induced Impacts	339.9	3.0	111.6	167.5
3. Total Economic Impact	973.5	9.0	366.3	483.1
4. Multipliers (e.g., 3/1)	1.537	1.421	1.438	1.531
Composition of Gross State Product				
1. Wages (Net of Taxes)				325.4
2. Taxes, Total				80.3
a. Local Taxes				13.7
b. State Taxes				12.2
c. Federal Taxes				54.2
3. Profits, dividends, rent and other				77.5
4. Total Gross State Product (1+2+3)				483.1
Tax Accounts				
Total				154.1
Local				22.0
State				21.3
Federal				110.8
Check total				0.0
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				14.2
Income				830,946.9
State Taxes				48,151.4
Local Taxes				50,035.9
Gross State Product				1,095,909.7
Initial Expenditure in Dollars				634,209.7

TABLE A-10

GARDEN CITY CONTAINERIZED CARGO
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	4,618.9	17.0	443.1	766.3
Agri. Serv., Forestry, & Fish	1,854.1	32.0	829.4	1,021.3
Mining	6,290.6	55.0	905.3	2,174.6
Construction	51,422.2	135.0	7,061.9	15,872.1
Manufacturing	269,899.1	742.0	43,332.9	79,129.5
Trans. & Public Utilities	2,956,950.9	23,082.0	1,056,271.0	1,458,976.8
Wholesale	108,140.9	543.0	43,975.7	45,946.9
Retail Trade	235,504.6	3,654.0	86,590.6	137,093.7
Finance, Ins., & Real Estate	258,758.0	1,301.0	83,237.3	164,800.5
Services	308,494.0	3,044.0	128,251.2	148,964.2
Government	25,450.0	165.0	7,955.3	13,325.3
Check total	0.1	1.0	-0.1	0.3
Total	**4,227,382.9**	**32,769.0**	**1,458,853.9**	**2,068,070.8**
Distribution of Economic Impact				
1. Direct Impact	2,752,222.9	21,390.0	975,298.7	1,346,777.3
2. Indirect & Induced Impacts	1,475,160.0	11,379.0	483,555.0	721,293.5
3. Total Economic Impact	4,227,382.9	32,769.0	1,458,853.9	2,068,070.8
4. Multipliers (e.g., 3/1)	1.536	1.532	1.496	1.536
Composition of Gross State Product				
1. Wages (Net of Taxes)				1,289,421.4
2. Taxes, Total				325,844.5
a. Local Taxes				54,037.8
b. State Taxes				48,599.4
c. Federal Taxes				223,207.1
3. Profits, dividends, rent and other				452,805.0
4. Total Gross State Product (1+2+3)				2,068,070.8
Tax Accounts				
Total				619,764.0
Local				87,340.9
State				84,364.1
Federal				448,059.0
Check total				0.0
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				11.9
Income				762,043.7
State Taxes				44,068.6
Local Taxes				45,623.8
Gross State Product				1,080,272.1
Initial Expenditure in Dollars				2,754,051,659.4

TABLE A-11

GARDEN CITY LIQUID BULK
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	23.7	0.0	2.3	3.9
Agri. Serv., Forestry, & Fish	5.8	0.0	2.4	3.3
Mining	157.0	1.0	21.6	53.2
Construction	420.4	1.0	59.0	129.2
Manufacturing	3,773.2	5.0	337.4	847.3
Trans. & Public Utilities	13,397.8	72.0	4,704.4	7,357.7
Wholesale	824.6	4.0	335.3	350.3
Retail Trade	1,131.2	18.0	415.8	657.4
Finance, Ins., & Real Estate	1,163.4	6.0	384.5	734.0
Services	1,354.4	13.0	564.9	649.8
Government	223.0	1.0	72.8	132.6
Check total	0.1	-1.0	0.0	-0.1
Total	**22,474.2**	**122.0**	**6,900.4**	**10,919.0**
Distribution of Economic Impact				
1. Direct Impact	15,293.5	70.0	4,653.4	7,489.1
2. Indirect & Induced Impacts	7,180.8	52.0	2,246.9	3,429.8
3. Total Economic Impact	22,474.2	122.0	6,900.4	10,919.0
4. Multipliers (e.g., 3/1)	1.470	1.751	1.483	1.458
Composition of Gross State Product				
1. Wages (Net of Taxes)				6,162.2
2. Taxes, Total				1,478.0
a. Local Taxes				247.4
b. State Taxes				225.4
c. Federal Taxes				1,005.1
3. Profits, dividends, rent and other				3,278.7
4. Total Gross State Product (1+2+3)				10,919.0
Tax Accounts				
Total				2,868.1
Local				405.0
State				394.6
Federal				2,068.7
Check total				-0.1
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				8.0
Income				647,339.8
State Taxes				37,022.4
Local Taxes				37,984.8
Gross State Product				1,024,326.4
Initial Expenditure in Dollars				15,334,916.4

TABLE A-12

OCEAN TERMINAL AUTOS
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	13.2	0.0	1.3	2.2
Agri. Serv., Forestry, & Fish	3.7	0.0	1.7	2.2
Mining	13.4	0.0	2.0	4.7
Construction	221.1	1.0	30.8	68.0
Manufacturing	684.2	2.0	120.7	210.5
Trans. & Public Utilities	7,805.8	56.0	2,541.0	3,842.6
Wholesale	245.6	1.0	99.8	104.3
Retail Trade	618.0	10.0	227.2	359.5
Finance, Ins., & Real Estate	822.0	4.0	230.0	536.9
Services	966.2	10.0	447.5	473.6
Government	439.9	2.0	148.8	288.9
Check total	0.0	0.0	0.0	0.0
Total	**11,833.2**	**86.0**	**3,850.8**	**5,893.4**
Distribution of Economic Impact				
1. Direct Impact	7,564.6	54.0	2,501.6	3,851.0
2. Indirect & Induced Impacts	4,124.8	31.0	1,349.3	2,042.4
3. Total Economic Impact	11,833.2	86.0	3,850.8	5,893.4
4. Multipliers (e.g., 3/1)	1.535	1.580	1.539	1.530
Composition of Gross State Product				
1. Wages (Net of Taxes)				3,385.7
2. Taxes, Total				878.0
a. Local Taxes				151.1
b. State Taxes				133.4
c. Federal Taxes				593.6
3. Profits, dividends, rent and other				1,629.6
4. Total Gross State Product (1+2+3)				5,893.4
Tax Accounts				
Total				1,653.8
Local				239.0
State				227.9
Federal				1,187.1
Check total				-0.1
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				11.1
Income				717,097.5
State Taxes				42,421.4
Local Taxes				44,497.3
Gross State Product				1,097,457.6
Initial Expenditure in Dollars				7,725,328.0

TABLE A-13

OCEAN TERMINAL BREAKBULK
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	109.2	0.0	10.5	18.0
Agri. Serv., Forestry, & Fish	42.4	1.0	19.1	23.6
Mining	213.3	2.0	30.1	73.1
Construction	1,172.6	3.0	160.8	362.1
Manufacturing	7,590.2	18.0	1,052.8	2,070.1
Trans. & Public Utilities	49,910.5	406.0	18,147.7	24,887.6
Wholesale	2,354.8	12.0	957.7	1,000.5
Retail Trade	5,470.0	85.0	2,011.7	3,184.1
Finance, Ins., & Real Estate	5,984.0	30.0	1,883.0	3,826.5
Services	16,926.0	265.0	9,485.0	9,135.0
Government	1,466.8	8.0	487.0	915.7
Check total	-0.3	1.0	0.1	0.0
Total	**91,240.2**	**829.0**	**34,245.2**	**45,496.3**
Distribution of Economic Impact				
1. Direct Impact	59,451.9	581.0	23,812.9	29,843.3
2. Indirect & Induced Impacts	31,788.2	249.0	10,432.4	15,653.0
3. Total Economic Impact	91,240.2	829.0	34,245.2	45,496.3
4. Multipliers (e.g., 3/1)	1.535	1.428	1.438	1.525
Composition of Gross State Product				
1. Wages (Net of Taxes)				30,446.1
2. Taxes, Total				7,470.6
a. Local Taxes				1,267.6
b. State Taxes				1,136.8
c. Federal Taxes				5,066.3
3. Profits, dividends, rent and other				7,579.4
4. Total Gross State Product (1+2+3)				45,496.3
Tax Accounts				
Total				14,370.2
Local				2,049.3
State				1,976.3
Federal				10,344.4
Check total				0.1
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				13.9
Income				823,437.4
State Taxes				47,771.6
Local Taxes				49,535.3
Gross State Product				1,099,707.6
Initial Expenditure in Dollars				59,516,691.8

TABLE A-14

OCEAN TERMINAL CONTAINERIZED CARGO
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	4.5	0.0	0.4	0.7
Agri. Serv., Forestry, & Fish	1.9	0.0	0.9	1.0
Mining	6.3	0.0	0.9	2.2
Construction	43.3	0.0	5.9	13.4
Manufacturing	265.3	1.0	41.7	77.1
Trans. & Public Utilities	2,915.5	24.0	1,022.3	1,378.6
Wholesale	110.3	1.0	44.9	46.9
Retail Trade	230.2	4.0	84.6	134.1
Finance, Ins., & Real Estate	256.5	1.0	82.1	163.7
Services	310.7	3.0	128.3	149.9
Government	25.5	0.0	7.9	13.4
Check total	-0.1	1.0	-0.3	0.1
Total	**4,170.1**	**33.0**	**1,420.2**	**1,980.8**
Distribution of Economic Impact				
1. Direct Impact	2,696.9	22.0	936.5	1,260.6
2. Indirect & Induced Impacts	1,473.1	11.0	483.7	720.2
3. Total Economic Impact	4,170.1	34.0	1,420.2	1,980.8
4. Multipliers (e.g., 3/1)	1.546	1.514	1.516	1.571
Composition of Gross State Product				
1. Wages (Net of Taxes)				1,252.4
2. Taxes, Total				319.9
a. Local Taxes				52.7
b. State Taxes				47.5
c. Federal Taxes				219.8
3. Profits, dividends, rent and other				408.4
4. Total Gross State Product (1+2+3)				1,980.8
Tax Accounts				
Total				606.1
Local				85.2
State				82.3
Federal				438.8
Check total				-0.1
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				12.4
Income				757,025.8
State Taxes				43,837.0
Local Taxes				45,366.3
Gross State Product				1,055,880.6
Initial Expenditure in Dollars				2,698,790.6

TABLE A-15

MAYOR'S POINT BREAKBULK
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	9.4	0.0	0.9	1.6
Agri. Serv., Forestry, & Fish	3.7	0.0	1.7	2.0
Mining	19.0	0.0	2.7	6.5
Construction	103.6	0.0	14.2	31.9
Manufacturing	669.2	2.0	91.9	181.6
Trans. & Public Utilities	4,195.8	34.0	1,539.4	2,119.2
Wholesale	200.8	1.0	81.7	85.3
Retail Trade	470.6	7.0	173.1	273.9
Finance, Ins., & Real Estate	514.7	3.0	161.6	329.2
Services	1,492.1	23.0	841.0	807.1
Government	129.9	1.0	43.2	81.4
Check total	-0.1	0.0	-0.1	-0.1
Total	**7,809.0**	**71.0**	**2,951.6**	**3,919.8**
Distribution of Economic Impact				
1. Direct Impact	5,095.2	50.0	2,061.1	2,582.7
2. Indirect & Induced Impacts	2,713.8	21.0	890.3	1,337.0
3. Total Economic Impact	7,809.0	71.0	2,951.6	3,919.8
4. Multipliers (e.g., 3/1)	1.533	1.425	1.432	1.518
Composition of Gross State Product				
1. Wages (Net of Taxes)				2,623.4
2. Taxes, Total				644.6
a. Local Taxes				110.3
b. State Taxes				98.7
c. Federal Taxes				435.5
3. Profits, dividends, rent and other				651.8
4. Total Gross State Product (1+2+3)				3,919.8
Tax Accounts				
Total				1,239.2
Local				177.8
State				171.0
Federal				890.5
Check total				-0.1
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				14.0
Income				832,385.5
State Taxes				48,230.5
Local Taxes				50,133.8
Gross State Product				1,105,459.1
Initial Expenditure in Dollars				5,101,085.7

TABLE A-16

COLONEL'S ISLAND AUTOS
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	212.6	1.0	20.1	35.0
Agri. Serv., Forestry, & Fish	59.8	1.0	26.8	35.0
Mining	209.2	2.0	31.4	73.5
Construction	3,431.5	9.0	477.0	1,055.2
Manufacturing	10,834.1	33.0	1,921.5	3,346.5
Trans. & Public Utilities	127,830.3	924.0	41,513.1	62,151.5
Wholesale	4,070.5	20.0	1,655.3	1,729.5
Retail Trade	10,058.7	156.0	3,697.6	5,850.9
Finance, Ins., & Real Estate	13,246.5	62.0	3,739.6	8,641.5
Services	15,607.4	165.0	7,163.5	7,639.5
Government	6,786.7	34.0	2,293.8	4,447.9
Check total	0.0	-1.0	0.0	-0.1
Total	**192,347.3**	**1,408.0**	**62,539.8**	**95,006.2**
Distribution of Economic Impact				
1. Direct Impact	125,087.1	895.0	40,527.4	61,735.4
2. Indirect & Induced Impacts	67,260.2	513.0	22,012.3	33,270.8
3. Total Economic Impact	192,347.3	1,408.0	62,539.8	95,006.2
4. Multipliers (e.g., 3/1)	1.538	1.573	1.543	1.539
Composition of Gross State Product				
1. Wages (Net of Taxes)				55,039.8
2. Taxes, Total				14,205.2
a. Local Taxes				2,411.8
b. State Taxes				2,141.5
c. Federal Taxes				9,651.9
3. Profits, dividends, rent and other				25,761.2
4. Total Gross State Product (1+2+3)				95,006.2
Tax Accounts				
Total				26,805.3
Local				3,839.5
State				3,674.8
Federal				19,291.1
Check total				0.0
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				11.3
Income				717,773.6
State Taxes				42,175.4
Local Taxes				44,065.8
Gross State Product				1,090,392.6
Initial Expenditure in Dollars				125,345,599.2

TABLE A-17

COLONEL'S ISLAND DRY BULK
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	7.0	0.0	0.7	1.2
Agri. Serv., Forestry, & Fish	1.7	0.0	0.7	1.0
Mining	57.8	1.0	7.9	19.6
Construction	132.2	0.0	18.6	40.6
Manufacturing	1,353.4	2.0	115.1	297.6
Trans. & Public Utilities	3,451.9	18.0	1,262.8	1,989.2
Wholesale	257.1	1.0	104.6	109.2
Retail Trade	322.8	5.0	118.7	187.6
Finance, Ins., & Real Estate	344.7	2.0	109.9	218.5
Services	420.8	4.0	184.6	203.0
Government	167.5	1.0	56.5	109.2
Check total	-0.1	0.0	0.0	-0.3
Total	**6,517.1**	**34.0**	**1,980.1**	**3,176.9**
Distribution of Economic Impact				
1. Direct Impact	4,473.2	19.0	1,346.5	2,202.5
2. Indirect & Induced Impacts	2,044.0	15.0	633.6	974.2
3. Total Economic Impact	6,517.1	34.0	1,980.1	3,176.9
4. Multipliers (e.g., 3/1)	1.457	1.770	1.471	1.442
Composition of Gross State Product				
1. Wages (Net of Taxes)				1,741.4
2. Taxes, Total				450.9
a. Local Taxes				86.0
b. State Taxes				74.2
c. Federal Taxes				290.6
3. Profits, dividends, rent and other				984.4
4. Total Gross State Product (1+2+3)				3,176.9
Tax Accounts				
Total				849.8
Local				131.2
State				122.7
Federal				595.9
Check total				0.0
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				7.6
Income				634,697.4
State Taxes				39,347.1
Local Taxes				42,070.4
Gross State Product				1,018,308.7
Initial Expenditure in Dollars				4,487,960.1

TABLE A-18

LOGISTEC BREAKBULK
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	0.0	0.0	0.0	0.0
Agri. Serv., Forestry, & Fish	0.0	0.0	0.0	0.0
Mining	0.0	0.0	0.0	0.0
Construction	0.0	0.0	0.0	0.0
Manufacturing	0.3	0.0	0.0	0.1
Trans. & Public Utilities	2.2	0.0	0.9	1.2
Wholesale	0.1	0.0	0.0	0.0
Retail Trade	0.3	0.0	0.1	0.1
Finance, Ins., & Real Estate	0.3	0.0	0.1	0.1
Services	0.9	0.0	0.4	0.4
Government	0.0	0.0	1.6	0.0
Check total	-0.1	0.0	1.6	0.0
Total	**4.2**	**0.0**	**1.6**	**2.0**
Distribution of Economic Impact				
1. Direct Impact	2.7	0.0	1.2	1.3
2. Indirect & Induced Impacts	1.4	0.0	0.4	0.7
3. Total Economic Impact	4.2	0.0	1.6	2.0
4. Multipliers (e.g., 3/1)	1.538	1.421	1.438	1.531
Composition of Gross State Product				
1. Wages (Net of Taxes)				1.4
2. Taxes, Total				0.3
a. Local Taxes				0.0
b. State Taxes				0.0
c. Federal Taxes				0.3
3. Profits, dividends, rent and other				0.3
4. Total Gross State Product (1+2+3)				2.0
Tax Accounts				
Total				0.7
Local				0.1
State				0.1
Federal				0.4
Check total				0.0
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				14.2
Income				830,946.9
State Taxes				48,151.4
Local Taxes				50,035.9
Gross State Product				1,095,909.7
Initial Expenditure in Dollars				2,698.8

TABLE A-19

LOGISTEC DRY BULK
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	42.3	0.0	4.0	6.9
Agri. Serv., Forestry, & Fish	9.9	0.0	4.3	5.8
Mining	130.9	1.0	18.1	44.6
Construction	442.8	1.0	60.9	136.7
Manufacturing	3,772.9	7.0	435.5	945.7
Trans. & Public Utilities	27,754.9	212.0	9,221.1	12,775.6
Wholesale	1,284.8	6.0	522.5	545.8
Retail Trade	2,167.1	34.0	796.6	1,260.9
Finance, Ins., & Real Estate	2,348.1	12.0	766.8	1,492.1
Services	2,854.8	27.0	1,147.9	1,369.0
Government	479.3	3.0	157.2	289.2
Check total	0.3	-1.0	0.1	-0.1
Total	**41,287.5**	**304.0**	**13,134.7**	**18,872.4**
Distribution of Economic Impact				
1. Direct Impact	26,977.3	195.0	8,504.0	11,946.1
2. Indirect & Induced Impacts	14,310.2	109.0	4,630.7	6,926.3
3. Total Economic Impact	41,287.5	304.0	13,134.7	18,872.4
4. Multipliers (e.g., 3/1)	1.530	1.556	1.545	1.580
Composition of Gross State Product				
1. Wages (Net of Taxes)				11,696.8
2. Taxes, Total				2,846.0
a. Local Taxes				432.9
b. State Taxes				405.8
c. Federal Taxes				20,004.3
3. Profits, dividends, rent and other				4,329.5
4. Total Gross State Product (1+2+3)				18,872.4
Tax Accounts				
Total				5,492.3
Local				732.7
State				727.9
Federal				4,031.8
Check total				-0.1
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				11.3
Income				699,612.8
State Taxes				38,768.8
Local Taxes				39,024.9
Gross State Product				1,005,230.4
Initial Expenditure in Dollars				27,008,523.8

TABLE A-20

LOGISTEC LIQUID BULK
TOTAL ECONOMIC IMPACT

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GSP (000 OF 2017$)
Agriculture	16.8	0.0	1.6	2.7
Agri. Serv., Forestry, & Fish	3.9	0.0	1.7	2.3
Mining	30.1	0.0	4.3	10.4
Construction	152.9	0.0	20.9	47.3
Manufacturing	1,056.9	2.0	147.0	290.3
Trans. & Public Utilities	11,803.9	92.0	3,867.1	5,289.2
Wholesale	480.9	2.0	195.5	204.3
Retail Trade	885.0	14.0	325.3	515.2
Finance, Ins., & Real Estate	950.8	5.0	314.0	603.6
Services	1,140.2	11.0	447.4	545.7
Government	95.2	1.0	29.6	49.2
Check total	0.1	-1.0	-0.1	0.1
Total	**16,616.5**	**128.0**	**5,354.6**	**7,560.0**
Distribution of Economic Impact				
1. Direct Impact	10,761.7	83.0	3,445.9	4,718.9
2. Indirect & Induced Impacts	5,854.8	45.0	1,908.7	2,841.2
3. Total Economic Impact	16,616.5	128.0	5,354.6	7,560.0
4. Multipliers (e.g., 3/1)	1.544	1.539	1.554	1.602
Composition of Gross State Product				
1. Wages (Net of Taxes)				4,794.7
2. Taxes, Total				1,133.9
a. Local Taxes				159.4
b. State Taxes				154.6
c. Federal Taxes				819.7
3. Profits, dividends, rent and other				1,631.4
4. Total Gross State Product (1+2+3)				7,560.0
Tax Accounts				
Total				2,212.7
Local				281.7
State				286.0
Federal				1,645.0
Check total				0.0
Effects Per Million Dollars of Initial Expenditures				
Employment (jobs)				11.9
Income				715,328.0
State Taxes				38,203.5
Local Taxes				37,629.5
Gross State Product				1,009,957.6
Initial Expenditure in Dollars				10,768,614.4

TABLE A-21

PORT RELATED FY 2017
IMPACTED INDUSTRY

	MODEL OUTPUT (000 OF 2017$)	MODEL EMPLOYMENT (JOBS)	MODEL INCOME (000 OF 2017$)	MODEL GDP (000 OF 2017$)
Agriculture, Forestry, Fishing	5,801,820	36,280	1,701,415	1,956,807
Mining	558,832	2,536	128,432	305,307
Utilities	1,605,065	1,522	209,408	602,845
Construction	546,479	3,647	180,035	260,758
Manufacturing	59,231,245	126,518	8,816,632	17,775,861
Wholesale Trade	5,855,559	23,934	2,030,149	3,926,086
Retail Trade	1,787,758	22,102	694,925	1,134,900
Transportation & Warehousing	4,191,378	31,477	1,623,609	2,150,810
Information	2,128,192	4,476	507,374	1,030,502
Finance & Insurance	3,476,123	13,223	938,538	2,011,603
Real Estate, Rental, Leasing	4,509,749	11,025	280,167	3,004,554
Services & Government	11,724,318	123,755	5,887,828	7,173,072
Total	**101,416,518**	**400,493**	**22,998,514**	**41,333,105**
Distribution of Economic Impact				
1. Direct Impact	60,189,121	154,851	10,146,943	19,234,504
2. Indirect & Induced Impacts	41,227,397	245,642	12,851,571	22,098,601
3. Total Economic Impact	101,416,518	400,493	22,998,514	41,333,105
4. Multipliers (e.g., 3/1)	1.685	2.586	2.267	2.149

Note: Employment includes full- and part-time jobs. Detail may not sum to totals due to rounding.

Source: Estimated by the Selig Center for Economic Growth, Terry College of Business, the University of Georgia (www.selig.uga.edu) using the 2010 IMPLAN State Package for Georgia, 2018.


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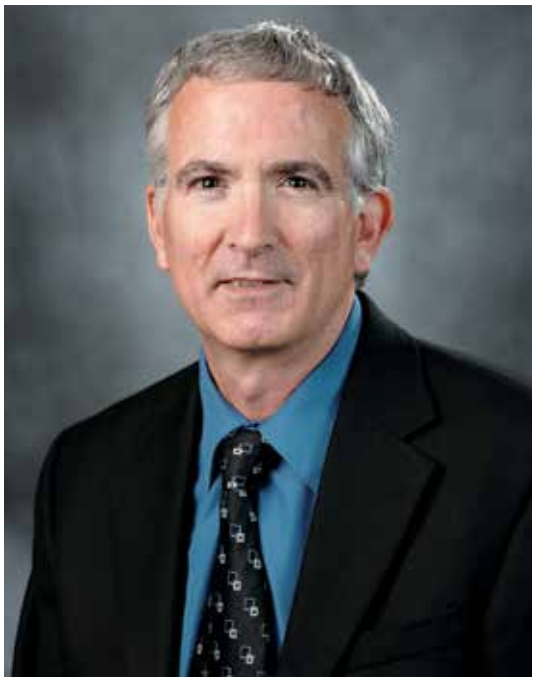
ABOUT THE AUTHOR



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