



Return-on-Investment for International Trade and Business Development Programs

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EXECUTIVE SUMMARY

Background and Purpose

Legislation enacted in 2013 directs the Office of Economic and Demographic Research (EDR) and the Office of Program Policy Analysis and Government Accountability (OPPAGA) to analyze and evaluate state economic development incentive programs on a recurring three-year schedule.¹ EDR is required to evaluate the “economic benefits” of each program using project data from the most recent three-year period and to provide an explanation of the model used in its analysis and the model’s key assumptions. “Economic Benefit” is defined as “the direct, indirect, and induced gains in state revenues as a percentage of the state’s investment” – which includes “state grants, tax exemptions, tax refunds, tax credits, and other state incentives.”² EDR’s evaluation also requires identification of jobs created, the increase or decrease in personal income, and the impact on state Gross Domestic Product (GDP) for each program.

In 2015, EDR reviewed Enterprise Florida’s international trade and business development programs established or funded under s. 288.826, F.S., for the period covering Fiscal Years 2011-12, 2012-13 and 2013-14.³ Now in its second cycle, this analysis covers Fiscal Years 2014-15, 2015-16 and 2016-17.

Explanation of Return on Investment

In this report, the term “Return on Investment” (ROI) is synonymous with economic benefit, and is used in lieu of the statutory term. This measure does not address issues of overall effectiveness or societal benefit; instead, it focuses on tangible financial gains or losses to state revenues, and is ultimately conditioned by the state’s tax policy.

The ROI is developed by summing state revenues generated by a program less state expenditures invested in the program, and dividing that calculation by the state’s investment. It is most often used when a project is to be evaluated strictly on a monetary basis, and externalities and social costs and benefits—to the extent they exist—are excluded from the evaluation. The basic formula is:

$$\frac{(\text{Increase in State Revenue} - \text{State Investment})}{\text{State Investment}}$$

Since EDR’s Statewide Model⁴ is used to develop these computations and to model the induced and indirect effects, EDR is able to simultaneously generate State Revenue and State Investment from the model so all feedback effects mirror reality. The result (a net number) is used in the final ROI calculation.

As used by EDR for this analysis, the returns can be categorized as follows:

- **Greater Than One (>1.0)**...the program more than breaks even; the return to the state produces more revenues than the total cost of the incentives.
- **Equal To One (=1.0)**...the program breaks even; the return to the state in additional revenues equals the total cost of the incentives.

¹ Section 288.0001, F.S., as created by s. 1, ch. 2013-39, Laws of Florida & s. 1, ch. 2013-42, Laws of Florida.

² Section 288.005(1), F.S.

³ EDR’s report can be found: <http://edr.state.fl.us/Content/returnoninvestment/ROI-IntTradeandBusinessDevProg.pdf>

⁴ See section on Methodology for more details.

- **Less Than One, But Positive (+, <1)**...the program does not break even; however, the state generates enough revenues to recover a portion of its cost for the incentives.
- **Less Than Zero (-, <0)**...the program does not recover any portion of the incentive cost, and state revenues are less than they would have been in the absence of the program because taxable activity is shifted to non-taxable activity, or the economy is overall worse off.

The numerical ROI can be interpreted as return in tax revenues for each dollar spent by the state. For example, an ROI of 2.5 would mean that \$2.50 in tax revenues is received back from each dollar spent by the state.

The basic formula for ROI is always calculated in the same manner, but the inputs used in the calculation can differ depending on the needs of the investor. Florida law requires the return to be measured from the state's perspective as the investor, in the form of state tax revenues. In this regard, the ROI is ultimately shaped by the state's tax code.

Overall Results and Conclusions

The international market continues to play an important role in Florida's economy; however, it has weakened slightly since the last report. In 2013, Florida exported over \$61.3 billion in commodities. This compares to only \$52.0 billion dollars of commodities during the 2016 calendar year,⁵ a 15% decline largely attributable to chemical and non-electrical machinery products. Even so, this represents about 6% of Florida's total Gross Domestic Product. The International Trade Administration estimated that about 230,000 Florida jobs are dependent on international trade.⁶ The manufacturing sector is the most prominent exporter in Florida, with aircraft engines and parts comprising the most exported product in 2016.⁷ Foreign direct investment (FDI) plays an important role in Florida's economy as well. Over 230,000 Florida jobs are tied to a firm under full or partial foreign ownership.⁸ Outside of the direct employment benefits, FDI has been linked to technological and human capital advances that benefit the economy at large.⁹

Enterprise Florida (EFI) is a public-private partnership that serves as the principal economic development organization for Florida. There are two divisions within Enterprise Florida that support international trade and business development programs. The International Trade & Development division offers export assistance to Florida businesses and operates Florida's international offices. The Business Development division develops foreign direct investment projects recruited and referred by the international offices. Because the Business Development division is not included in the statutory review directive, its economic benefit is not evaluated in this report. The report focuses solely on the services provided by the International Trade & Development division.

For the purposes of EDR's analysis, the services offered by the International Trade & Development division are grouped into two program areas, which are analyzed separately in order to develop two

⁵ U.S. Census Bureau, "2016 Exports by State of the Origin of Movement, Number of Exporting Companies, and Value for Small and Medium Sized Companies."

⁶ International Trade Administration, "Florida Exports, Jobs, and Foreign Investment", *U.S. Department of Commerce*.

⁷ International Trade Administration, "Jobs Supported by State Manufactured Exports, 2016" *U.S. Department of Commerce*.

⁸ 2015 Employment of Affiliates, State by Industry of Affiliates, Foreign Direct Investment in the United States (FDIUS): Preliminary 2015 Data, *Bureau of Economic Analysis* (August 2018).

⁹ E. Borensztein, J. De Gregorio and J.W. Lee, "How Does Foreign Direct Investment Affect Economic Growth?" *Journal of International Economics*, Vol. 45 (1998): 115-135.

calculations of Returns-on-Investment. First, the **Export Assistance Program** is defined to be the services, including grants, scholarships, and miscellaneous services, offered to assist Florida firms that seek to export goods and services to international markets. The assistance is primarily directed to small-to-mid-sized businesses that have little or no history in exporting.

Second, the **International Offices Program** is defined to be the operation of Florida's 14 international offices, which are located in 13 countries, for the purpose of recruiting foreign direct investment.

The ROI for the Export Assistance Program is projected at 1.05. For every dollar spent on services to exporters, the state of Florida received 1 dollar and 5 cents back in tax revenue. In addition, Florida's Real GDP increased by about \$518.6 million, and Real Disposable Personal Income grew by \$396.8 million during the review period. The economic benefit is attributable to the \$214 million in export sales that are associated with the program. These sales originated from Florida businesses that received assistance.

The ROI was not higher for several reasons. First, because the sales were exported, they were not subject to state sales tax. Instead, the ROI is more dependent on tax revenue generated from the indirect and induced impacts.¹⁰ These activities typically generate less state revenue.

Second, EDR's analysis does not take into account any capital investment made by the Florida firms that received export assistance during the review period. While it is possible that the increased sales required the firms to make additional capital investments in Florida, that data is not available. Inclusion of any capital investment purchases would increase the ROI.

Further, the analysis does not attribute expected sales of \$2.3 billion to the Export Assistance Program. This is due to considerable uncertainty about whether the expected sales actually materialized, when they occurred, and whether they should be attributed to the program. Instead, the analysis uses only actual sales of \$214 million. If all expected sales are included in the analysis, the ROI would be greater.

The ROI in this analysis review period (1.05) is lower than in the previous study (1.85). There are several factors contributing to the decrease in ROI. There was a 46 percent increase in state payments from \$9.5 million to \$13.5 million that corresponded to a 55 percent increase in the number of firms receiving export assistance. However, the number of firms that reported actual sales only increased by 30 percent and the amount of those sales decreased by 13 percent from \$248.6 million to \$214.5 million. The higher state payments with a combined decrease in actual sales caused the lower ROI. These decreases in actual sales correspond to the decreases in total exports from Florida during the same period.¹¹ There are many factors contributing to the slowing of exports from Florida. The economic downturn experienced by the state's major trade partners, such as Brazil, Mexico and Colombia, are contributing factors.

The ROI for the International Offices Program is projected at 4.28. For every dollar spent on the international offices, the state of Florida received 4 dollars and 28 cents back in tax revenue. In addition, the state investment caused Florida's Real GDP to increase by \$764.3 million and Real Disposable

¹⁰ Indirect effects are changes in employment, income, and output of local suppliers that provide goods and services to support the direct economic activity. Induced effects are changes in spending by households whose income is affected by direct and indirect economic activity.

¹¹ United States Census Bureau, "Total U.S. Exports (Origin of Movement) from Florida."

Personal Income to grow by \$545.5 million during the review period. The state's economic benefit is attributable to the output and capital investment associated with the foreign firms recruited by the international offices.

In the review period, the analysis attributes \$145.5 million of output and \$44.5 million in capital investment to these foreign-owned firms. This economic activity generates enough taxable revenue for the ROI to be 4.28. Both the reported levels of output and capital investment were higher; however, EDR made adjustments for two issues.

The first issue relates to attribution. While the international offices serve as the initial contact for interested foreign firms, potential investment opportunities are subsequently referred to EFI's Business Development division for development. The services of Business Development are outside the scope of this analysis. Consequently, EDR attributed only one-half of the economic benefit to the International Offices Program. This bifurcation of responsibilities between the two divisions masks the full value of foreign direct investment.

Second, an additional amount of output and capital investment is omitted because 38 out of 122 projects are market and resource dependent. These are projects where the business' clients are primarily based in Florida or the business is dependent on Florida's resources to produce its products or services.¹² There is no increase in economic activity associated with this foreign direct investment since the firms—or similarly situated competitors—would have been here regardless.

The ROI in this review period (4.28) is higher than in the previous study (3.98). The main factor contributing to the increase in ROI is the change in the mix of industries represented. While the number of industries represented is the same, there is a much higher concentration of firms in the Professional, Scientific and Technological Services and Computer System Design industries. These industries have high multipliers and a greater concentration than in the previous analysis.

It is important to note the ROIs only reflect the tangible economic benefit of these programs. There are also non-tangible and long-run benefits. One purpose of the Export Assistance Program is to transform inexperienced firms into seasoned exporters. This benefits Florida in the long-run, but is not reflected in early export sales. Similarly, the international offices serve as Florida's ambassadors across the world, provide logistical support to the Export Assistance Program, and represent Florida at local trade shows and events. These are duties of the International Offices Program that EDR's ROI does not measure, but that are still important to Florida.

¹² See the section entitled "Florida Market and Resource Dependent Projects" later in this report.

OVERVIEW OF PROGRAMS

EFI's International Trade & Development division exposes Florida businesses and foreign investors to opportunities, facilitating exports from and direct foreign investment in Florida.

The Export Assistance Program provides the following services:

- Florida's Export Directory: a directory that connects international buyers with Florida-based suppliers. An interested party can search by industry. Each listing contains a short description and contact information for the registered supplier.
- International Trade Statistics: a database of Florida's trading partners; export destinations and commodities; state-of-origin exports; and a summary of U.S. trade statistics.
- International Trade Shows & Trade Missions: a variety of international trade shows and trade missions across the world.
- Trade Grant Programs: funding to help Florida businesses attend trade shows and trade missions.
- Export Marketing Plan Scholarship: scholarships that subsidize the cost of a customized export marketing plan for eligible companies. The export marketing plan provides the company with an in-depth strategic assessment of the firm's export opportunities.
- Miscellaneous Services: a variety of technical assistance to Florida exporters such as helping a company find a distributor or sales representative; helping resolve regulatory issues; helping with licensing; and preparing a Certificate of Free Sale or Certificate of Good Manufacturing for exporting firms.¹³

The analysis of the Export Assistance Program examines the economic benefit of export assistance services, including the grant programs, the scholarship program, and other miscellaneous services. The analysis does not assign an economic benefit to the export directory or international trade statistics. While these services are useful to Florida firms, the economic benefit is ambiguous and difficult to measure because no data are available for either service. Additionally, the assistance provided through the existence of the export directory and international trade statistics is relatively minor and not likely to be the determining factor in a firm's decision or ability to export.¹⁴

The International Offices Program includes services provided through Florida's 14 international trade offices. The international offices provide local assistance to Florida firms in the foreign countries; provide international market advice; assist and coordinate EFI-sponsored trade shows and trade missions; and recruit and refer foreign direct investment opportunities to EFI's Business Development division.

¹³ Certificate of Free Sale or Certificate of Good Manufacturing are documents that indicate that the exporting products are legally sold or distributed in the open market and approved by the regulatory authorities in the country of origin.

¹⁴ See the "But For" Requirement discussion in the Overview of Economic Incentives and ROI Section. Another source of free Florida trade statistics is the U.S. Census Bureau and the International Trade Administration.

OVERVIEW OF ECONOMIC DEVELOPMENT INCENTIVES AND ROI

The basic formula for Return-on-Investment (ROI) is always calculated in the same manner, but the inputs used in the calculation can differ depending on the needs of the investor. Florida law requires the “return” to be measured from the state’s perspective as the investor, in the form of state tax revenues. In this regard, the ROI is ultimately shaped by the state’s tax code. For example, all other factors being equal, if Florida had a personal income tax, the ROI for each incentive program would increase from the additional tax revenues.

All of the issues below shape EDR’s calculation of ROI. Some of them are further addressed in the assumptions, methodology, and findings.

Role of Incentives...

Generally, the goal of economic development by local, state, or national government is to expand economic activity, primarily through capital investment and the creation of new job opportunities – preferably at competitive-to-above-average wages, thereby increasing the state’s standard of living for its residents. This new economic activity creates new income, which when spent in the economy, induces the creation of additional jobs. To the extent this economic goal is achieved, the tax base is expanded and governments realize an increase in tax revenues.

Intuitively, it is easy to see why local governments offer economic incentives to individual businesses. Any action that benefits or increases the standard of living within a local jurisdiction—even if it causes harm to its neighbors—would be reasonable. It is much harder to accomplish this type of economic development (as opposed to generic investments in public infrastructure and Florida’s overall business climate) at the state level where government should be neutral between competing in-state areas and has to take both winners and losers into account. In effect, the state becomes a single economic region, and the focus is generally on attracting new business to the state or promoting exports to other states and countries.

From the business perspective, incentives are public resources that reduce capital, operating, and search costs. From an economic development organization’s perspective, incentives help particular sites overcome deficiencies or mitigate weaknesses. In regard to the programs discussed in this report, the state reduces the initial costs of exporting for Florida firms and reduces search costs for international firms.

Classification of Incentives...

Economic development incentives may be provided by any level of government. The various forms an incentive can take are wide-ranging, including everything from grants, loans, and tax relief, to regulatory breaks and technical assistance. There are a number of ways these incentives may be classified. For the purposes of this analysis, direct financial assistance (grants, scholarships) and technical assistance (international offices, miscellaneous services) are measured.

“But For” Requirement...

There are multiple reasons why a Florida-based business exports its products or an international firm decides to invest in Florida. A business might decide to export due to new or emerging market opportunities, exchange rate fluctuations, limited domestic opportunities, or lower tariffs. An international business decides to invest in a state due to factors like average hourly wage, educational

level in the area, tax liability, and locational proximity to major interstates. The one definitive factor is elusive and is likely different for each firm, but the academic research suggests that both export promotion programs and international offices play important roles.¹⁵

In previous EDR ROI reports, the analyses assume “but for” the economic incentive, the economic activity would not have occurred. Likewise, this analysis assumes “but for” the Export Assistance Program, the Florida firms would not have completed the export sale(s). For the International Offices Program, the analysis assumes “but for” the contribution of the international offices, the foreign firm would have chosen a different state or country in which to invest.

Florida Market and Resource Dependent Projects...

A Florida market and resource dependent project is defined as any business where its clients are primarily based in Florida or where the business is dependent on Florida resources to produce its products or services. There is no new state revenue resulting from those projects since the businesses are otherwise tied to Florida, meaning the state would have already been their location choice. In this regard, to the extent that incentives are for market or resource dependent businesses, there is “no net gain in economic activity or jobs or income.”¹⁶ The businesses cannot claim that “but for” the program benefit, they would not have undertaken the business activity.

Thirty-eight of the 122 firms recruited by the international offices have been determined to be Florida market and resource dependent; therefore, no economic benefit is attributed to these projects.

Attribution...

The international offices are the initial contact points for international businesses that are interested in investing in Florida. The international office meets with the foreign company and provides the company with preliminary information. If the foreign firm decides to pursue Florida as an option for investment (FDI), the international office forwards the lead to Business Development division, which then develops the potential project.

Because of this shared responsibility, this analysis evenly divides (1 to 1) the economic benefits of the FDI—attributing one-half of the economic benefit to the International Offices Program.

While the international offices do assist at the trade shows and trade missions, the analysis attributes all actual sales arising from those events to the Export Assistance Program. The first reason is that majority of the sales (77%) are tied to Florida firms that received an Export Marketing Plan or a Trade Grant in the past. Both the scholarship and the grants are administered by the Export Assistance Program. Second, the international offices provide support, but the Export Assistance Program is the main organizer of the trade shows and trade missions.

¹⁵ See the analysis sections for an overview of the research into the roles played by the international offices and the export promotion programs.

¹⁶ Peter S. Fisher, “Corporate Taxes and State Economic Growth, Policy Brief of the Iowa Fiscal Partnership,” Revised February, 2012: 4.

METHODOLOGY

Broad Approach

EDR used the Statewide Model to estimate the Return on Investment for the programs under review. The Statewide Model is a dynamic computable general equilibrium (CGE) model that simulates Florida's economy and government finances.¹⁷ The Statewide Model is enhanced and adjusted each year to reliably and accurately model Florida's economy. These enhancements include updating the base year the model uses, as well as adjustments to how the model estimates tax collections and distributions.¹⁸

Among other things, the Statewide Model captures the indirect and induced economic activity resulting from the direct program effects. This is accomplished by using large amounts of data specific to the Florida economy and fiscal structure. Mathematical equations¹⁹ are used to account for the relationships (linkages and interactions) between the various economic agents, as well as likely responses by businesses and households to changes in the economy.²⁰ The model also has the ability to estimate the impact of economic changes on state revenue collections and state expenditures in order to maintain a balanced budget by fiscal year.

When using the Statewide Model to evaluate economic programs, the model is "shocked"²¹ using static analysis estimates of the initial or direct effects attributable to the projects funded by the incentives. In this analysis, the direct effects are different for each program.

The Export Assistance Program's direct effects ("shocks") are:

- Removal of the costs from the state budget.
- Increase in demand for Florida goods ("exports") from outside the state.

The International Offices Program direct effects ("shocks") are:

- Removal of the costs from the state budget.
- Capital investment by foreign firms.
- Increase in output based on jobs and payroll associated with foreign firms.²²

¹⁷ The statewide economic model was developed using GEMPACK software with the assistance of the Centre of Policy Studies (CoPS) at Victoria University (Melbourne, Australia).

¹⁸ Reports prior to January 1, 2017 have 2009 as the base year. Reports beginning January 1, 2017 and later have 2011 as the base year.

¹⁹ These equations represent the behavioral responses to economic stimuli, that is, the changes in economic variables.

²⁰ The business reactions simulate the supply-side responses to the new activity (e.g., changes in investment and labor demand).

²¹ In economics, a shock typically refers to an unexpected or unpredictable event that affects the economy, either positive or negative. In this regard, a shock refers to some action that affects the current equilibrium or baseline path of the economy. It can be something that affects demand, such as a shift in the export demand equation; or, it could be something that affects the price of a commodity or factor of production, such as a change in tax rates.

²² Jobs are multiplied by the average wage for the project and by an "employer benefits contribution" multiplier to determine the total wage bill for each year. RIMS II multipliers are then used to estimate the annual output from the total wage bill.

The model was then used to estimate the additional—indirect and induced—economic effects generated by the programs, as well as the supply-side responses to the new activity, where the supply-side responses are changes in investment and labor demand arising from the new activity. Indirect effects are the changes in employment, income, and output by local supplier industries that provide goods and services to support the direct economic activity. Induced effects are the changes in spending by households whose income is affected by the direct and indirect activity.

All of these effects can be measured by changes (relative to the baseline) in the following outcomes:

- State government revenues and expenditures
- Jobs
- Personal income
- Florida Gross Domestic Product
- Gross output
- Household consumption
- Investment
- Population

EDR's calculation of the Return on Investment used the model's estimate of net state revenues and expenditures. Other required measures for this report include the number of jobs created, the increase or decrease in personal income, and the impact on gross domestic product, all of which are included in the model results.

Key Assumptions

The following key assumptions are used in the Statewide Model to determine the outcomes of the programs under review. Some of the assumptions are used to resolve ambiguities in the literature, while others conform to the protocols and procedures adopted for the Statewide Model.

1. The analysis assumes the export assistance to the firms was the determining factor in the businesses' decision to export.
2. The analysis assumes the assistance given to the international firms by the international offices was the determining factor in locating to Florida and not a competing state.
3. The analysis assumes all data provided by Enterprise Florida and other entities is complete and accurate. The data was not independently audited or verified by EDR.
4. The analysis assumes, given the time span under review, applying discount rates would not prove material to the outcome.
5. The analysis assumes the state's budgetary allocation for the programs is a redirection from the general market basket of goods and services purchased by the state. Similarly, any revenue gains from increased business activities are fully spent by the state.
6. The analysis assumes the relevant geographic region is the whole state, not individual counties or regions. The Statewide Model does not recognize that any economic benefit arises from intrastate

relocation. However, the model accounts and makes adjustments for the fact that industries within the state cannot supply all of the goods, services, capital, and labor needed to produce the state's output.

7. The analysis assumes businesses treated the assistance as subsidies that lowered the cost of operation for each individual firm.
8. The analysis assumes distribution of capital purchases by each business is the same as the industry in which it operates. This assumption is made because data is not available regarding the specific capital purchases associated with each project. It is also assumed that the businesses within a program are not large enough to affect the rate of return on capital within the industries in which the businesses operated.
9. The analysis assumes the output from projects does not displace the market for goods and services of existing Florida businesses. To do this, output associated with the businesses is assumed to be exported to the rest of the world. The "rest of the world" is defined as other states or the international market.

Key Terms

In the pages that follow, the analysis for each program includes diagnostic tables describing the composition and statistics of the projects under review. Key terms used in the tables are described below:

Actual State Payments Used in Analysis – Represents the amount of state payments made to the program in each fiscal year.

Total Net State Revenues \$ (M) – Represents the amount of new state revenue generated by the program in each fiscal year.

Personal Income (Nominal \$(M)) – Income received by persons from all sources. It includes income received from participation in production as well as from government and business transfer payments. It is the sum of compensation of employees (received), supplements to wages and salaries, proprietors' income with inventory valuation adjustment (IVA) and capital consumption adjustment (CCAdj), rental income of persons with CCAdj, personal income receipts on assets, and personal current transfer receipts, less contributions for government social insurance.

Real Disposable Personal Income (Fixed 2010-11 \$(M)) – Total after-tax income received by persons; it is the income available to persons for spending or saving.

Real Gross Domestic Product (Fixed 2010-11 \$(M)) – A measurement of the state's output; it is the sum of value added from all industries in the state. GDP by state is the state counterpart to the Nation's gross domestic product.

Consumption by Households and Government (Fixed 2010-11 \$(M)) – The goods and services purchased by persons plus expenditures by governments consisting of compensation of general government employees, consumption of fixed capital (CFC), and intermediate purchases of goods and services less sales to other sectors and own-account production of structures and software. It excludes current transactions of government enterprises, interest paid or received by government, and subsidies.

Real Output (Fixed 2010-11 \$(M)) – Consists of sales, or receipts, and other operating income, plus commodity taxes and changes in inventories.

Total Employment (Jobs) – This comprises estimates of the number of jobs, full time plus part time, by place of work. Full time and part time jobs are counted at equal weight. Employees, sole proprietors, and active partners are included, but unpaid family workers and volunteers are not included.

Population (Persons) – Reflects first of year estimates of people, including survivors from the previous year, births, special populations, and three types of migrants (economic, international, and retired).

PROGRAM FINDINGS

EXPORT ASSISTANCE PROGRAM

Overview of International Trade and Florida

International trade plays an important role in Florida’s economy. In 2016, Florida exported more than \$52.0 billion dollars of commodities abroad.²³ This represents about 6% of Florida’s total Gross Domestic Product.²⁴ Table 1 lists Florida’s top ten most exported products in 2016 and 2017. Due to Florida’s geographical location, Florida is a top re-exporter of goods to and from Latin America. In particular, Miami is an important distribution hub for Latin America. Three of Florida’s top international trading partners are located in South America (Brazil, Venezuela, Colombia), with Miami exporting 67% of all merchandise out of Florida.²⁵

Table 1: Florida’s Top Ten Most Exported Products
(\$ in Millions)

Rank	Description	2016 \$ Value	2017 \$ Value	% share of the Florida Export Market (2017)
	Florida GDP*	\$930,375	\$967,337	
	Total Florida Exporters	\$52,032	\$54,914	-
	% Share of the U.S Export Market	3.6%	3.6%	-
1	Engine and Parts for Civilian Aircraft	\$5,420	\$6,326	11.5%
2	Cellular Phones	\$2,485	\$3,027	5.5%
3	Non-Monetary, Unfinished Gold	\$1,803	\$2,219	4.0%
4	Electronic Processors and Controllers	\$770	\$952	1.7%
5	Wireless Equipment (e.g. routers, network switches)	\$950	\$935	1.7%
6	Portable Automatic Data Processing Machines	\$801	\$885	1.6%
7	Perfumes	\$544	\$619	1.1%
8	Parts and Accessories for Automatic Data Processing Machines	\$642	\$605	1.1%
9	Medical and Surgical Instruments	\$573	\$594	1.1%
10	Ammonium Phosphate	\$685	\$558	1.0%
*U.S. Bureau of Economic Analysis				

²³ U.S. Census Bureau, “2016 Exports by State of the Origin of Movement, Number of Exporting Companies, and Value for Small and Medium Sized Companies.”

²⁴ U.S. Bureau of Economic Analysis estimated that Florida’s 2016 GDP was \$930.38 billion.

²⁵ International Trade Administration, “Florida Exports, Jobs, and Foreign Investment”, *U.S. Department of Commerce* (2018)

The International Trade Administration estimates that Florida exports sustained over 230,000 jobs in 2016, with around 60,000 Florida businesses participating in international trade.²⁶ Since 2004, the number of jobs sustained by international trade has grown by 12%.²⁷ Manufacturing represents the largest industry impacted by international trade. Approximately 95% of all Florida export-dependent jobs are in the manufacturing sector.²⁸ Trade also directly impacts other sectors of the economy. Florida's agricultural industry exported over \$3 billion in 2016 (an 80% increase in value since 2003).²⁹

International trade also indirectly impacts non-exporting sectors. For example, Florida's transportation sector benefits because international trade requires trucks, distribution centers, and ports. One study estimated large employment effects in the Florida's transportation sector due to international trade, helping offset a general decline in the industry over the past 10 years.³⁰

These benefits to Florida's transportation sector and Florida as a whole are evident in EDR's analysis of the Florida Department of Transportation's Work Program.³¹ This report found ROIs greater than 1.0 for both the Seaports and Aviation programs during the review period running from FY 2013-14 to FY 2015-16 (1.76 and 1.37, respectively) and the forecasted Work Program for FY 2016-17 to FY 2020-21 (2.71 and 1.72, respectively). While tourism helped the ROI for these programs, they both directly and indirectly benefit from Florida exports as well.

Currently, Florida has 15 public seaports. In 2015, four of its seaports (Miami, Palm Beach, Everglades, and Jacksonville) experienced some of the fastest growth in the United States for cargo exports.³² That same year, Florida seaports handled over 103 million tons of goods.³³ Many jobs in Florida are tied to Florida seaports. Direct seaport employment includes pilots, customhouse brokers, vessel agents, stevedores and terminal operators. However, the seaports also benefit related industries. For example, the rail and trucking industries benefit as they pick up or off-load cargo from the seaports.

The public-use airport system generates a significant amount of output and employs a large amount of people on airport grounds. The 2014 DOT economic impact study estimated 170,000 jobs occur on-airport grounds in Florida. Additionally, some Florida industries are dependent on the Florida aviation system. These include air cargo operators that transport large amounts of goods to and from Florida on a daily basis. The 2014 study estimated over 52,000 jobs are linked to the air cargo industry in Florida.

A closely linked economic impact involves aviation-related businesses in Florida. This can include aircraft maintenance, aircraft repair and aircraft production. The civilian aircrafts and parts industry was one of Florida's largest export business sectors in 2014 and 2015. The aircrafts and parts industry exported \$4.8 billion in 2014 and \$4.7 billion in 2015.³⁴ This represents about 8% of all commodities exported from

²⁶ Ibid.

²⁷ U.S. Census Bureau, Trade Statistics.

²⁸ International Trade Administration, "Jobs Supported by State, Manufactured Exports, 2016" *U.S. Department of Commerce*.

²⁹ State Agricultural Exports, U.S. Agricultural Case Receipts-Based Estimates, *United States Department of Agriculture Economic Research Service* (April 29, 2015).

³⁰ David Riker, "International Trade and Local Transportation Employment" *International Trade Administration Manufacturing and Services Economics Brief*, No. 6 (March 2012).

³¹ The report can be found: http://edr.state.fl.us/Content/returnnoninvestment/ROI_Transportation.pdf

³² The Florida Department of Transportation, "The 2015 Florida Seaport System Plan", (July 2016): 1-5.

³³ The Florida Department of Transportation, "The 2015 Florida Seaport System Plan", (July 2016): 3-2.

³⁴ United States Census Bureau, "Total U.S. Exports (Origin of Movement) from Florida." (2018)

Florida.³⁵ The 2014 economic impact study estimated aviation-related employment at over 76,000 in Florida.

Further, wages in export-intensive industries tend to be higher. In the manufacturing sector, exports contribute an additional 18% in workers' earnings.³⁶ The export-premium is seen predominately in manufacturing industries like computers, machinery, electrical equipment, and transportation equipment.

However, Florida's official export numbers are likely overstated. The Census calculates state export totals based on export declaration forms for goods leaving the United States. The declaration form requires the exporter to list the location from which the export started its journey (Origin-of-Movement).³⁷ For example, a container of soybeans shipped out of Miami should have its Origin-of-Movement as Iowa. In the Census calculation, Iowa would be considered the exporter. Unfortunately, exporters occasionally list distribution hubs as the original destination. This error inflates export totals in states with ports and understates total exports in state without ports.³⁸

Overview of State Export Promotion Programs

Almost all states have export promotion programs. Each state's program offers different services, but most of the programs focus on assisting small to mid-sized businesses (SMBs) to become regular exporters.³⁹ These programs focus on SMBs because they are less likely to be regular exporters than large-sized firms, which dominate the export market. While large-sized firms account for only 0.32% of all business establishments in the United States, they represent a much larger share (2.5%) of export firms.⁴⁰ In addition, large-sized firms export 66.7% of all U.S. goods, with the top 250 firms responsible for 50% of all U.S. exports.⁴¹

There are numerous reasons why SMBs do not export or export less frequently. SMBs may be unaware of the market opportunities outside the United States or do not know how to market themselves outside the country.⁴² International sales also introduce new business risks, such as foreign exchange fluctuations, tariffs, import quotas, and dealing with a foreign legal system.⁴³ Managers at SMBs have less experience dealing with the complexities of exporting than managers at large-sized firms.⁴⁴ All these

³⁵ Ibid.

³⁶ David Riker, "Do Jobs in Export Industries Still Pay More? And Why?" *International Trade Administration Manufacturing and Services Economics Brief*, No. 2 (July 2010).

³⁷ International Trade Statistical Method Branch, "U.S. Merchandise Trade Statistics: A Quality Profile" *U.S. Census Bureau* (October 2014).

³⁸ Ibid.

³⁹ As defined by the U.S. Census Bureau, any business with fewer than 500 employees falls into the small to mid-sized category. See Appendix II for a review and comparison of Pennsylvania, California, Georgia, Virginia and Washington's export promotion programs.

⁴⁰ See U.S. Census Bureau's "Number of Firms, Number of Establishments, Annual Payroll, and Estimated Receipts by Enterprise Employment Size for the United States and States, Total: 2016" See U.S. Census Bureau's "2016 Exports by State of the Origin of Movement, Number of Exporting Companies, and Value for Small and Medium Sized Companies" for the total number of Large and SMB exporters.

⁴¹ Natalie Sorka, "U.S. Trading Companies, 2012" *International Trade Administration* (November 2014): 3-4.

⁴² A. Diamantopoulos, B.B. Schlegelmich and Ky. Katy Tse "Understanding the Role of Export Marketing Assistance: Empirical Evidence and Research Needs" *European Journal of Marketing*, Vol. 27 Iss. 4 (1993): 5-18.

⁴³ Stuart Cooper and Inke Nyborg, "The Financing and Information Needs of Smaller Exporters" *Bank of England Quarterly Bulletin* (1998): 166-172.

⁴⁴ June N.P. Francis and Colleen Marie Collins, "The Impact of Firms' Export Orientation on the Export Performance of High-Tech Small and Medium-Sized Enterprises" *Journal of International Marketing*, Vol. 21 Iss: 4 (2004): 474-495.

issues can be successfully overcome, but an inexperienced firm may think the opposite and exaggerate the obstacles.

Export promotion programs provide services to SMBs at all stages of the export process. At the early stage, SMBs may require assistance with finding relevant trade statistics, establishing a marketing plan for its product, and identifying attractive foreign markets. Additionally, early-stage SMBs may need to reorient the manager's mindset or improve the manager's confidence about participating in the export market. At the later stages, once the SMBs have decided to export and likely know where they want to export, the firms may need assistance with finding customers. At this stage, export promotion programs assist the SMBs by sponsoring trade missions and trade shows in the foreign countries.

Research has modeled how an export promotion program can be successful.⁴⁵ Much less research has studied its real world effectiveness, with Seringhaus concluding that export-measured success may be too challenging to measure.⁴⁶ Instead, Seringhaus advocated non-tangible performance measures, with a focus on the knowledge and competence gains from users of the programs.⁴⁷ The research into non-tangible performance measures has generally shown that firms become more knowledgeable and confident about exporting after using promotion programs.⁴⁸ Whether this leads to additional exporting is open to debate.⁴⁹

Actual empirical research on export promotion programs' impact on export sales has been mixed. Bernard and Jenson found no relationship between a state's expenditures on export promotion and the amount manufacturing exports from the state.⁵⁰ A study of Argentina's export promotion programs found a relationship between the programs and exports by SMBs.⁵¹ A similar paper on Columbia's export subsidy program also found an increase in exports from SMBs.⁵²

Studies of Canadian export promotion programs have found contradictory results. One study examined the export outcomes of 500 technology firms in Canada. They found no correlation between the use of an export promotion program with either an increase in total export sales or the firm's export intensity

⁴⁵ F.H. Rolf Seringhaus, "Trade Missions in Exporting: State of the Art" *Management International Review*, Vol. 29 No. 2 (2nd Quarter 1989): 5-16.

⁴⁶ Ibid. See also: June N.P. Francis and Colleen Marie Collins, "The Impact of Firms' Export Orientation on the Export Performance of High-Tech Small and Medium-Sized Enterprises" *Journal of International Marketing*, Vol. 21 Iss. 4 (2004): 474-495. Francis asserts that export promotion programs are one of several factors that affect exporting behavior.

⁴⁷ Ibid.

⁴⁸ See C.N. Wheeler, "Stimulating Scottish and United Kingdom Economics Through Export Promotion Programs" *International Perspectives on Trade Promotion and Assistance*, Quorum, New York, NY (1990): 102-111. See also: H.W. Vanderleest, "What New Exporters Think About US Government-sponsored Export Promotion Services and Publications", *Multinational Business Review*, Vol. 4 No. 2 (1996): 21-29.

⁴⁹ E.E. Marandu, "Impact of Export Promotion on Export Performance: A Tanzanian Study" *Journal of Global Marketing* Vol. 9 No. ½ (1995): 9-39. See also: D. Crick and M.R. Czinkota, "Export Assistance: Another Look at Whether We are Supporting the Best Programs", *International Marketing Review* Vol. 12 No. 3 (1995): 61-72. See also: Jim Blythe, "The Evaluation of Non-Selling Activities at British Trade Exhibitions: An Exploratory Study", *Marketing Intelligence & Planning*, Vol. 14 Iss. 5 (1996): 20-24.

⁵⁰ Andrew B. Bernard and J. Bradford Jenson, "Why Some Firms Export", *The Review of Economics and Statistics*, Vol. 86, No. 2 (May 2004): 561-569.

⁵¹ Christian V. Martincus, Jeronimo Carballo, and Pablo Garcia, "Firm Size and the Impact of Export Promotion Programs", *Trade Policy Research*. (2010): 191-244.

⁵² Christian Helmers and Natalia Trofimenko, "Export Subsidies in a Heterogeneous Firm Framework", *Working Paper No. 147* (September 2010).

(export sales/total sales)⁵³ although the researchers did find a correlation between SMB usage and non-tangible markers of export success.⁵⁴ In another study, researchers found that Canadian firms that accessed export promotion programs were, on average, exporting 17.9% more than a typical Canadian firm. This benefit tends to continue years after the initial assistance.⁵⁵

Research looking specifically at trade missions has also found mixed results. A 2001 study of U.K. trade missions found that trade sales were up in the years following a trade mission.⁵⁶ The study found that the business leads developed during the trade mission led to later sales. However, the researchers cautioned that the firms needed to stay active overseas (e.g., hire an overseas agent, attend trade shows, contact leads often) to be successful.⁵⁷ Two earlier studies did not find a relationship between trade missions and export sales. Seringhaus found no relationship between export sales and trade missions' attendance.⁵⁸ Wilkinson found a negative relationship between U.S. state trade missions and state export sales. The study concluded that trade missions might not be a productive activity for generating more export sales; but rather, better suited towards attracting foreign direct investment.⁵⁹

Regarding trade shows, research shows that they pay off for participants. Seringhaus' 2000 study of trade shows found a positive correlation between attendance and export sales, although the correlation was lower for companies that received a grant to attend the trade show.⁶⁰ A case study of a single trade show participant found an increase in both sales and profits after trade show attendance; however, this case study might be less relevant to this analysis since the studied firm was an experienced exporter. Wilkinson saw a positive relationship between a state's total export sales and the number of trade shows sponsored by the state's export promotion department. His study estimated that for every trade show sponsored by a U.S. state, the state saw an additional \$189 million in export sales.⁶¹

⁵³ June P. Francis and Colleen Marie Collins, "Impact of Export Promotion Programs on Firm Competencies, Strategies and Performance: The Case of Canadian High-Technology SMEs", *International Marketing Review*.

⁵⁴ Non-tangible markers can include: better export strategies, improved knowledge of the export market, and greater managerial experience regarding exports.

⁵⁵ Johannes Van Biesebroeck, Emily Yu and Shenji Chen, "The Impact of Trade Promotion Services on Canadian Exporter Performance", *Center for Economic Studies-Discussion Papers* (April 2010): 1-46.

⁵⁶ Martine M Spence, "Evaluating Export Promotion Programmes: U.K. Overseas Trade Missions and Export Performance" *Small Business Economics*. Vol.20 No.1 (February 2003): 96

⁵⁷ Ibid.

⁵⁸ F.H. Rolf Seringhaus, "The Use of Trade Missions in Foreign Market Entry of Industrial Firms", *Industrial Marketing Purchasing*, Vol. 2 No. 1, (1987): 43-60.

⁵⁹ Timothy Wilkinson and Lance E Brouthers, "An Evaluation of State Sponsored Promotion Programs", *Journal of Business Research*, Vol. 47 (March 2000): 229-236.

⁶⁰ F.H. Rolf Seringhaus and Philip J. Rosson, "Exhibitors at International Trade Fairs: The Influence of Export Support" *Nordic Journal of Business*. Vol. 4 (2000): 505-516.

⁶¹ Timothy Wilkinson and Lance E. Brouthers, "An Evaluation of State Sponsored Promotion Programs", *Journal of Business Research*, Vol. 47 (March 2000): 229-236.

Program Description

Florida's Export Assistance Program offers a variety of export-related services and grants to SMBs. The available grants and scholarships include:

- **Target Sector Trade Grants:** Eligible companies may be reimbursed up to \$6,000 for expenses at qualified trade shows or exhibitions around the world. To qualify, the company must be in one of the following target sectors: Aviation & Aerospace, Clean Energy, Homeland Security & Defense, Life Sciences, Marine Industry, Professional Services (Healthcare, Architecture/Engineering, Software Development), or Manufacturing.⁶²
- **Gold Key/Matchmaker Grants:** Companies are provided an opportunity to meet with pre-screened and pre-qualified potential buyers, importers, agents, and others with an interest in the companies' products or services. The grant covers up to \$1,000 for the cost of the matchmaking services. To qualify, the firm must be in a qualified target sector (same as Target Sector Trade Grants) and either a new exporter, new to the interested foreign market, or an infrequent exporter (i.e., less than 50 export shipments per year).⁶³
- **Export Marketing Plan Scholarship:** Eligible companies will receive a \$3,530 grant to cover the cost of a customized export marketing plan developed by a Small Business Development International Trade Specialist. The export marketing plan provides the company with an in-depth strategic assessment of the firm's export opportunities. The company must be an infrequent exporter to qualify and agree to cover \$500 of the cost of the plan.⁶⁴

In addition to the grant and scholarship programs, the Export Assistance Program includes a variety of technical assistance to Florida firms looking to export, including helping a company find a distributor or sales representative, helping it resolve regulatory issues, helping with licensing, and preparing a Certificate of Free Sale or Certificate of Good Manufacturing for exporting firms.⁶⁵

Description of the Data

The analysis relies on data provided by the International Trade & Development division. The data includes all firms that recorded export sales during the review period (July 1, 2014 through June 30, 2017) and utilized the services provided through the Export Assistance Program. The data includes the firm's contact information, actual and projected export sales tied directly to the export assistance, and the services provided to each firm. Neither the actual nor projected export sales are verified by EFI.⁶⁶

The International Trade & Development division also provided budgetary information. The cost associated with the Export Assistance Program is defined to be the division's allocated state operating assistance and state grant assistance over the three fiscal years. Costs associated with the international offices are subtracted from the total.

⁶² See Enterprise Florida's Target Sector Trade Show Grants Flyer at <https://www.enterpriseflorida.com/wp-content/uploads/target-sector-trade-grant-criteria-application-process-terms-conditions.pdf> for more details.

⁶³ See Enterprise Florida's Gold Key/Matchmaker Grants Flyer at <https://www.enterpriseflorida.com/wp-content/uploads/gold-key-matchmaker-grant.pdf> for more details.

⁶⁴ See Enterprise Florida's Export Marketing Flyer at <http://www.enterpriseflorida.com/wp-content/uploads/export-marketing-plan-program-flyer.pdf> for more details.

⁶⁵ Certificate of Free Sale or Certificate of Good Manufacturing are documents that indicate that the exporting products are legally sold or distributed in the open market and approved by the regulatory authorities in the country of origin.

⁶⁶ For a discussion of issues related to the reported actual and projected (or expected) sales reported by firms, see "Florida Economic Development Program Evaluations – Year 3" OPPAGA Report No. 15-11, November 2015, pp. 57-59.

The analysis attributes all actual sales to the Export Assistance Program. This amounts to \$214 million in export sales over the review period. Actual sales is defined as any sale recorded by companies receiving export assistance. The much higher expected sales figure (\$2.3 billion) is not attributed to the program for several reasons. The first reason is related to timing. The expected sales are projected to occur sometime in the future, but without an exact date, it cannot be determined that the sales occurred within the review period. Second, attribution becomes problematic. It is true that the Export Assistance Program likely facilitated the initial encounter between buyer and seller, but the research suggests that a firm's doggedness to pursue the sale over months, if not years, is what leads to a final sale.⁶⁷ Third, whether the anticipated sales actually occur is an issue, too. One researcher found that only 21% of trade show sales leads convert to actual sales.⁶⁸

The Florida firms were industries ranging from computer electronic manufacturing to textiles. They affect 31 out of the 69 industries in the Statewide Model. Forty-two percent of sales occurred in FY 2014-15, and 29 percent each in FY 2015-16 and FY 2016-17.

Statewide Economic Model Impact Projections of the Export Assistance Program

		14-15	15-16	16-17	Total
State Payments in the Window	Nominal \$ (M)	4.1	4.7	4.8	13.5
Total Net State Revenues	Nominal \$ (M)	5.2	4.3	4.8	14.2
Return-on-Investment by Year		1.26	0.9	1.0	
Return-on-Investment for the 3 year period					1.05

		14-15	15-16	16-17	Total	Average per Year
Personal Income	Nominal \$ (M)	189.1	158.9	169.9	517.9	172.6
Real Disposable Personal Income	Fixed 2010-11 \$ (M)	145.5	122.5	128.8	396.8	132.3
Real Gross Domestic Product	Fixed 2010-11 \$ (M)	191.7	156.4	170.5	518.6	172.9
Consumption by Households and Government	Fixed 2010-11 \$ (M)	149.6	126.5	113.5	389.6	129.9
Real Output	Fixed 2010-11 \$ (M)	315.1	270.8	299.7	885.6	295.2

		14-15	15-16	16-17	Minimum	Maximum	Average per Year
Total Employment	Jobs	528	166	263	166	528	319
Population	Persons	704	1,216	1,472	704	1,472	1,131

The ROI for the Export Assistance Program is projected at 1.05. For every dollar spent on the program, the state of Florida received 1 dollar and 5 cents back in tax revenue. In addition, the export sales caused Florida's Real GDP to increase by \$518.6 million and caused Real Disposable Personal Income to grow by \$396.8 million during the review period. On average there were 319 more jobs economy-wide each year due to the program.

The ROI was not higher for several reasons. The first is due to the exclusion of expected sales. If expected sales are included, then the ROI would be greater than 1.05. The second reason is the state's tax code. Because the direct sales were exported, they were not taxable, thus the ROI is largely

⁶⁷ Martine M Spence, "Evaluating Export Promotion Programmes: U.K. Overseas Trade Missions and Export Performance" *Small Business Economics*. Vol. 20 No. 1 (February 2003): 83-103.

⁶⁸ Jim Blythe, "The Evaluation of Non-Selling Activities at British Trade Exhibitions: An Exploratory Study", *Marketing Intelligence & Planning*, Vol. 14 Issue 5 (1996): 20-24.

dependent on the indirect and induced impacts to generate the tax revenue.⁶⁹ The indirect and induced impacts do generate tax revenue, but at a much smaller level than the direct impact.

One reason for higher ROIs in previous evaluations of other incentive programs is the inclusion of investment activity. Investment activity is a direct impact that generates considerable tax revenue through material purchases and the spending activity of construction workers. The analysis of the Export Assistance Program does not account for any capital investment purchases made by the Florida firms. It is possible that the export sales required the firms to make additional capital investments in Florida, but that data is not available.

The final reason for the ROI is due to the program's intent. The Export Assistance Program focuses on small to mid-size businesses that are new to exporting. Most of these firms have either never exported or have just begun exporting. The goal of the program is not to maximize export sales at the trade shows or trade missions; rather, it is to transform these firms into regular exporters. This potentially suppresses the ROI in the short-term, but ultimately benefits the state of Florida.

The ROI in this analysis review period (1.05) is lower than in the previous study (1.85). There are several factors contributing to the decrease in ROI. There was a 46 percent increase in state payments from \$9.5 million to \$13.5 million that corresponded to a 55 percent increase in the number of firms receiving export assistance. However, the number of firms that reported actual sales only increased by 30 percent and the amount of those sales decreased by 13 percent from \$248.6 million to \$214.5 million. The higher state payments with a combined decrease in actual sales caused the lower ROI. These decreases in actual sales correspond to the decreases in total exports from Florida during the same period.⁷⁰ There are many factors contributing to the slowing of exports from Florida. The economic downturn experienced by the state's major trade partners, such as Brazil, Mexico and Colombia, are contributing factors.

⁶⁹ Indirect effects are defined as changes in employment, income, and output of local suppliers that provide goods and services to support the direct economic activity. Induced effects are defined as changes in spending by households whose income is affected by direct and indirect economic activity.

⁷⁰ United States Census Bureau, "Total U.S. Exports (Origin of Movement) from Florida." (2018)

INTERNATIONAL OFFICES PROGRAM

Program Description

International offices are an important part of a state's economic development strategy. In a 2015 survey of state trade directors, 40 out of the 50 states collectively operated 199 international offices.⁷¹ The top five countries with U.S. international offices were Germany, Mexico, China, Brazil, and Canada.⁷² Florida operates 14 offices in 13 countries.⁷³

One role of international offices is to increase state exports into the host country. The international offices can act as intermediaries between domestic businesses and potential international clients by arranging meetings or providing translation services between the companies. The offices also assist domestic companies at international trade shows and provide advice (e.g., trade statistics and market research). However, the larger role of the international offices is in attracting foreign direct investment to Florida.

Foreign direct investment (FDI) is defined as the full or partial ownership by a foreign investor of a business operating in the domestic country.⁷⁴ In Florida's case, an FDI example could be a logistics center located in Jacksonville and owned, at least in part, by a German company that has more than a 10% stock in the center.⁷⁵ Foreign direct investment can involve either a new business or an established company whose shares are bought by a foreign company. In 2016, the total stock of FDI in the United States was at \$3.7 trillion dollars, with an annual net positive inflow of \$379.7 billion dollars.⁷⁶ This is a sizeable increase from the previous analysis. According to the Bureau of Economic Analysis, "new foreign direct investment peaked in 2015 and was also historically high in 2016 due to corporate inversion activity and several large transactions by foreign investors to acquire U.S. businesses."⁷⁷

In 2015, an estimated 327,000 Florida jobs were affiliated with a foreign-owned company in Florida.⁷⁸ The largest foreign contributors are listed in the following table.⁷⁹

⁷¹ Jennifer Burnett, "Beyond Borders: State International Trade Offices", *Capitol Ideas: The Council of State Government*, Nov/Dec 2015.

⁷² Ibid.

⁷³ Florida's international offices are located in Brazil, Canada (Toronto and Montreal), Mexico, Japan, Taiwan, France, Czech Republic, Germany, Spain, United Kingdom, Israel, and South Africa.

⁷⁴ Bureau of Economic Analysis, Foreign Direct Investment in the United States.

⁷⁵ The foreign entity must own 10% of the company for it to be considered FDI. For BEA's definition see: "Foreign Direct Investment in the United States: 1992 Benchmark Survey, Final Results", *U.S. Department of Commerce*, (September 1995).

⁷⁶ Bureau of Economic Analysis, "New Foreign Direct Investment in the United States; 2017." (July 2018)

⁷⁷ Thomas Anderson, "New Foreign Direct Investment in the United States in 2017" Bureau of Economic Analysis. (August 2018)

⁷⁸ International Trade Administration, "Florida Exports, Jobs, and Foreign Investment", *U.S. Department of Commerce*.

⁷⁹ Florida has an international office in all five of these countries.

2015 Cumulative Foreign Direct Employment by Country in Florida	
Rank	Country
1	United Kingdom
2	Canada
3	France
4	Germany
5	Japan

By industry, the bulk of FDI associated jobs are in manufacturing, about 35.9%.⁸⁰ The next largest industries are retail trade (9.0%) and wholesale trade (9.3%).⁸¹ FDI businesses, on average, tend to export more than domestic-owned businesses.⁸² The concentration in manufacturing with a focus on exports suggests that FDI businesses have higher multipliers than a typical Florida firm.⁸³

Besides direct employment benefits, a state can benefit from FDI through a spillover effect from new technology inputs and the human capital training required to operate the new technology.⁸⁴ Technology spillover occurs through competing domestic businesses adopting the new technology. These spillovers tend to make the economy more efficient and competitive in the long-run. Additionally, advances in human capital occur through FDI employee training and worker turnover that spreads the benefit to new employers. Academic research has shown that this benefit is especially true in the manufacturing sector.⁸⁵

Another benefit is the local linkages established by the FDI business. When the company is a new entrant into the domestic market, the foreign firm is likely to establish ties with both upstream suppliers of raw and intermediate goods and downstream buyers of the firm's product. Besides the effect of increasing overall demand, foreign firms may share general technology advice to both upstream and downstream associates.⁸⁶ This can improve general business practices, lower costs, and increase profits. In the long-run, these benefits may foster a stronger, more expansive local economy.⁸⁷

International Offices & Foreign Direct Investment Recruitment

Very little research has been done into the effectiveness of state international offices in attracting foreign direct investment. The first reason is the limited availability of data. State international offices

⁸⁰ "Activities of U.S. Affiliates of Foreign Multinational Enterprises: Preliminary 2015 Statistics" *U.S. Bureau of Economic Statistics* (August 2018). Manufacturing's total share of Florida employment was 3.8% in 2015. Source: 2015 Census Statistical Abstract, Employees in Nonfarm establishments—States.

⁸¹ Ibid.

⁸² OECD "Foreign Direct Investment for Development: Maximizing Benefits, Minimizing Costs" (2002):10.

⁸³ <http://www.themanufacturinginstitute.org/Research/Facts-About-Manufacturing/Economy-and-Jobs/Multiplier/Multiplier.aspx>

⁸⁴ E. Borensztein, J. De Gregorio and J.W. Lee, "How Does Foreign Direct Investment Affect Economic Growth?", *Journal of International Economics*, Vol. 45 (1998): 115-135.

⁸⁵ Laura Alfaro, "Foreign Direct Investment and Growth: Does the Sector Matter?" *Harvard University, Harvard Business School*, (2003).

⁸⁶ Ronald Findlay, "Relative Backwardness, Direct Foreign Investment and the Transfer of Technology: A Simple Dynamic Model", *Quarterly Journal of Economics*, Vol. 92, (1978): 1-16.

⁸⁷ Ibid. Also, research on the benefit of FDI spillover is mixed. See: H. Gorg and D. Greenaway, "Much Ado About Nothing? Do Domestic Firms Really Benefit from Foreign Direct Investment?" *IZA Discussion Paper*, No. 944, (November 2003): 1-38.

did not begin to proliferate until the early 1980s. Most studies exclude data prior to the 1980s and limit the analysis to a narrow-subset of foreign countries where foreign offices are common (notably Japan and Germany).

The second reason is that researchers tend to bundle the operation of international offices with other export promotion expenditures. These studies show a positive relationship between a state's export promotion expenditures and FDI within the state.⁸⁸ However, the research does not separate the impact between international offices and other export promotion expenditures.⁸⁹

The final reason is that FDI research tends to focus on other state economic variables such as tax, labor, and geographical metrics. Labor variables can include the percentage of workers in a union, educational attainment, the unemployment rate, and measures of labor productivity. Geographical variables can include relative proximity to large markets, proximity to major interstates or ports, and proximity to similar industries.⁹⁰ Tax variables can include the presence of a state corporate income tax and the state's relative tax burden compared to other states. The bulk of the analysis related to FDI in the United States focuses on these other variables, with little discussion about state international offices.

There are three studies that measured the impact of international offices on foreign direct investment. Two of the three studies found a positive, significant relationship. Woodward studied Japanese-affiliated manufacturing investments in the U.S. between 1980 and 1989.⁹¹ Woodward looked at whether the establishment of a foreign office before 1984 was associated with higher foreign investment in a later period and found a strong positive relationship.⁹²

Bobonis looked at a larger dataset (eight foreign countries) and also found a strong, positive relationship. Bobonis' study included additional state incentive variables (labor and capital subsidies), but only the presence of international offices was significant.⁹³ The paper estimated that for every 1% increase in the number of years a foreign office is open, the state sees an additional 0.27% increase in FDI in the state.⁹⁴

In contrast, Coughlin (2000) did not find a positive relationship. Instead, the study found a negative, but not significant, relationship between FDI and international offices.⁹⁵ Coughlin's study looked at newly-built, foreign-owned manufacturing plants in the United States from 1989 to 1995.

⁸⁸ See: Cletus C. Coughlin, Joseph T Terza and Vachira Arromdee, "State Characteristics and the Location of Foreign Direct Investment within the United States" *The Review of Economics and Statistics*, Vol. 4. (November 1991): 675-683. See also, Joseph Friedman, Daniel Gerlowski and Johnathan Silberman, "What Attracts Foreign Multinational Corporations? Evidence from Branch Plant Location in the United States" *Journal of Regional Science*, Vol. 32, No. 4 (1992): 403-418. See also, Joseph Friedman, Hung-Gay Fung, Daniel Gerlowski and Johnathan Silberman, "A Note on State Characteristics and the Location of Foreign Direct Investment within the United States" *The Review of Economics and Statistics*, Vol. 78, No. 2 (May 1996): 367-368.

⁸⁹ *Ibid.*

⁹⁰ Also called Industrial Clustering. This is a geographic area where a large concentration of similar firms operate. Additional firms will relocate there, because the area will already contain the skilled workforce and suppliers needed by the firm.

⁹¹ Douglas P. Woodward, "Determinants of Japanese Manufacturing Start-Ups in the United States" *Southern Economic Journal*, Vol. 58, No. 3 (January 1992): 609-708.

⁹² *Ibid.*

⁹³ Gustavo J. Bobonis and Howard J. Shatz, "Agglomeration, Adjustment, and State Policies in the Location of Foreign Direct Investment in the United States" *The Review of Economics and Statistics*, Vol. 89, No. 1 (Feb 2007): 30-43.

⁹⁴ *Ibid.*, at 39.

⁹⁵ Cletus C. Coughlin and Eran Segev, "Location Determinants of New Foreign-Owned Manufacturing Plants" *Journal of Regional Science*, Vol. 40, No. 2 (2000): 323-351.

Data

This analysis relies on data provided by the Business Development division. The data contains 122 successful FDI projects in Florida within the review period. Each project was referred to the Business Development division by one of Florida's international offices. The data includes the amount of capital investment, total employment, and average wage for each project.

The data is problematic. First, it is not verified by Enterprise Florida. There is no requirement that the company submit proof of employment numbers or capital purchases; rather, the Business Development division regularly contacts each company to confirm it is on track. Second, the investment and employment numbers reflect what the company expects to create over the next three years but does not attribute the activity to specific years. As a result, the analysis spreads the data uniformly across the three-year review period. Any investment and employment projected outside of the review period is excluded. Third, the analysis requires NAICS codes to estimate output.⁹⁶ Because NAICS codes are not included in the data, each company had to be researched in order to assign it a NAICS code.

The output is divided evenly (1:1) between the International Offices Program and Business Development division, meaning that only one-half of the output is attributed to the international offices.

Budgetary information was also provided by the International Trade & Development division. Expenses related to the international offices are included in the analysis.⁹⁷ While the offices also provide export assistance, their entire budget was deemed to be the state's investment in recruiting foreign investment for the purposes of this calculation.

As discussed in the subsection entitled "Florida Market and Resource Dependent Projects," the output from 38 of the 122 firms is excluded from the analysis. These businesses were determined to be dependent on Florida resources to produce or sell their products or services. There is no new state revenue resulting from these projects since the businesses are otherwise tied to Florida, meaning the state would have already been their (or a competitor's) location choice.

Twelve additional firms are excluded from the analysis because they received additional Florida economic incentives. These projects received either Qualified Target Industry (QTI) funds and Quick Action Closing funds or both. Future ROI reports will attribute the firms' output to these two incentive programs; therefore, they are excluded from this analysis to avoid double attribution.

The estimated total output over the review period is \$145.5 million. The output steadily rose over the three years, beginning at \$14.2 million in 2014 and ending at \$94.3 million in 2017. In addition, the foreign firms made capital investment purchases of \$44.5 million over the three-year review period. Twenty-six of the 69 industries in the Statewide Model are impacted by the program. The industries range from manufacturing to retail.

⁹⁶ North American Industry Classification System (NAICS) is the coding system used by the Federal Government in classifying business establishments.

⁹⁷ See the section entitled "Florida Market and Resource Dependent Projects" later in this report.

Statewide Economic Model Impact Projections of the International Offices Program

		14-15	15-16	16-17	Total
State Payments in the Window	Nominal \$ (M)	2.1	1.9	1.8	5.8
Total Net State Revenues	Nominal \$ (M)	4.1	9.8	10.9	24.9
Return-on-Investment by Year		2.00	5.0	6.1	
Return-on-Investment for the 3 year period					4.28

		14-15	15-16	16-17	Total	Average per Year
Personal Income	Nominal \$ (M)	108.9	283.7	324.3	716.8	238.9
Real Disposable Personal Income	Fixed 2010-11 \$ (M)	84.1	217.0	244.4	545.5	181.8
Real Gross Domestic Product	Fixed 2010-11 \$ (M)	124.6	313.3	326.4	764.3	254.8
Consumption by Households and Government	Fixed 2010-11 \$ (M)	97.2	251.0	215.8	564.0	188.0
Real Output	Fixed 2010-11 \$ (M)	198.3	502.5	518.8	1,219.5	406.5

		14-15	15-16	16-17	Minimum	Maximum	Average per Year
Total Employment	Jobs	561	1,344	1,089	561	1,344	998
Population	Persons	128	448	1,216	128	1,216	597

The ROI for the International Offices Program is projected at 4.28. For every dollar spent on the International Offices Program, the state of Florida received 4 dollars and 28 cents back in tax revenue. In addition, the state incentive caused Florida’s Real GDP to increase by about \$764.3 million and caused Real Disposable Personal Income to grow by \$545.5 million in the review period.

The ROI is 4.28 for two reasons. First, the international offices recruited firms with higher-than-average economic multipliers. Industries like finance and manufacturing have a greater impact on Florida’s economy than traditional Florida industries, like retail and food service. These industries have higher wages,⁹⁸ which leads to a greater direct impact. Additionally, they tend to make larger input purchases, which leads to greater indirect and induced impacts within the economy.

The second reason is capital investment. Investment activity is a direct impact that generates considerable tax revenue through material purchases and the indirect activity of construction workers. In the review period, 94% of all the firms had capital investment. Their capital investment ranged from \$20 million to only a few thousand; but, regardless of the amount, the capital investment contributed to a higher ROI.

The ROI in this analysis review period (4.28) is higher than in the previous study (3.95). The main factor contributing to the increase in ROI is the change in the mix of industries. While the number of industries represented is the same, there is a much higher concentration of firms in the Professional, Scientific and Technological Services and Computer System Design industries. These industries have high multipliers and a greater concentration than in the previous analysis.

⁹⁸ The average reported wage of the firms in the analysis was \$71,986. Florida’s 2016 average wage was \$42,278 (Source: The Florida Economic Estimating Conference, July 2017).