



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

OFFICE OF ECONOMIC & DEMOGRAPHIC RESEARCH

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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 20 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 and OPPAGA reviewed Enterprise Florida’s international trade and business development programs established or funded under s. 288.826, F.S. The three years included in the analysis are Fiscal Years 2011-12, 2012-13, and 2013-14 (hereinafter referred to as “review period”).³

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.

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 reports can be found at <http://edr.state.fl.us/Content/returnoninvestment/index.cfm>

⁴ See section on Methodology for more details.

- **Equal To One (=1.0)**...the program breaks even; the return to the state in additional revenues equals the total cost of the incentives.
- **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 means that \$2.50 in tax revenues is received back from each dollar spent by the state.

Overall Results and Conclusions...

The international market plays an important role in Florida's economy. Florida exported over \$61.3 billion dollars of commodities during the 2013 calendar year.⁵ This represents about 8% of Florida's total Gross Domestic Product. The International Trade Administration estimated that about 270,000 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 2014.⁷ Foreign direct investment (FDI) plays a prominent role in Florida's economy as well. Over 245,000 Florida jobs are tied to a firm under full or partial foreign ownership.⁸ In 2012, the U.S. saw \$166 billion in new foreign direct investment.⁹ Outside of the direct employment benefits, FDI has been linked to technological and human capital advances that benefit the economy at large.¹⁰

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 as part of this report. The report focuses solely on the services provided by the International Trade & Development division.

For 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 calculations of Returns-on-Investment. First, the **Export Assistance Program** is defined to be the activities, including grants, scholarships, and miscellaneous services, offered to assist Florida firms that seek to export goods

⁵ U.S. Census Bureau, "2013 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, 2014" *U.S. Department of Commerce*.

⁸ 2012 Employment of Affiliates, State by Industry of Affiliates, Foreign Direct Investment in the United States (FDIUS): Preliminary 2012 Data, *Bureau of Economic Analysis*, (November 2014): 77:91.

⁹ Department of Commerce and the President's Council of Economic Advisers, "Foreign Direct Investment in the United States", *United States Department of Commerce: Economic & Statistics Administration*, (October 2013): 1. Annual Foreign Direct Investment inflows by state is unavailable.

¹⁰ 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.

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 15 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 **1.85**. For every dollar spent on services to exporters, the state of Florida received 1 dollar and 85 cents back in tax revenue. In addition, Florida's Real GDP increased by about \$523.5 million, and Real Disposable Personal Income grew by \$494.1 million during the review period. The economic benefit is attributable to the \$248 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.¹¹ 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 \$1.94 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 \$248 million. If all expected sales are included in the analysis, the ROI would be greater.

The ROI for the International Offices Program is projected at **3.98**. For every dollar spent on the international offices, the state of Florida received 3 dollars and 98 cents back in tax revenue. In addition, the state investment caused Florida's Real GDP to increase by \$549.1 million and Real Disposable Personal Income to grow by \$504.3 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 \$269.9 million of output and \$57 million in capital investment to these foreign-owned firms. This economic activity generates enough taxable revenue for the ROI to be 3.98. Both the reported levels of output and capital investment were higher; however, EDR made adjustments related to two issues.

The first issue relates to attribution. While the international offices recruit foreign direct investment in Florida and 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

¹¹ 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.

of the economic benefit to the International Offices Program. In effect, 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 22 out of the 65 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.

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 subsection entitled "Florida Market and Resource Dependent Projects" later in this report.

OVERVIEW OF THE PROGRAMS

EFI's International Trade & Development division exposes U.S. 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-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; aiding in the resolution of regulatory issues; assisting 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 to export.¹⁴

The International Offices Program includes services provided through Florida's 15 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 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 sections on 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 wealth, 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 invest in 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 export-behavior.

From the business perspective, incentives are public resources that reduce capital, operating, and search costs. From an economic development organization’s perspective, incentives help 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.

While the state offers many incentive programs, only the services provided through the Export Assistance Program and the International Offices Program are under review in this report. The Export Assistance Program offers grants to attend trade shows or trade missions, scholarships to pay for export marketing plans for businesses, and technical assistance. The international offices advertise Florida and recruit international firms. The offices also represent Florida at international events while supporting Enterprise Florida-sponsored trade shows and trade missions. While the International Offices Program is

not technically an incentive, the services available through the offices lower a foreign firm's search cost for investment opportunities.

“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.

Twenty-two of the 65 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, 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 the majority of the sales (77%) are tied to Florida firms that received an Export Marketing Plan or a Trade

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.

Grant in the past. Both the scholarship and the grants are administered by the Export Assistance Program. Second, the international offices provides support, but the Export Assistance Program is the main organizer of the trade shows and trade missions.

METHODOLOGY

Broad Approach...

EDR uses the Statewide Model to estimate the ROI 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 Among other things, it 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 equations¹⁸ 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.¹⁹ 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”²⁰ using static analysis to develop 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.²¹

The model is 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 supply 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.

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 These equations represent the behavioral responses to economic stimuli – to changes in economic variables.

¹⁹ The business reactions simulate the supply-side responses to the new activity (e.g., changes in investment and labor supply).

²⁰ 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.

²¹ 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.

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 uses 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.

- The analysis assumes that the export assistance to the firms was the determining factor in the businesses' decision to export.
- The analysis assumes that the assistance given to the international firms by the international offices was the determining factor in locating to Florida and not a competing state.
- 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.
- The analysis assumes that given the time span under review, applying discount rates would not prove material to the outcome.
- The analysis assumes that 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.
- 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.
- The analysis assumes that businesses treated the assistance as subsidies that lowered the cost of operation for each individual firm.
- 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 also assumes 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.
- The analysis assumes that 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.

PROGRAM FINDINGS

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

State Payments in the Window \$(M) – 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 2009 \$(M)) – Total after-tax income received by persons; it is the income available to persons for spending or saving.

Real Gross Domestic Product (Fixed 2009 \$(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 2009 \$(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 2009 \$(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, includes survivors from the previous year, births, special populations, and three types of migrants (economic, international, and retired).

EXPORT ASSISTANCE PROGRAM

Overview of International Trade and Florida...

International trade plays an important role in Florida’s economy. In 2013, Florida exported more than \$61.3 billion dollars of commodities abroad.²² This represents about 8% of Florida’s total GDP.²³ Table 1 lists Florida’s top ten most exported products in 2013 and 2014. Due to Florida’s geographical location, Florida is a top re-exporter of goods to and from Latin America. In this regard, 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.²⁴

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

Rank	Description	2013 Value	2014 Value	% Share of the Florida Export Market (2014)
	Florida GDP*	800,697	839,944	
	Total Florida Exports	60,486	58,507	-
	% Share of the U.S. Export Market	3.80%	3.60%	-
1	Engine and Parts for Civilian Aircraft	4,769	4,799	8.2%
2	Non-Monetary, Unfinished Gold	4,908	3,282	5.6%
3	Cellular Phones	2,934	2,923	5.0%
4	Diammonium Phosphate	1,202	1,058	1.8%
5	Data Processing Machines	1,162	993	1.7%
6	Wireless Equipment (ex: Routers, Network Switches)	1,003	972	1.7%
7	Motor Vehicles	818	937	1.6%
8	Electronic Processors and Controllers	1,272	920	1.6%
9	Ammonium Phosphate	567	738	1.3%
10	Parts & Accessories for Automatic Data Processing Machines	772	677	1.2%
* U.S. Bureau of Economic Analysis				

²² U.S. Census Bureau, “2013 Exports by State of the Origin of Movement, Number of Exporting Companies, and Value for Small and Medium Sized Companies”.

²³ U.S. Bureau of Economic Analysis estimated that Florida’s 2013 GDP was \$800.69 billion.

²⁴ International Trade Administration, “Florida Exports, Jobs, and Foreign Investment”, *U.S. Department of Commerce*.

The International Trade Administration estimates that Florida exports sustained over 270,000 jobs in 2014, with around 61,000 Florida businesses participating in international trade.²⁵ Since 2004, the number of jobs sustained by international trade has grown by 28%.²⁶ Manufacturing represents the largest industry impacted by international trade. Approximately 90% of all Florida export-dependent jobs are in the manufacturing sector.²⁷ Other sectors of the economy are also directly impacted by trade. Florida's agricultural industry exported over \$4 billion in 2013 (a 110% increase in value since 2003).²⁸

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 transportation sector due to international trade, helping offset a general decline in the industry over the past 10 years.²⁹

Further, wages in export-intensive industries tend to be higher. In the manufacturing sector, exports contribute an additional 18% in workers' earnings.³⁰ The export-premium is seen predominately in manufacturing industries like computers, machinery, electrical equipment, and transportation equipment. The Brookings Institution predicts that the export-oriented industries will outperform the general economy in the future.³¹

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).³² 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 states without ports.³³

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.³⁴ 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 (3%) of export

²⁵ Ibid.

²⁶ U.S. Census Bureau, Trade Statistics.

²⁷ International Trade Administration, "Jobs Supports by State, Manufactured Exports, 2014"
U.S. Department of Commerce.

²⁸ State Agricultural Exports, U.S. Agricultural Case Receipts-Based Estimates, *United States Department of Agriculture Economic Research Service*, (April 29, 2015).

²⁹ David Riker, "International Trade and Local Transportation Employment" *International Trade Administration Manufacturing and Services Economics Brief*, No. 6 (March 2012).

³⁰ David Riker, "Do Jobs in Export Industries Still Pay More? And Why?" *International Trade Administration Manufacturing and Services Economics Brief*, No. 2 (July 2010).

³¹ Bruce Katz and Emilia Istrate, "Boosting Exports, Delivering Jobs and Economic Growth" *Brookings-Rockefeller Project on State and Metropolitan Innovation, (January 2011): 1.*

³² International Trade Statistical Method Branch, "U.S. Merchandise Trade Statistics: A Quality Profile" *U.S. Census Bureau*, (October 2014).

³³ Ibid.

³⁴ As defined by the U.S. Census, any business with fewer than 500 employees falls into the small to mid-sized category.

firms.³⁵ In addition, large-sized firms export 69% of all U.S. goods, with the top 250 firms responsible for 50% of all U.S. exports.³⁶

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.³⁷ International sales also introduce new business risks, such as foreign exchange fluctuations, tariffs, import quotas, and dealing with a foreign legal system.³⁸ Managers at SMBs have less experience with exporting than managers at large-sized firms.³⁹ All these 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 need to find trade statistics, establish a marketing plan for its product, and identify attractive foreign markets. Additionally, early-stage SMBs may need to reorient the manager's mindset or gain confidence about 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 in finding a customer. 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.⁴⁰ Much less research has studied its real world effectiveness, with Seringhaus concluding that export-measured success may be too challenging to measure.⁴¹ Instead, Seringhaus advocated non-tangible performance measures, with a focus on the knowledge and competence gains from users of the programs.⁴² The research into non-tangible performance measures has generally shown that firms become more knowledgeable and confident about exporting after using promotion programs.⁴³ Whether this leads to additional exporting is open to debate.⁴⁴

³⁵ See U.S. Census' "Number of Firms, Number of Establishments, Annual Payroll, and Estimated Receipts by Enterprise Employment Size for the United States and States, Total: 2012" See U.S. Census' "2012 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.

³⁶ Natalie Sorka, "U.S. Trading Companies, 2012" *International Trade Administration*, (November 2014): 3-4.

³⁷ 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.

³⁸ Stuart Cooper and Inke Nyborg, "The Financing and Information Needs of Smaller Exporters" *Bank of England Quarterly Bulletin*, (1998): 166-172.

³⁹ 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.

⁴⁰ F.H. Rolf Seringhaus, "Trade Missions in Exporting: State of the Art" *Management International Review*, Vol. 29 No. 2 (2nd Quarter 1989): 5-16.

⁴¹ 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.

⁴² Ibid.

⁴³ 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.

⁴⁴ 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.

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 manufacturing exports within the state.⁴⁵ Conversely, a study of Argentina's export promotion programs did find a relationship between the programs and exports by SMBs.⁴⁶ A similar paper on Columbia's export subsidy program also saw an increase in exports from SMBs.⁴⁷

Studies of Canadian export promotion programs have found contradictory results for the same initiative. 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 in the firm's export intensity (export sales/total sales)⁴⁸ although the researchers did find a correlation between SMB usage and non-tangible markers of export success.⁴⁹ 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.⁵⁰

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.⁵¹ 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.⁵² 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.⁵³ 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.⁵⁴

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.⁵⁵ 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

⁴⁵ 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.

⁴⁶ Christian V. Martincus, Jeronimo Carballo, and Pablo Garcia, "Firm Size and the Impact of Export Promotion Programs", *Trade Policy Research*. (2010): 191-244.

⁴⁷ Christian Helmers and Natalia Trofimenko, "Export Subsidies in a Heterogeneous Firm Framework", *Working Paper No. 147* (September 2010).

⁴⁸ 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*.

⁴⁹ Non-tangible markers can include: better export strategies, improved knowledge of the export market, and greater managerial experience regarding exports.

⁵⁰ 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.

⁵¹ 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

⁵² Ibid.

⁵³ 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.

⁵⁴ Timothy Wilkinson and Lance E Brouters, "An Evaluation of State Sponsored Promotion Programs", *Journal of Business Research*, Vol. 47 (March 2000): 229-236.

⁵⁵ 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.

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.⁵⁶

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.⁵⁷
- **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).⁵⁸
- **Export Marketing Plan Scholarship:** Eligible companies receive a \$3,530 grant to cover the cost of a customized export marketing plan done 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 personally cover \$500 of the cost of the plan.⁵⁹

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, aiding in the resolution of regulatory issues, assisting with licensing, and preparing a Certificate of Free Sale or Certificate of Good Manufacturing for exporting firms.⁶⁰

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, 2011 through July 30, 2014) 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.⁶¹

⁵⁶ Timothy Wilkinson and Lance E. Brouters, "An Evaluation of State Sponsored Promotion Programs", *Journal of Business Research*, Vol. 47 (March 2000): 229-236.

⁵⁷ See Enterprise Florida's Target Sector Trade Grants Flyer at <http://www.enterpriseflorida.com/wp-content/uploads/efi-target-sector-grant-flyer-application.pdf> for more details.

⁵⁸ 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.

⁵⁹ See Enterprise Florida's Export Marketing Flyer at <http://www.enterpriseflorida.com/wp-content/uploads/export-marketing-plan-program-flyer.pdf> for more details.

⁶⁰ 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.

⁶¹ 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.

In addition, EDR surveyed over 200 recipients of an export marketing plan scholarship or a trade show or trade mission grant. The survey asked whether the export assistance led to greater export sales. EDR received a response rate of 15%.

Budgetary information was also provided by the International Trade & Development division. 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.

Analysis and Findings...

Statewide Economic Model Impact of the EXPORT ASSISTANCE PROGRAM

	2011-12	2012-13	2013-2014	Total
State Payments in the Window \$ (M)	2.7	3.1	3.4	9.2
Total Net State Revenues \$ (M)	4.3	7.1	5.5	17.0
Return-on-Investment by Year	1.6	2.3	1.6	
Return-on-Investment for the 3 year period				1.85

		2011-12	2012-13	2013-2014	Total		Average per Year
Personal Income	Nominal \$ (M)	161.5	272.6	203.5	637.5		212.5
Real Disposable Personal Income	Fixed 2009 \$ (M)	126.7	211.4	155.9	494.1		164.7
Real Gross Domestic Product	Fixed 2009 \$ (M)	134.8	225.7	163.1	523.5		174.5
Consumption by Households and Government	Fixed 2009 \$ (M)	129.1	217.0	161.3	507.4		169.1
Real Output	Fixed 2009 \$ (M)	296.6	479.8	334.1	1,110.5		370.2
Total Employment	Jobs	525	664	228	228.0	664.0	472
Population	Persons	112	736	1,664	112.0	1,664.0	837

The EDR survey indicates that the Export Assistance Program does contribute to Florida’s export sales, with 65% of the survey respondents indicating that either the subsidized trade show/trade mission or the export marketing plan led to an increase in export sales. When asked about their export intensity (total export sales divided by total sales)⁶² in the two-year period before and after the subsidized event, 69% of the firms reported a higher export intensity in the two-year period after attending the trade show/trade mission or receiving the Export Marketing Plan Scholarship. A firm’s export intensity, on average, grew by 5%.

The analysis attributes all actual sales to the Export Assistance Program. This amounts to \$248 million in export sales over the review period. An “actual sale” is defined as any sale recorded by a company receiving export assistance. The much higher expected sales figure (\$1.964 billion) is not attributed to the program for several reasons.⁶³ The first reason is due to timing. The expected sales are projected to occur sometime in the future, but without an exact date of sale, EDR cannot determine that the sales occurred within the review period. Second, attribution becomes problematic. It is true that the Export

⁶² Export Intensity is a good marker to gauge export success because it controls for annual sales volatility.

⁶³ 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.

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 sale.⁶⁴ 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.⁶⁵

The Florida firms were in diverse industries, ranging from computer electronic manufacturing to textiles. During the review period, they impacted 23 out of the 69 industries in the Statewide Model. Seventy-seven percent of all the export sales occurred in calendar years 2012 and 2013.

The ROI for the Export Assistance Program is projected at 1.85. For every dollar spent on the program, the state of Florida received 1 dollar and 85 cents back in tax revenue. In addition, the export sales caused Florida's Real GDP to increase by about \$523.5 million and caused Real Disposable Personal Income to grow by \$494.1 million during the review period. On average there were 472 more jobs in the economy each year due to the program. All of these impacts are mitigated by the redirection of state spending to this program from other state programs.

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 1.85. The second reason is the state's tax code. Because the direct sales were exported, they were not taxable, thus the ROI is largely dependent on the indirect and induced impacts to generate the tax revenue.⁶⁶ 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.

⁶⁴ 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.

⁶⁵ 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.

⁶⁶ 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.

INTERNATIONAL OFFICES PROGRAM

Program Description...

International offices are an important part of a state’s economic development plan. In a 2015 survey of state trade directors, 40 out of the 50 states collectively operated 199 international offices.⁶⁷ The top five countries with U.S. international offices were Germany, Mexico, China, Brazil, and Canada.⁶⁸ Florida operates 15 offices (13 full service international offices and two liaison offices) in 13 countries.⁶⁹

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.

Foreign direct investment (FDI) is defined as the full or partial ownership by a foreign investor of a business operating in the domestic country.⁷⁰ 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 which has more than a 10% stock in the center.⁷¹ Foreign direct investment can involve either a new business or an established company whose shares are bought by a foreign company. In 2012, the total stock of FDI in the United States was at \$3.9 trillion dollars, with an annual net positive inflow of \$166 billion dollars.⁷²

In 2012, an estimated 245,000 Florida jobs were affiliated with a foreign-owned company in Florida.⁷³ The largest foreign contributors are listed in the following table.⁷⁴

2012 Cumulative Foreign Direct Employment by Country in Florida	
Rank	Country
1	United Kingdom
2	Canada
3	Germany
4	France
5	Japan

⁶⁷ Jennifer Burnett, “Beyond Borders: State International Trade Offices”, *Capitol Ideas: The Council of State Government*, Nov/Dec 2005.

⁶⁸ Ibid.

⁶⁹ Florida’s international offices are located in Brazil, Canada, Mexico, China, Japan, Taiwan, France, Czech Republic, Germany, Spain, United Kingdom, Israel, and South Africa.

⁷⁰ Bureau of Economic Analysis, Foreign Direct Investment in the United States.

⁷¹ 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).

⁷² Department of Commerce and the President’s Council of Economic Advisers, “Foreign Direct Investment in the United States”, *United States Department of Commerce: Economic & Statistics Administration*, (October 2013): 1.

⁷³ 2012 Employment of Affiliates, State by Industry of Affiliates, Foreign Direct Investment in the United States (FDIUS): Preliminary 2012 Data, *Bureau of Economic Analysis*, (November 2014): 77:91.

⁷⁴ Florida has an international office in all five of these countries.

By industry, the bulk of FDI-associated jobs are in manufacturing, about 23.8%.⁷⁵ The next largest industries are retail trade (11.2%) and the wholesale trade (8.3%).⁷⁶ FDI businesses, on average, tend to export more than domestic-owned businesses.⁷⁷ The concentration in manufacturing with a focus on exports suggests that FDI businesses have higher multipliers than a typical Florida firm.⁷⁸

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.⁷⁹ Technology spillover occurs when competing domestic businesses adopt 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.⁸⁰

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 and supply, foreign firms may share general technology advice to both upstream and downstream associates.⁸¹ 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.⁸²

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 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

⁷⁵ Thomas Anderson, "2012 Activities of U.S. Affiliates of Foreign Multinational Enterprises" *U.S. Bureau of Economic Statistics* (November 2014): 4. Manufacturing's total share of Florida employment was 4.6% in 2010. Source: 2012 Census Statistical Abstract, Employees in Nonfarm establishments—States.

⁷⁶ Thomas Anderson, "2012 Activities of U.S. Affiliates of Foreign Multinational Enterprises" *U.S. Bureau of Economic Statistics* (November 2014): 4.

⁷⁷ OECD "Foreign Direct Investment for Development: Maximizing Benefits, Minimizing Costs" (2002):10.

⁷⁸ <http://www.themanufacturinginstitute.org/Research/Facts-About-Manufacturing/Economy-and-Jobs/Multiplier/Multiplier.aspx>

⁷⁹ 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.

⁸⁰ Laura Alfaro, "Foreign Direct Investment and Growth: Does the Sector Matter?" *Harvard University, Harvard Business School*, (2003).

⁸¹ 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.

⁸² 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.

promotion expenditures and FDI within the state.⁸³ However, the research does not separate the impact between international offices and other export promotion expenditures.⁸⁴

The final reason is that FDI research tends to focus on other state economic variables such as tax, labor, and geographic metrics. Labor variables can include the percentage of workers in a union, educational attainment, the unemployment rate, and measures of labor productivity. Geographic variables can include relative proximity to large markets, proximity to major interstates or ports, and proximity to similar industries.⁸⁵ 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 the existence of 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 1989.⁸⁶ He 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.⁸⁷

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.⁸⁸ 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.⁸⁹

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.⁹⁰ Coughlin's study looked at newly-built, foreign-owned manufacturing plants in the United States from 1989 to 1995.

Data...

This analysis relies on data provided by the Business Development division. The data contains 65 successful FDI projects in Florida within the review period. Each project was referred to the Business

⁸³ 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.

⁸⁴ Ibid.

⁸⁵ 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.

⁸⁶ Douglas P. Woodward, "Determinants of Japanese Manufacturing Start-Ups in the United States" *Southern Economic Journal*, Vol. 58, No. 3 (January 1992): 609-708.

⁸⁷ Ibid.

⁸⁸ 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.

⁸⁹ Ibid, at 39.

⁹⁰ 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.

Development division by one of Florida’s international offices. The data includes the amount of capital investment, total employment (retained and new), 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.⁹¹ Because NAICS codes are not included in the data, each company had to be separately researched in order to assign it to a NAICS code.

The output is divided evenly (1:1) between the International Offices Program and Business Development, 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. 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

Analysis and Findings...

Statewide Economic Model Impact of the INTERNATIONAL OFFICES PROGRAM

	2011-12	2012-13	2013-2014	Total
State Payments in the Window \$ (M)	1.4	1.5	1.9	4.8
Total Net State Revenues \$ (M)	4.6	7.9	6.5	19.1
Return-on-Investment by Year	3.3	5.3	3.4	
Return-on-Investment for the 3 year period				3.98

		2011-12	2012-13	2013-2014	Total		Average per Year
Personal Income	Nominal \$ (M)	161.8	277.1	212.8	651.6		217.2
Real Disposable Personal Income	Fixed 2009 \$ (M)	126.8	214.8	162.6	504.3		168.1
Real Gross Domestic Product	Fixed 2009 \$ (M)	138.1	235.0	176.0	549.1		183.0
Consumption by Households and Government	Fixed 2009 \$ (M)	129.8	220.7	168.4	519.0		173.0
Real Output	Fixed 2009 \$ (M)	297.7	489.2	351.6	1,138.5		379.5
		2010 - 11	2011 - 12	2012 - 13	Minimum	Maximum	Average per Year
Total Employment	Jobs	536	707	317	317	707	520
Population	Persons	112	752	1,728	112	1,728	864

As discussed in the subsection entitled “Florida Market and Resource Dependent Projects,” the output from 22 of the 65 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

⁹¹ North American Industry Classification System (NAICS) is the coding system used by the Federal Government in classifying business establishments.

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.

Two additional firms are excluded from the analysis because they received additional Florida economic incentives. One project received both Qualified Target Industry (QTI) and Quick Action Closing funds. The other project received only QTI funds. 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 two main inputs into the Statewide Model are estimated output and capital investment related to the projects under review. The estimated output of the projects over the review period is \$269.9 million. The output steadily rose over the three years, beginning at \$2.77 million in 2011 and ending at \$148.16 million by 2014. Capital investment from the foreign firms was estimated at \$57 million over the review period. Twenty-six of the 69 industries in the Statewide Model are impacted by the program. The industries range from construction to retail.

The ROI for the International Offices Program is projected at 3.98. For every dollar spent on the international offices, the state of Florida received 3 dollars and 98 cents back in tax revenue. In addition, the state incentive caused Florida's Real GDP to increase by about \$549.1 million and caused Real Disposable Personal Income to grow by \$504.3 million in the review period.

The ROI is 3.98 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. Among other things, these industries have higher wages,⁹² 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 \$22 million to only a few thousand; but, regardless of the amount, the capital investment contributed to a higher ROI.

⁹² The average reported wage of the firms in the analysis was \$52,286. Florida's 2014 average wage was \$46,900 (Source: The Florida Economic Estimating Conference, July 17, 2015).