

**The Economic Impact of International Merchandise Trade
in Miami-Dade County:**

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Executive Summary

Purpose

International merchandise trade is one of the more dynamic components of Miami-Dade County's economy. The objective of this study is to quantify the economic impact of international merchandise trade on the County's economy.¹ The analysis is based on the physical movement of merchandise through Miami-Dade's ports and the economic contribution from businesses through production of goods as well as merchandise trade-related services and government agencies involved in this key component of the economy. The elements of the local economy involved in merchandise trade-related services include the County's airport and seaport, transportation, warehousing, trade arrangement and wholesaling services, and international trade-financing services. The movement of goods that were produced in whole or in part by manufacturers located in the County or were produced by firms located outside the County and then transshipped through County ports as exports to foreign markets rely on trade-related services such as transportation and warehousing to off- and on-load the goods, consolidate and re-package them, hold them in a warehouse, locate buyers overseas and sell them the products and arrange for the financing of the sale. Similar services are also involved in the importation of merchandise through Miami-Dade.

Approach

This study utilized standard generally accepted methodologies to estimate the economic impact. Among the most important components of the economic impact are employment, employee compensation and total local value added (the local equivalent of gross domestic product).

Our analysis compares the magnitude of the impact in 2006 with that for 2003 in order to assess the dynamics of this sector. Both exports and imports are included in the study, because they

¹ Sometimes the term international trade is used to include both merchandise trade and services such as tourism. However this study deals exclusively with merchandise trade.

provide jobs and generate value added associated with the movement of goods through Miami-Dade. The study then projects the future impact of international merchandise trade for the period 2007-2017 based on a forecast of the economies of Miami-Dade's trading partners. The projections also take into account the County's competitive advantages as an international trading hub as well as the potential impact from existing and future free trade agreements between the U.S. and Miami-Dade's principal trading partners.

Findings

Our estimates show that international merchandise trade has had a substantial impact on the economy of Miami-Dade County. The estimates shown in Table 1 for the employment, income and value added impact reveal an important and dynamic sector of the economy.

	Direct	Indirect	Induced	Total
Value Added*	\$5,149	\$1,838	\$2,026	\$9,014
Employee Compensation*	\$2,857	\$1,075	\$997	\$4,929
Employment**	52,763	24,661	28,035	105,459
State & Local Taxes*				\$961
* Millions of 2006 dollars				
** Number of jobs				

In 2006:

- An estimated 105,459 jobs are supported by international trade activity in Miami-Dade, when direct, indirect and induced spending is considered. This represents approximately 7.5 percent of all jobs in the local economy. This is down slightly from 7.6 percent of all jobs in 2003. Based on the value of trade for Miami-Dade in 2006 of \$51.2 billion, for each \$1.0 billion generated in trade flows, 2,061 jobs are created in the County.
- International trade (including direct, indirect and induced jobs) generated \$4.9 billion in labor compensation locally per year in 2006, which accounts for 54.7 percent of the total value added impact.

- The impact of international merchandise trade is favorable for annual earnings per worker. The jobs supported by the international trade sector (those associated with the direct, indirect, and induced impact) had average annual earnings from employment of \$46,738. This is 13.2 percent higher than average earnings in the County's economy, which is up from an 11.1 percent differential in 2003.
- International trade also supports higher paying jobs. Direct employment in trade pays an average \$54,147 per year, which is 31.2 percent higher than average earnings for the Miami-Dade economy, up from a 25.9 percent differential in 2003.
- These payrolls are broadly distributed across the County economy, with local employee compensation of \$2.1 billion flowing to people not directly involved in international trade occupations (i.e., the indirect and induced jobs)
- Total local value added attributable to international trade activity is \$9.0 billion annually. This figure represents 8.6 percent of total 2006 economic activity in MDC, down slightly from 8.8 percent in 2003. The decline is explained in large part by the surge in construction activity during 2003-2006.
- Total State and local taxes represented about 10.7 percent of the value added generated by international trade.
- The impact of international trade has grown substantially over time. Relative to 2003, local value added (inflation-adjusted) attributable to international trade is up by 20.7 percent, the overall number of jobs has increased by 5.3 percent, and total employee compensation (inflation-adjusted) has increased by 17.8 percent.
- While total job growth of 5.3 percent for the merchandise trade-related sector is slightly less than for the overall local economy, changes in the structure of trade mean that growth in compensation per trade-related job has grown by 11.9 percent over the 2003 to

2006 period, while earnings per job in the overall County economy have grown by 9.7 percent.

- A continuing shift in export-related manufacturing away from textiles and garment assembly into more technology intensive export sectors such as surgical and medical instrument manufacturing is associated with higher wage jobs.² Total compensation paid to employees in trade-related manufacturing grew by 15.2 percent over the 2003 – 2006 period, while total compensation paid to County employees in the manufacturing sector shrank by over 2.8 percent. Essentially, employment in trade-related manufacturing was flat, with wages per employee up strongly.
- The figures for total employment impact in 2003 are lower than those estimated in a 2004 Economic Impact study due to the downturn that occurred starting in 2002 with respect to manufacturing employment as the industry shifted from lower-wage to higher-wage higher value added industries, for example from textile to medical equipment manufacturing.³ The earlier study had based its estimates on final 2001 employment data and extrapolated the 2002 and 2003 figures on the assumption of continued job growth in manufacturing. The actual employment figures for 2002 and 2003 later showed a drop of 16 percent in employment. It appears that at the time the previous study was prepared the structural changes in manufacturing were not yet evident. Nevertheless, the decline in the number of jobs has been offset by a greater concentration in higher paying jobs.

While international merchandise trade represents an important component of the local economy, these calculations are in no way intended to represent the total economic impact of international business activities on the Miami-Dade economy. Merchandise trade is only one component of the County's international sector; the other is comprised of trade in services. International services include tourism, financial services – other than trade finance-related, professional and business services, information, health care, and film & television production. If the contribution

² The impact from the manufacturing of goods in Miami-Dade is measured on the export side only. Imports used as inputs in manufacturing by Miami-Dade firms can reduce the cost of production and increase availability of goods to consumers and businesses; however, the economic impact of imports used in manufacturing is difficult to measure.

³ The Economic Impact of International Merchandise Trade in Miami-Dade County, by the Washington Economics Group, Inc. April 30, 2004.

of these other services were included, the size of the County's international economy would be notably larger. Furthermore, the competitive factors that explain Miami-Dade's success in international merchandise trade have also contributed to the expansion of international services as well as the synergistic effects of the combined activities on the development of international business. As manufacturing gets increasingly automated and continues to move offshore, a trend that will very likely intensify as high-tech high-value added manufacturing also moves offshore, international services will play a more dominant role in the County's international sector. These services include both the brokering, handling, and transporting of goods through Miami-Dade, which is the subject of this report, and the spectrum of services other than merchandise trade-related that account for an even bigger share of the County's economy.

Future Impact of International Merchandise Trade

The second part of this study presents a forecast of the global economic environment and how different factors will impact the growth of international trade in Miami-Dade. This analysis is then used as an input for the calculation of the future economic impact, based on a dynamic long-term economic model of the County. Overall, the outlook for international trade during 2007-2017 is positive. Further globalization of production and consumption will contribute to a rising share of international trade in the world economy and similarly in Miami-Dade.

This forecast foresees few fundamental changes in the structure of international trade through Miami-Dade. The County will continue to play a leading role in the triangulation of trade between Latin America and the Caribbean and the rest of the world. Strong economic growth in Asia, particularly China and India, will boost Asia – Latin American trade and thus the movement of goods through Miami-Dade.

The degree to which the County can optimize its opportunities to expand trade will depend on the outcome of key strategic factors such as market diversification; implementation of regional free trade agreements; competition from other trading hubs; and Miami-Dade's operational efficiencies in international trade. The key assumptions regarding these issues are:

- Exports to Latin America transshipped through Miami-Dade will expand at a faster pace than those originating in the local economy. Some opportunities for trade creation with Africa and the Middle East are also considered.
- This forecast assumes an increase in trade with Europe and Asia tied to the transshipment to Latin America as well as imports for the U.S. market.
- Existing Free Trade Agreements (FTAs) and those that are pending are expected to bolster growth of exports to the Latin America and the Caribbean through Miami-Dade.
- There is a significant probability that a political change in Cuba during the forecast period that would establish a form of government that is aligned with U.S. held democratic principles could result in a subsequent lifting of the embargo.
- The outlook for international merchandise trade through Miami-Dade depends on how well it can compete against rival trading hubs and to what extent it can enhance the efficiency of its infrastructure in order to retain or expand its current market share.
- Private sector investments in transportation, warehousing, trade arrangement and wholesaling enterprises will be critical to a positive trade outlook.
- This forecast assumes that the regulatory burden on international banking will start to become less onerous within the next three years as evidence mounts of the U.S. banking industry's losses in global competitiveness and the consequent deterioration of financial performance due to rising costs of compliance relative to the other major financial centers in Europe and Asia.

This forecast is based on the assumption that Miami-Dade will sustain its competitive advantage as a major international trading center for the Americas. The compelling evidence from past trends and market fundamentals lead us to conclude that Miami-Dade's future as an international

trading center is linked directly to the economic fortunes of Latin America. The impact of competitive factors on Miami-Dade trade is shown under alternative forecast scenarios.

The longer a forecast period, the wider is the band of possible outcomes. For this reason, the projection of international merchandise trade in this study is based on three basic scenarios regarding global economic growth and Miami-Dade's capture of market share. While many alternative assumptions can be considered, the scenarios chosen for this study are representative of the more likely range of outcomes. The three forecast scenarios are as follows:

Base Scenario: Trade through Miami-Dade Expands as the Global Economy Maintains Trend Growth

The Base Case represents the more likely scenario for the growth of international trade through Miami-Dade based on trend growth of the global economy, and on the assumption that Miami-Dade maintains its competitive advantage in trade.

Alternative 1(high case): A significant increase in Miami-Dade's share of imports and exports

This alternative represents the high case, or more optimistic outcome for the impact of international merchandise trade with above trend world economic growth, improved economic performance in Latin America and the Caribbean, and increased competitiveness of Miami-Dade's ports.

Alternative 2(low case): Miami-Dade's Market Share Declines

Alternative 2 represents the low case, or less optimistic outcome for international trade based on slower world economic growth, more restrictive trade polices, and limited investment in Miami-Dade trade infrastructure.

The growth of trade associated with each of these scenarios is shown in Table 2.

Table 2: Miami-Dade International Merchandise Trade Projected Growth						
(AAG)	2007-2012			2012-2017		
	Base	Alt 1	Alt 2	Base	Alt 1	Alt 2
Latin America & Caribbean	7.7	8.5	6.1	6.6	7.0	5.7
European Union	5.5	6.0	5.0	5.2	5.7	4.8
Asia	7.5	8.2	6.6	6.2	6.7	5.2
Middle East	6.7	7.2	6.2	5.4	5.8	5.0
Africa	5.6	5.9	4.4	5.0	5.3	3.9
Other	5.2	6.0	4.3	4.3	4.9	3.5
Total Exports	7.5	8.3	6.0	6.4	6.9	5.6

AAG is average annual growth.
Source: IMF, World Bank and StratInfo

The baseline forecast shows that international trade will continue to have a strong focus on manufactured goods, along with the services necessary to handle them and transport them to foreign markets. Output growth (final sales and intermediate sales) is projected to be more than double the rate of growth in output for the economy overall. Employment growth in trade-related sectors is also expected to be much more rapid than the rate of growth for the County economy overall. This strong performance means that the share of the merchandise trade-related sector will grow in relation to the overall Miami-Dade economy

As shown in Table 3, value added resulting from international trade will grow faster than the rest of the Miami-Dade economy. Thus value added from international trade will increase from 8.6 percent of the total for Miami-Dade in 2006 to 12.7 percent in 2017 in the more likely, or Base case forecast. Employee compensation will be driven by growth in the volume of trade, by higher margins associated with greater value added content of merchandise moving through the County, and by increased productivity associated with the enhancement in the trade infrastructure. Employment in international trade will expand from 7.5 percent of the total for Miami-Dade in 2006 to 10.0 percent in 2017.

Table 3: Projected Impact of International Merchandise Trade on the Miami Dade Economy

	2006	2012	2017
Value Added*			
Most Likely	\$9,014	\$14,559	\$19,551
High Case	\$9,014	\$15,338	\$21,072
Low Case	\$9,014	\$13,530	\$17,540
Employee Compensation*			
Most Likely	\$4,781	\$6,593	\$7,466
High Case	\$4,781	\$6,754	\$7,705
Low Case	\$4,781	\$6,308	\$7,062
Employment**			
Most Likely	105,459	139,882	154,325
High Case	105,459	143,750	159,989
Low Case	105,459	133,047	144,752
* Millions of 2006 dollars			
** Number of jobs			

Recent Trends in International Merchandise Trade

Miami-Dade County is an important center for international trade, commerce and finance. The area's strategic location relative to Latin America and the Caribbean makes it a natural hub for trade between the Americas, Europe, and Asia. The availability of frequent and extensive international air service, combined with modern seaport facilities, provides an infrastructure conducive to international merchandise trade. The Dante Fascell Port of Miami has state of the art equipment for inter-modal transportation, refrigeration, and the automated processing of shipments. With its excellent infrastructure and facilities, the Miami International Airport is a leader in international freight in the Americas.

International merchandise trade has benefited from the growth of the global economy. In fact, the growth in the volume of trade has outperformed the growth of the global economy. According to the IMF, the global economy grew at an average annual rate of 3.8 percent during 1997-2004, while the volume of trade grew by 6.5 percent.⁴ This implies that for every percentage point growth in the global economy, the volume of international trade has expanded by 1.7 percent.

Exports

The growing importance of international trade in Miami-Dade is demonstrated by the growth of activity through the Miami Customs District (M-C District). During the past 15 years the value of exports from South Florida has averaged 6.7 percent per annum growth.⁵ With respect to total U.S. exports, M-C District's share increased gradually and peaked in 2000, and then fell to 3.7 percent in 2004, mostly as a result of unfavorable economic conditions in its principal markets in South America. Since 2004, its share moved up slightly and has held at 3.8 percent through 2006.

⁴ IMF, World Economic Outlook, October, 2007. The IMF figure for the volume of trade includes services.

⁵ The Miami Customs District includes Fort Pierce Seaport, Ft. Lauderdale International Airport, Key West Seaport, Miami International Airport, Miami Seaport, Port Everglades Seaport, and West Palm Beach Seaport. All the other ports in the State of Florida make up the Tampa Customs District.

Table 4: Miami Customs District Exports and Total for U.S.

(US\$ millions)

	U.S.		Miami Customs District (MCD)			
	Total	Total	Top 15			
	Exports	Exports	% of U.S.	Countries	% of U.S.	% of MCD
1992	448,164	16,041	3.6	11,448	37.9	71.4
1995	584,742	22,739	3.9	16,172	37.9	71.1
2000	781,918	31,119	4.0	23,254	45.4	74.7
2004	818,775	30,068	3.7	21,559	41.4	71.7
2005	905,978	34,096	3.8	24,988	40.9	73.3
2006	1,036,635	39,627	3.8	29,106	38.3	73.5

Note: this table shows top 15 countries excluding Mexico.
Source: U.S. Census Bureau

The principal exports markets (top 15 countries) for the M-C District based on 2006 value of shipments are all in Latin America and the Caribbean. In 2006 these markets accounted for 73.5 percent of total District exports and for 38.3 percent of total U.S. exports to those countries. Despite a moderate but steady erosion of its share of U.S. exports to these countries since it peaked at 45.4 percent in 2000, Miami maintains a dominant role in merchandise trade within this hemisphere.

Key trends impacting on the growth of exports from M-C District since 2003 include: (i) the expansion of the global economy; (ii) the strength of the recovery of Latin America since the 2001 recession, boosted by the global commodity price boom; (iii) growth of offshore production which is reflected as exports from the District to countries where the products are assembled and then shipped back to the U.S.; and (iv) the depreciation of the US dollar, which makes U.S. products cheaper to foreign buyers. The downward trend in the District's share of U.S. exports is explained in part by the diversion of traditional port users to other locations that were not affected by increased U.S. security provisions, and a growing tendency to ship east-west trade via major containerized ports in Southern California.

The Miami International Airport (MIA) and the Miami Seaport, the two ports located in Miami-Dade, account for the bulk of merchandise exports through the M-C District. As shown in Table 5, these two ports shipped 75.9 percent of the District's total exports in 2006; however, this share was down from 80.6 percent in 2004, reflecting in part increased competition from the other ports including other South Florida facilities. MIA exports are characterized by high-value goods

such as computers and other electronic products and medical equipment that have experienced dynamic growth in volume during 2003-2006. The top 50 commodities based on tariff codes represented 82.4 percent of MIA's exports in 2006. The Seaport's export structure is characterized by high-weight merchandise such as machinery and equipment and is more diversified than MIA's as shown by the share of its top 50 commodities of 52.8 percent.

Table 5: Miami International Airport & Miami Seaport Exports

	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	AAG <u>2003-06</u>
Miami International Airport					
Value (mill US\$)	13,958.0	16,197.9	17,754.7	20,666.5	14.0
Weight (000, kg)	226,553	257,737	266,523	295,419	9.3
Average Value (\$ / kg)	61.61	62.85	66.62	69.96	4.3
Miami Seaport					
Value (mill US\$)	7,127.2	8,049.4	9,019.1	9,413.6	9.7
Weight (000, kg)	2,189,355	2,246,512	2,297,381	2,371,200	2.7
Average Value (\$ / kg)	3.26	3.58	3.93	3.97	6.8
MIA & Seaport Value of Exports as % of M-C District					
	80.4	80.6	78.5	75.9	
AAG is average annual growth					
Source: U.S. Census Bureau					

Imports

With the globalization of production and consumption U.S. imports are becoming more important in meeting final demand for goods and services. As a result, the U.S. merchandise trade deficit jumped from \$84 billion in 1992 to \$817 billion in 2006. In contrast, the M-C District has maintained a trade surplus throughout the same period. This reflects the dominance of exports to Latin American markets relative to imports from the region. M-C District's share of total U.S. imports has remained relatively stable during 1992-2006 at 1.8 percent, although it was moderately higher during 2000-2004.

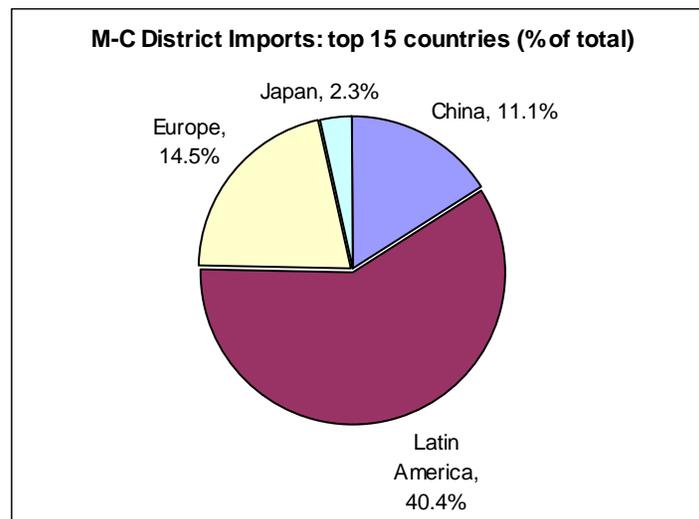
Table 6: Miami Customs District Imports and Total for U.S.

(US\$ millions)

	U.S.		Miami Customs District (MCD)			
	Total Imports	Total Imports	% of U.S.	Top 15 Countries	% of U.S.	% of MCD
1992	532,665	9,651	1.8	6,465	3.2	67.0
1995	743,543	13,328	1.8	8,918	3.3	66.9
2000	1,218,022	24,700	2.0	17,383	4.2	70.4
2004	1,469,704	28,814	2.0	20,338	3.9	70.6
2005	1,673,455	31,802	1.9	22,280	3.7	70.1
2006	1,853,938	32,474	1.8	22,155	3.3	68.2

Source: U.S. Census Bureau

M-C District's imports are more diversified when compared to the structure of exports. Based on the top 15 countries for imports through the District in 2006, Latin America accounted for 40.4 percent of the total, followed by Europe with 14.5 percent, and China with 11.1 percent. Imports from China have grown exponentially; and in 2006 China became the top supplier of goods imported through the District. Imports from France, the Netherlands and the UK have also exhibited strong growth.



The expansion of imports through the M-C District exhibits several characteristics: first, the average value of imports is much lower than for exports, since imports of merchandise are

comprised of raw materials and semi-processed commodities and other manufactured products compared to exports which have a higher value added component. Second, import demand is driven by growth of the U.S. economy, as inputs into production of final goods and services and as finished products destined to the U.S. consumer market. Third, some of the imports are products assembled in Latin America from U.S. made components which were exported through the M-C District to the country where they were assembled and then re-exported back to the U.S. market. And fourth, a portion of M-C District imports from Europe and Asia are subsequently re-exported or transshipped to Latin America and the Caribbean by businesses located in South Florida.

Table 7: Miami International Airport & Miami Seaport Imports

	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>AAG</u> <u>2003-06</u>
Miami International Airport					
Value (mill US\$)	8,754.8	9,126.2	9,650.1	9,623.8	3.2
Weight (000, kg)	516,304	570,726	530,311	515,951	0.0
Average Value (\$ / kg)	16.96	15.99	18.20	18.65	3.2
Miami Seaport					
Value (mill US\$)	9,727.1	10,862.8	11,577.0	11,469.9	5.6
Weight (000, kg)	4,120,956	4,339,386	4,327,344	4,112,670	-0.1
Average Value (\$ / kg)	2.36	2.50	2.68	2.79	5.7
MIA & Seaport Value of Imports as % of M-C District:					
	71.2	69.4	66.7	65.0	
AAG is average annual growth					
Source: U.S. Census Bureau					

Miami-Dade County accounts for about two thirds of total imports through the District, although that share has been declining since 2003 in part as a result of competition from other U.S. ports, including those located in Florida.

Measuring the Economic Impact of International Merchandise Trade

The economic impact of international merchandise trade measures the total value added generated by this type of activity in Miami-Dade. Value added measures the difference between the revenue a business earns by selling its products and the amount it pays for the products of other firms it uses as intermediate goods or the value that is added to each product by firms at each stage of production. However, if the firm selling the intermediate goods is located outside of Miami-Dade, then the value added of that supplier is not counted. Value added thus represents the income generated by all production activities originating in the County, and on the flip side, it measures total expenditures on the goods and services produced exclusively in Miami-Dade resulting from international merchandise trade. From the income side of the ledger the value added impact measures the compensation of workers, business income, and government revenues associated with international trade. Value added is thus a comprehensive measure of the overall economic impact. The calculation of the economic impact derived in this study is based on information for 2006 which is then compared to the 2003 figures in order to assess the trend during that period.

Methodology for Calculating the Economic Impact

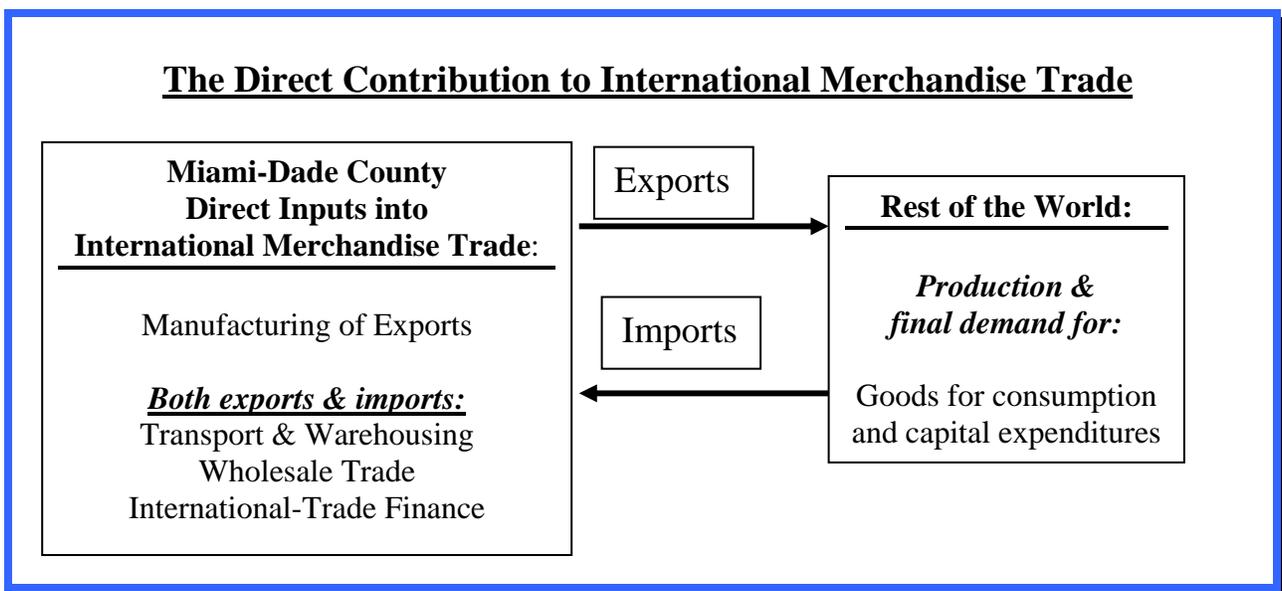
The first step in the calculation of the economic impact is to identify the direct inputs involved in the movement of trade through Miami-Dade which is then used by the analytical model to measure the multiplier impact on the local economy. Based on employment information for each industry, we calculated the direct impact as the percent of total workers involved in international merchandise trade.

The second step involves the estimate of the purchases of intermediate goods and services by those sectors directly involved in international trade from other industries located in the County. The value generated by the purchases of intermediate inputs is referred to as the indirect impact. The third level of impact is induced effect, which measures how much of the income generated by the direct and the indirect impact is then spent by households, the government, and businesses

(through investment) on goods and services produced in the local economy. The sum of the three value components measures the economic impact from international merchandise trade.

The direct effect of spending is the impact of new spending on first tier suppliers. This direct spending has the advantage that it can be counted relatively easily, but it does not capture the “multiplier effect” of the additional economic activity set in motion by the direct inputs. For example, the purchase of a meal at a local restaurant generates employment, income and taxes at that establishment and would thus constitute the direct contribution to the local economy from the restaurant industry.

As shown in the figure, international trade is comprised of exports from Miami-Dade to the rest of the world and imports into the County. Some of the exports are goods manufactured in the County. All other exports and all imports are handled by firms located in Miami-Dade such as transportation, warehousing, and international trade-finance. The rest of the world is the driver for Miami-Dade exports through their demand for consumer goods, intermediate goods and capital equipment. Imports through the County are driven by final U.S. demand for goods produced by the rest of the world or by firms that arrange the imports of goods into Miami-Dade for transshipment to foreign markets. All individuals, businesses and government agencies involved in the movement of these goods constitute the direct effect from trade.



The indirect effect measures the purchases of certain inputs from other businesses. To the extent that these inputs are local, these purchases represent additional local economic activity. The restaurant in the example may purchase food inputs from a local produce market which make up the ingredients of the meal served by the restaurant to its customer. The produce market may have paid a local farmer for the items that were used by the produce market to make the food sold to the restaurant, and the farmer in turn may have purchased other inputs used in farming from other local suppliers. The indirect effect measures the cumulative local purchases from other businesses that are generated from the dollars spent on the meal. Since much of the spending on intermediate inputs eventually goes to businesses outside the Miami-Dade area, the indirect effect is usually smaller than the direct effect.

The induced effect measures the additional spending that occurs across the economy that originates from the income paid by all of the businesses involved, directly or indirectly, in producing as in the example the restaurant meal. There is a flow of wages received by the waiters, cooks, produce store clerks, farmers and others who play a part in putting that meal in front of the customer. These people receive most of those wages as take-home pay, and they spend most of it, with the remainder going to savings. To the extent that their spending generates jobs in the local economy, there is additional economic impact attributable to the meal. However, much of that pay may go to a mortgage or car payment that leaves the local economy. In fact, most of the grocery store spending will leave the local economy to pay for food produced elsewhere in the country. But the part that pays the local banker administering the car loan, or the clerk at the local store, or other local employees, represents a local economic impact of that restaurant meal.

Thus, the total local economic impact of the restaurant meal is greater than the actual price of the meal. If the restaurant meal is \$20, then the total economic impact may be \$32. In this case the “multiplier” is said to be 1.6, meaning that every dollar spent on that category (restaurant meals) has a total impact of \$1.60 on the local economy, after the direct, indirect and induced effects are accounted for.

In order to calculate the economic multiplier from the indirect and induced impacts the U.S. Department of Commerce’s Bureau of Economic Analysis has developed Input-Output tables,

based on actual historical data for the U.S. and for each individual county, that show how much of the goods and services produced by each industry is in turn used as inputs by other industries, or are sold as final goods to consumers, as capital goods to businesses and as goods and services to the public sector. The inter-industry component of the table shows the dollar amount of inputs from each industry used to produce a dollar's worth of output by other industries. These Input-Output tables are used in developing economic impact models. These models of a county's economic structure are then used to calculate the multiplier or total economic impact of a business, an industry, or a sector from the national down to the individual county level.

Input-output accounting describes commodity flows from producers to intermediate and final consumers. The total industry purchases of commodities, services, employment compensation, and other value added components, plus imports are equal to the value of the commodities produced. Purchases for final use (final demand) drive the model. Industries purchase goods and services from other industries in order to produce goods and services, which are in turn purchased as inputs by other industries as well as final demand by consumers, governments, and businesses. These other producers, in turn, purchase goods and services from other industries, and so forth. This buying of goods and services (indirect purchases) continues until leakages from the region (imports and value added) stop the cycle.

The regional impact model used in this study is the IMPLAN which was developed by researchers at the Minnesota IMPLAN Group in 1993 as an outgrowth of their work at the University of Minnesota. Creating regional input-output models require a tremendous amount of data. The IMPLAN model was developed as a cost-effective means to develop expanded regional input-output models known as Social Accounting Matrices. The IMPLAN database, created by MIG, Inc., consists of two major parts: 1) a national-level technology matrix and 2) estimates of sectorial activity for final demand, final payments, industry output and employment for each county in the U.S. along with state and national totals.

Calculation of the Direct Economic Impact

In this study the direct economic contribution is derived from an estimate of the number of people employed in the sale, handling and transportation of international merchandise trade.

International trade statistics only establish where merchandise began its journey, whether it is from a factory or from a warehouse; thus the data do not identify the origin of production of merchandise. Thus the use of employment data provides a more accurate base for estimating the direct economic contribution from exporting and importing activities.

Once we calculated the employment associated with international merchandise trade, our Input – Output model is then used to calculate total compensation for those employed by each industry. The principal industries associated with international merchandise trade are manufacturing, transportation, transportation services, wholesale trade and international trade financing. The specific sub-industry components used in this study along with their industry codes are shown in Table 8. The employment information is drawn from the Bureau of Labor Statistics’ *County Employment and Wages (CEW)*. Since the CEW only includes workers covered by unemployment insurance, these figures were then adjusted by the Department of Commerce’s Bureau of Economic Analysis’ estimates of non-covered employment which includes some part-time and self-employed workers. Employment estimates for international trade represent both exporting and importing activities.

The estimate of direct employment in international trade is derived from various sources and then applied as a percentage of total employment. For manufacturing, the international percentage is calculated on the basis of the 2002 Economic Census of Manufacturers for Miami-Dade, which is the latest available. The total value of shipments, or what may be referred to as the value of total output of manufacturers, was \$8.4 billion in 2002. Then by reference to the Bureau of the Census’ Survey of Manufacturer Exports for the same year, which is only available at the State level, the same percentages of the value of exports to total shipments was applied by sub-category of manufacturing to arrive at the number of people involved in the manufacture of exports. Because of the higher concentration of textile and apparel exports in Miami-Dade associated with offshore assembly, the export proportion obtained at the state level was adjusted up to 80 percent. A similar adjustment was made to miscellaneous manufacturing, which is dominated by production of medical equipment, and to computer & medical instruments for which it was assumed that 75 percent was exported. These figures were then updated through 2006 based on CEW employment statistics and productivity trends.

Employment in international transportation and wholesale services is also based on the CEW data adjusted for international activity. The percentage of international trade associated with the Airport and Seaport was calculated from information provided by the ports on the movement of cargo and these percentages were then applied to the total employment figures. The proportion of persons employed in the wholesale sector that are directly involved in international trade is estimated using data from the State of Florida Revenue office reports for taxable sales. The percentage is calculated by using the number of firms filing tax returns for Miami-Dade in the importing and exporting category relative to the total number of wholesaling establishments in the County.

Table 8: Miami-Dade: Employment in International Merchandise Trade			
Industry	NAICS Code	Employment 2006	% of jobs in International trade
Manufacturing	31-33	52,130	34%
Transportation			
General freight trucking, long-distance	48412	4,057	50
Water Transportation:			
Deep sea freight transportation	483111	817	100
Port and harbor operations	48831	217	100
Marine cargo handling	48832	2,154	100
Navigational services to shipping	48833	105	100
Air Transportation:			
Scheduled freight air transportation	481112	1,292	80
Nonscheduled air freight chartering	481212	196	80
Support activities for air transportation	4881	1,839	40
Transportation Services			
Freight transportation arrangement	4885	9,140	60
Packing and crating	488991	264	60
Warehousing and storage	493	3,120	40
Wholesale trade	42	79,996	21
International trade financing	522293	2,215	100
Source: Bureau of Labor Statistics and StratInfo			

Indirect, Induced and Total Economic Impact in 2006

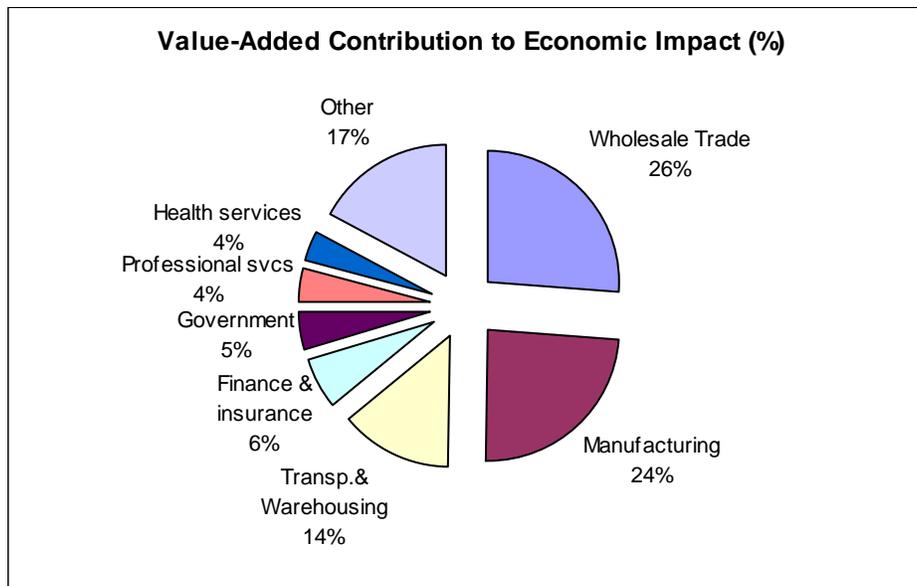
The measure of direct labor input in the production and movement of international merchandise trade was applied to the IMPLAN regional economic model to calculate the indirect, the induced and the total impact on the Miami-Dade economy. In terms of employment, an estimated 105,459 jobs were supported by international trade activity in Miami-Dade during 2006 (see Table 9). This represents approximately 7.5 percent of all jobs in the local economy. Thus for each worker directly employed in international trade approximately another job is created in the

Miami-Dade economy (see Appendix tables for details). The greatest indirect and induced employment impact is found in healthcare, retail trade, administrative and professional services.

International trade (including direct, indirect and induced jobs) generated \$4.9 billion in labor compensation locally per year in 2006. These payrolls are broadly distributed across the economy, with local employee compensation of \$2.1 billion flowing to people not directly employed by businesses involved in international trade; thus for every dollar of direct compensation in international trade, \$0.72 was generated in indirect and induced labor income. Total jobs in Miami-Dade supported by the international trade sector had average annual earnings from employment of \$46,738 which is 13.2 percent higher than average earnings in the County economy. Annual earning for direct employment in trade was higher at \$54,147 per year, which is 31.2 percent above the county average.

	Direct	Indirect	Induced	Total
Value Added*	\$5,149	\$1,838	\$2,026	\$9,014
Employee Compensation*	\$2,857	\$1,075	\$997	\$4,929
Employment**	52,763	24,661	28,035	105,459
State & Local Taxes*				\$961
* Millions of 2006 dollars				
** Number of jobs				

Total local value added attributable to export activity is \$9.0 billion for 2006. This figure represents 8.6 percent of total 2006 economic activity in Miami-Dade. As shown in the figure below, wholesale trade accounts for the largest contribution to indirect and induced value added, followed by professional services, finance & real estate, and healthcare services. Total State and local taxes represented about 10.7 percent of the value added generated by international trade.



Comparison of Economic Impact for 2003 and 2006

The impact of international trade in Miami-Dade has grown substantially over time. Relative to 2003, local value added (inflation-adjusted) attributable to merchandise trade is up by 20.7 percent, the overall number of jobs has increased by 5.3 percent, and total employee compensation (inflation-adjusted) has increased by 17.8 percent.

While total job growth of 5.3 percent for the merchandise trade sector is slightly less than for the overall local economy, changes in the structure of trade such as the value added content and the margins earned by trading companies mean that growth in compensation per trade-related job has grown by 17.8 percent over the 2003 to 2006 period, while earnings per job in the overall County economy have grown by 17.4 percent.

A continuing shift in export-related manufacturing away from textiles and garment assembly into more technology intensive export sectors such as surgical and medical instrument manufacturing is associated with higher wage jobs. Total compensation paid to employees in trade-related manufacturing grew by 15.2 percent over the 2003 – 2006 period, while total compensation paid to Miami-Dade employees in the manufacturing sector shrank by over 2.8 percent. Essentially, employment in trade-related manufacturing was flat, with wages per employee up strongly, while

manufacturing employment overall in the County was down, and wages per employee were more flat.

Table 10: Impact of International Merchandise Trade on the Miami Dade Economy in 2003				
	Direct	Indirect	Induced	Total
Value Added*	\$4,238	\$1,506	\$1,727	\$7,470
Employee Compensation*	\$2,439	\$862	\$882	\$4,183
Employment**	51,492	21,084	27,540	100,116
State & Local Taxes*				\$833
* Millions of 2006 dollars				
** Number of jobs				

Total local value added attributable to international trade activity represented 8.6 percent of total 2006 economic activity in Miami-Dade, down slightly from 8.8 percent in 2003. The contribution to state and local taxes remained stable at 10.7 percent. This reflects the unusually strong expansion in other industries such as construction and real estate. As shown in Table 11 below, the most dynamic sector during 2003-2006 was construction, with more than one third of the cumulative growth in the County's economy attributed to construction and real estate. On the other hand, international trade has shown significant but steady growth, with good prospects for continued expansion, as opposed to the more volatile construction industry. By contributing to greater diversification of Miami-Dade's economy, the international sector supports a more sustainable and steady growth of the overall economy.

Table 11: Miami-Dade: Cumulative Change in Value added 2003-2006

Sector ranked by total change:	2003-2006	
	Value Added Cumulative Change	% of Value Added in 2006
1 Construction	66.1	5.2
2 Accommodation & food services	56.2	3.6
3 Management of companies	52.3	1.3
4 Educational svcs	40.1	1.3
5 Real estate & rental	33.9	9.2
6 Finance & insurance	26.8	8.1
7 Wholesale Trade	26.4	9.1
8 Health & social services	23.0	6.5
9 Utilities	22.0	1.1
10 Government & non NAICs	21.5	17.3
11 Information	21.3	5.7
12 Administrative & waste services	20.7	3.6
13 Professional- scientific & tech svcs	18.3	7.3
14 Other services	16.7	2.4
15 Arts- entertainment & recreation	14.1	1.2
16 Retail trade	13.0	6.9
17 Manufacturing	4.5	4.3
18 Ag, Forestry, Fish & Hunting	2.1	0.6
19 Transportation & Warehousing	-4.9	5.3
20 Mining	-65.1	0.0
Total Value added	22.7	100.0

Outlook for International Trade and Economic Impact Analysis: 2008 – 2017

The second part of this study presents a projection of the global economic environment, its implication for international trade, and how different competitive factors impact the outlook for international trade in Miami-Dade. This analysis is then used as an input in the calculation of the future economic impact of international trade, based on a dynamic long-term economic model of Miami-Dade County.

Developing a strategic vision of the role of international merchandise trade in Miami-Dade involves a forward looking analysis of the principal factors determining the growth of trade such as growth of Miami-Dade's major trading partners; Miami-Dade's competitive advantages in international trade and their contribution to growth of the economy; growth of international trade relative to the size of the County's economy; and how the risks to the outlook impact the future development of trade in the County.

Global Economic and Trade Outlook

Global economic growth during 2008-2017 will be increasingly powered by developing countries. A growing share of global production of goods and services will be located in emerging market countries. In most economies, the importance of trade will rise. Fueled by the influx of investments, the rapid growth of developing and emerging markets will generate greater purchasing power to acquire consumer goods and to travel, which will in turn expand the opportunities for trade. The developed economies will act as a stabilizing factor through sustained steady growth. The principal trading regions for Miami-Dade in order of importance are: Latin America and the Caribbean, Europe, Asia, the Middle East and Africa. The following is a summary of the principal assumptions underlying the forecast for each region.⁶

⁶ The long-term economic outlook is based on projections by the IMF, the World Bank, and StratInfo.

Latin America and the Caribbean

The economic forecast for Latin America and the Caribbean is based on the assumption that most of the market-based economic reforms of the past two decades will be maintained, mainly in the fiscal and monetary policy areas, although increased political uncertainties may adversely affect the economic outlook. On the external front, continued expansion in the global economy will support the regional economies, particularly through favorable commodity prices. The principal risks to this forecast are political uncertainties associated with recent leadership changes in South America and a weakening of the global economic environment. Nevertheless, the progress made in the region during the past 20 years bodes well for the overall regional economic outlook.

GDP growth in the Latin American and Caribbean region is expected to average 4.2 percent during 2008-2017. This projection is based on a number of assumptions including:

- Most governments will maintain market-based reforms with greater emphasis on social spending.
- Fiscal and monetary policies will be supportive of stable inflation and currency markets along with sustainable growth.
- The adverse effect on economic performance from the marked shift to a greater role of the state in the economy in Bolivia, Ecuador, and Venezuela will be more than offset by their dependence on oil exports and the relatively robust outlook for energy prices.
- The U.S. and other principal trading partners will continue to expand at their historical rates while increasing trade with Asia will further boost Latin American exports.
- The expansion of Free Trade Agreements in the region will bolster the prospects for economic growth.

Trade is expected to be an important driver of growth in the region, especially through the expansion in regional free trade agreements. For example, analysis by the World Bank indicates that implementation of the CAFTA-DR Free Trade Agreement with the U.S. could add one percentage point to annual growth of the individual economies. Both Chile and Peru have signed

free trade agreements with the U.S. Uruguay, which is prevented by MERCOSUR from directly negotiating a free trade agreement with the U.S., has then signed a trade enhancement pact.

The economic outlook for Latin America and the Caribbean bodes well for the growth of international trade through Miami-Dade. The expectation that growth in trade will outperform growth in the individual economies is another impetus to growth of trade through the County.

Post-embargo Cuba

With a population of close to 11.3 million, a post-embargo Cuba could become the Region's largest market outside Florida because it is only 90 miles south of Key West, Florida. The recent transition of power to Raul Castro following the serious ailment of Fidel Castro marks the beginning of political changes that could eventually evolve into full-fledged diplomatic relations with the U.S. This will create opportunities for international trade and services companies in Miami-Dade, which could become a major transshipment location for trade with Cuba. The impact from such an event has been incorporated into this analysis.

Europe

The long term outlook for the European Union will continue to improve through the consolidation of the Euro Area and the integration of emerging European nations with Western Europe. Growth performance in the Euro Area will be driven by productivity and employment growth. Additional efforts at fiscal consolidation will help to alleviate the burden of the deficit and thus contribute to increased private sector investment and greater economic stability.

Emerging Europe will benefit from rising disposable income and increasing productivity. Significant wage differences with Western Europe will enhance competitiveness and thus attract greater investments. An increasing number of Central and Eastern European economies will be joining the European Union with a consequent improvement in their standard of living. Europe trade with Miami-Dade should continue growing, with Miami-Dade maintaining its role as a transshipment hub.

Asia

Asia is expected to remain the highest growth region in the world economy. According to the World Bank, GDP growth in East Asia is expected to average 5.1 percent per annum during 2008-2030, influenced by strong growth in China and India. The strong growth in trade between Asia and Latin America and the Caribbean is expected to bolster the transshipment of goods through Miami-Dade. Goods originating from Asia will be shipped to Miami-Dade where a large proportion will then be distributed as exports to Latin American and Caribbean markets, and in turn exports from the region will be shipped to Miami for distribution in the U.S. market and for transshipment to Asia.

China has become the principal source of merchandise imports into the Miami-Dade County. In recent years, China has developed stronger economic ties with Latin America in the form of investments in natural resource industries and through exports of consumer and industrial products. China's economy is reliant on the import of natural resources and raw materials so it looks to Latin America and the Caribbean as a strategic supplier of these commodities. Based on the IMF's Direction of Trade statistics for 1999-2005, China exports to Latin America and the Caribbean expanded at an average annual rate of 22.8 percent, while China's imports from the region expanded at 44.1 percent, although most of the growth occurred in the latter two years. Nevertheless, in 2005, Latin America and the Caribbean accounted for just 3.0 percent of total Chinese exports. As trade between China and Latin America and the Caribbean grows during the forecast period, Miami-Dade will benefit from opportunities as a location for the transshipment of goods between the two although the costs associated with increasing U.S. security measures for handling of trade could undermine these prospects.

Commonwealth of Independent States

Economic growth in the Commonwealth of Independent States (CIS) countries will be buttressed by the boom in commodity prices in the short-term and then slow to a more sustainable rate in the medium- to long-term. The energy exporting countries such as Azerbaijan, Kazakhstan, Russia, Turkmenistan, and Uzbekistan will outperform the other countries in the region with stronger income growth and greater consumption. Investment inflows during the next five years should enhance productivity growth; nevertheless, investment levels remain low. In the lower

income CIS countries greater efforts at fiscal discipline will be needed to achieve sustainable growth with low inflation.

Miami trade with CIS countries is expected to grow at a more moderate pace than with Latin America, Asia and Europe.

Middle East

Strong growth in this region will be supported by high oil prices. Rising government spending in infrastructure and social projects financed by oil revenues will sustain robust growth. In some countries inflation will continue to pose a challenge to economic policy and dampen their growth prospects. Political risks could also hurt economic growth of the region. Miami-Dade trade with the Middle East should show modest growth.

Africa

Above average growth will propel the African economies. Improved economic management will contribute to more sustainable growth. Increasing trade will support employment growth. Foreign direct investment inflows will help finance the external deficits, particularly for the energy importing countries. On the downside, disparate social conditions could trigger renewed waves of internal conflict in some of the countries.

The principal assumptions regarding economic growth of the principal regions of the world are shown in Table 12 below.

(AAG)	2007-2012			2012-2017		
	Base	Alt 1	Alt 2	Base	Alt 1	Alt 2
Latin America & Caribbean	4.3	5.0	3.2	4.0	4.5	3.0
European Union	3.2	3.7	2.8	3.0	3.5	2.5
Asia	6.1	6.8	5.1	5.8	6.2	4.4
Middle East	5.2	6.2	4.1	4.8	5.7	3.9
Africa	5.4	5.8	4.2	5.0	5.4	3.8
AAG is average annual growth						
Source: IMF, World Bank and StratInfo						

Forecast of International Merchandise Trade through Miami-Dade

Miami-Dade is a major hub for international trade linking Latin America and the Caribbean with the U.S., Europe, Asia and other regions of the world. Its competitive advantage can be attributed to its location from which it services many destinations in the region; to the cluster of trade related services as well as a wide array of international professional and business services; and to its multi-lingual community with extensive linkages to countries throughout the region. This forecast is based on the assumption that Miami-Dade will sustain its competitive advantage as a major international trading center for the Americas. The impact of competitive factors on Miami-Dade trade is shown under alternative forecast scenarios. The baseline scenario will assume that Miami-Dade will hold its market share of trade with the Americas. The more optimistic scenario (Alternative 1) considers that Miami-Dade succeeds in increasing market share and further diversifying its trading base. The more pessimistic scenario (Alternative 2) reflects a shrinking of market share, due to a more restrictive global trade environment and slower growth in its principal markets of Latin America and the Caribbean.

Issues Affecting the Outlook for International Trade

The outlook for international trade during 2007-2017 is positive. Continued globalization of production and consumption will contribute to a rising share of international trade in the world economy. This forecast foresees few fundamental changes in the structure of international trade through Miami-Dade. The County will continue to play a leading role in the triangulation of trade between Latin America and the Caribbean and the rest of the world. Strong economic growth in Asia, particularly China and India, will boost Asia – Latin American trade and thus the movement of goods through Miami-Dade. Thus exports to Latin America transshipped through Miami-Dade will expand at a faster pace than those originating in the local economy. Some opportunities for trade creation with Africa and the Middle East are also considered. In view of the increased investments in assembly and manufacturing industries in the regional economies, this projection assumes that imports from Latin America will attain a higher value added content. The degree to which Miami-Dade is able to optimize its opportunities to expand trade will depend on the outcome of key strategic factors such as market diversification; implementation of

regional free trade agreements; competition from other trading hubs; and Miami-Dade's operational efficiencies in international trade.

Market diversification

Diversification of international trade can contribute to a higher rate of expansion in the shipment of goods as well as reducing the vulnerabilities arising from market concentration. Latin America and the Caribbean represents the principal market for Miami-Dade accounting for 88 percent of total exports in 2006. The predominance of Latin America reflects Miami-Dade's strategic location as well as other competitive factors in trading with the region. On the other hand strong competition from other U.S. trading hubs such as Atlanta, Dallas, Houston, Los Angeles, and New York presents a challenge in achieving an increased presence in the European and Asian markets. Yet Miami-Dade can exploit its competitive advantage in trade with Latin America to expand its role as a trading hub between Europe, Asia and the Americas. This forecast assumes an increase in trade with Europe and Asia tied to the transshipment to Latin America as well as imports for the U.S. market. The Middle East and Africa also present opportunities for diversifying Miami-Dade's trading base although from a very low base since these two regions accounted for only 1.0 percent of total exports in 2006.

Miami-Dade's role as an import hub will also be impacted by the completion of the Panama Canal expansion project. The widening of the Canal will allow larger vessels to go through, thus diverting merchandise that would normally have been shipped from California ports by truck to the east, the northeast, and to the southeast, directly to ports on the east coast such as Miami-Dade.

Trade expansion through Free Trade Agreements

Starting with the Caribbean Basin Initiative (CBI) in the 1980s and the Free Trade Agreements (FTA) in the 1990s, U.S. trade agreements with the region have generated a net benefit to Miami-Dade through increased international trade. In the case of the CBI, which included the Caribbean and Central American countries, its implementation resulted in an increase in Miami-Dade's share of U.S. trade with those countries. Thus existing FTAs and those that are pending

are expected to bolster growth of exports to the Latin America and the Caribbean through Miami-Dade. The principal FTAs between the U.S. and Latin America are as follows:

North America Free Trade Agreement (NAFTA) (1993)

NAFTA is a comprehensive trade agreement established by Canada, Mexico and the U.S. It has served as a prototype for successive U.S. free trade agreements. Once NAFTA was implemented, Mexico immediately eliminated tariffs on nearly 50 percent of all industrial goods imported from the U.S. Tariffs on other products will be phased out by 2008. Through NAFTA, manufacturers in all three countries have gained greater access to supply of inputs at lower prices, particularly in the assembly industries. NAFTA grants equal treatment for investors from all three countries and eliminated most barriers to trade in services.

From 1993 to 2006, trade among the NAFTA nations climbed from \$297 billion to \$883 billion or at an average annual rate of 8.7 percent. Canada and Mexico are the top two export markets for the U.S. Florida as well as Miami-Dade have benefited from this increase in trade. However, many of the goods shipped to Mexico and Canada are moved by truck or rail and thus are not counted as part of Miami-Dade merchandise trade, but are picked up by the state where they make their border crossing. Our projection for Miami-Dade trade with Mexico and Canada assumes higher growth in trade, even though the actual quantitative impact is not fully reflected in the calculations due to the limitation of the trade statistics.

Chile Free Trade Agreement (2004)

The U.S. - Chile Free Trade Agreement went into effect on January 1, 2004. Once the agreement became effective tariffs on 90 percent of U.S. exports to Chile and 95 percent of Chilean exports to the U.S. were eliminated. As a result of the Agreement, U.S. exports to Chile jumped from \$2.7 billion in 2003 to \$6.8 billion in 2006. U.S. imports from Chile grew from \$3.7 billion in 2003 to \$9.6 billion in 2006, reflecting in part the surge in copper prices. The cargo hub of the large Chilean-owned LAN airline is located in Miami-Dade. Among the key categories of U.S. exports to Chile have been computers, construction equipment, medical equipment, agricultural machinery and motor vehicles. These exports are among the principal categories of merchandise shipped through Miami-Dade.

Central America & Dominican Republic Free Trade Agreement (CAFTA-DR) (2006)

The U.S., Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, and Nicaragua signed the CAFTA-DR in August 2004. All have ratified the agreement, with the recent approval by referendum in Costa Rica. The CAFTA-DR entered into force in 2006 for El Salvador, followed by the other countries that ratified the agreement. Duties on most tariff lines covering industrial and consumer goods were eliminated when the agreement began implementation and duties on other goods will be phased out over periods of up to 10 years. Textiles and apparel, one of the principal industries in the region will receive duty-free and quota-free status under the agreement if they use U.S. or regional fabric and yarn. The agreement also establishes a secure legal framework for U.S. investors in Central America and the Dominican Republic. All CAFTA-DR countries except for Nicaragua are in the top 15 export markets for Miami-Dade and this forecast assumes that trade with these countries will expand at an accelerated pace during the short- to medium-term period.

Peru Free Trade Agreement (2007)

With Congressional approval and the signing in December of this year, the Peru Free Trade Agreement is set for implementation. Under the Agreement 80 percent of U.S. exports of consumer and industrial products to Peru will become duty-free immediately, with the remaining tariffs phased out over 10 years. More than two-thirds of U.S. farm exports will become duty-free. In addition, Peru will eliminate its price band system on trade with the U.S. Trade in textile and apparel will also benefit from the Agreement. Legal protection for investors is also contained in the Agreement as well as for intellectual property rights. In 2006 Peru was the eighth most important export market for Miami-Dade thus the Agreement portends stronger growth of international merchandise trade through the County.

Colombia Free Trade Agreement

Awaiting approval from Congress, the U.S.-Colombia Agreement would expand on the benefits already obtained by Colombia under the Andean Trade Preference Act by making duty-free treatment permanent. If the Agreement is ratified by the U.S. Congress, over 80 percent of U.S.

exports of consumer and industrial products to Colombia will be duty-free immediately, another 7 percent within 5 years and the remainder within 10 years. The Agreement would also open up the services sector with only a few exceptions. Investors from both countries would be protected under the agreement. Intellectual property and trademarks will also fall within the purview of the trade accord. As Miami-Dade's third export market, the approval and subsequent implementation of this agreement would further boost international trade through the County. On the other hand, with recent anti-trade sentiment in the U.S., there is a possibility that this agreement may not be approved.

Panama Free Trade Agreement

Free trade with Panama also awaits an uphill battle to obtain Congressional approval following conclusion of negotiations in December 2006. If the agreement becomes effective, over 88 percent of U.S. exports of consumer and industrial products to Panama would receive duty-free treatment, an additional 4 percent within 5 years, and the rest within ten years. The timing of this agreement could be highly beneficial to U.S. firms seeking to participate in the Canal expansion project. Panama would also open up their services sector including financial services. All forms of investment are also covered by the agreement. Panama represents the thirteenth most important export market for Miami-Dade and implementation of the agreement would bolster the County's international trade activity.

Trade with a Post-embargo Cuba

The U.S. trade embargo against Cuba has been in force since 1962. There is a significant probability that a political change in Cuba during the forecast period that would establish a form of government that is aligned with U.S. held democratic principles could result in a subsequent lifting of the embargo. It is difficult to predict when such a change would take place and how it would play out; therefore different dates have been assumed in the three forecast scenarios. The forecast of trade with Cuba following the lifting of the embargo is based on the assumption that most of the financing of Cuba's imports during the initial five year period will be provided by multilateral lending agencies such as the IMF, the World Bank, the Inter-American Development Bank, and by individual countries, principally the U.S. Limited amounts of foreign direct investment are assumed to flow mostly in response to privatization of some of the country's

state-owned enterprises or the opening of certain industries to foreign participation such as tourism and agriculture. The projected value of exports to Cuba is also based on an analysis of similar transition economies in Eastern Europe and CIS countries and the relative importance of trade in those countries.

Competition from other trading hubs

Strong competition for global trade has resulted in some erosion of Miami-Dade's market share. The Miami-Custom's District share of total U.S. exports slipped from 4.0 percent in 2000 to 3.8 percent in 2006. Likewise, Miami-Dade's share of District exports has declined from 80.4 percent in 2003 to 75.9 percent in 2006. These figures point to increasing competition from other international trading hubs in the U.S. as well as challenges to Miami-Dade from other South Florida ports in Broward and Palm Beach. The outlook for international merchandise trade through Miami-Dade thus depends on how well it can compete against rival trading hubs and to what extent it can enhance the efficiency of its infrastructure in order to retain or expand its current market share. The projections consider three scenarios for Miami-Dade's role in international trade: first, that its share remains stable (Base case); second, that it increases moderately (Alternative 1); and third, that it continues to experience some erosion in market share due to weaker performance of the principal trading partners, sub-optimal infrastructure investments and greater trade frictions (Alternative 2).

Operational costs and infrastructure requirements

The growth of international merchandise trade through Miami-Dade will be influenced by its operational efficiencies which are driven by costs as well as by infrastructure capacity. Operational costs associated with the movement of goods are affected by numerous factors. Urban growth will contribute to greater competition for limited resources such as land and labor thus increasing the costs of doing business. Traffic congestion adds to bottlenecks in the transportation of goods to and from the ports. U.S. security measures will also elevate operational costs perhaps more so than for competing hubs. Rising costs in Miami-Dade relative to other trading hubs could thus dampen growth during the forecast period.

Successful market share retention and expansion in the international trade arena also hinges on a critical mass of infrastructure investments to ensure adequate capacity at competitive rates to meet the rising volume of trade. Miami-Dade's increasing urban density adds to the cost of expanding the transportation, warehousing, and port capacity. The result of this impact analysis, which demonstrates an increase in the economic contribution of international trade during the past three years (2003-2006), is an indication that past investments in infrastructure have certainly generated a positive economic benefit to the County. This forecast assumes that Miami-Dade's ports will continue to invest in capacity as needed to meet the rising volume of trade and thus continue to generate a positive economic impact. Other public sector investments in transportation infrastructure such as roads and multi-modal connections will be necessary to ensure the competitiveness of the international trading hub. Private sector investments in transportation, warehousing, trade arrangement and wholesaling enterprises will be critical to a positive trade outlook. Greater reliance on private sector development of public infrastructure projects is assumed to partially compensate for the lag in public sector resources; also offsetting the costs with user fees will help to assign the fiscal burden to those that directly benefit from the infrastructure.

The availability of international trade finance will also play an instrumental role in supporting the growth of international trade particularly because of Miami-Dade's premier position as an international financial center for the Americas. However, the degree to which financing can bolster the growth in trading activity will depend on changes in the current banking regulatory environment so that it will be more effective in guarding against illegal financial activities without penalizing legitimate trade financing activities. This forecast thus assumes that the regulatory burden on international banking will start to become less onerous within the next three years as evidence mounts of the U.S. banking industry's losses in global competitiveness and the consequent deterioration of financial performance due to rising costs of compliance relative to the other major financial centers in Europe and Asia.

Operational costs may also affect the competitiveness of Miami-Dade's manufacturing industry. Globalization of trade offers opportunities for U.S. manufacturers to locate production offshore where labor costs are substantially lower. Recent trends indicate that high value added manufacturing in Miami-Dade is also relocating in order to take advantage of lower production

costs overseas. High-technology production will thus be transferable to countries exhibiting lower costs and a well-trained labor force.

Risks to the outlook

The compelling evidence from past trends and market fundamentals lead us to conclude that Miami-Dade's future as an international trading center is linked directly to the economic fortunes of Latin America. This is driven by its strategic geographical location. The underlying assumption in this forecast is that improved economic performance in the regional economies will drive the growth of trade through the County including trade linked to Europe and Asia. On the other hand, Latin America has exhibited greater volatility than other regions of the world, thus the comparatively lower growth rate for the region used in this forecast is a reflection of the stop-go patterns of the past triggered by swings in political and economic policy environments. On a positive note, there appears to be a split within the region between those countries that have maintained pro-growth and pro-market policies and others that have adopted a less predictable course. This will contribute to narrower swings in regional economic performance during the forecast period. Nevertheless, there is a possibility that weaker than expected economic growth motivated by less favorable policies such as greater resistance to trade liberalization, reduced investment, and a more pronounced stop-go growth pattern would in turn adversely impact the outlook for international trade through Miami-Dade. Alternative 2 presents the trade outlook under the assumption that Latin America begins to back-track on its pro-growth policies.

The other challenges facing the trade outlook are Miami-Dade's ability to expand its infrastructure capacity to handle the increased volume in trade including the dwindling share of Miami-Dade's share of international trade finance and the threats posed by other international trading hubs pursuing more aggressive strategies based on their cost and location advantages in capturing greater share of trade between Latin America, Europe and Asia.

Future Economic Impact of International Trade in Miami-Dade

The fundamental analytical tool used in this study to quantify the future economic impact of international trade is a complex dynamic simulation economic model developed by Regional Economic Models, Inc. (REMI) in 1980. The IMPLAN model which was used to measure the economic impact of international merchandise trade for 2003 and for 2006 is based on detailed input-output relationships derived from actual economic data specific to each year and thus the impact figures are fact-based. However, the limitations of the IMPLAN model in making a projection of the economic impact is that the model keeps all values constant during the forecast period, and thus its reliability diminishes over the projected time period. The advantage of the REMI model in making a forecast is that it allows key variables such as worker compensation and cost of capital to vary in accordance with the demand for workers and capital and thus incorporates a more realistic approach to projecting economic relationships. On the other hand, the REMI model works with a more aggregate structure of the Miami-Dade economy than that of the IMPLAN model; in other words, less detail in terms of sub-sectors. Nevertheless, the REMI model retains the fundamental structure of Miami-Dade's economy including the international merchandise trade sector which is used to project the economic impact of trade during the next ten years.

Methodology for Calculating the Future Economic Impact

Econometric simulation models such as REMI combine the sector detail and geography detail of input/output models but provide for functioning economic linkages between sectors and regions over time. The REMI Policy Insight Model is a dynamic model that incorporates the basic input/output linkages, much like IMPLAN, but also uses econometrically estimated county-specific parameters, for example, interregional migration in response to changes in economic opportunities, in generating impact results. Because of these between-sector linkages, the model incorporates general equilibrium tendencies as the economy responds to shocks over time. That is, changes in spending in a region affect not just conditions in that market, but also in other markets within the region and outside the region (via trade and also via migration in response to changes in economic opportunities). This is in contrast to traditional input-output models that are both static (all effects are assumed to occur simultaneously, so there is no adjustment path

over time) and partial equilibrium in nature, e.g. changes in employment do not change wage rates. This describes the phenomenon whereby, for example, a new financial services back-office call center opens in a county, and bank managers throughout the county find they have to give staff a raise in order to keep them from leaving to take a job at the new call center. A traditional input-output model description of the economic impact would have held everything else fixed (including bank wages across the county) and simply documented the employment and job creation effects resulting directly from the new call center and the consequent multiplier effects.

A simulation model such as REMI captures not only the spending effects flowing from the call center and its local suppliers and employees and owners, but also the spillover effects into other markets as wages and prices that change due to competition for the same employees and other resources. These are the general equilibrium (equilibrium across all markets simultaneously) tendencies of the REMI model. It also simulates the adjustment path over time of these market responses, using historical parameters estimated specifically for Miami-Dade County (the dynamic component). A rule of thumb is that the smaller the spending change being considered, the more appropriate it is to use the traditional input/output model. However, the general equilibrium and dynamic characteristics of an economic simulation model are particularly important when considering “large” economic changes such as those originating from the manufacture, handling, and shipments of merchandise trade because spending of this magnitude is likely to have spillover impacts in other markets not directly in the trade-related supply chain. The overall structure of the model can be summarized in five major blocks: (1) output and demand, (2) labor and capital demand, (3) population and labor force, (4) wages, prices, and costs, and (5) market shares.

Projection of the Economic Impact Based on Alternative Scenarios

The longer the forecast period, the wider is the band of possible values of key economic factors. For this reason, the projection of international merchandise trade in this study is based on several basic scenarios regarding global economic growth and Miami-Dade’s capture of market share. While many alternative assumptions can be considered, the scenarios chosen for this study are representative of the more likely range of outcomes. The three scenarios were designed

according to a high (Alternative 1), a low (Alternative 2), and a more likely set of assumptions (Base case) regarding global economic growth, particularly for Miami-Dade's principal markets and the degree of competitiveness of the County based on the effectiveness of market diversification and on competitive threats from other ports; on the success of trade initiatives; and on the role of costs and infrastructure capacity. At the same time, the spread between the high (alternative 1) and low (alternative 2) forecast has been determined by the degree of risk associated with each alternative. The principal assumptions for each scenario are outlined as follows:

Base Scenario: Trade through Miami-Dade Expands as the Global Economy Maintains Trend Growth

The Base Case represents the more likely scenario for the growth of international trade through Miami-Dade. It assumes that:

- The global economy will grow at the trend rate during the next ten years.
- Miami-Dade will maintain its preeminence as the Gateway to The Americas.
- Miami-Dade will continue to invest in port capacity and in the necessary infrastructure to meet the rising volume of trade.
- Brisk private sector investments in transportation, warehousing, trade arrangement and wholesaling enterprises in the County help to maintain market share.
- Free trade agreements with Latin American countries promote trade with the U.S. and Miami-Dade will at least maintain its existing share of trade with those markets.

Alternative 1: A significant increase in Miami-Dade's share of imports and exports

This alternative represents the high case, or more optimistic outcome for the impact of international merchandise trade. It assumes that:

- The global economy will grow at above-trend rates during the next ten years.
- Miami-Dade benefits from greater trade liberalization and improved economic performance in Latin America by a greater degree than other trading hubs.
- Greater political stability in Latin America allows for improved fiscal and monetary management and for the implementation of free market policies, which promotes faster sustainable growth.
- An improved political and economic climate in Latin America spurs foreign investment and trade.
- The lifting of the embargo on Cuba within the next five years brings a significant increase in trade flows to Miami-Dade.
- Public and private investment in infrastructure and technology gives a wider competitive edge to Miami-Dade ports.

Alternative 2: Miami-Dade's Market Share Declines

Alternative 2 represents the low case, or less optimistic outcome for international trade. It assumes that:

- Slower world economic growth with greater economic and political risk in certain regions.

- Increased reliance on tariff and non-tariff trade barriers and competitive devaluations have a negative impact on world trade growth. The U.S. – Colombia and the U.S.-Panama free trade agreements are not approved by the U.S. Congress.
- More restrictive trade policies and periods of stagnation in Latin America induced by greater state intervention in the economies.
- Limited resources and a less favorable outlook limit public and private investment in infrastructure and technology thus hurting the competitiveness of Miami-Dade ports.

Projected International Trade through Miami-Dade

The assumptions associated with the three forecast scenarios drive the growth of international merchandise trade through Miami-Dade. Each of the projected trade flows in turn serve as an input into the REMI model which calculates the economic impact under each scenario. As shown in Table 13, there is greater volatility of the trade forecast for Latin America and the Caribbean during the initial five year period compared to the other major regions of the world. During the second five year period however, trade growth is more concentrated around historical trend rates.

(AAG)	2007-2012			2012-2017		
	Base	Alt 1	Alt 2	Base	Alt 1	Alt 2
	Latin America & Caribbean	7.7	8.5	6.1	6.6	7.0
European Union	5.5	6.0	5.0	5.2	5.7	4.8
Asia	7.5	8.2	6.6	6.2	6.7	5.2
Middle East	6.7	7.2	6.2	5.4	5.8	5.0
Africa	5.6	5.9	4.4	5.0	5.3	3.9
Other	5.2	6.0	4.3	4.3	4.9	3.5
Total Exports	7.5	8.3	6.0	6.4	6.9	5.6
AAG is average annual growth						
Source: IMF, World Bank and StratInfo						

Analysis of the Projected Economic Impact of International Merchandise Trade

Combining the StratInfo trade forecast with the REMI simulation model allows us to project employment, output, total wages and salaries that will likely result from continued growth of international trade. The baseline forecast shows that international trade will continue to have a strong focus in manufactured goods, along with the services necessary to handle them and transport them to foreign markets. Output growth (final sales and intermediate sales) is projected to be more than double the rate of growth in output for the economy overall. Employment in trade-related sectors is also expected to grow more rapidly than overall employment in the County. This strong performance means that the share of the merchandise trade-related sector will grow in relation to the overall Miami-Dade economy.

This outlook is in contrast to the economic contribution during 2003-2006 when a strong dollar and weak performance in the major Miami-Dade trading partners inhibited substantial export growth, as did growing competition from other port facilities in the southeastern United States. The projected improvement in growth prospects for Latin America and the Caribbean, along with the growing competitiveness of the Miami-Dade area assumed in the Base case and alternative 1, which is due in part to the recent depreciation of the U.S. dollar against major world currencies, can already be seen in U.S. macroeconomic performance in recent quarters. Strong export growth in Miami-Dade will mirror the national picture, even as the County's real estate development sector remains mired in a slowdown. Taken together, these trends suggest that an already healthy Miami-Dade export performance will improve sharply in the next several years, driving employment and output growth for the international trade sector.

	2006	2012	2017
Value Added*			
Most Likely	\$9,014	\$14,559	\$19,551
High Case	\$9,014	\$15,338	\$21,072
Low Case	\$9,014	\$13,530	\$17,540
Employee Compensation*			
Most Likely	\$4,781	\$6,593	\$7,466
High Case	\$4,781	\$6,754	\$7,705
Low Case	\$4,781	\$6,308	\$7,062
Employment**			
Most Likely	105,459	139,882	154,325
High Case	105,459	143,750	159,989
Low Case	105,459	133,047	144,752
* Millions of 2006 dollars			
** Number of jobs			

As shown in Table 14, value added resulting from international trade will grow faster than the rest of the Miami-Dade economy. Thus value added from international trade will increase from 8.6 percent of the total for Miami-Dade in 2006 to 12.7 percent in 2017 according to the more likely or Base forecast. Employee compensation will be driven by growth in the volume of trade, by higher margins associated with greater value added content of merchandise moving through the County, and by increased productivity associated with the enhancement in the trade infrastructure.

Appendixes

Economic Impact for 2003 and 2006: Detailed Tables

Table A1: Miami-Dade: Employment Impact of International Merchandise Trade in 2006				
(Number of employees)	Direct	Indirect	Induced	Total
11 Ag, Forestry, Fish & Hunting		16	78	93
21 Mining		2	1	2
22 Utilities		91	106	196
23 Construction		318	153	470
31-33 Manufacturing	18,506	1,561	609	20,675
42 Wholesale Trade	16,799	2,484	1,058	20,341
48-49 Transportation & Warehousing	15,243	3,986	871	20,100
44-45 Retail trade		754	5,313	6,066
51 Information		629	330	959
52 Finance & insurance	2,215	1,340	1,552	5,106
53 Real estate & rental		1,591	1,401	2,992
54 Professional- scientific & tech svcs		3,845	1,137	4,981
55 Management of companies		1,242	208	1,451
56 Administrative & waste services		4,428	1,433	5,861
61 Educational svcs		89	1,032	1,121
62 Health & social services		2	6,177	6,179
71 Arts- entertainment & recreation		251	624	875
72 Accommodation & food services		1,166	3,024	4,190
81 Other services		701	2,748	3,449
92 Government & non NAICs		170	182	352
	52,763	24,661	28,035	105,459

Table A2: Miami-Dade: Employment Impact of International Merchandise Trade in 2003				
(Number of employees)	Direct	Indirect	Induced	Total
11 Ag, Forestry, Fish & Hunting		14	90	104
21 Mining		19	14	32
22 Utilities		78	70	148
23 Construction		264	131	395
31-33 Manufacturing	18,965	1,321	655	20,941
42 Wholesale Trade	16,005	2,018	1,071	19,094
48-49 Transportation & Warehousing	14,170	3,532	759	18,461
44-45 Retail trade		691	5,438	6,129
51 Information		711	389	1,100
52 Finance & insurance	2,352	986	1,370	4,708
53 Real estate & rental		1,177	1,061	2,238
54 Professional- scientific & tech svcs		3,945	1,167	5,111
55 Management of companies		731	129	860
56 Administrative & waste services		3,244	1,244	4,488
61 Educational svcs		106	917	1,023
62 Health & social services		2	5,620	5,622
71 Arts- entertainment & recreation		239	630	869
72 Accommodation & food services		971	3,248	4,219
81 Other services		722	3,232	3,954
92 Government & non NAICs		315	307	622
	51,492	21,084	27,540	100,116

Table A3: Miami-Dade: Employment Compensation Impact of Intl. Merchandise Trade in 2006				
(millions of 2006 dollars)	Direct	Indirect	Induced	Total
11 Ag, Forestry, Fish & Hunting		0.4	1.6	1.9
21 Mining		0.1	0.1	0.2
22 Utilities		9.2	10.6	19.8
23 Construction		9.6	4.7	14.3
31-33 Manufacturing	979.7	74.7	25.3	1,079.8
42 Wholesale Trade	1,038.4	153.5	65.4	1,257.4
48-49 Transportation & Warehousing	680.1	152.8	32.8	865.6
44-45 Retail trade		22.1	154.8	176.8
51 Information		37.0	18.9	55.9
52 Finance & insurance	158.7	88.3	95.9	342.8
53 Real estate & rental		25.0	19.8	44.8
54 Professional- scientific & tech svcs		205.2	61.1	266.4
55 Management of companies		114.1	19.1	133.3
56 Administrative & waste services		110.4	34.8	145.2
61 Educational svcs		3.6	37.9	41.5
62 Health & social services		0.1	261.5	261.6
71 Arts- entertainment & recreation		8.4	16.2	24.6
72 Accommodation & food services		32.0	70.5	102.6
81 Other services		18.7	55.5	74.2
92 Government & non NAICs		9.4	10.8	20.2
Total	2,856.9	1,074.7	997.3	4,928.9

Table A4: Miami-Dade: Employment Compensation Impact of Intl. Merchandise Trade in 2003				
(millions of 2006 dollars)	Direct	Indirect	Induced	Total
11 Ag, Forestry, Fish & Hunting		0.3	1.5	1.8
21 Mining		0.3	0.2	0.5
22 Utilities		7.8	6.9	14.7
23 Construction		9.4	4.7	14.0
31-33 Manufacturing	853.1	58.7	25.3	937.1
42 Wholesale Trade	868.7	109.5	58.1	1,036.3
48-49 Transportation & Warehousing	546.8	127.4	29.6	703.8
44-45 Retail trade		17.8	137.5	155.3
51 Information		42.1	21.7	63.7
52 Finance & insurance	170.8	61.3	80.2	312.3
53 Real estate & rental		24.0	18.8	42.9
54 Professional- scientific & tech svcs		183.2	56.0	239.2
55 Management of companies		67.7	12.0	79.6
56 Administrative & waste services		91.3	32.3	123.7
61 Educational svcs		3.7	28.6	32.4
62 Health & social services		0.1	218.9	219.0
71 Arts- entertainment & recreation		5.7	14.2	19.9
72 Accommodation & food services		19.9	63.7	83.5
81 Other services		15.9	56.5	72.4
92 Government & non NAICs		15.4	15.0	30.4
Total	2,439.4	861.6	881.8	4,182.7

	Direct	Indirect	Induced	Total
11 Ag, Forestry, Fish & Hunting		1.2	7.0	8.2
21 Mining		0.7	0.4	1.1
22 Utilities		43.1	50.3	93.4
23 Construction		36.6	16.9	53.5
31-33 Manufacturing	5,253.2	427.1	200.6	5,880.9
42 Wholesale Trade	2,896.4	428.2	182.5	3,507.1
48-49 Transportation & Warehousing	1,777.2	350.8	86.6	2,214.6
44-45 Retail trade		56.8	398.2	454.9
51 Information		196.2	124.8	320.9
52 Finance & insurance	383.3	260.2	319.5	962.9
53 Real estate & rental		254.3	204.0	458.3
54 Professional- scientific & tech svcs		541.8	149.4	691.1
55 Management of companies		238.9	40.1	279.0
56 Administrative & waste services		255.7	78.1	333.9
61 Educational svcs		6.3	65.4	71.7
62 Health & social services		0.3	534.3	534.6
71 Arts- entertainment & recreation		18.4	40.5	58.9
72 Accommodation & food services		88.0	194.3	282.4
81 Other services		56.7	141.2	198.0
92 Government & non NAICs		35.8	457.1	492.8
Total	10,310.1	3,297.1	3,291.2	16,898.3

	Direct	Indirect	Induced	Total
11 Ag, Forestry, Fish & Hunting		1.5	7.7	9.2
21 Mining		4.9	3.6	8.5
22 Utilities		49.5	43.5	93.0
23 Construction		24.0	13.7	37.7
31-33 Manufacturing	3,191.0	253.5	137.6	3,582.1
42 Wholesale Trade	2,276.9	287.1	152.3	2,716.3
48-49 Transportation & Warehousing	1,814.8	342.9	81.8	2,239.4
44-45 Retail trade		41.3	322.3	363.6
51 Information		160.4	99.4	259.8
52 Finance & insurance	461.9	185.9	263.3	911.1
53 Real estate & rental		222.7	175.4	398.1
54 Professional- scientific & tech svcs		346.9	107.4	454.3
55 Management of companies		141.8	25.0	166.9
56 Administrative & waste services		194.7	65.7	260.5
61 Educational svcs		7.1	55.0	62.2
62 Health & social services		0.3	438.3	438.6
71 Arts- entertainment & recreation		13.2	45.7	58.8
72 Accommodation & food services		49.5	157.4	206.9
81 Other services		61.1	141.8	202.9
92 Government & non NAICs		86.0	395.2	481.2
Total	7,744.7	2,474.3	2,732.0	12,951.0

Table A7: Miami-Dade: Value added Impact of International Merchandise Trade in 2006				
(millions of 2006 dollars)	Direct	Indirect	Induced	Total
11 Ag, Forestry, Fish & Hunting		0.9	4.9	5.8
21 Mining		0.3	0.2	0.5
22 Utilities		33.4	38.6	72.0
23 Construction		15.2	7.2	22.4
31-33 Manufacturing	1,973.7	138.3	51.4	2,163.4
42 Wholesale Trade	1,953.4	288.8	123.1	2,365.2
48-49 Transportation & Warehousing	976.3	219.6	46.1	1,242.0
44-45 Retail trade		37.6	262.8	300.4
51 Information		95.4	60.5	155.9
52 Finance & insurance	246.0	155.0	173.8	574.8
53 Real estate & rental		161.8	135.2	297.0
54 Professional- scientific & tech svcs		287.7	84.0	371.7
55 Management of companies		139.7	23.4	163.2
56 Administrative & waste services		152.5	47.3	199.8
61 Educational svcs		4.0	41.9	45.9
62 Health & social services		0.1	327.9	328.0
71 Arts- entertainment & recreation		12.5	25.6	38.1
72 Accommodation & food services		52.1	107.3	159.5
81 Other services		27.2	74.5	101.6
92 Government & non NAICs		16.1	390.4	406.5
Total	5,149.3	1,838.4	2,026.0	9,013.7

Table A8: Miami-Dade: Value added Impact of International Merchandise Trade in 2003				
(millions of 2006 dollars)	Direct	Indirect	Induced	Total
11 Ag, Forestry, Fish & Hunting		0.8	5.3	6.1
21 Mining		1.8	1.3	3.1
22 Utilities		33.8	29.4	63.3
23 Construction		12.7	6.6	19.3
31-33 Manufacturing	1,456.6	96.5	49.1	1,602.2
42 Wholesale Trade	1,648.5	207.8	110.3	1,966.6
48-49 Transportation & Warehousing	807.5	181.4	40.7	1,029.5
44-45 Retail trade		31.0	241.8	272.8
51 Information		87.7	55.4	143.1
52 Finance & insurance	324.9	112.9	146.6	584.4
53 Real estate & rental		143.7	118.0	261.6
54 Professional- scientific & tech svcs		254.1	78.3	332.4
55 Management of companies		100.7	17.8	118.5
56 Administrative & waste services		119.4	41.2	160.6
61 Educational svcs		4.2	34.0	38.2
62 Health & social services		0.1	266.5	266.6
71 Arts- entertainment & recreation		8.8	28.6	37.4
72 Accommodation & food services		28.7	83.6	112.3
81 Other services		21.1	65.3	86.4
92 Government & non NAICs		58.8	306.9	365.7
Total	4,237.5	1,506.0	1,726.7	7,470.2

Table A9: Miami-Dade: Tax Contribution from International Merchandise Trade

(millions of 2006 \$s)	2003	2006
Corporate Profits Tax	92.4	234.8
Indirect Bus Tax: Custom Duty	21.1	24.4
Indirect Bus Tax: Excise Taxes	71.5	65.8
Indirect Bus Tax: Fed NonTaxes	22.4	29.9
Personal Tax: Estate and Gift Tax		
Personal Tax: Income Tax	10.5	533.7
Personal Tax: NonTaxes (Fines- Fees		
Social Ins Tax- Employee Contribution	254.4	313.9
Social Ins Tax- Employer Contribution	237.3	287.2
Federal Government NonDefense Total	709.6	1,489.7
Corporate Profits Tax	18.4	31.1
Dividends	57.3	54.8
Indirect Bus Tax: Motor Vehicle Lic	6.7	6.6
Indirect Bus Tax: Other Taxes	50.9	92.1
Indirect Bus Tax: Property Tax	272.8	290.3
Indirect Bus Tax: S/L NonTaxes	32.1	37.0
Indirect Bus Tax: Sales Tax	357.9	404.2
Indirect Bus Tax: Severance Tax	0.5	1.0
Personal Tax: Estate and Gift Tax		
Personal Tax: Income Tax		
Personal Tax: Motor Vehicle License	6.0	6.9
Personal Tax: NonTaxes (Fines- Fees	19.3	22.7
Personal Tax: Other Tax (Fish/Hunt)	0.3	0.4
Personal Tax: Property Taxes	2.4	2.9
Social Ins Tax- Employee Contribution	2.3	2.3
Social Ins Tax- Employer Contribution	6.1	9.0
State/Local Govt NonEducation Total	833.1	961.2
Total	1,542.7	2,451.0

Projected Economic Impact of International Merchandise Trade: Detailed Tables

BASE CASE: Employment (Number of employees)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
11 Ag, Forestry, Fish & Hunting	106	114	120	127	133	140	147	153	159	164	169
21 Mining	2	2	2	2	2	2	2	2	2	2	2
22 Utilities	233	233	253	275	275	300	323	323	361	361	361
23 Construction	543	589	629	672	714	808	853	901	901	983	983
31-33 Manufacturing	21,593	22,274	22,785	23,360	23,939	24,560	25,151	25,766	25,795	25,748	25,731
42 Wholesale Trade	20,398	20,467	20,410	20,337	20,240	20,079	19,896	19,659	19,382	19,023	18,689
48-49 Transportation & Warehousing	21,788	22,835	23,589	24,346	25,051	25,748	26,366	26,951	27,087	27,105	27,093
44-45 Retail trade	6,575	6,849	7,086	7,298	7,505	7,690	7,868	8,055	8,055	8,055	7,972
51 Information	1,063	1,132	1,187	1,246	1,304	1,368	1,427	1,489	1,489	1,480	1,472
52 Finance & insurance	5,675	6,052	6,350	6,675	6,993	7,345	7,685	8,041	8,110	8,154	8,199
53 Real estate & rental	3,447	3,752	4,005	4,282	4,559	4,870	5,175	5,502	5,668	5,824	5,989
54 Professional- scientific & tech svcs	5,738	6,249	6,670	7,127	7,582	8,088	8,582	9,103	9,292	9,458	9,629
55 Management of companies	1,592	1,685	1,758	1,836	1,912	1,994	2,073	2,152	2,133	2,106	2,079
56 Administrative & waste services	6,744	7,334	7,819	8,345	8,868	9,451	10,020	10,610	10,865	11,074	11,290
61 Educational svcs	1,320	1,460	1,581	1,721	1,857	2,008	2,164	2,328	2,450	2,586	2,727
62 Health & social services	6,981	8,008	8,454	8,929	9,858	10,375	10,871	11,917	11,917	12,821	12,821
71 Arts- entertainment & recreation	1,009	1,125	1,200	1,280	1,358	1,474	1,558	1,646	1,693	1,744	1,798
72 Accommodation & food services	4,938	5,468	5,889	6,379	6,857	7,434	7,988	8,573	8,931	9,326	9,738
81 Other services	3,950	4,338	4,673	5,030	5,379	5,704	6,077	6,537	6,641	6,869	7,106
92 Government & non NAICs	377	394	407	420	433	446	458	471	474	475	476
TOTAL	114,071	120,360	124,867	129,687	134,821	139,882	144,685	150,180	151,406	153,358	154,325

Table A11: Miami-Dade: Projected Economic Impact of International Merchandise Trade

ALTERNATIVE 1: Employment (Number of employees)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
11 Ag, Forestry, Fish & Hunting	106	115	123	130	137	145	153	160	166	172	178
21 Mining	2	2	2	2	2	2	2	2	2	2	2
22 Utilities	235	235	258	283	283	310	336	336	379	379	379
23 Construction	547	599	645	693	741	848	899	952	952	1,045	1,045
31-33 Manufacturing	21,646	22,404	22,980	23,622	24,271	24,961	25,604	26,271	26,303	26,251	26,233
42 Wholesale Trade	20,401	20,478	20,414	20,334	20,226	20,049	19,854	19,602	19,305	18,921	18,564
48-49 Transportation & Warehousing	21,886	23,054	23,907	24,756	25,551	26,329	27,006	27,644	27,795	27,815	27,801
44-45 Retail trade	6,604	6,910	7,178	7,416	7,649	7,856	8,050	8,254	8,254	8,254	8,163
51 Information	1,069	1,147	1,208	1,275	1,341	1,412	1,478	1,546	1,546	1,537	1,527
52 Finance & insurance	5,709	6,129	6,467	6,834	7,195	7,591	7,967	8,360	8,438	8,487	8,537
53 Real estate & rental	3,473	3,815	4,103	4,417	4,733	5,087	5,429	5,794	5,982	6,159	6,347
54 Professional- scientific & tech svcs	5,782	6,354	6,833	7,352	7,871	8,448	8,999	9,581	9,796	9,983	10,177
55 Management of companies	1,600	1,704	1,787	1,874	1,961	2,053	2,139	2,227	2,205	2,176	2,145
56 Administrative & waste services	6,796	7,456	8,007	8,604	9,201	9,865	10,500	11,159	11,448	11,684	11,929
61 Educational svcs	1,331	1,488	1,627	1,786	1,942	2,116	2,291	2,477	2,617	2,772	2,935
62 Health & social services	7,028	8,176	8,685	9,226	10,290	10,882	11,438	12,610	12,610	13,636	13,636
71 Arts- entertainment & recreation	1,017	1,146	1,232	1,323	1,412	1,545	1,639	1,738	1,791	1,849	1,910
72 Accommodation & food services	4,981	5,576	6,056	6,614	7,163	7,824	8,448	9,107	9,517	9,968	10,441
81 Other services	3,979	4,413	4,795	5,201	5,601	5,971	6,389	6,904	7,023	7,281	7,551
92 Government & non NAICs	379	398	412	426	441	456	469	483	486	487	488
TOTAL	114,572	121,600	126,719	132,166	138,012	143,750	149,092	155,206	156,614	158,857	159,989

Table A12: Miami-Dade: Projected Economic Impact of International Merchandise Trade

ALTERNATIVE 2: Employment (Number of employees)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
11 Ag, Forestry, Fish & Hunting	104	111	116	120	125	131	136	142	146	150	155
21 Mining	2	2	2	2	2	2	2	2	2	2	2
22 Utilities	228	228	245	260	260	280	300	300	330	330	330
23 Construction	533	571	603	634	664	740	777	817	817	880	880
31-33 Manufacturing	21,477	22,036	22,445	22,870	23,309	23,835	24,352	24,890	24,914	24,875	24,861
42 Wholesale Trade	20,391	20,447	20,401	20,347	20,272	20,131	19,966	19,751	19,517	19,207	18,919
48-49 Transportation & Warehousing	21,575	22,430	23,030	23,585	24,113	24,697	25,231	25,737	25,847	25,861	25,851
44-45 Retail trade	6,510	6,735	6,924	7,079	7,234	7,390	7,543	7,705	7,705	7,705	7,638
51 Information	1,050	1,106	1,149	1,192	1,236	1,288	1,338	1,390	1,390	1,384	1,377
52 Finance & insurance	5,604	5,910	6,146	6,382	6,617	6,907	7,195	7,496	7,551	7,586	7,621
53 Real estate & rental	3,389	3,637	3,835	4,034	4,236	4,488	4,741	5,013	5,139	5,261	5,388
54 Professional- scientific & tech svcs	5,642	6,057	6,387	6,716	7,047	7,457	7,867	8,299	8,444	8,573	8,706
55 Management of companies	1,574	1,650	1,708	1,765	1,821	1,889	1,956	2,024	2,009	1,987	1,966
56 Administrative & waste services	6,633	7,111	7,492	7,870	8,251	8,724	9,197	9,687	9,883	10,046	10,213
61 Educational svcs	1,295	1,408	1,503	1,602	1,700	1,821	1,948	2,082	2,174	2,277	2,383
62 Health & social services	6,880	7,715	8,062	8,402	9,078	9,493	9,902	10,764	10,764	11,462	11,462
71 Arts- entertainment & recreation	992	1,086	1,144	1,202	1,258	1,352	1,422	1,494	1,530	1,570	1,611
72 Accommodation & food services	4,843	5,272	5,601	5,951	6,296	6,757	7,211	7,688	7,959	8,260	8,572
81 Other services	3,887	4,201	4,464	4,721	4,974	5,235	5,543	5,923	6,003	6,179	6,361
92 Government & non NAICs	374	388	398	408	417	428	439	450	452	453	454
TOTAL	112,984	118,102	121,655	125,143	128,912	133,047	137,067	141,656	142,577	144,049	144,752

Table A13: Miami-Dade: Projected Economic Impact of International Merchandise Trade

BASE CASE: Output (millions of 2006 \$s)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
11 Ag, Forestry, Fish & Hunting	8.8	9.6	10.2	11.3	12.0	12.7	13.4	14.6	15.2	15.9	17.3
21 Mining	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2
22 Utilities	93.4	107.2	107.2	120.0	132.5	146.4	146.4	160.5	182.9	182.9	182.9
23 Construction	53.5	53.5	53.5	53.5	53.5	53.5	107.2	107.2	107.2	107.2	107.2
31-33 Manufacturing	6,638.6	7,192.4	7,714.8	8,299.5	8,891.5	9,555.2	10,221.8	10,944.6	11,624.9	12,366.4	13,125.9
42 Wholesale Trade	3,823.0	4,049.4	4,255.5	4,475.6	4,688.2	4,907.5	5,117.8	5,330.5	5,644.4	5,987.1	6,342.1
48-49 Transportation & Warehousing	2,588.2	2,830.5	3,040.3	3,263.8	3,482.2	3,725.7	3,959.4	4,206.0	4,206.0	4,631.2	5,085.9
44-45 Retail trade	508.9	548.2	584.7	625.1	665.8	710.5	754.6	801.4	848.4	899.8	952.2
51 Information	374.1	413.1	450.8	495.0	538.1	589.1	642.5	698.8	742.4	788.2	833.5
52 Finance & insurance	1,114.3	1,223.5	1,327.7	1,449.1	1,570.9	1,714.2	1,859.1	2,019.6	2,141.4	2,276.4	2,418.7
53 Real estate & rental	532.3	587.5	640.0	700.0	761.7	833.6	906.6	988.3	1,049.7	1,116.6	1,187.0
54 Professional- scientific & tech svcs	812.0	900.7	983.5	1,080.9	1,179.1	1,295.3	1,413.4	1,541.6	1,635.4	1,733.4	1,836.5
55 Management of companies	326.5	361.0	393.0	430.4	469.2	513.6	558.6	608.6	644.5	684.2	723.7
56 Administrative & waste services	390.2	426.7	468.9	513.7	557.5	618.4	665.2	727.0	766.4	809.9	878.6
61 Educational svcs	71.7	84.1	94.7	94.7	105.8	118.2	130.0	142.5	142.5	142.5	164.7
62 Health & social services	534.6	534.6	534.6	534.6	534.6	1,095.4	1,095.4	1,095.4	1,095.4	1,095.4	1,095.4
71 Arts- entertainment & recreation	58.9	58.9	76.4	76.4	94.3	94.3	94.3	114.2	114.2	114.2	114.2
72 Accommodation & food services	282.4	330.8	372.9	372.9	416.5	465.1	511.7	561.0	561.0	646.1	646.1
81 Other services	198.0	198.0	286.0	286.0	286.0	386.0	386.0	386.0	386.0	561.6	561.6
92 Government & non NAICs	555.9	602.0	645.4	693.9	742.9	798.1	853.0	912.5	967.4	1,027.5	1,089.4
TOTAL	18,966.4	20,512.6	22,041.0	23,577.4	25,183.4	27,633.8	29,437.6	31,361.5	32,876.4	35,187.7	37,364.1

Table A14: Miami-Dade: Projected Economic Impact of International Merchandise Trade

ALTERNATIVE 1: Output (millions of 2006 \$s)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
11 Ag, Forestry, Fish & Hunting	8.8	9.7	10.4	11.6	12.4	13.3	14.1	15.4	16.1	16.8	18.4
21 Mining	1.1	1.1	1.1	1.1	1.3	1.3	1.3	1.3	1.3	1.3	1.3
22 Utilities	93.4	108.7	108.7	123.1	137.3	153.1	153.1	168.7	194.2	194.2	194.2
23 Construction	53.5	53.5	53.5	53.5	53.5	53.5	110.9	110.9	110.9	110.9	110.9
31-33 Manufacturing	6,682.7	7,301.9	7,895.6	8,558.1	9,234.5	9,990.3	10,736.0	11,544.3	12,318.3	13,161.1	14,029.0
42 Wholesale Trade	3,841.4	4,094.0	4,327.3	4,575.1	4,815.9	5,062.9	5,295.0	5,529.4	5,880.6	6,263.6	6,662.4
48-49 Transportation & Warehousing	2,610.0	2,881.3	3,120.4	3,374.4	3,624.6	3,902.5	4,164.4	4,440.5	4,440.5	4,922.1	5,440.9
44-45 Retail trade	512.1	556.0	597.4	643.1	689.5	740.2	789.4	841.6	894.8	953.0	1,012.5
51 Information	377.2	420.9	463.8	514.2	563.8	622.4	682.8	746.5	796.8	849.4	901.9
52 Finance & insurance	1,123.2	1,245.3	1,364.1	1,502.1	1,642.1	1,806.3	1,969.7	2,150.8	2,290.6	2,445.6	2,609.7
53 Real estate & rental	536.6	598.5	658.3	726.6	797.5	880.1	962.6	1,055.0	1,125.6	1,202.5	1,284.0
54 Professional- scientific & tech svcs	819.0	918.4	1,012.9	1,124.0	1,237.1	1,370.8	1,504.6	1,649.9	1,758.2	1,871.1	1,990.6
55 Management of companies	329.2	367.9	404.4	447.0	491.6	542.7	593.6	650.1	691.5	737.2	782.9
56 Administrative & waste services	393.5	434.4	482.5	533.5	583.8	653.8	706.8	776.7	822.0	872.2	951.6
61 Educational svcs	71.7	85.4	97.6	97.6	110.2	124.3	137.7	151.8	151.8	151.8	177.1
62 Health & social services	534.6	534.6	534.6	534.6	534.6	1,149.5	1,149.5	1,149.5	1,149.5	1,149.5	1,149.5
71 Arts- entertainment & recreation	58.9	58.9	78.5	78.5	98.8	98.8	98.8	121.1	121.1	121.1	121.1
72 Accommodation & food services	282.4	336.2	384.0	384.0	433.8	489.3	541.8	597.3	597.3	694.5	694.5
81 Other services	198.0	198.0	296.5	296.5	296.5	410.2	410.2	410.2	410.2	610.3	610.3
92 Government & non NAICs	559.5	611.1	660.4	715.4	771.4	834.2	895.6	962.2	1,024.5	1,092.8	1,163.5
TOTAL	19,086.9	20,815.7	22,551.8	24,293.9	26,130.2	28,899.4	30,917.5	33,073.0	34,795.7	37,420.9	39,906.2

Table A15: Miami-Dade: Projected Economic Impact of International Merchandise Trade

ALTERNATIVE 2: Output (millions of 2006 \$s)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
11 Ag, Forestry, Fish & Hunting	8.7	9.4	9.9	10.6	11.1	11.7	12.4	13.3	13.8	14.3	15.4
21 Mining	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2
22 Utilities	93.4	104.8	104.8	114.2	123.4	134.6	134.6	146.4	163.6	163.6	163.6
23 Construction	53.5	53.5	53.5	53.5	53.5	53.5	101.8	101.8	101.8	101.8	101.8
31-33 Manufacturing	6,543.0	6,993.1	7,404.4	7,825.7	8,257.2	8,794.3	9,346.4	9,944.3	10,465.0	11,036.1	11,615.9
42 Wholesale Trade	3,783.2	3,967.9	4,131.4	4,291.9	4,449.4	4,630.8	4,809.4	4,990.2	5,237.8	5,509.9	5,789.3
48-49 Transportation & Warehousing	2,541.1	2,737.2	2,901.5	3,061.7	3,220.0	3,416.2	3,609.1	3,812.4	3,812.4	4,142.2	4,490.1
44-45 Retail trade	502.1	534.1	562.9	592.1	621.8	658.2	695.0	734.1	770.3	810.2	850.5
51 Information	367.4	399.0	428.4	460.0	490.9	531.5	574.8	620.4	653.1	687.5	721.3
52 Finance & insurance	1,095.2	1,183.7	1,265.4	1,352.2	1,440.1	1,554.5	1,672.8	1,803.5	1,895.0	1,997.3	2,104.1
53 Real estate & rental	523.0	567.7	608.7	651.6	696.0	753.3	812.6	878.9	924.9	975.3	1,027.9
54 Professional- scientific & tech svcs	796.7	868.5	933.1	1,002.6	1,073.0	1,165.1	1,260.7	1,364.2	1,434.1	1,507.6	1,584.3
55 Management of companies	320.5	348.4	373.4	400.1	428.0	463.3	499.8	540.3	567.1	597.1	626.6
56 Administrative & waste services	383.1	412.7	445.7	477.7	509.1	557.6	595.6	645.6	675.1	707.9	759.3
61 Educational svcs	71.7	81.9	90.3	90.3	98.5	108.5	118.3	128.6	128.6	128.6	145.7
62 Health & social services	534.6	534.6	534.6	534.6	534.6	1,023.3	1,023.3	1,023.3	1,023.3	1,023.3	1,023.3
71 Arts- entertainment & recreation	58.9	58.9	73.0	73.0	86.3	86.3	86.3	102.8	102.8	102.8	102.8
72 Accommodation & food services	282.4	322.3	355.5	355.5	387.7	427.0	465.6	506.1	506.1	571.8	571.8
81 Other services	198.0	198.0	269.2	269.2	269.2	351.3	351.3	351.3	351.3	488.0	488.0
92 Government & non NAICs	547.9	585.4	619.6	654.6	690.3	735.0	780.5	829.8	871.8	918.1	965.4
TOTAL	18,705.6	19,962.2	21,166.4	22,272.1	23,441.3	25,457.2	26,951.4	28,538.5	29,698.8	31,484.6	33,148.2

Table A16: Miami-Dade: Projected Economic Impact of International Merchandise Trade											
BASE CASE: Value added	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
(millions of 2006 \$s)											
11 Ag, Forestry, Fish & Hunting	6.2	6.8	7.2	8.0	8.5	9.0	9.5	10.3	10.8	11.3	12.3
21 Mining	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
22 Utilities	72.0	82.6	82.6	92.4	102.1	112.8	112.8	123.6	140.9	140.9	140.9
23 Construction	22.4	22.4	22.4	22.4	22.4	22.4	44.9	44.9	44.9	44.9	44.9
31-33 Manufacturing	2,442.1	2,645.8	2,838.0	3,053.1	3,270.9	3,515.0	3,760.2	4,026.1	4,276.4	4,549.2	4,828.6
42 Wholesale Trade	2,578.3	2,730.9	2,869.9	3,018.4	3,161.8	3,309.7	3,451.5	3,594.9	3,806.6	4,037.8	4,277.2
48-49 Transportation & Warehousing	1,389.4	1,496.6	1,596.3	1,706.6	1,817.6	1,939.5	2,060.0	2,188.0	2,316.1	2,456.6	2,599.4
44-45 Retail trade	351.1	383.9	412.4	442.7	472.3	505.4	537.1	570.5	570.5	628.2	689.9
51 Information	181.7	200.7	218.9	240.4	261.3	286.1	312.1	339.4	360.6	382.8	404.8
52 Finance & insurance	665.2	730.3	792.6	865.0	937.7	1,023.3	1,109.7	1,205.6	1,278.2	1,358.9	1,443.8
53 Real estate & rental	345.0	380.8	414.8	453.7	493.6	540.3	587.6	640.5	680.3	723.6	769.3
54 Professional- scientific & tech svcs	436.7	484.4	528.9	581.3	634.1	696.6	760.2	829.1	879.5	932.2	987.7
55 Management of companies	190.9	211.1	229.8	251.7	274.4	300.4	326.7	355.9	376.9	400.2	423.3
56 Administrative & waste services	233.6	255.4	280.7	307.5	333.7	370.1	398.2	435.1	458.7	484.8	525.9
61 Educational svcs	45.9	53.7	60.6	60.6	67.6	75.5	83.1	91.1	91.1	91.1	105.3
62 Health & social services	328.0	328.0	328.0	328.0	328.0	672.1	672.1	672.1	672.1	672.1	672.1
71 Arts- entertainment & recreation	38.1	38.1	49.4	49.4	60.9	60.9	60.9	73.8	73.8	73.8	73.8
72 Accommodation & food services	159.5	186.9	210.6	210.6	235.3	262.7	289.1	316.9	316.9	364.9	364.9
81 Other services	101.6	101.6	146.8	146.8	146.8	198.2	198.2	198.2	198.2	288.4	288.4
92 Government & non NAICs	458.5	496.6	532.3	572.4	612.8	658.3	703.6	752.7	797.9	847.5	898.6
TOTAL	10,046.6	10,837.1	11,622.7	12,411.4	13,242.4	14,558.8	15,477.9	16,469.4	17,351.1	18,489.6	19,551.5

Table A17: Miami-Dade: Projected Economic Impact of International Merchandise Trade											
ALTERNATIVE 1: Value added (millions of 2006 \$s)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
11 Ag, Forestry, Fish & Hunting	6.3	6.9	7.4	8.2	8.8	9.4	10.0	10.9	11.4	11.9	13.1
21 Mining	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6
22 Utilities	72.0	83.7	83.7	94.8	105.8	117.9	117.9	130.0	149.6	149.6	149.6
23 Construction	22.4	22.4	22.4	22.4	22.4	22.4	46.5	46.5	46.5	46.5	46.5
31-33 Manufacturing	2,458.3	2,686.1	2,904.5	3,148.2	3,397.0	3,675.1	3,949.4	4,246.7	4,531.5	4,841.5	5,160.8
42 Wholesale Trade	2,590.7	2,761.0	2,918.4	3,085.5	3,247.9	3,414.5	3,571.0	3,729.0	3,965.9	4,224.2	4,493.1
48-49 Transportation & Warehousing	1,463.8	1,616.0	1,750.0	1,892.5	2,032.8	2,188.6	2,335.5	2,490.4	2,490.4	2,760.5	3,051.4
44-45 Retail trade	338.1	367.1	394.5	424.6	455.2	488.7	521.2	555.7	590.8	629.2	668.5
51 Information	183.2	204.4	225.3	249.7	273.8	302.3	331.6	362.6	387.0	412.6	438.0
52 Finance & insurance	670.4	743.4	814.3	896.7	980.2	1,078.3	1,175.8	1,283.9	1,367.3	1,459.8	1,557.8
53 Real estate & rental	347.8	387.9	426.6	470.9	516.9	570.4	623.8	683.7	729.5	779.4	832.2
54 Professional- scientific & tech svcs	440.5	493.9	544.7	604.5	665.3	737.2	809.2	887.3	945.5	1,006.3	1,070.5
55 Management of companies	192.6	215.1	236.5	261.4	287.5	317.4	347.1	380.2	404.4	431.1	457.9
56 Administrative & waste services	235.5	260.0	288.8	319.3	349.5	391.3	423.0	464.9	492.0	522.0	569.6
61 Educational svcs	45.9	54.6	62.4	62.4	70.5	79.5	88.0	97.0	97.0	97.0	113.2
62 Health & social services	328.0	328.0	328.0	328.0	328.0	705.3	705.3	705.3	705.3	705.3	705.3
71 Arts- entertainment & recreation	38.1	38.1	50.7	50.7	63.9	63.9	63.9	78.3	78.3	78.3	78.3
72 Accommodation & food services	159.5	189.9	216.9	216.9	245.1	276.4	306.0	337.4	337.4	392.3	392.3
81 Other services	101.6	101.6	152.2	152.2	152.2	210.6	210.6	210.6	210.6	313.4	313.4
92 Government & non NAICs	461.5	504.1	544.7	590.1	636.3	688.1	738.7	793.6	845.1	901.3	959.7
TOTAL	10,156.6	11,064.7	11,972.5	12,879.6	13,839.6	15,337.8	16,375.2	17,494.6	18,386.1	19,762.9	21,071.8

Table A18: Miami-Dade: Projected Economic Impact of International Merchandise Trade											
ALTERNATIVE 2: Value added	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
(millions of 2006 \$s)											
11 Ag, Forestry, Fish & Hunting	6.2	6.6	7.0	7.5	7.9	8.3	8.8	9.4	9.8	10.1	10.9
21 Mining	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
22 Utilities	72.0	80.7	80.7	88.0	95.0	103.7	103.7	112.8	126.0	126.0	126.0
23 Construction	22.4	22.4	22.4	22.4	22.4	22.4	42.7	42.7	42.7	42.7	42.7
31-33 Manufacturing	2,406.9	2,572.5	2,723.8	2,878.8	3,037.5	3,235.1	3,438.2	3,658.2	3,849.7	4,059.8	4,273.1
42 Wholesale Trade	2,551.4	2,676.0	2,786.3	2,894.5	3,000.7	3,123.1	3,243.5	3,365.5	3,532.4	3,715.9	3,904.4
48-49 Transportation & Warehousing	1,425.1	1,535.1	1,627.3	1,717.1	1,805.9	1,915.9	2,024.1	2,138.2	2,138.2	2,323.1	2,518.2
44-45 Retail trade	331.5	352.6	371.7	390.9	410.6	434.6	458.9	484.7	508.6	535.0	561.6
51 Information	178.5	193.8	208.1	223.4	238.5	258.2	279.2	301.3	317.2	333.9	350.3
52 Finance & insurance	653.8	706.6	755.3	807.2	859.6	928.0	998.5	1,076.5	1,131.2	1,192.2	1,256.0
53 Real estate & rental	338.9	367.9	394.5	422.3	451.1	488.2	526.7	569.6	599.4	632.1	666.2
54 Professional- scientific & tech svcs	428.5	467.1	501.8	539.2	577.0	626.6	678.0	733.7	771.3	810.8	852.0
55 Management of companies	187.4	203.8	218.4	234.0	250.3	270.9	292.3	316.0	331.7	349.2	366.4
56 Administrative & waste services	229.3	247.0	266.8	285.9	304.7	333.7	356.5	386.4	404.1	423.7	454.5
61 Educational svcs	45.9	52.3	57.7	57.7	63.0	69.4	75.6	82.2	82.2	82.2	93.1
62 Health & social services	328.0	328.0	328.0	328.0	328.0	627.9	627.9	627.9	627.9	627.9	627.9
71 Arts- entertainment & recreation	38.1	38.1	47.2	47.2	55.7	55.7	55.7	66.4	66.4	66.4	66.4
72 Accommodation & food services	159.5	182.1	200.8	200.8	219.0	241.2	263.0	285.9	285.9	323.0	323.0
81 Other services	101.6	101.6	138.2	138.2	138.2	180.4	180.4	180.4	180.4	250.6	250.6
92 Government & non NAICs	451.9	482.9	511.0	539.9	569.4	606.2	643.8	684.4	719.0	757.2	796.3
TOTAL	9,957.5	10,617.7	11,247.6	11,823.6	12,435.2	13,530.0	14,297.9	15,122.6	15,724.4	16,662.5	17,540.1

Table A19: Miami-Dade: Projected Economic Impact of International Merchandise Trade											
BASE CASE: Total Compensation	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
(millions of 2006 \$s)											
Forestry, Fishing, Other	2.0	2.2	2.4	2.5	2.7	2.9	3.0	3.2	3.3	3.5	3.6
Mining	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Utilities	32.7	33.2	36.6	40.1	40.4	44.4	48.3	48.8	55.2	55.6	56.1
Construction	20.1	22.2	24.0	25.8	27.7	31.6	33.7	35.9	36.3	39.9	40.3
Manufacturing	1,065.9	1,119.2	1,156.1	1,196.1	1,236.7	1,280.4	1,324.2	1,371.0	1,385.1	1,394.4	1,406.0
Wholesale Trade	1,318.6	1,346.7	1,356.1	1,363.6	1,369.2	1,370.8	1,371.7	1,369.8	1,362.8	1,349.1	1,337.2
Retail Trade	666.1	710.6	741.2	772.0	801.4	831.3	859.6	888.0	900.7	909.0	916.7
Transp, Warehousing	307.4	325.9	340.5	353.9	367.2	379.7	392.3	405.9	409.6	413.1	412.5
Information	74.3	80.5	85.2	90.3	95.4	100.9	106.3	112.1	113.1	113.5	113.8
Finance, Insurance	382.7	415.4	440.1	466.9	493.5	523.1	552.7	584.4	594.8	603.2	611.9
Real Estate, Rental, Leasing	69.4	76.9	82.9	89.4	96.0	103.5	111.1	119.4	124.1	128.6	133.4
Profess, Tech Services	339.0	375.8	405.0	436.8	468.7	504.7	540.8	579.7	597.1	613.0	629.7
Mngmt of Co, Enter	182.0	196.1	206.6	217.7	228.8	240.8	252.8	265.2	265.3	264.2	263.1
Admin, Waste Services	176.1	194.9	209.8	225.9	242.2	260.6	279.0	298.6	308.5	317.2	326.2
Educational Services	53.6	60.4	66.0	72.5	78.9	86.1	93.7	101.9	108.2	115.2	122.6
Health Care, Social Asst	301.4	351.9	375.1	399.8	445.3	473.0	500.5	554.5	559.6	607.2	612.6
Arts, Enter, Rec	36.7	41.6	44.8	48.3	51.7	56.6	60.4	64.5	67.0	69.6	72.4
Accom, Food Services	122.2	137.7	149.8	163.7	177.6	194.3	210.8	228.7	240.4	253.2	266.8
Other Services (excl Gov)	71.0	79.3	86.3	93.7	101.1	108.2	116.5	126.6	129.8	135.4	141.3
TOTAL (excl Gov)	5,221.1	5,570.8	5,808.8	6,059.1	6,324.7	6,593.0	6,857.3	7,158.3	7,261.0	7,384.8	7,466.5

Table A20: Miami-Dade: Projected Economic Impact of International Merchandise Trade											
ALTERNATIVE 1: Total Compensation	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
(millions of 2006 \$s)											
Forestry, Fishing, Other	2.1	2.3	2.4	2.6	2.8	3.0	3.1	3.3	3.5	3.7	3.8
Mining	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Utilities	33.0	33.5	37.3	41.2	41.6	46.0	50.3	50.8	57.9	58.4	58.9
Construction	20.2	22.6	24.5	26.6	28.7	33.2	35.5	38.0	38.3	42.4	42.8
Manufacturing	1,068.6	1,125.8	1,166.0	1,209.5	1,253.8	1,301.4	1,348.0	1,397.8	1,412.3	1,421.6	1,433.4
Wholesale Trade	1,318.8	1,347.4	1,356.4	1,363.4	1,368.2	1,368.8	1,368.8	1,365.8	1,357.4	1,341.8	1,328.3
Retail Trade	669.1	717.4	751.2	785.0	817.4	850.0	880.5	910.9	924.2	932.8	940.7
Transp, Warehousing	308.7	328.8	344.9	359.6	374.2	387.9	401.3	415.9	419.7	423.3	422.4
Information	74.7	81.6	86.8	92.4	98.1	104.2	110.2	116.4	117.5	117.8	118.1
Finance, Insurance	384.9	420.7	448.3	478.0	507.7	540.6	573.0	607.6	618.8	627.8	637.2
Real Estate, Rental, Leasing	69.9	78.2	84.9	92.2	99.7	108.1	116.5	125.7	130.9	136.0	141.4
Profess, Tech Services	341.6	382.1	414.9	450.5	486.6	527.1	567.1	610.2	629.5	647.1	665.5
Mngmt of Co, Enter	183.0	198.3	210.0	222.3	234.6	247.9	260.9	274.4	274.2	272.9	271.5
Admin, Waste Services	177.4	198.1	214.9	233.0	251.4	272.0	292.3	314.0	325.1	334.6	344.7
Educational Services	54.1	61.5	67.9	75.2	82.5	90.7	99.2	108.4	115.6	123.5	131.9
Health Care, Social Asst	303.4	359.3	385.4	413.1	464.8	496.1	526.6	586.8	592.1	645.8	651.6
Arts, Enter, Rec	37.0	42.4	46.0	49.9	53.7	59.3	63.6	68.1	70.8	73.8	76.9
Accom, Food Services	123.3	140.5	154.1	169.8	185.5	204.5	223.0	242.9	256.2	270.6	286.0
Other Services (excl Gov)	71.5	80.7	88.6	96.9	105.3	113.3	122.4	133.7	137.2	143.5	150.2
TOTAL (excl Gov)	5,241.3	5,621.3	5,884.6	6,161.2	6,456.8	6,754.2	7,042.3	7,370.9	7,481.5	7,617.4	7,705.4

Table A21: Miami-Dade: Projected Economic Impact of International Merchandise Trade											
ALTERNATIVE 2: Total Compensation	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
(millions of 2006 \$s)											
Forestry, Fishing, Other	2.0	2.2	2.3	2.4	2.5	2.7	2.8	3.0	3.1	3.2	3.3
Mining	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Utilities	32.0	32.6	35.3	37.9	38.2	41.5	44.9	45.3	50.4	50.8	51.3
Construction	19.7	21.5	22.9	24.3	25.7	28.9	30.7	32.6	32.9	35.7	36.1
Manufacturing	1,060.2	1,107.3	1,138.9	1,171.0	1,204.1	1,242.7	1,282.1	1,324.4	1,337.8	1,347.1	1,358.4
Wholesale Trade	1,318.1	1,345.5	1,355.6	1,364.3	1,371.3	1,374.4	1,376.5	1,376.2	1,372.3	1,362.1	1,353.7
Retail Trade	659.6	698.0	723.6	747.8	771.4	797.3	822.6	848.0	859.4	867.3	874.7
Transp, Warehousing	304.4	320.5	332.7	343.2	353.9	364.8	376.1	388.3	391.8	395.2	395.2
Information	73.3	78.7	82.5	86.4	90.3	95.0	99.7	104.7	105.7	106.1	106.5
Finance, Insurance	377.9	405.7	426.0	446.4	466.9	491.9	517.4	544.8	553.8	561.1	568.8
Real Estate, Rental, Leasing	68.2	74.5	79.3	84.2	89.2	95.4	101.8	108.7	112.5	116.1	120.0
Profess, Tech Services	333.4	364.3	387.9	411.6	435.7	465.3	495.7	528.5	542.7	555.7	569.3
Mngmt of Co, Enter	180.0	192.0	200.7	209.3	218.0	228.2	238.6	249.5	249.9	249.3	248.8
Admin, Waste Services	173.2	189.0	201.0	213.1	225.4	240.5	256.1	272.6	280.6	287.7	295.1
Educational Services	52.6	58.2	62.7	67.5	72.3	78.1	84.4	91.1	96.0	101.4	107.1
Health Care, Social Asst	297.0	339.0	357.7	376.2	410.1	432.8	455.9	500.9	505.4	542.8	547.7
Arts, Enter, Rec	36.1	40.2	42.8	45.3	47.9	51.9	55.1	58.6	60.5	62.6	64.9
Accom, Food Services	119.9	132.8	142.5	152.8	163.0	176.6	190.3	205.1	214.2	224.2	234.8
Other Services (excl Gov)	69.8	76.8	82.5	88.0	93.5	99.3	106.2	114.7	117.3	121.8	126.5
TOTAL (excl Gov)	5,177.5	5,478.7	5,677.1	5,871.9	6,079.7	6,307.7	6,536.9	6,797.1	6,886.4	6,990.5	7,062.4

Table A22: Miami-Dade: Tax Contribution from International Merchandise Trade		
(millions of 2006 \$s)	2,012	2017
Transfers	7.0	11.0
Transfers Total	7.0	11.0
Corporate Profits Tax	330.5	518.9
Indirect Bus Tax: Custom Duty	34.4	54.0
Indirect Bus Tax: Excise Taxes	92.7	145.6
Indirect Bus Tax: Fed NonTaxes	42.0	66.0
Personal Tax: Estate and Gift Tax		
Personal Tax: Income Tax	751.4	1,179.7
Personal Tax: NonTaxes (Fines- Fees		
Social Ins Tax- Employee Contribution	442.0	693.9
Social Ins Tax- Employer Contribution	404.4	634.9
Federal Government NonDefense Total	2,097.5	3,293.0
Corporate Profits Tax	43.8	68.7
Dividends	77.1	121.1
Indirect Bus Tax: Motor Vehicle Lic	9.3	14.7
Indirect Bus Tax: Other Taxes	129.7	203.6
Indirect Bus Tax: Property Tax	408.8	641.7
Indirect Bus Tax: S/L NonTaxes	52.0	81.7
Indirect Bus Tax: Sales Tax	569.0	893.4
Indirect Bus Tax: Severance Tax	1.3	2.1
Personal Tax: Estate and Gift Tax		
Personal Tax: Income Tax		
Personal Tax: Motor Vehicle License	9.6	15.1
Personal Tax: NonTaxes (Fines- Fees	32.0	50.3
Personal Tax: Other Tax (Fish/Hunt)	0.6	0.9
Personal Tax: Property Taxes	4.1	6.4
Social Ins Tax- Employee Contribution	3.2	5.0
Social Ins Tax- Employer Contribution	12.7	20.0
State/Local Govt NonEducation Total	1,353.4	2,124.8
Total	3,457.9	5,428.8

Projected Merchandise Trade for Miami-Dade: Detailed Tables

Table A23: Miami-Dade Exports: Most Likely Scenario

(bill 2006 US\$)	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Latin America & Caribbean	30.04	32.62	35.02	37.72	40.44	43.49	46.56	49.90	52.95	56.29	59.74
European Union	2.15	2.26	2.38	2.50	2.64	2.80	2.97	3.12	3.28	3.45	3.62
Asia	0.90	0.97	1.05	1.12	1.20	1.29	1.37	1.46	1.55	1.64	1.74
Middle East	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.23	0.24
Africa	0.20	0.21	0.23	0.24	0.25	0.26	0.28	0.29	0.30	0.32	0.34
Other	0.53	0.56	0.59	0.62	0.65	0.68	0.71	0.74	0.78	0.81	0.84
Total	33.95	36.76	39.42	42.37	45.36	48.72	52.08	55.71	59.08	62.74	66.51

Table A24: Miami-Dade Exports: High Case Scenario

(bill 2006 US\$)	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Latin America & Caribbean	30.24	33.12	35.86	38.92	42.03	45.51	48.93	52.66	56.14	59.93	63.86
European Union	2.16	2.29	2.42	2.56	2.72	2.90	3.08	3.25	3.43	3.62	3.82
Asia	0.90	0.99	1.07	1.15	1.24	1.34	1.43	1.53	1.63	1.74	1.85
Middle East	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.22	0.23	0.24	0.25
Africa	0.20	0.21	0.23	0.24	0.25	0.27	0.28	0.30	0.31	0.33	0.35
Other	0.53	0.57	0.60	0.64	0.67	0.71	0.75	0.79	0.82	0.86	0.91
Total	34.18	37.32	40.34	43.68	47.10	50.92	54.68	58.74	62.57	66.73	71.04

Table A25: Miami-Dade Exports: Low Case Scenario

(bill 2006 US\$)	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Latin America & Caribbean	29.58	31.66	33.53	35.44	37.39	39.84	42.37	45.13	47.45	50.01	52.62
European Union	2.14	2.24	2.35	2.46	2.58	2.73	2.88	3.01	3.15	3.30	3.45
Asia	0.89	0.96	1.02	1.09	1.15	1.22	1.29	1.36	1.43	1.50	1.58
Middle East	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.23
Africa	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30
Other	0.52	0.55	0.57	0.59	0.62	0.64	0.67	0.69	0.72	0.74	0.76
Total	33.46	35.75	37.84	39.97	42.15	44.86	47.65	50.66	53.24	56.06	58.94

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Mr. Lasaga is President and co-founder of Strategic Information Analysis, Inc., (**StratInfo**) an economics and finance consulting firm established in 1993 in Miami, Florida. He has more than 22 years experience as a business and financial economist and senior executive. Lasaga has extensive experience in the analysis of global financial markets and business trends, and in assisting clients in optimizing their investments. He has successfully completed new bank applications in the State of Florida. He also works with domestic and international clients to identify profitable business opportunities and to develop effective business plans. Lasaga has nationally-recognized capability for independent analysis of the Florida, U.S., and Latin American economies and financial markets. He is also called upon as an expert witness in litigation matters involving economic losses.

Lasaga's professional career includes Citicorp in New York, where he worked extensively in the restructuring of the external debt of Latin American countries; Wharton Econometric Forecasting Associates in Philadelphia; and Southeast Bank in Miami. He has consulted for 15 years with the World Bank in Washington D.C., specializing in the evaluation of banking structures and development projects throughout Latin America.

Lasaga was a member of the Florida Governor Jeb Bush's Council of Economic Advisors during 2001-2006. An active community leader, he has served for fourteen years on the Board of Directors of Baptist Hospital of Miami and is currently a member of the Hospital's Executive Committee and the Baptist Health System's Investment Committee. He also serves on the Advisory Board of the Miami Dade College's School of Business.

Lasaga holds a Master's Degree and a Ph.D. degree in Economics from the University of Pennsylvania. For fourteen years, he has taught undergraduate and MBA courses in International Finance, Managerial Economics, and Microeconomics at the University of Miami.

Richard K. Harper Ph.D.

Mr. Harper is the president of Economic Consulting Services, Inc., which provides expert economic and business consulting services in economic analysis, litigation support, and business planning. The firm's economic and business research team has developed a project portfolio that includes economic and fiscal impact analysis, industry sector and labor market analysis. Clients have included Fortune 500 companies, economic development organizations and legal firms

Mr. Harper's career as an economist began in 1979 at the Research Triangle Institute in North Carolina, where he was involved in all phases of various funded research projects. He received his Ph.D. in Economics from Duke University in 1989 and joined the University of West Florida faculty that same year. He received his bachelor's degree from Guilford College in North Carolina.

Prior to coming to the University of West Florida, Mr. Harper lectured at the University of North Carolina at Greensboro. Other academic experience includes visiting appointments at ESSCA, in Angers, France, the University of Nottingham, England and University College, Cork, Ireland. His published scholarly research is largely in the area of government policy and its effect on the business environment.

Through the University of West Florida's Haas Center for Business Research and Economic Development, where he serves as director, Mr. Harper has worked with Florida businesses and government leaders on a variety of business research and economic development issues. He represented Northwest Florida on Governor Jeb Bush's Council of Economic Advisors from 2001 - 2006.

Alicia Diaz

Ms. Diaz is Vice-President and co-founder of StratInfo. She is an economics and finance consultant with more than 15 years experience. Ms. Diaz has broad experience in international business research, in assessing international risks and identifying business opportunities in global markets. She has also done extensive research on the Florida economy. Her professional career includes founder and President of AD/vantage Point Inc., a business consulting firm, and Southeast Bank in Miami, as an officer and international economist, with responsibility for preparation of country risk assessments and loan exposure recommendations for more than 50 countries worldwide. Ms. Diaz has also collaborated with the North-South Center of the University of Miami on several research projects; and is a co-author of *The Enterprise for the Americas Initiative: Its Impact on South Florida*. She has also made numerous presentations at business seminars. Ms. Diaz holds a Bachelor's Degree in Finance from Florida International University, where she has completed courses in the Graduate School Program for economics.