

Transportation and Economic Impacts of the Freight Industry in Miami-Dade County

Executive Summary

prepared for

Miami-Dade Metropolitan Planning Organization

prepared by

Cambridge Systematics, Inc.

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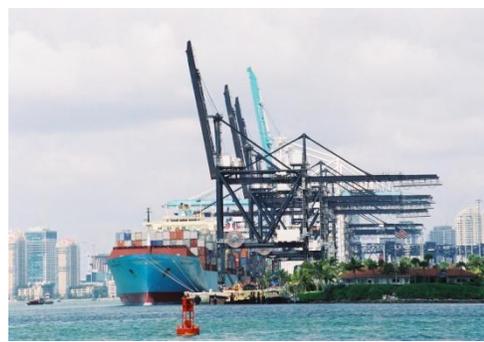
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Miami-Dade County is an international marketplace driven by a well-established freight transportation system that serves as the cornerstone of the region's economy, providing goods and services to Florida's largest consumption market as well as connecting the region to the global economy through major sea and air gateways. This robust system helps lower the costs of moving goods and doing business in the region, thereby allowing the County to be more competitive in the attraction and retention of businesses - and well-paying jobs. Businesses directly involved in moving freight generate 275,000 jobs in Miami-Dade, representing over \$42 billion in economic output, and a gross regional product of \$25 billion. In fact, the freight industry is the third largest sector in Miami-Dade's economy behind finance, insurance and real estate (FIRE) and retail industry sectors.



The *Transportation and Economic Impacts of the Freight Industry in Miami-Dade County Study* provides the County with a critical tool to help understand the magnitude of the freight industry. The study describes the County's current infrastructure by mode, existing and future freight flows, and their corresponding economic impacts in 2008 and 2035. The economic impacts are summarized in terms of jobs, wages, economic output, gross regional product, tax revenue generated, and costs (road maintenance, congestion, and rail crossing delay).

What Are the Freight-Significant Features of Miami-Dade County?

Miami-Dade County has an extensive freight system consisting of the Port of Miami, Miami International Airport, the Port of Miami River, CSX and FEC rail corridors and terminals, and a dense infrastructure of private warehouse and distribution center facilities - all connected and served by a network of highway corridors. The major roadway corridors have been designated as part of either the Strategic Intermodal System (SIS) or the Southeast Florida Transportation Council's (SEFTC) Corridors of Regional Significance.

The Port of Miami (POM) is the largest container port in the state, handling over 850,000 TEUs (twenty-foot equivalent container units) of goods. Cargo destined for more than 100 countries and 250 ports around the world flow through the POM. Significant infrastructure improvements are underway to allow the port to nearly triple this volume by 2035 - and more importantly, be the first and only port in Florida that will be "open for business" when the widening of the Panama Canal is completed in 2014. These improvements include



deepening the main channel to 50 feet to

serve the next generation of mega containerships, re-establishing on-port rail service with the Florida East Coast Railway to provide direct rail connections to U.S. hinterland markets, and building a tunnel to provide trucks with direct access to the interstate highway system.

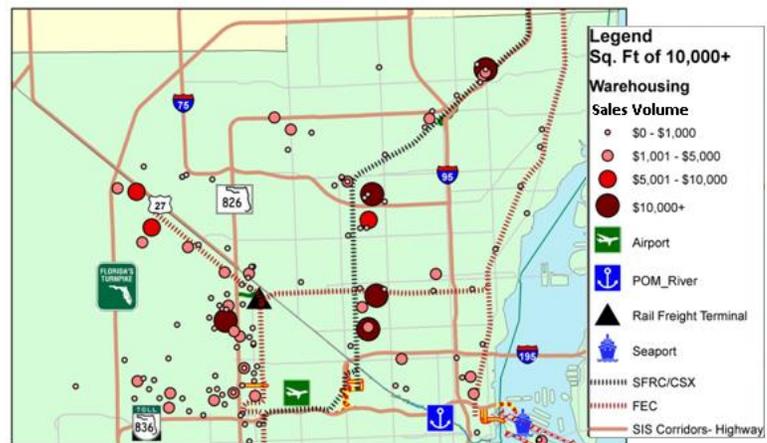
Miami International Airport is the fourth largest cargo airport in the country with over 2 million tons of freight annually. More importantly, MIA is the dominant airport in the US for the import of perishables, including flowers, fruits and vegetables, and fish. These shipments come from all over the world, but the primary trading partner/region is South America and MIA handles over 80 percent of them. The final phase of the 25th Street Viaduct project will commence in 2012, representing a significant improvement in access to MIA's air cargo operation. Additional terminal side improvements are also underway to ensure MIA maintains its competitive position globally.



The County also is served by two freight operating railroads: CSX Transportation and the Florida East Coast Railway (FEC). The CSX freight network within Miami-Dade County consists of carload and bulk service, including aggregate and general merchandise. It has a yard in Hialeah that supports its carload operations. It operates on the South Florida Corridor (SFRC), which is owned by the state of Florida and used by Tri-Rail and Amtrak. The FEC is a Class II railroad that provides north-south service along the Atlantic Coast between Miami and Jacksonville. The FEC provides exclusive rail service to the Port of Miami, Port Everglades, and Port of Palm Beach. Both of these railroads provide Miami-Dade County with direct access to the rest of North America through the rail gateway in Jacksonville.



Miami-Dade County is also host to an extensive network of warehouses focusing on general merchandise, refrigerated goods, and farm products. The establishments are spread out across the County, but cluster around the major freight roadway and rail corridors - primarily SR-826, SR-836 and US-27 - and the major hubs - MIA, POM, FEC, CSX. There is a major concentration of Warehousing establishments within the Doral and Medley industrial areas.



How Significant Is Goods Movement in the Region?

Miami-Dade's freight infrastructure handled over 137 million tons of domestic and international freight in 2010. Trucks handled the largest volume of traffic by weight (75%), followed by the railroads (11%), the waterborne system (5%), and aviation system (8%). Domestically, goods were primarily transported to/from other counties within Florida, and to a lesser degree Alabama, Georgia, Tennessee, and the Carolinas.

In terms of international trade, Miami is known as the World's gateway to Latin America, through the use of MIA and the POM. MIA is the leader in trade with the Americas and the world's largest gateway to Latin America and the Caribbean, making it the dominant north/south cargo operation in the Western Hemisphere. The airport handles 83% of all air imports and 81% of all exports from the Latin American / Caribbean region; MIA serves as the hub for distribution of perishable products, hi-tech commodities, telecommunications equipment, textiles, pharmaceuticals and industrial machinery. The POM connects the United States to key trading partners in Central, South America, and the Caribbean, including the Bahamas, with over 1 million tons of freight, the Dominican Republic (619,000 tons), and Honduras (436,000 tons). The Port also does significant trade with China and other Asian countries, a market that is projected to continue increasing significantly over the next decade.

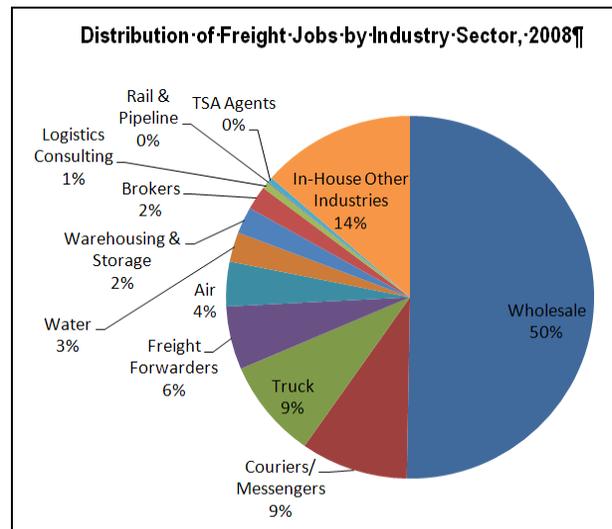


Why Is Freight Important to Miami-Dade County?

Miami-Dade is home to approximately 2.5 million people. These residents rely on freight transportation to obtain goods needed on a daily basis, including milk, bread, coffee, oranges, medicine, office supplies, to name just a few. Efficient and reliable freight movement is critical to the local economy – the higher the cost of moving goods, the higher the price of the products we buy and the higher the cost of living and doing business in the County, resulting in a reduced ability to attract and retain jobs in the region. An efficient freight transportation system allows businesses to import and export goods at a more competitive rate, which enhances the quality of life in Miami-Dade County and supports ongoing economic expansion.

In order to quantify the impact of the freight activity in the County, the industry was defined as: *the transportation (and related services) of goods from point of production or import through delivery at retail locations or ports for export*. This definition covers hauling goods from production sources or point of import to wholesale distributors, and subsequently to retail outlets, as well as from point of production to point of export. The supporting services provided by warehouses, freight forwarders, brokers, and logistics companies are also included.

The freight industry sector was directly responsible for 151,000 jobs in Miami-Dade County in 2008. Approximately half of these jobs consist of wholesale trade, while couriers/messengers, truckers, and forwarders each make up over five percent of the industry. As a group, in-house freight transportation jobs accounted for the second largest source of jobs within freight. These relate to establishments that handle their own goods movement in-house, such as Wal-Mart owning and managing their own fleet of trucks.



These jobs in turn produce an additional 123,000 jobs in Miami-Dade through indirect (business-to-business transactions) and induced (business-to-direct employees transactions) impacts, for a total 274,552 jobs in the County, with an average compensation of \$54,374 (including benefits). Indirect jobs are focused primarily in business services such as banking, finance, and insurance, while induced jobs are more diverse covering retail trade, health care, finance, leisure/hospitality, and others. Taken together, the direct, indirect, and induced jobs generate over \$42 billion in economic output in the County and a gross regional product of \$25 billion. This represents a sizeable portion of Miami-Dade’s economy, which hosts 1.4 million jobs and a Gross Regional Product of \$111 billion.

Metric	Direct	Indirect	Induced	Total	Multiplier
Jobs	151,314	48,841	74,397	274,552	1.81
Labor Income (millions)	\$ 9,124	\$ 2,589	\$ 3,173	\$ 14,886	1.63
Average Compensation	\$ 60,297	\$ 53,009	\$ 42,655	\$ 54,219	-----
GRP (millions)	\$15,098	\$ 4,111	\$ 5,897	\$ 25,106	1.66
Economic Output (millions)	\$25,845	\$ 7,146	\$ 9,805	\$ 42,796	1.66

In addition to the employment, GRP, and economic output, freight activity in the County also generates other positive and negative contributions to the local economy. The positive impacts include tax revenue from equipment, truck registrations, fuel sales, real estate, and business taxes, as well as the influx of construction dollars from non-County sources for freight related projects. The tax revenues in 2008 amounted to \$542 million, while the freight related construction projects brought in \$310 million during that same year, for an overall positive impact of \$852 million. Negative impacts or costs included pavement deterioration and congestion generated by truck traffic, and delay at rail-grade crossings from FEC and CSX traffic. These externalities had an adverse impact of approximately \$400 million on the county’s residents and visitors in 2008.

Impact Type	Metric	2008 Impact (millions)	Source
Positive	Equipment Taxes	\$9	Miami-Dade County
	Truck Registrations	\$272	Miami-Dade County
	Fuel Taxes	\$11	FL Dept of Revenue
	Real Estate Taxes	\$249	Miami-Dade County
	Business Taxes	\$1	Miami-Dade County
	Freight-Related Construction Projects	\$310	Miami-Dade County
Negative	Road Maintenance	\$102	FDOT/FHWA
	Congestion	\$297	FDOT/FHWA
	Rail Crossings	\$2	CS/FDOT

The net impact from freight in the county amounts to \$25.5 billion in economic activity annually. This is the result of adding together the positive impacts (GRP, various sources of tax revenue, and the freight-related construction impacts) and subtracting the negative impacts.

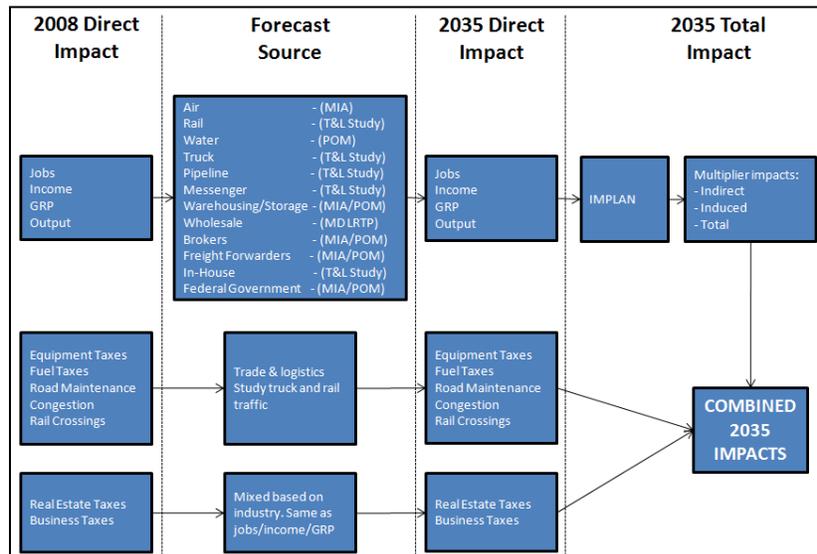
Impact Type	Metric	2008 Impact (millions)
Positive	Gross Regional Product	\$25,106
	Tax Revenue	\$542
	Freight-Related Construction Projects	\$310
Negative	Maintenance, congestion, delay	\$401
Net	Combined Impact	\$25,557

How Much Freight-Related Economic Activity Will There Be in the Future?

There are numerous trends that are likely to impact future freight traffic in the region, including population and employment growth, and the expansion of the Panama Canal and the region's ability to attract additional Asian-cargo through the airport and seaport gateways. Using data from the MPO population forecast, the POM and MIA cargo forecasts, and the Florida Trade and Logistics Study, total freight volumes are projected to grow by approximately 60 percent throughout the region between 2010 and 2035. The POM and MIA traffic are projected to see the largest growth over the next 25 years, with annual rates of around four percent, while truck and rail traffic see more modest increases. In total freight traffic is projected to grow at a two percent rate annually from 138 million tons to 222 million tons in 2035.

Mode	2010 Tons (millions)	2035 Tons (millions)	Annual Growth Rate	Source
Truck	103	159	1.7%	T&L Study
Rail	15	18	0.7%	T&L Study
Seaport	7	21	4.4%	POM
Air	2	5	3.7%	MIA
Other	11	21	2.5%	T&L Study
Total	138	222	1.9%	Total

Using the forecast freight data for each mode, economic activity was estimated for 2035. The freight industry is projected to have strong growth in Miami-Dade County, with most of the key economic metrics rising nearly two percent annually over the next 25 years. Total jobs (direct, indirect, and induced) are projected to increase a combined 65 percent reaching 450,000, with an average compensation of \$53,000 per year. This activity will result in over \$870 million in tax revenue for the county, and an average annual influx of \$417 million from freight related construction projects. Negative impacts or costs are projected to cost the county’s residents and visitors \$640 million annually in road maintenance, congestion, and rail crossings delay.



Impact Type	Metric	2008 Impact	2035 Impact	Resulting CAGR*
Positive	Jobs	274,552	453,949	1.9%
	Output	\$42,796	\$70,648	1.9%
	Labor Income	\$14,886	\$24,025	1.8%
	Value Added (GDP)	\$25,106	\$40,088	1.7%
	Equipment Taxes	\$9	\$13	1.4%
	Truck Registrations	\$272	\$433	1.7%
	Fuel Taxes	\$11	\$17	1.7%
	Real Estate Taxes	\$249	\$412	1.9%
	Business Taxes	\$1	\$1	1.1%
	Net Construction Impact	\$310	\$417	1.1%
Negative	Road Maintenance	\$102	\$163	1.7%
	Congestion	\$297	\$474	1.7%
	Rail Crossings	\$2	\$3	0.7%

* CAGR – Compounded Annual Growth Rate

How Will This Report Be Used?

The *Transportation and Economic Impacts of the Freight Industry in Miami-Dade Study* will provide the County with a valuable instrument to help understand the magnitude of the freight industry. This understanding will help build support for ongoing investments and improvements to our freight transportation system. The world economy becomes more global and integrated with the passing of every new free trade agreement and efficiency improvement

in the transportation industry. The free trade agreements with South Korea, Colombia and Panama are anticipated to have significant impacts over the next decade. The ongoing shift to larger container vessels will also change the economies of scale, particularly for the select number of seaports that are successful in becoming a first port of call for Asian cargo. It is critical that Miami-Dade County remain committed to preparing for and competing for these new and expanded opportunities for growth in international



trade. This will remain a challenge in an environment with less and less funding. However, this report provides freight transportation leaders with an additional resource to help continue building support for our freight transportation system by documenting the significant benefits of the freight community on the strength of our regional economy today and in the future.