January 2005

Potential economic effects of the proposed Dominican Republic-Central America free trade agreement (DR-CAFTA) on the state of Florida

University of South Florida. Center for Economic Development Research

Potential Economic Effects of the Proposed Dominican Republic – Central America Free Trade Agreement (DR-CAFTA) on the State of Florida

Prepared by the
CENTER FOR ECONOMIC DEVELOPMENT RESEARCH
College of Business Administration

USF Downtown Center

1101 Channelside Drive, Second Floor North, Tampa, Florida 33602
Office: (813) 905-5854 or Fax: (813) 905-5856

May 2005

Preface

In order to advance effective public policy recommendations regarding the statewide impact of globalization, the University of South Florida's (USF) Globalization Research Center commissioned the Center for Economic Development Research (CEDR) to conduct a study of the potential economic effects of proposed free trade agreements on the state of Florida.

This report is a follow-on to the CEDR report "Potential Economic Effects of the Proposed Free Trade Area of the Americas (FTAA) on the State of Florida." We follow the same methodology of that report, available upon request from CEDR.

CEDR, a unit of the USF College of Business Administration, initiates and conducts innovative research on economic development. The Center's education programs are designed to cultivate excellence in regional development. Our information system serves to enhance development efforts at USF, its College of Business, and throughout the Tampa Bay area and the state of Florida.

Robert Anderson, Dean, College of Business Administration (COBA), USF
Dennis Colie, Director, CEDR, COBA, USF, Co-principal Investigator
Dave Sobush, Associate Director, CEDR, COBA, USF, Co-principal Investigator
Michael Bernabe, Graduate Research Assistant, CEDR, COBA, USF

Executive Summary

This report estimates the potential effects of the proposed Dominican Republic – Central American Free Trade Agreement (DR-CAFTA) on the Florida economy. Economic effects are measured by jobs, output, and regional product. These are three descriptions of the same phenomenon, as mass, density, and shape can each be used to describe a solid.

The DR-CAFTA, if enacted, would encompass seven Western Hemisphere nations. Modeled after the North American Free Trade Agreement (NAFTA), the DR-CAFTA would reduce - over a period of time – the prevailing tariffs and other trade restrictions. Currently, the prevailing tariffs imposed on U.S. exports to the region can be as high as 25%, ad valorem. Regional exports to the U.S. typically face fewer and smaller barriers to trade.

Using economic software to model elimination of tariffs on agriculture and manufactures, we estimate that enactment of a DR-CAFTA would have a slight, but positive, effect on Florida's economy. In the first year of enactment, we estimate Florida employment to increase by 5,335 jobs (0.06%), Florida output (sales) to increase by $885M (96$), or 0.10%, and Gross State Product (GSP) to increase by $436M (96$), or 0.08%. The effects of a DR-CAFTA would increase over time, percolating through Florida's economy.

Introduction

This report estimates the potential economic effects of the proposed Dominican Republic – Central America Free Trade Agreement (DR-CAFTA) on the state of Florida. We measure economic effects by jobs, regional product, and output (sales adjusted for inventory). We hope that this report will aid the development of economically sound policy and investment both nationally and regionally. We follow the methodology of our May 2005 report "*Potential Economic Effects of the Proposed Free Trade Area of the Americas (FTAA) on the State of Florida.*"

U.S.- Dominican Republic – Central America Free Trade Agreement (DR-CAFTA)

The Dominican Republic – Central America Free Trade Agreement (DR-CAFTA) is a proposed free trade zone spanning seven countries in North and Central America, along with the Caribbean. **Table 1** lists the countries participating in FTAA negotiations.

Table 1 – DR-CAFTA Country Participants

Costa Rica	Guatemala
Dominican Republic	Honduras
El Salvador	Nicaragua
United States of America	

Negotiations of a Free Trade Agreement (FTA) between the U.S. and five Central American countries (Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua) began early 2003. An agreement was reached in early 2004 and signed by all participants in May 2004. Meanwhile the U.S. was having separate negotiations with the Dominican Republic hoping to include them into the grand scheme of CAFTA. In August of 2004 the Dominican Republic was officially added to the CAFTA agreement, which was thus renamed DR-CAFTA.[1] The House Ways and Means Committee held hearings on the DR-CAFTA April 21, 2005. U.S. Congress is slated to vote on the DR-CAFTA in the late summer or fall of 2005. Presently only three participating countries (Honduras, Guatemala, and El Salvador) have ratified the agreement.[2]

If passed by Congress and ratified by all participating countries, DR-CAFTA will be the largest Free Trade Agreement (FTA) put into force in the last decade. In 2003, U.S. exports to Central America and the Dominican Republic totaled more than $15B, making it the second largest market for U.S. exports in all of Latin America.[3] In 2004, two-way trade between U.S. and the region exceeded $33B.[4] DR-CAFTA is a wide-ranging agreement regulating many issues: agriculture, telecommunications, investment, trade in services (from water distribution to

[1] *US-DR-CAFTA.* (n.d.) Retrieved May 2005, from http://www.bilaterals.org/rubrique.php3?id_rubrique=13
[2] *Florida FTAA, Inc. Leads DR-CAFTA Lobbying Mission to Washington, D.C.* (March 15, 2005). Retrieved May 2005, from http://news.findlaw.com/prnewswire/20050315/15mar2005161522.html
[3] *CAFTA Facts.* (February 2005) Retrieved May 2005, from Office of the United States Trade Representative Web site: http://www.ustr.gov/assets/Trade_Agreements/Bilateral/CAFTA/Briefing_Book/asset_upload_file248_7179.pdf
[4] *U.S.-Dominican Republic-Central America Free Trade Agreement (DR-CAFTA).* (n.d.) Retrieved May 2005, from U.S. Chamber of Commerce Web site: http://www.uschamber.com/issues/index/international/drcafta.htm

gambling), intellectual property, the environment, etc. It essentially serves US business interests by giving them a concrete and high-level set of rights to operate in Central America.[5] The main focus of the agreement is to eliminate barriers, especially to trade, within agriculture, manufacturing, services and investment.

U.S. Highlights

Presently, the U.S has eliminated tariffs on 75% of all imports from Central America and the Caribbean, including 99% of agricultural imports from the region. Meanwhile, U.S. merchandise exports to the region still face tariffs averaging between 30% to 100% higher than remaining U.S. tariffs. Implementation of DR-CAFTA would immediately eliminate tariffs on 80% of U.S. exports of consumer and industrial goods into the region.[6] Key sectors to benefit include: information technology products, agricultural and construction equipment, paper products, pharmaceuticals, and medical and scientific equipment. Remaining tariffs will be phased out in ten years.[7] In addition to eliminating tariffs, DR-CAFTA will open service markets, provide new legal protections for copyrights, patents, and trademarks; and foster transparency in government procurement.[8]

Effect on the State of Florida

The state of Florida serves as the gateway for two-thirds of U.S. merchandise trade with the DR-CAFTA region. About $4.5B worth of U.S. goods and services headed to the DR-CAFTA region passes through Florida's air and sea ports annually.

The overall effects of implementing the DR-CAFTA will spill into Florida by providing increased access into the DR-CAFTA markets regarding the major sectors: agriculture, manufacturing, and services. Key agricultural industries to benefit include processed foods, meats, poultry, nuts, vegetables, and cotton. DR-CAFTA will also benefit Florida's leading manufacturing export sectors including textiles, apparel, and computers and electronics. Also, substantial reductions in trade barriers will be seen in Florida service industries including telecommunications, insurance, health care, information technology, and banking and securities. [9]

In contrast to the Free Trade Area of the Americas (FTAA), negotiations and support of DR-CAFTA from leaders of the participating countries has been much more animate. Recent events included a two-day trip through 11 U.S. cities by the leaders of the six participating countries culminating with a meeting with the President of the U.S. Notable support of the benefits of the agreement, specifically how "CAFTA will help Central America get out of

[5] *US-DR-CAFTA.*
[6] *Fifteen Reasons to Support DR-CAFTA.* (n.d.) Retrieved May 2005, from U.S. Chamber of Commerce Web site: http://www.uschamber.com/issues/index/international/0504_cafta_15reasons.htm
[7] *CAFTA Facts.* (February 2005)
[8] *U.S.-Dominican Republic-Central America Free Trade Agreement (DR-CAFTA).*
[9] *DR-CAFTA: MEANS JOBS AND OPPORTUNITY FOR FLORIDA.* (n.d.) Retrieved May 2005, from United States Chamber of Commerce Web site: http://www.uschamber.com/NR/rdonlyres/ezymqy43axsb7knbj6xvdcgj5vuoo57yqq3xt7hdloj4a75kuxxlskmqdw6dhsykl5hgrj5a7yz3fd37xhiqe2ha5af/0505_fl_drcafta.pdf

poverty," was made by the President of Nicaragua.[10] Although still awaiting U.S. congress approval and ratification of the agreement by three other participating countries (Dominican Republic, Costa Rica, and El Salvador) negotiations regarding DR-CAFTA are definitely much more viable than those of the FTAA.

[10] Harrington, Jeff. (2005). Central American Free Trade Agreement// A presidents plea for trade. *St. Petersburg Times*. Retrieved May 19, 2005, from http://pqasb.pqarchiver.com/sptimes/836598731.html?MAC=2a85109c958563d4bbf9150a7031f56e&did=836598731&FMT=FT&FMTS=FT&date=May+11%2C+2005&author=JEFF+HARRINGTON&printformat=&desc=CENTRAL+AMERICAN+FREE+TRADE+AGREEMENT+%2F%2F+A+president%27s+plea+for+free+trade

Potential Impacts: Economic Modeling

In this section, we use two computer models, IMPLAN and REMI, to estimate the potential effects of a DR-CAFTA on the state of Florida. We report economic effects in terms of employment, output and gross state product. Employment refers to jobs (not workers as a worker may hold more than one job), output is defined as sales adjusted for inventory, and gross state product is output minus inputs and can also be thought of as compensation and profit. These three variables are interrelated descriptors of the same economy, much as mass, volume and density each can describe a solid.

Economic Impact of a DR-CAFTA

The first step in our economic modeling is to estimate the net direct employment effect of a DR-CAFTA on the Crop Production (NAICS 111) and Animal Production (NAICS 112) sub-sectors of Florida's economy. Using the IMPLAN model, we estimated these sectors would experience a net decrease of 30 jobs in our analysis of the FTAA. We scaled this result by agricultural trade volume between Florida and the DR-CAFTA nations, vis-à-vis the Florida and the FTAA nations. As agricultural trade between Florida and the DR-CAFTA nations is one-third of agricultural trade between Florida and the FTAA nations, we estimate that a DR-CAFTA, upon implementation, would result in a net direct loss of 10 crop and animal production jobs.

Next we utilize the REMI model to estimate the total economic effects of a DR-CAFTA on Florida's economy. We introduce to the model the direct employment effects generated in the previous step and concomitantly adjust the "Foreign Export Costs (Share)" and "Foreign Import Costs (Share)" on other industries to simulate the economic effects of an DR-CAFTA. Because the "Foreign Export Costs (Share)" and "Foreign Import Costs (Share)" represent global trade and not just trade with the DR-CAFTA nations, we must scale the variables by Florida's trade with the DR-CAFTA nations as a share of global trade.

Table 2 reports, for year 2004, the share by NAICS sub-sector of Florida's global exports to the six other DR-CAFTA nations, the average applied tariff, and in the right-most column, the product of the share and the tariff. This is the amount by which we will reduce "Foreign Export Costs (Share)" in the REMI model.

Table 2 - Foreign Export Cost Reduction Calculation

REMI Sectors	Item	Share of FL Exports	Tariff	Tariff x Share
1	113 & 114 Forestry and Fishing, et al	4.06%	1.99%	0.081%
3	211 Oil & Gas Extraction	0.76%	1.99%	0.015%
4	212 Mining	6.64%	1.99%	0.132%
19	311 Processed Foods	9.24%	17.13%	1.583%
20	312 Beverage & Tobacco Products	7.06%	17.13%	1.210%
21	313 Fabric Mill Products	86.21%	18.03%	15.543%
22	314 Non-Apparel Textile Products	31.46%	18.03%	5.672%
23	315 Apparel Manufactures	53.77%	19.36%	10.410%
24	316 Leather & Related Products	12.50%	19.08%	2.385%
8	321 Wood Products	10.04%	12.11%	1.216%
25	322 Paper Products	15.11%	12.11%	1.830%
26	323 Printing & Related Products	9.42%	12.11%	1.141%
27	324 Petroleum & Coal Products	15.18%	9.06%	1.375%
28	325 Chemical Manufactures	6.07%	9.06%	0.550%
29	326 Plastic & Rubber Products	17.29%	9.06%	1.566%
9	327 Non-Metallic Mineral Manufactures	16.37%	12.11%	1.982%
10	331 Primary Metal Manufactures	12.75%	10.79%	1.376%
11	332 Fabricated Metal Products	13.47%	12.11%	1.632%
12	333 Machinery Manufactures	10.41%	10.37%	1.080%
13	334 Computers & Electronic Prod.	9.24%	10.52%	0.972%
14	335 Elec. Eq.; Appliances & Parts	15.10%	10.52%	1.588%
15 & 16	336 Transportation Equipment	5.68%	see below	
17	337 Furniture & Related Products	15.24%	12.11%	1.845%
18	339 Misc. Manufactures	8.39%	12.11%	1.016%
40	511 Publishing Industries	2.13%	12.11%	0.258%
30	910 Waste & Scrap	5.54%	see below	
30	920 Used Merchandise	5.84%	see below	
30	990 Special Classification Provisions	6.78%	see below	

Note: REMI variable 15 is motor vehicles only. In 2004 15.5% FL exports of Trans. Equip. were motor vehicles. Items 910, 920, and 990 were weighted by trade and assigned to the Wholesale Trade sector.

15	Motor Vehicles	0.88%	21.78%	0.192%
16	Transportation Equipment ex. Motor Vehicles	4.80%	12.11%	0.581%
30	Wholesale Trade	6.22%	12.11%	0.753%

To reduce import costs in the model, we use estimates published by the National Association of Manufacturers (NAM). The NAM, in a 2005 publication, states that the average applied industrial tariff imposed by the U.S. on goods from Latin American countries is 3.7%.[11] We scaled this figure by the share of DR-CAFTA imports relative to world imports to the U.S.

[11] *To the Point: Talking Points for Manufacturers.* (2005, April). Retrieved April 1, 2005, from http://nam.org/s_nam/doc1.asp?CID=14&DID=233610

Inherent to this methodology is the assumption that Florida's appetite for imports mirrors the nation's.

Table 3 reports, for year 2004, the share by NAICS sub-sector of Florida's imports from the six other DR-CAFTA nations, the average applied tariff, and in the right-most column, the product of the share and the tariff. This is the amount by which we will reduce "Foreign Import Costs (Share)" in the REMI model.

Table 3 - Foreign Import Cost Reduction Calculation

REMI Sectors	Item	Share of US Exports	Tariff	Tariff x Share
1	11 Agriculture, Forestry, Fishing, and Hunting	7.52%	3.70%	0.278%
3, 4	21 Mining	0.11%	3.70%	0.004%
19, 20, 21, 22, 23, 24	31 Manufacturing; Part 1	7.05%	3.70%	0.261%
8, 9, 25, 26 27, 28, 29	32 Manufacturing; Part 2	0.21%	3.70%	0.008%
10, 11, 12, 13 14, 15, 16, 17 18	33 Manufacturing; Part 3	0.41%	3.70%	0.015%
40	51 Information	0.03%	3.70%	0.001%
30	910 Waste & Scrap	6.01%	see below	
30	920 Used Merchandise	0.04%	see below	
30	990 Special Classification Provisions	0.53%	see below	

Note: Items 910, 920, and 990 were weighted by trade and assigned to the Wholesale Trade sector.

30	Wholesale Trade	3.58%	3.70%	0.13%

Comparison of the export and import cost reductions shows that the U.S. faces higher tariffs on its exported goods than it imposes on DR-CAFTA goods entering the country. This is consistent with the practice of protective tariffs. Smaller economies generally will have larger tariffs than large economies to protect their industries from foreign competition. We also note here that we do not adjust import or exports costs for services or investment, as no tariffs exist for these types of trade, per se.

<u>Economic Impact of a DR-CAFTA – Employment</u>

We report estimated employment changes due to enactment of a DR-CAFTA in **Table 4**. Predictive results are presented by NAICS sub-sector for years 2006 and 2015. The values reported are differences from Florida's baseline economic forecast.

Table 4 - Estimated Employment Effects

Reduction of Export and Import Tariffs - Full Implementation

NAICS Sector	Name	2006	2015
11	Agriculture, Forestry, and Fishing	4.24	5.72
21	Mining	2.35	4.24
22	Utilities	18.95	24.29
23	Construction	347.90	605.10
31-33	Manufacturing	1,918.78	2,100.65
42	Wholesale Trade	345.00	426.10
44-45	Retail Trade	571.30	715.30
48-49	Transportation and Warehousing	119.82	156.69
51	Information	107.97	149.96
52	Finance and Insurance	188.03	214.26
53	Real Estate and Rental and Leasing	99.61	173.71
54	Professional, Scientific, and Technical Services	352.50	543.50
55	Management of Companies, Enterprises	86.32	101.60
56	Administrative and Support and Waste Management and Remediation Services	290.32	400.35
61	Educational Services	57.98	70.33
62	Health Care and Social Assistance	97.11	197.33
71	Arts, Entertainment, and Recreation	74.34	89.87
72	Accommodation and Food Services	317.29	397.57
81	Other Services (Except Public Administration)	269.26	334.11
92	Public Administration	66.89	462.30
	Total Employment	5,335.95	7,172.98

We predict that in the first year of DR-CAFTA implementation, almost 5,336 new jobs will be created in Florida. In terms of absolute jobs created by full enactment of a DR-CAFTA, the Manufacturing sectors (NAICS 31-33) are projected to receive the preponderance of new jobs, approximately 1/3 of the total. Even with a direct loss of animal and crop production jobs, the Agriculture Sector, which also includes forestry, fishing, and agricultural support services - receives a small net benefit of jobs from DR-CAFTA implementation.

<u>Economic Impact of an DR-CAFTA – Output</u>

We report estimated changes in output due to enactment of a DR-CAFTA in **Table 5**. Predictive results are presented by NAICS sector for years 2006 and 2015. The values reported are differences from Florida's baseline economic forecast. We report output changes for the private, non-farm sectors of the economy.

Table 5 - Estimated Output Effects (Bil. 96$)

Reduction of Export and Import Tariffs - Full Implementation

NAICS Sector	Name	2006	2015
11	Agriculture, Forestry, and Fishing	$ 0.001	$ 0.002
21	Mining	$ 0.000	$ 0.001
22	Utilities	$ 0.008	$ 0.012
23	Construction	$ 0.026	$ 0.050
31-33	Manufacturing	$ 0.534	$ 0.977
42	Wholesale Trade	$ 0.067	$ 0.120
44-45	Retail Trade	$ 0.039	$ 0.063
48-49	Transportation and Warehousing	$ 0.013	$ 0.021
51	Information	$ 0.025	$ 0.048
52	Finance and Insurance	$ 0.036	$ 0.054
53	Real Estate and Rental and Leasing	$ 0.025	$ 0.053
54	Professional, Scientific, and Technical Services	$ 0.032	$ 0.061
55	Management of Companies, Enterprises	$ 0.024	$ 0.039
56	Administrative and Support and Waste Management and Remediation Services	$ 0.016	$ 0.026
61	Educational Services	$ 0.002	$ 0.003
62	Health Care and Social Assistance	$ 0.005	$ 0.013
71	Arts, Entertainment, and Recreation	$ 0.005	$ 0.006
72	Accommodation and Food Services	$ 0.015	$ 0.021
81	Other Services (Except Public Administration)	$ 0.013	$ 0.019
	Total Output (Private Non-farm)	**$ 0.885**	**$ 1.589**

We predict that in the first year of DR-CAFTA implementation, more than $880M (1996$) of new output will be created in Florida. The lion's share of this output - $534M (1996$) - will emanate from the Manufacturing sectors. The Finance and Insurance, along with the Professional, Scientific, and Technical Services sectors will enjoy the next largest increases in output. By the 10th year, we predict the DR-CAFTA will create $1.58B in extra output for Florida's economy.

Economic Impact of a DR-CAFTA – Gross State Product

We report estimated changes in gross state product (GSP) due to enactment of a DR-CAFTA in **Table 6**. Predictive results are presented by NAICS sector for years 2006 and 2015. The values reported are differences from Florida's baseline economic forecast.

Table 6 - Estimated GSP Effects (Bil. 96$)

Reduction of Export and Import Tariffs - Full Implementation

NAICS Sector	Name	2006	2015
11	Agriculture, Forestry, and Fishing*	$ 0.001	$ 0.001
21	Mining	$ 0.000	$ 0.000
22	Utilities	$ 0.004	$ 0.007
23	Construction	$ 0.012	$ 0.024
31-33	Manufacturing	$ 0.216	$ 0.497
42	Wholesale Trade	$ 0.043	$ 0.077
44-45	Retail Trade	$ 0.022	$ 0.037
48-49	Transportation and Warehousing	$ 0.006	$ 0.011
51	Information	$ 0.014	$ 0.028
52	Finance and Insurance	$ 0.022	$ 0.034
53	Real Estate and Rental and Leasing	$ 0.019	$ 0.040
54	Professional, Scientific, and Technical Services	$ 0.022	$ 0.042
55	Management of Companies, Enterprises	$ 0.017	$ 0.027
56	Administrative and Support and Waste Management and Remediation Services	$ 0.011	$ 0.018
61	Educational Services	$ 0.001	$ 0.002
62	Health Care and Social Assistance	$ 0.003	$ 0.008
71	Arts, Entertainment, and Recreation	$ 0.003	$ 0.004
72	Accommodation and Food Services	$ 0.008	$ 0.011
81	Other Services (Except Public Administration)	$ 0.008	$ 0.012
92	Public Administration	$ 0.004	$ 0.029
	Total Gross State Product	**$ 0.436**	**$ 0.909**

* Includes imputed Farm Product

We estimate that the enactment of a DR-CAFTA will generate $436M (1996$) of new GSP. Again, the Manufacturing sector is predicted to provide the greatest gain $216M (1996$). The Agriculture sector gains due to the enactment DR-CAFTA, but the animal and crop production sub-sectors experience a decline. By the 10th year, we predict the DR-CAFTA will a total of $909M (1996$) in extra product for Florida's economy.

Economic Impact of an DR-CAFTA – Summary

Using estimates of output change from the U.S. Department of Agriculture (USDA), we estimate a very minor direct loss of jobs – 10 – in the animal and crop production sub-sectors of Florida's economy. Of these, the bulk of job loss will be borne by animal production workers. The USDA estimates predict no change in output for citrus growers.

Table 7 presents a summary of estimated economic effects due to the enactment of a DR-CAFTA. We present the absolute differences, as well as the percentage differences, from Florida's forecasted economic baseline.

Table 7 – Summary of Economic Effects

Reduction of Export and Import Tariffs - Full Implementation

	2006		2015	
Employment	5,335.95	0.06%	7,172.98	0.07%
Output (Bil. 96$)	$ 0.885	0.10%	$ 1.589	0.13%
GSP (Bil. 96$)	$ 0.436	0.08%	$ 0.909	0.11%

By modeling the elimination of tariffs on manufactured goods and output losses borne by the Agriculture sector, we predict that enactment of a DR-CAFTA would add in the first year almost 5,400 new jobs to Florida's economy, $885M (1996$) in output (sales), and $436M (also 1996$) to GSP. These effects represent 0.06%, 0.10%, and 0.08% increases, respectively, over the baseline economic forecast. By the tenth year of enactment, these percentages increase, indicating that the economic effects of free trade "gain steam" over time.

Conclusions

Given its proximity, it is logical that the Central American nations and Dominican Republic are large trading partners of Florida. Common time zones also foster trade between the two regions, vis-à-vis the rest of the world. Based on the U.S. experience post-NAFTA, the enactment of a DR-CAFTA would further increase trade between the U.S. and its hemispheric neighbors.

The DR-CAFTA, if enacted, would have a positive effect on Florida's employment, output, and GSP. Although thousands of new jobs and hundreds of millions of dollars of output and product are large effects, in relative terms these indicators would increase by no more than 13/100 of one percent in the event of a full enactment of the DR-CAFTA. Our estimates are in the same direction, but generally more subdued than, other reports. We believe our inclusion of import effects accounts for this.