



University of South Florida

Digital Commons @ University of South Florida

Center for Economic Development Research
(CEDR) Collection

Community and Campus Partnerships

January 2005

Economic structure of the Tampa - St. Petersburg - Clearwater, FL metropolitan statistical area

University of South Florida. Center for Economic Development Research

Follow this and additional works at: <https://digitalcommons.usf.edu/cedr>

Recommended Citation

University of South Florida. Center for Economic Development Research, "Economic structure of the Tampa - St. Petersburg - Clearwater, FL metropolitan statistical area" (2005). *Center for Economic Development Research (CEDR) Collection*. 20.

<https://digitalcommons.usf.edu/cedr/20>

This Text is brought to you for free and open access by the Community and Campus Partnerships at Digital Commons @ University of South Florida. It has been accepted for inclusion in Center for Economic Development Research (CEDR) Collection by an authorized administrator of Digital Commons @ University of South Florida. For more information, please contact scholarcommons@usf.edu.

Economic Structure of the Tampa - St. Petersburg - Clearwater, FL Metropolitan Statistical Area

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



1101 Channelside Dr., 2nd Floor N., Tampa, Florida 33602
Office: (813) 905-5854 or Fax: (813) 905-5856

August 2004

Preface

In order to advance effective public policy recommendations regarding the impact of globalization in the Tampa Bay area, the USF Globalization Research Center commissioned Innovation Insight to conduct a baseline study of offshore outsourcing of labor in the Tampa - St. Petersburg - Clearwater, FL Metropolitan Statistical Area (MSA). Innovation Insight, an economic development private consultant, proposed a multi-modal research strategy, incorporating analyses of quantitative and qualitative data.

The Center for Economic Development Research (CEDR), is a part of Innovation Insight's research plan for this project, and provides quantitative data as a part of the multi-modal research strategy.

CEDR, a unit of the University of South Florida's (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.

Robert Anderson, Dean, College of Business Administration (COBA), USF
Dennis Colie, Director, Center for Economic Development Research (CEDR), COBA,
USF, Director and Co-principal Investigator
Dave Sobush, Research Associate, CEDR, COBA, USF, Economist and Co-principal
Investigator
(Revised February 2005)

TABLE OF CONTENTS

Section 1. Introduction	1
Section 2. Changes in Economic Structure: Establishments and Employment	1
Section 3. Changes in Economic Structure: Workers and Their Occupations	10
Section 4. Changes in Economic Structure: International Trade	24
Section 5. Summary of Findings	30
Appendix A – Baseline Analysis of Telemarketing Employment and Wages in Tampa Bay, 2002	31
Appendix B – Test for Long-term Structural Changes in Employment by Demand Source	35

Section 1: Introduction

This report is a broad-based review, measuring the publicly available data relevant to a baseline study of the offshore outsourcing and its effect, if any, on the regional economy. To do so, we describe the economy of Tampa – St. Petersburg – Clearwater Metropolitan Statistical Area (MSA) in terms of its establishments and their employees, its workers and their occupations, and the potential role of international trade on its employment patterns.

During the course of this research, we realized that it is important to distinguish between jobs and employment. A job is a position or task for which a person may be employed. A job is vacant when there is no worker or employee occupying the position and performing the task. If there is at least one vacant job in an economy, the number of jobs necessarily exceeds the level of employment. It is in this sense that we specify levels of employment, rather than jobs, in this report.

Offshore outsourcing is one of several means by which job dislocation – the geographic separation of a job and its incumbent – can take place. Other means include, but are not limited to, employer bankruptcy, technological innovation, family emergency, and legislation.¹

Offshore outsourcing – the business practice of domestic-sponsored, foreign-based employment – takes place for two major reasons: cost reduction, and market-seeking. The costs businesses seek to lower are not solely wage costs, but the more inclusive production costs, of which wages compose a portion. If wage reduction were the key factor in cost reduction, one might expect to see offshore outsourcing flow to Equatorial Africa, rather than countries with a burgeoning middle class such as India and China. Offshore outsourcing also takes place to bolster a firm's visibility within a foreign market, as a way to boost sales.²

Offshore outsourcing has occurred with regularity in the manufacturing and other goods producing sectors for some time. Additionally, the nature of goods production – it results in a tangible object that must be transported to market – avails itself to measurement of such activity. Cargoes are inspected and tariffs levied at ports and border crossings daily, with substantial record keeping. However, the Internet revolution has made feasible the import of services previously immune to competition from workers in foreign countries.³

As with most economic questions, the macro-/micro- issue pertains to the debate over offshore outsourcing. Employment has increased in the Tampa - St. Petersburg - Clearwater MSA over the past decade or so. The unemployment rate has declined during

¹ See *Appendix A - Baseline Analysis of Telemarketing Employment and Wages in Tampa Bay, 2002*, for an example of potential job dislocation by legislation.

² Slaughter, Matthew J., "Globalization and Employment by U.S. Multinationals: A Framework and Facts." *Daily Tax Report*, Number 58, March 26, 2004, pp. J1-J7.

³ Aaronson, Daniel, Rissman, Ellen R., and Sullivan, Daniel G., "Can Sectoral Allocation Explain the Jobless Recovery?" *Economic Perspectives*, Second Quarter 2004, pp. 36-49.

that same period, from an annual rate of 7.1% in 1992 to 4.1% as of June, 2004.⁴ By most measures, the macro-economy of the MSA continues to grow. However, for a person whose job has left the area, or the country, these macro-level gains admittedly provide little solace.

This report focuses on macro-level data, the data most commonly reported by the major statistical agencies. The locations of individual jobs are micro-level data. Collection of micro-level data on job dislocations, either through longitudinal studies or anecdotal evidence, may enhance future examinations of the effects of offshore outsourcing.

The rest of this report is organized as follows. In Section 2 we report changes in the number of establishments and employment in the MSA and in Section 3 we report changes in the MSA's employment by demand source and by occupations, as well as changes in the labor force. Then, in Section 4 we examine the effect of international trade on employment in the MSA. We end this report with Section 5: Summary of Findings.

Section 2: Changes in Economic Structure: Establishments and Employment

The purpose of this section is to report changes in the number of establishments and employment in the Tampa – St. Petersburg – Clearwater MSA from 1988 to 2003. The source of the data is the State of Florida's Agency for Workforce Innovation's ES-202 files. The Agency compiles the ES-202 files in conjunction with the Unemployment Insurance program and, as such, reflects non-farm payroll employees and the establishments that employ these workers.

Beginning in 2001, governments began reporting the data according to a new classification system: the North American Industry Classification System (NAICS). In 2001 (for which data is available in both NAICS and SIC) and in prior years they reported the data in the Standard Industrial Classification (SIC) system.

Table 1 reports non-farm payroll employment by NAICS for 2001, 2002, and 2003. During these years overall employment in the MSA has slightly declined. Consistent with the possibility of outsourcing, employment in the Manufacturing sector and in the Information sector was down. On the other hand, employment in the Finance and Insurance sector, with which some call centers are associated, increased.

Table 1

⁴ Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics. Preliminary data reported for June 2004.

Non-farm Payroll Employment by NAICS

NAICS Sector	% Change			% Change	
	2001	2002	2001 - 2002	2003	2002 - 2003
Agriculture, Forestry, Fishing & Hunting	12,528	13,777	9.97%	13,328	-3.26%
Mining	470	475	0.96%	490	3.27%
Utilities	6,397	6,329	-1.07%	5,607	-11.40%
Construction	60,961	62,632	2.74%	64,530	3.03%
Manufacturing	78,961	74,676	-5.43%	70,551	-5.52%
Wholesale Trade	48,612	47,721	-1.83%	45,075	-5.54%
Retail Trade	140,265	140,609	0.25%	135,851	-3.38%
Transportation & Warehousing	35,877	33,984	-5.28%	31,746	-6.58%
Information	37,591	34,516	-8.18%	34,126	-1.13%
Finance & Insurance	69,284	69,403	0.17%	70,675	1.83%
Real Estate & Rental & Leasing	19,469	19,610	0.73%	20,659	5.35%
Prof., Scientific, & Technical Services	67,176	65,814	-2.03%	64,926	-1.35%
Management of Co.'s & Enterprises	11,877	13,588	14.40%	14,244	4.83%
Administrative, Support, Waste Management & Remediation Services	171,963	152,073	-11.57%	154,818	1.81%
Educational Services	72,746	74,460	2.36%	74,977	0.69%
Health Care & Social Assistance	126,344	129,975	2.87%	132,825	2.19%
Arts, Entertainment, & Recreation	19,003	19,420	2.19%	18,766	-3.37%
Accommodation & Food Services	83,268	87,782	5.42%	88,767	1.12%
Other Services (except Public Admin.)	31,966	34,200	6.99%	33,178	-2.99%
Public Administration	54,819	55,562	1.36%	54,498	-1.92%
Unclassified	835	752	-9.91%	1,382	83.67%
Tampa - St. Petersburg - Clearwater MSA	1,150,412	1,139,357	-0.96%	1,133,021	-0.56%

Source: Florida Agency for Workforce Innovation ES202 (Unemployment Insurance) data as follows:

Year 2001 - annual file

Year 2002 - average of quarters 1 through 4

Year 2003 - average of quarters 1 through 3 only

We suspect, however, that employment levels reported for each NAICS sector are unstable during this period as the transition from SIC to NAICS takes place. For example, a new classification, NAICS sector 55 for Management of Companies and Enterprises, causes some employees to be reclassified away from their firm's principal business, e.g. employees at an electric power generation company's headquarters are reclassified from the Utilities sector to NAICS 55.

Table 2 shows establishments by NAICS for 2001, 2002, and 2003. Unlike the slight downtrend in employment over this period, the number of establishments increased by about 3.5% and 4.2%, respectively, year-over-year. Again, consistent with the possibility of outsourcing, establishments in the Manufacturing sector declined.

Table 2
Establishments by NAICS

NAICS Sector	2001	2002	% Change	
			2001 - 2002	2002 - 2003
Agriculture, Forestry, Fishing & Hunting	509	497	-2.46%	-2.25%
Mining	21	24	11.90%	3.55%
Utilities	83	94	12.95%	7.38%
Construction	6,147	6,400	4.11%	4.79%
Manufacturing	2,691	2,623	-2.52%	-1.76%
Wholesale Trade	4,497	4,586	1.97%	2.74%
Retail Trade	8,703	8,967	3.03%	3.64%
Transportation & Warehousing	1,327	1,317	-0.79%	2.82%
Information	1,133	1,170	3.27%	5.64%
Finance & Insurance	3,777	3,888	2.93%	8.19%
Real Estate & Rental & Leasing	3,048	3,164	3.81%	6.56%
Prof., Scientific, & Technical Services	8,517	8,730	2.50%	4.76%
Management of Co.'s & Enterprises	231	236	2.27%	6.53%
Administrative, Support, Waste Management & Remediation Services	4,192	4,314	2.90%	4.56%
Educational Services	659	668	1.40%	4.40%
Health Care & Social Assistance	5,744	5,978	4.08%	3.48%
Arts, Entertainment, & Recreation	807	866	7.25%	2.18%
Accommodation & Food Services	3,884	4,154	6.96%	5.12%
Other Services (except Public Admin.)	5,532	5,670	2.49%	1.53%
Public Administration	419	423	0.95%	1.34%
Unclassified	456	813	78.18%	24.92%
Tampa - St. Petersburg - Clearwater MSA	62,377	64,578	3.53%	4.23%

Source: Florida Agency for Workforce Innovation ES202 (Unemployment Insurance) data as follows:

Year 2001 - annual file

Year 2002 - average of quarters 1 through 4

Year 2003 - average of quarters 1 through 3 only

Table 3 reports non-farm payroll employment by SIC industry divisions from 1988 through 2001. **Panel A** shows the average annual levels of employment, **Panel B** is the year-over-year percent change in employment levels, and **Panel C** is the yearly percent of total employment accounted for by each industry division.

Table 3
Non-farm Payroll Employment by SIC

Panel A

Employment (units)							
Industry Division	1988	1989	1990	1991	1992	1993	1994
Agriculture, Forestry, & Fisheries	19,600	20,745	20,621	19,898	19,066	19,439	20,385
Mining and Construction	58,708	54,558	50,493	44,614	41,106	41,504	43,210
Manufacturing	94,157	95,757	94,085	86,917	84,801	86,250	86,907
Transportation, Communication, & Utilities	46,197	47,762	48,410	48,024	47,970	48,315	49,498
Trade	227,398	237,416	241,378	230,393	225,675	228,859	236,615
Finance, Insurance, & Real Estate	64,152	64,494	64,247	64,807	62,702	63,356	69,454
Services	273,148	288,995	310,968	317,731	322,894	342,581	364,104
Public Administration & Non-classifiable Establishments	40,331	42,299	44,193	46,322	48,721	47,378	48,808
Tampa - St. Petersburg - Clearwater MSA	823,691	852,026	874,395	858,706	852,935	877,682	918,981
	1995	1996	1997	1998	1999	2000	2001
Agriculture, Forestry, & Fisheries	20,410	20,213	21,180	20,097	21,131	21,409	23,727
Mining and Construction	44,795	47,042	50,030	52,294	55,431	56,847	58,673
Manufacturing	85,484	85,756	86,179	88,316	89,046	89,032	90,818
Transportation, Communication, & Utilities	50,828	52,954	54,211	54,361	60,135	60,467	65,062
Trade	242,966	251,277	255,155	253,218	255,808	259,806	270,762
Finance, Insurance, & Real Estate	64,989	67,253	70,449	76,512	82,126	81,926	87,448
Services	389,366	414,765	437,954	449,584	471,687	493,840	504,400
Public Administration & Non-classifiable Establishments	53,127	54,595	52,936	52,779	54,391	56,165	55,799
Tampa - St. Petersburg - Clearwater MSA	951,965	993,855	1,028,094	1,047,161	1,089,755	1,119,492	1,156,689

Panel B

Employment (% change)							
Industry Division	1989	1990	1991	1992	1993	1994	1995
Agriculture, Forestry, & Fisheries	5.84%	-0.60%	-3.51%	-4.18%	1.96%	4.87%	0.12%
Mining and Construction	-7.07%	-7.45%	-11.64%	-7.86%	0.97%	4.11%	3.67%
Manufacturing	1.70%	-1.75%	-7.62%	-2.43%	1.71%	0.76%	-1.64%
Transportation, Communication, & Utilities	3.39%	1.36%	-0.80%	-0.11%	0.72%	2.45%	2.69%
Trade	4.41%	1.67%	-4.55%	-2.05%	1.41%	3.39%	2.68%
Finance, Insurance, & Real Estate	0.53%	-0.38%	0.87%	-3.25%	1.04%	9.62%	-6.43%
Services	5.80%	7.60%	2.17%	1.62%	6.10%	6.28%	6.94%
Public Administration & Non-classifiable Establishments	4.88%	4.48%	4.82%	5.18%	-2.76%	3.02%	8.85%
Tampa - St. Petersburg - Clearwater MSA	3.44%	2.63%	-1.79%	-0.67%	2.90%	4.71%	3.59%

Panel B (continued)

Employment (% change)								
Industry Division	1996	1997	1998	1999	2000	2001	Average	Std. Dev.
Agriculture, Forestry, & Fisheries	-0.97%	4.78%	-5.11%	5.15%	1.32%	10.83%	1.58%	4.61%

Mining and Construction	5.02%	6.35%	4.53%	6.00%	2.55%	3.21%	0.18%	6.28%
Manufacturing	0.32%	0.49%	2.48%	0.83%	-0.02%	2.01%	-0.24%	2.69%
Transportation, Communication, & Utilities	4.18%	2.37%	0.28%	10.62%	0.55%	7.60%	2.72%	3.24%
Trade	3.42%	1.54%	-0.76%	1.02%	1.56%	4.22%	1.38%	2.56%
Finance, Insurance, & Real Estate	3.48%	4.75%	8.61%	7.34%	-0.24%	6.74%	2.51%	4.77%
Services	6.52%	5.59%	2.66%	4.92%	4.70%	2.14%	4.85%	2.03%
Public Administration & Non-classifiable Establishments	2.76%	-3.04%	-0.30%	3.05%	3.26%	-0.65%	2.58%	3.41%
Tampa - St. Petersburg - Clearwater MSA	4.40%	3.45%	1.85%	4.07%	2.73%	3.32%	2.66%	1.90%

Panel C

Employment (% total)								
Industry Division	1988	1989	1990	1991	1992	1993	1994	1995
Agriculture, Forestry, & Fisheries	2.38%	2.43%	2.36%	2.32%	2.24%	2.21%	2.22%	2.14%
Mining and Construction	7.13%	6.40%	5.77%	5.20%	4.82%	4.73%	4.70%	4.71%
Manufacturing	11.43%	11.24%	10.76%	10.12%	9.94%	9.83%	9.46%	8.98%
Transportation, Communication, & Utilities	5.61%	5.61%	5.54%	5.59%	5.62%	5.50%	5.39%	5.34%
Trade	27.61%	27.86%	27.61%	26.83%	26.46%	26.08%	25.75%	25.52%
Finance, Insurance, & Real Estate	7.79%	7.57%	7.35%	7.55%	7.35%	7.22%	7.56%	6.83%
Services	33.16%	33.92%	35.56%	37.00%	37.86%	39.03%	39.62%	40.90%
Public Administration & Non-classifiable Establishments	4.90%	4.96%	5.05%	5.39%	5.71%	5.40%	5.31%	5.58%
Tampa - St. Petersburg - Clearwater MSA	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

	1996	1997	1998	1999	2000	2001	Average	Std. Dev.
Agriculture, Forestry, & Fisheries	2.03%	2.06%	1.92%	1.94%	1.91%	2.05%	2.14%	0.17%
Mining and Construction	4.73%	4.87%	4.99%	5.09%	5.08%	5.07%	5.09%	0.49%
Manufacturing	8.63%	8.38%	8.43%	8.17%	7.95%	7.85%	9.21%	1.10%
Transportation, Communication, & Utilities	5.33%	5.27%	5.19%	5.52%	5.40%	5.62%	5.46%	0.14%
Trade	25.28%	24.82%	24.18%	23.47%	23.21%	23.41%	25.42%	1.55%
Finance, Insurance, & Real Estate	6.77%	6.85%	7.31%	7.54%	7.32%	7.56%	7.29%	0.29%
Services	41.73%	42.60%	42.93%	43.28%	44.11%	43.61%	40.17%	3.30%
Public Administration & Non-classifiable Establishments	5.49%	5.15%	5.04%	4.99%	5.02%	4.82%	5.23%	0.27%
Tampa - St. Petersburg - Clearwater MSA	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%

Source: Florida Agency for Workforce Innovation ES202 (Unemployment Insurance) Q1 monthly averages

Since 1997 there has been over one million people working in the Tampa – St. Petersburg – Clearwater MSA each year and that number has grown steadily through 2001.⁵ Between 1988 and 2001, employment in the MSA increased on average 2.66% each year - about 25,000 employees per year - with a low standard deviation of 1.90%, which indicates a stable employment structure. The only industry division to experience a decline in employment over the period was Manufacturing. In 1988, Manufacturing represented about 11.43% of total employment and by 2001 this percentage had fallen to 7.85% of total employment. Meanwhile, Services, which is the largest division of employment, had risen from 33.16% to 43.61% of total employment.

⁵ As reported in Table 1, above, total employment fell in 2002 and 2003, but remained above the one million worker level.

Table 4 reports establishments by SIC industry divisions from 1988 through 2001. **Panel A** shows the average annual number of establishments, **Panel B** is the year-over-year percent change in the number of establishments, and **Panel C** is the yearly percent of total establishments accounted for by each industry division.

Table 4
Establishments by SIC

Panel A							
Establishments (units)							
Industry Division	1988	1989	1990	1991	1992	1993	1994
Agriculture, Forestry, & Fisheries	1,397	1,418	1,494	1,547	1,564	1,585	1,580
Mining and Construction	5,923	5,703	5,528	5,247	4,975	4,906	4,829
Manufacturing	2,581	2,504	2,524	2,528	2,436	2,448	2,509
Transportation, Communication, & Utilities	1,342	1,370	1,412	1,496	1,632	1,721	1,762
Trade	13,176	13,421	13,272	14,534	15,103	15,434	15,738
Finance, Insurance, & Real Estate	4,480	4,500	4,470	4,738	4,867	4,970	5,125
Services	16,979	17,780	18,393	18,689	19,464	20,276	20,407
Public Administration & Non-classifiable Establishments	316	305	330	634	775	560	765
Tampa - St. Petersburg - Clearwater MSA	46,194	47,001	47,423	49,413	50,816	51,900	52,715
	1995	1996	1997	1998	1999	2000	2001
Agriculture, Forestry, & Fisheries	1,611	1,577	1,604	1,624	1,708	1,726	1,744
Mining and Construction	4,743	5,018	5,050	5,192	5,518	5,748	5,791
Manufacturing	2,402	2,483	2,433	2,524	2,532	2,525	2,589
Transportation, Communication, & Utilities	1,805	1,900	1,908	1,906	1,988	2,015	2,176
Trade	15,686	15,907	16,465	16,051	16,052	16,198	16,485
Finance, Insurance, & Real Estate	5,223	5,469	5,511	5,598	5,702	5,866	6,302
Services	20,715	21,793	22,492	23,040	23,948	24,199	24,871
Public Administration & Non-classifiable Establishments	1,617	1,912	1,114	1,419	1,478	2,069	1,233
Tampa - St. Petersburg - Clearwater MSA	53,802	56,059	56,577	57,354	58,926	60,346	61,191

Panel B							
Establishments (% change)							
Industry Division	1989	1990	1991	1992	1993	1994	1995
Agriculture, Forestry, & Fisheries	1.50%	5.36%	3.55%	1.10%	1.34%	-0.32%	1.96%

Mining and Construction	-3.71%	-3.07%	-5.08%	-5.18%	-1.39%	-1.57%	-1.78%
Manufacturing	-2.98%	0.80%	0.16%	-3.64%	0.49%	2.49%	-4.26%
Transportation, Communication, & Utilities	2.09%	3.07%	5.95%	9.09%	5.45%	2.38%	2.44%
Trade	1.86%	-1.11%	9.51%	3.91%	2.19%	1.97%	-0.33%
Finance, Insurance, & Real Estate	0.45%	-0.67%	6.00%	2.72%	2.12%	3.12%	1.91%
Services	4.72%	3.45%	1.61%	4.15%	4.17%	0.65%	1.51%
Public Administration & Non-classifiable Establishments	-3.48%	8.20%	92.12%	22.24%	-27.74%	36.61%	111.37%
Tampa - St. Petersburg - Clearwater MSA	1.75%	0.90%	4.20%	2.84%	2.13%	1.57%	2.06%

	1996	1997	1998	1999	2000	2001	Average	Std. Dev.
Agriculture, Forestry, & Fisheries	-2.11%	1.71%	1.25%	5.17%	1.05%	1.04%	1.74%	2.02%
Mining and Construction	5.80%	0.64%	2.81%	6.28%	4.17%	0.75%	-0.10%	3.90%
Manufacturing	3.37%	-2.01%	3.74%	0.32%	-0.28%	2.53%	0.06%	2.64%
Transportation, Communication, & Utilities	5.26%	0.42%	-0.10%	4.30%	1.36%	7.99%	3.82%	2.82%
Trade	1.41%	3.51%	-2.51%	0.01%	0.91%	1.77%	1.78%	2.93%
Finance, Insurance, & Real Estate	4.71%	0.77%	1.58%	1.86%	2.88%	7.43%	2.68%	2.25%
Services	5.20%	3.21%	2.44%	3.94%	1.05%	2.78%	2.99%	1.46%
Public Administration & Non-classifiable Establishments	18.24%	-41.74%	27.38%	4.16%	39.99%	-40.41%	19.00%	45.60%
Tampa - St. Petersburg - Clearwater MSA	4.20%	0.92%	1.37%	2.74%	2.41%	1.40%	2.19%	1.08%

Panel C

Employment (% total)								
Industry Division	1988	1989	1990	1991	1992	1993	1994	1995
Agriculture, Forestry, & Fisheries	3.02%	3.02%	3.15%	3.13%	3.08%	3.05%	3.00%	2.99%
Mining and Construction	12.82%	12.13%	11.66%	10.62%	9.79%	9.45%	9.16%	8.82%
Manufacturing	5.59%	5.33%	5.32%	5.12%	4.79%	4.72%	4.76%	4.46%
Transportation, Communication, & Utilities	2.91%	2.91%	2.98%	3.03%	3.21%	3.32%	3.34%	3.35%
Trade	28.52%	28.55%	27.99%	29.41%	29.72%	29.74%	29.85%	29.16%
Finance, Insurance, & Real Estate	9.70%	9.57%	9.43%	9.59%	9.58%	9.58%	9.72%	9.71%
Services	36.76%	37.83%	38.78%	37.82%	38.30%	39.07%	38.71%	38.50%
Public Administration & Non-classifiable Establishments	0.68%	0.65%	0.70%	1.28%	1.53%	1.08%	1.45%	3.01%
Tampa - St. Petersburg - Clearwater MSA	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Panel C (Continued)

Employment (% total)								
Industry Division	1996	1997	1998	1999	2000	2001	Average	Std. Dev.
Agriculture, Forestry, & Fisheries	2.81%	2.84%	2.83%	2.90%	2.86%	2.85%	2.96%	0.12%

Mining and Construction	8.95%	8.93%	9.05%	9.36%	9.53%	9.46%	9.76%	1.06%
Manufacturing	4.43%	4.30%	4.40%	4.30%	4.18%	4.23%	4.64%	0.40%
Transportation, Communication, & Utilities	3.39%	3.37%	3.32%	3.37%	3.34%	3.56%	3.27%	0.19%
Trade	28.38%	29.10%	27.99%	27.24%	26.84%	26.94%	28.53%	1.07%
Finance, Insurance, & Real Estate	9.76%	9.74%	9.76%	9.68%	9.72%	10.30%	9.70%	0.20%
Services	38.88%	39.75%	40.17%	40.64%	40.10%	40.64%	39.17%	0.99%
Public Administration								
& Non-classifiable Establishments	3.41%	1.97%	2.47%	2.51%	3.43%	2.02%	1.96%	0.95%
Tampa - St. Petersburg - Clearwater MSA	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%

Source: Florida Agency for Workforce Innovation ES202 (Unemployment Insurance) Q1 monthly averages

Between 1988 and 2001 the number of establishments in the Tampa – St. Petersburg – Clearwater MSA has increased from approximately 46,000 to 61,000, an average annual gain of 2.19%. The standard deviation of this annual percentage gain was 1.08%, indicating steady but stable growth. This addition of over 1,100 establishments, on average per year, is a notable source of job growth and employment in the region. Only the Mining and Construction industry division experienced a small decline in the number of establishments during the period. The number of Manufacturing establishments barely eked out a positive annual average increase of 0.06%; 2,581 manufacturers were counted in 1988 and 2,589 in 2001. As with employment, Services, which is also the largest division of establishments, rose from 36.76% of total establishments in 1988 to 40.64% in 2001.

Because a significant shift in the divisional allocations of employment or establishments is indicative of a major change in a region’s economic structure, and consistent with large-scale outsourcing, we test the data for evidence of structural change. The test statistic is the square root of the summation of weighted (by its percentage in the total economy) squared deviations of annual growth of employment and establishments for each industry division.⁶ Thus, the test statistic is similar to a standard deviation from annual average divisional percent change. **Table 5** presents our findings.

Table 5
Tests for Structural Change in Allocation
of
Non-farm Employment and Establishments

⁶ Reference Lilien, David M., 1982, “Sectoral Shifts and Cyclical Unemployment,” *Journal of Political Economy*, Vol. 90, No. 4, August, pp. 777 – 793.

Year	Employment	Establishments
1989	3.23%	2.92%
1990	4.26%	2.62%
1991	4.40%	10.97%
1992	2.83%	4.05%
1993	2.67%	3.60%
1994	2.27%	4.42%
1995	3.99%	19.08%
1996	2.09%	3.28%
1997	2.53%	6.34%
1998	2.63%	4.68%
1999	2.60%	2.10%
2000	1.89%	7.10%
2001	2.18%	6.44%
2002	5.64%	8.60%
2003	4.28%	3.26%

Source: Compiled by CEDR
SIC divisional structure for 1989 through 2001
NAICS sectoral structure for 2002 and 2003

Heuristically, a test statistic greater than 4% signifies a potential significant shift in the divisional or sectoral allocations of the economy. For employment, we find test statistics over the 4% threshold in 1990 and 1991 and again in 2002 and 2003. The finding for 2002 and 2003 is consistent with a shift in the employment structure and recent jobs dislocation in the MSA. However, as mentioned above, we have concern about the reliability of the ES-202 data during the transition from SIC to NAICS.

After 1992, test statistics for establishments often exceed the 4% threshold. And, during the 5-year period from 1997 to 2002 the test statistic is over 4% in five of the six years. In 2003, the test statistics drops below the threshold. An interpretation of this finding is that the MSA is recently undergoing a major shift in the allocation of the number of establishments per industry or sectoral division.⁷

⁷ An alternative explanation of this finding is a data anomaly. From Panel B, Table 4, note that the % change in the industry division for Public Administration & Non-classifiable Establishments exhibits large volatility (measured by standard deviation) and even though only a small % of total establishments (Panel C) may unduly influence the test statistic. We believe the volatility in this division is due to how the ES-202 data is collected, resulting in new establishments being initially unclassified.

Section 3: Changes in Economic Structure: Workers and Their Occupations

The purpose of this section is to report employment by demand source and by occupations, as well as the labor force in the Tampa – St. Petersburg – Clearwater MSA from 1993 to 2004. The sources of the labor force data are the *REMI Policy Insight*® model and the Census Bureau’s 5-Percent Public Use Microdata Sample (PUMS) databases for the 1990 and 2000 decennial censuses

The Regional Economic Model Inc. (REMI) model is a long-run, general equilibrium, regional economic model. In 1980, REMI was founded to build, maintain, and advise on the use of its regional economic model. Since then the model has been widely accepted as an effective economic planning and forecasting tool. Users in Florida include the Governor’s office and the Agency for Workforce Innovation, Labor Market Statistics; the Tampa Bay Regional Planning Council; Florida State University; and the University of South Florida.

Currently, the “Last Available Historical Year” for the REMI model is 2000. Thus, labor force levels and percentages reported in this section for years 2001 through 2004 are REMI forecasts. REMI’s source for labor force data is the U.S. Census Bureau’s State Population Estimates and Demographic Components of Population Change. REMI derives occupational data from the Occupational Matrix of Bureau of Labor Statistics by linear interpolation based on population. Further, REMI’s principal source for employment data is Covered Employment and Wages (ES-202), a quarterly collection of employee and wage data from all employers participating in Florida’s unemployment insurance program. However, REMI supplements the ES-202 data with a product of the Bureau of Economic Analysis called the Regional Economic Information System (REIS). The REIS provides data beyond the wage and salary jobs, which are usually covered by ES-202, by including sole proprietorships and military employment. (In addition, REMI may use the County Business Patterns information from the U.S. Census Bureau to estimate industry employment when ES-202 data are suppressed due to a confidentiality constraint. Hence, REMI’s employment levels are always greater than those levels strictly indicated by ES-202 data.)

We report labor force by place of residence, but employment and occupational data by place of work.⁸

Table 6 reports employment by sector in the Tampa – St. Petersburg – Clearwater MSA from 1993 to 2004. In 1993 there were approximately 961,600 workers employed within the MSA’s Private Non-Farm sector and that number of workers grew to almost 1,340,000 by 2004. The annual growth rate of Private Non-Farm employment was 3%. Within the Private Non-Farm sector, manufacturing employment went virtually unchanged between 1993 and 2004, although year-to-year changes did occur within this subsector. Thus, almost all of the employment growth was in non-manufacturing

⁸ Employment by occupation does not include military personnel, whereas employment by sector does include military who are assigned within the region.

industries, going from about 871,300 employees in 1993 to nearly 1,245,800 employees in 2004.

Farm employment, which represents a very small portion of total employment within the MSA, increased by about 1,000 workers from 11,200 in 1993 to 12,200 in 2004.

Table 6
Employment by Sector
Tampa - St. Petersburg - Clearwater MSA

Sector Employment (units)	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f		
Private Non-Farm	961,599	1,003,207	1,044,437	1,098,688	1,142,170	1,205,422	1,263,839	1,303,820	1,340,263	1,324,008	1,321,132	1,334,467		
Government	131,939	134,513	135,918	135,908	138,003	139,185	140,132	143,699	146,577	149,795	150,184	148,660		
Farm	11,200	11,885	11,139	10,410	10,940	10,986	11,434	12,589	12,496	12,401	12,306	12,208		
By Sector (Total)	1,104,738	1,149,605	1,191,494	1,245,006	1,291,113	1,355,593	1,415,405	1,460,108	1,499,336	1,486,204	1,483,622	1,495,335		
Sector Employment (% change)		1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f	Average	Std. Dev.
Private Non-Farm		4.3%	4.1%	5.2%	4.0%	5.5%	4.8%	3.2%	2.8%	-1.2%	-0.2%	1.0%	3.0%	2.3%
Government		2.0%	1.0%	0.0%	1.5%	0.9%	0.7%	2.5%	2.0%	2.2%	0.3%	-1.0%	1.1%	1.1%
Farm		6.1%	-6.3%	-6.5%	5.1%	0.4%	4.1%	10.1%	-0.7%	-0.8%	-0.8%	-0.8%	0.9%	5.1%
By Sector (Total)		4.1%	3.6%	4.5%	3.7%	5.0%	4.4%	3.2%	2.7%	-0.9%	-0.2%	0.8%	2.8%	2.0%
Private Non-Farm Sector (units)	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f		
Manufacturing	90,306	90,661	90,352	90,985	92,184	93,246	93,835	94,767	93,897	90,692	89,888	90,727		
Non-Manufacturing	871,293	912,546	954,085	1,007,703	1,049,986	1,112,176	1,170,004	1,209,053	1,246,366	1,233,317	1,231,244	1,243,740		
Private Non-Farm Sector (% change)		1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f	Average	Std. Dev.
Manufacturing		0.4%	-0.3%	0.7%	1.3%	1.2%	0.6%	1.0%	-0.9%	-3.4%	-0.9%	0.9%	0.1%	1.4%
Non-Manufacturing		4.7%	4.6%	5.6%	4.2%	5.9%	5.2%	3.3%	3.1%	-1.0%	-0.2%	1.0%	3.3%	2.4%
Government Sector (units)	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f		
State and Local	100,810	105,541	107,142	106,659	108,412	109,393	110,568	113,321	115,373	117,098	115,772	113,828		
Federal Civilian	18,069	17,898	17,901	18,020	17,814	18,094	18,126	18,945	19,053	19,158	19,501	19,345		
Federal Military	13,060	11,074	10,875	11,229	11,777	11,698	11,438	11,433	12,152	13,539	14,911	15,487		
Government Sector (% change)		1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f	Average	Std. Dev.
State and Local		4.7%	1.5%	-0.5%	1.6%	0.9%	1.1%	2.5%	1.8%	1.5%	-1.1%	-1.7%	1.1%	1.8%
Federal Civilian		-0.9%	0.0%	0.7%	-1.1%	1.6%	0.2%	4.5%	0.6%	0.6%	1.8%	-0.8%	0.6%	1.6%
Federal Military		-15.2%	-1.8%	3.3%	4.9%	-0.7%	-2.2%	0.0%	6.3%	11.4%	10.1%	3.9%	1.8%	7.3%

f = REMI forecast

Between 1993 and 2004, employment in the Government sector increased at an average annual rate of just over 1% and by 2004 there were approximately 148,700 people working for the government in the MSA. In 2004, State and local government employment was 113,800, the federal civilian workforce numbered 19,300 persons, and

federal military personnel working in the MSA totaled nearly 15,500.⁹ Military employment showed rapid growth beginning in 2001, presumably because MacDill Air Force Base, a key command headquarters for forces in the Middle East, is located within the Tampa - St. Petersburg - Clearwater MSA.

Table 7 reports the Tampa – St. Petersburg – Clearwater MSA’s employment by demand source from 1993 to 2004. Demand source means the origin of the want for goods or services, i.e. the amount of employment needed to fulfill various types of demand.

Table 7
Employment by Demand Source
Tampa - St. Petersburg - Clearwater MSA

Panel A

Employment (units)	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f
By Demand Source (Priv. Non-Farm)												
Intermediate	202,240	208,447	216,552	227,576	233,439	242,693	256,932	263,122	268,765	263,726	261,371	262,869
Local Consumption	397,385	405,712	426,345	443,169	454,562	469,857	478,505	489,923	511,644	506,320	505,279	504,942
Government Demand	14,140	13,931	14,730	15,309	17,685	17,976	18,920	19,477	20,826	21,411	21,700	21,655
Investment Activity	50,017	56,129	56,630	61,350	68,874	77,071	79,269	85,284	91,696	90,016	88,170	91,049
Exports to Rest of Florida	136,073	139,872	140,412	153,287	155,521	163,006	166,565	172,860	176,927	175,597	175,488	177,216
Exports to Rest of Nation	129,772	145,138	153,362	160,086	170,814	194,822	225,456	234,041	233,487	232,315	235,416	241,732
Exports to Rest of World	31,973	33,977	36,406	37,911	41,276	39,997	38,193	39,113	36,919	34,623	33,708	35,005
Total Private Non-Farm	961,600	1,003,206	1,044,437	1,098,688	1,142,171	1,205,422	1,263,840	1,303,820	1,340,264	1,324,008	1,321,132	1,334,468

Panel B

Employment (% of Total)	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f
By Demand Source (Priv. Non-Farm)												
Intermediate	21.0%	20.8%	20.7%	20.7%	20.4%	20.1%	20.3%	20.2%	20.1%	19.9%	19.8%	19.7%
Local Consumption	41.3%	40.4%	40.8%	40.3%	39.8%	39.0%	37.9%	37.6%	38.2%	38.2%	38.2%	37.8%
Government Demand	1.5%	1.4%	1.4%	1.4%	1.5%	1.5%	1.5%	1.5%	1.6%	1.6%	1.6%	1.6%
Investment Activity	5.2%	5.6%	5.4%	5.6%	6.0%	6.4%	6.3%	6.5%	6.8%	6.8%	6.7%	6.8%
Exports to Rest of Florida	14.2%	13.9%	13.4%	14.0%	13.6%	13.5%	13.2%	13.3%	13.2%	13.3%	13.3%	13.3%
Exports to Rest of Nation	13.5%	14.5%	14.7%	14.6%	15.0%	16.2%	17.8%	18.0%	17.4%	17.5%	17.8%	18.1%
Exports to Rest of World	3.3%	3.4%	3.5%	3.5%	3.6%	3.3%	3.0%	3.0%	2.8%	2.6%	2.6%	2.6%
Total Private Non-Farm	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Panel C

Employment (% change)	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f	Average	Std. Dev.
By Demand Source (Priv. Non-Farm)													
Intermediate	3.1%	3.9%	5.1%	2.6%	4.0%	5.9%	2.4%	2.1%	-1.9%	-0.9%	0.6%	2.4%	2.4%
Local Consumption	2.1%	5.1%	3.9%	2.6%	3.4%	1.8%	2.4%	4.4%	-1.0%	-0.2%	-0.1%	2.2%	2.0%
Government Demand	-1.5%	5.7%	3.9%	15.5%	1.6%	5.3%	2.9%	6.9%	2.8%	1.3%	-0.2%	4.0%	4.6%
Investment Activity	12.2%	0.9%	8.3%	12.3%	11.9%	2.9%	7.6%	7.5%	-1.8%	-2.1%	3.3%	5.7%	5.4%
Exports to Rest of Florida	2.8%	0.4%	9.2%	1.5%	4.8%	2.2%	3.8%	2.4%	-0.8%	-0.1%	1.0%	2.5%	2.8%
Exports to Rest of Nation	11.8%	5.7%	4.4%	6.7%	14.1%	15.7%	3.8%	-0.2%	-0.5%	1.3%	2.7%	6.0%	5.6%
Exports to Rest of World	6.3%	7.1%	4.1%	8.9%	-3.1%	-4.5%	2.4%	-5.6%	-6.2%	-2.6%	3.8%	1.0%	5.5%
Total Private Non-Farm	4.3%	4.1%	5.2%	4.0%	5.5%	4.8%	3.2%	2.8%	-1.2%	-0.2%	1.0%	3.0%	2.3%

f = REMI forecast

⁹ Many federal military personnel may frequently be on temporary assignment outside the MSA.

In **Panel A** we enumerate private, non-farm employment by demand source. Employment may be full-time or part-time and a worker may hold more than one job, and thus be counted more than once in an employment number. In **Panel B** we show employment by demand source as a percent of total private, non-farm employment in a given year. And, in **Panel C** we report the year-over-year percent change in employment by demand source, as well as the average yearly percent change and standard deviation of the yearly average percent changes.

Not unusual for an economic region, in the Tampa – St. Petersburg – Clearwater MSA the highest level of employment is for the production of goods and services for Local Consumption. In 1993 employment for Local Consumption was about 41% of total private, non-farm employment, but that percentage has declined to about 37% or 38% in recent years.

Other demand sources accounting for relatively large portions of total employment are the demand for Intermediate products and the demand for Exports to the Rest of the Nation.¹⁰ Employment to meet the demand for Intermediate products has declined slightly from 21% of total employment in 1993 to just fewer than 20% in 2004. Conversely, employment demand due to Exports to the Rest of the Nation has increased from 13% of total employment in 1993 to around 18% in 2004.

Over the period 1993 to 2004, the fastest growing employment category by demand source was Exports to the Rest of the Nation, which grew at an average annual rate of 6%. Employment for Investment Activity also experienced relatively rapid growth at slightly below 6% over the same period.¹¹ The slowest growing employment category by demand source from 1993 to 2004 was Exports to the Rest of the World for which employment increased at an average annual rate of only 1%. Interestingly, however, the more volatile demand sources (measured by standard deviation of annual grow rate of employment) were Exports to the Rest of the Nation, Exports to the Rest of the World, and Investment Activity.

In **Appendix B**, we provide more detailed information for each demand source by subdividing the descriptive employment statistics by industry division as well as forming Quadrant Correlations. By interpreting the Quadrant Correlations, we find evidence consistent with long-term structural change of increasing employment to fulfill demand for local consumption and demand by government for goods and services.

¹⁰ Intermediate products are goods and services used in the region's production processes, as opposed to local consumption; exports to the "Rest of the Nation" means exports demanded within the U.S. but outside Florida.

¹¹ Investment Activity refers to the production of the area's capital stock, i.e. residential and non-residential construction as well as equipment.

Economists generally recognize two motives for US multinational enterprises to decide to expand abroad. (See, for example, “Globalization and Employment by U.S. Multinationals: A Framework and Facts,” by Matthew J. Slaughter, associate professor of business administration at Dartmouth, and printed in the March 26, 2004 issue of *Daily Tax Report* by the Bureau of National Affairs, Inc., Washington, D.C. 20037.) The motives are 1) to reduce production costs or 2) to increase market share outside the US. Increasing regional Exports to the Rest of the World would be consistent with the latter motive to expand markets abroad. However, we find no empirical evidence for increasing employment for Exports to the Rest of the World relative to overall employment in the Tampa – St. Petersburg – Clearwater MSA.

Table 8 reports employment by occupation for workers in the Tampa – St. Petersburg – Clearwater MSA from 1993 to 2004. Consistently, the most prevalent occupational category is Sales and Sales-related Office and Administrative work. In 2004, this category comprised 30.5% of total employment. From 1993 to 2004, Sales and Sales-related Office and Administrative employment increased by 33.3%, which is roughly in line with the total increase in employment of 35.6%. However, the greatest increase in employment in the MSA in an occupational category was experienced by the Computer and Mathematical occupations, which grew by 169.3%. Still, in 2004 the Computer and Mathematical occupations represented only 3.8% of the area’s total employment.

Table 8
Employment by Occupation
Tampa - St. Petersburg - Clearwater MSA

Occupations	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f	% Growth
Management, Business, Financial	108,149	113,079	117,084	123,097	129,905	138,316	145,951	152,781	156,578	155,312	154,985	156,499	44.7%
% of Total Employment	9.9%	9.9%	9.9%	10.0%	10.2%	10.3%	10.4%	10.5%	10.5%	10.5%	10.6%	10.6%	
Computer and Mathematical	21,143	23,802	26,968	29,767	34,061	38,715	44,434	47,651	50,518	51,850	53,918	56,931	169.3%
% of Total Employment	1.9%	2.1%	2.3%	2.4%	2.7%	2.9%	3.2%	3.3%	3.4%	3.5%	3.7%	3.8%	
Architecture and Engineering	20,127	20,386	21,028	22,068	23,698	24,594	25,978	28,358	28,775	28,296	28,145	28,483	41.5%
% of Total Employment	1.8%	1.8%	1.8%	1.8%	1.9%	1.8%	1.9%	2.0%	1.9%	1.9%	1.9%	1.9%	
Life, Physical, Social Science	7,682	7,951	8,288	8,696	9,303	9,752	10,302	11,255	11,532	11,556	11,617	11,789	53.5%
% of Total Employment	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.8%	0.8%	0.8%	0.8%	0.8%	
Education, Training, Library, Community & Social Services	41,584	43,452	44,223	45,473	46,283	48,401	50,158	53,136	54,858	55,516	55,441	55,744	34.1%
% of Total Employment	3.8%	3.8%	3.7%	3.7%	3.6%	3.6%	3.6%	3.7%	3.7%	3.8%	3.8%	3.8%	
Legal	8,897	9,109	9,424	10,070	11,042	11,613	12,311	13,991	14,392	14,427	14,472	14,688	65.1%
% of Total Employment	0.8%	0.8%	0.8%	0.8%	0.9%	0.9%	0.9%	1.0%	1.0%	1.0%	1.0%	1.0%	

Table 8 (Continued)
Employment by Occupation
Tampa - St. Petersburg - Clearwater MSA

Employment (units)													%
Occupations	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f	Growth
Art, Design, Entertainment, Media	13,439	14,174	14,906	15,725	16,837	18,100	19,379	19,945	20,482	20,344	20,393	20,695	54.0%
% of Total Employment	1.2%	1.2%	1.3%	1.3%	1.3%	1.3%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	
Healthcare Practice, Technology & Support	77,544	80,944	85,697	88,645	87,487	89,513	91,905	92,847	96,042	96,514	97,034	97,970	26.3%
% of Total Employment	7.1%	7.1%	7.3%	7.2%	6.8%	6.7%	6.5%	6.4%	6.5%	6.6%	6.6%	6.6%	
Protective Services	30,239	32,452	34,352	35,479	37,900	40,404	43,258	44,570	45,860	46,311	46,623	47,282	56.4%
% of Total Employment	2.8%	2.9%	2.9%	2.9%	3.0%	3.0%	3.1%	3.1%	3.1%	3.1%	3.2%	3.2%	
Food Preparation and Serving	80,881	85,806	86,271	91,423	89,076	90,131	91,489	91,658	93,118	92,252	92,600	93,387	15.5%
% of Total Employment	7.4%	7.5%	7.3%	7.4%	7.0%	6.7%	6.5%	6.3%	6.3%	6.3%	6.3%	6.3%	
Building and Grounds													
Cleaning & Maintenance	53,019	54,772	56,803	58,806	62,121	66,337	69,807	71,230	72,564	71,884	71,532	72,210	36.2%
% of Total Employment	4.9%	4.8%	4.8%	4.8%	4.9%	4.9%	5.0%	4.9%	4.9%	4.9%	4.9%	4.9%	
Personal Care and Services	28,700	29,296	30,006	31,684	32,746	35,187	35,469	36,078	36,915	36,848	36,635	37,017	29.0%
% of Total Employment	2.6%	2.6%	2.5%	2.6%	2.6%	2.6%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Sales & Sales-related													
Office & Admin	338,938	352,717	366,932	383,288	397,100	418,562	437,052	449,590	459,642	452,955	450,636	451,786	33.3%
% of Total Employment	31.0%	31.0%	31.1%	31.1%	31.0%	31.1%	31.1%	31.0%	30.9%	30.8%	30.7%	30.5%	
Farming, Fishing, Forestry	14,562	15,229	14,918	15,072	15,353	15,177	15,673	16,603	17,249	17,116	17,016	17,006	16.8%
% of Total Employment	1.3%	1.3%	1.3%	1.2%	1.2%	1.1%	1.1%	1.1%	1.2%	1.2%	1.2%	1.1%	
Maintenance and Repair	97,044	100,169	103,218	107,945	113,233	118,891	123,260	127,742	134,794	131,481	128,421	127,369	31.2%
% of Total Employment	8.9%	8.8%	8.7%	8.7%	8.9%	8.8%	8.8%	8.8%	9.1%	8.9%	8.7%	8.6%	
Production	77,479	79,416	81,497	83,994	87,202	90,658	93,755	95,138	95,967	93,740	93,296	94,313	21.7%
% of Total Employment	7.1%	7.0%	6.9%	6.8%	6.8%	6.7%	6.7%	6.6%	6.5%	6.4%	6.4%	6.4%	
Transportation and Material Moving	72,253	75,778	79,005	82,547	85,991	89,549	93,786	96,100	97,911	96,289	95,982	96,724	33.9%
% of Total Employment	6.6%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.6%	6.6%	6.5%	6.5%	6.5%	
Total Employment	1,091,680	1,138,532	1,180,620	1,233,779	1,279,338	1,343,900	1,403,967	1,448,673	1,487,197	1,472,691	1,468,746	1,479,893	35.6%

f = REMI forecast

Table 9 shows the Tampa – St. Petersburg – Clearwater labor force from 1993 to 2004. The labor force includes the region’s residents who are employed plus those actively seeking work. In 2004, the MSA’s labor force totaled nearly 1.3 million residents resulting in a participation rate (labor force divided by population) of 78.2% of the prime working-age population, ages 15 to 64. Since 1993, the Tampa – St. Petersburg – Clearwater MSA labor force has grown by 27.5%.

Table 9
Labor Force
Tampa - St. Petersburg - Clearwater MSA

Workers (units)	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f	% Growth
White	831,755	846,256	854,814	865,554	881,444	893,289	906,817	923,690	939,862	949,791	956,783	964,076	15.9%
Black	88,846	92,089	95,678	99,372	104,489	110,278	114,735	113,757	118,524	122,398	125,976	129,595	45.9%
Other	16,662	17,759	19,352	20,618	22,199	23,716	24,833	45,646	47,445	49,018	50,503	52,033	212.3%
Hispanic	79,284	83,597	88,528	95,850	103,838	109,954	116,790	127,126	133,501	139,378	144,952	150,442	89.8%
Total Labor Force	1,016,547	1,039,701	1,058,372	1,081,394	1,111,970	1,137,237	1,163,175	1,210,219	1,239,332	1,260,585	1,278,214	1,296,146	27.5%
Workers by Gender (units)	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f	% Growth
Males	536,227	543,587	551,749	561,808	574,684	586,113	596,776	624,194	637,647	646,774	654,256	661,888	23.4%
Females	480,321	496,114	506,622	519,586	537,284	551,123	566,400	586,024	601,684	613,810	623,959	634,257	32.0%
Participation Rates	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f	
Total (Ages 15-64)	74.4%	74.8%	75.0%	75.5%	75.9%	76.0%	76.3%	77.1%	77.6%	77.9%	78.0%	78.2%	
Total (Ages 15-101)	57.5%	58.2%	58.4%	58.9%	59.5%	59.8%	60.4%	61.6%	62.3%	62.7%	63.0%	63.3%	
White (Ages 15-64)	75.3%	75.8%	76.1%	76.5%	76.8%	76.7%	77.0%	77.9%	78.4%	78.7%	78.8%	79.0%	
White (Ages 15-101)	56.5%	57.1%	57.4%	57.8%	58.3%	58.5%	59.0%	59.8%	60.5%	60.9%	61.2%	61.5%	
Black (Ages 15-64)	69.7%	70.0%	70.3%	70.8%	71.3%	72.3%	72.4%	73.0%	73.6%	73.9%	74.1%	74.3%	
Black (Ages 15-101)	63.3%	63.8%	64.1%	64.6%	65.1%	66.1%	66.3%	66.7%	67.4%	67.7%	67.9%	68.1%	
Other (Ages 15-64)	67.6%	68.1%	69.4%	70.2%	71.1%	72.3%	72.8%	74.5%	74.8%	75.0%	75.0%	75.2%	
Other (Ages 15-101)	63.9%	64.2%	65.4%	65.9%	66.7%	67.7%	68.1%	69.5%	69.4%	69.2%	68.8%	68.4%	
Hispanic (Ages 15-64)	71.9%	72.1%	71.8%	73.1%	74.4%	74.9%	75.4%	76.4%	77.0%	77.4%	77.7%	78.0%	
Hispanic (Ages 15-101)	62.1%	62.2%	62.0%	63.0%	64.3%	64.3%	64.6%	68.7%	69.3%	69.7%	70.1%	70.4%	

f = REMI forecast

While the Hispanic and Black segments of the labor force have grown more than the White segment since 1993, the nebulous “Other” segment has the highest percent growth. Furthermore, the female segment has growth more than the male segment since 1993 (32.0% versus 23.4%). For the working-age population, ages 15 to 64, the White segment has the highest participation rate, 79%, closely followed by the Hispanic segment at 78%.

We also report changes in the composition of the labor force, with respect to prior residence and place of birth, in the Tampa - St. Petersburg - Clearwater MSA between 1990 and 2000. The sources of this labor force data are the Census Bureau's 5-Percent Public Use Microdata Sample (PUMS) databases for the 1990 and 2000 decennial censuses.

The PUMS database, a sub-sample of the census long-form questionnaire, contains individual records of the characteristics for a sample of people and housing units. The characteristics include employment status, industry of employment, occupation, place of birth, and place of residence for the year 5 years prior to the decennial census. We analyzed these characteristics for the years 1990 and 2000 for the sampled residents of the Tampa - St. Petersburg - Clearwater MSA.¹²

Table 10 reports changes in the distribution of workers by occupation from 1990 to 2000 by place of prior residence. In 1990, 1.44% of the sampled workers lived outside of the United States and Puerto Rico in 1985, and 18.31% lived in Puerto Rico or a state other than Florida. Farming, Forestry, and Fishing occupations had the largest concentration of workers living outside of the United States and Puerto Rico in 1985 – 4.10%, whereas less than 1% of Protective Service workers and Business and Financial Operations workers lived outside of the United States and Puerto Rico in 1985. In 2000, 2.52% of the sampled workers lived outside of the United States and Puerto Rico in 1995, and 13.49% lived in Puerto Rico or a state other than Florida. Farming, Forestry, and Fishing occupations continued to have the largest concentration of workers living outside of the United States and Puerto Rico in 1995 – 14.09%, whereas less than 1% of Legal workers lived outside of the United States and Puerto Rico in 1995.

¹² Census Industry and Occupation codes changed from the 1990 and 2000 censuses. To account for these changes, we utilized “crosswalks” developed by the Census Bureau available at <http://www.census.gov/hhes/www/ioindex.html>

Table 10
Employment by Occupation by Place of Prior Residence
Tampa-St. Petersburg-Clearwater MSA

Census Occupation Group	1990 PUMS			2000 PUMS			% Change, 1990-2000	
	% of Sampled Workers	% Lived Abroad 1985	% Lived in Puerto Rico or US, but not FL, 1985	% of Sampled Workers	% Lived Abroad 1995	% Lived in Puerto Rico or US, but not FL, 1995	% Lived Abroad	% Lived in Puerto Rico or US, but not FL
Management	8.61%	1.25%	17.60%	9.00%	1.53%	15.03%	22.26%	-14.61%
Business and Financial Operations	4.07%	0.98%	17.99%	4.77%	1.71%	15.02%	74.08%	-16.54%
Computer and Mathematical	1.25%	1.62%	19.54%	2.46%	5.45%	20.24%	236.92%	3.55%
Architecture and Engineering	2.49%	1.62%	19.55%	1.66%	2.11%	11.70%	30.18%	-40.17%
Life, Physical, and Social Sciences	1.01%	1.60%	19.52%	0.56%	2.09%	19.51%	30.82%	-0.04%
Community and Social Services	1.07%	1.39%	19.20%	1.46%	3.19%	14.49%	129.32%	-24.52%
Legal	0.87%	1.50%	19.31%	1.22%	0.80%	10.38%	-46.85%	-46.21%
Education, Training, and Library	4.49%	1.37%	19.06%	4.68%	2.12%	11.12%	55.03%	-41.62%
Arts, Design, Entertainment, Sports, and Media	1.73%	1.41%	19.19%	1.83%	2.76%	16.01%	96.07%	-16.57%
Healthcare Practitioners and Technical	3.76%	1.53%	19.38%	5.46%	1.49%	13.27%	-2.35%	-31.51%
Healthcare Support	1.96%	2.07%	20.61%	2.07%	1.41%	11.90%	-32.23%	-42.24%
Protective Service	1.73%	0.90%	15.64%	1.92%	1.52%	11.31%	69.23%	-27.69%
Food Preparation and Serving Related	5.02%	2.07%	20.62%	5.15%	3.96%	15.95%	91.33%	-22.65%
Building and Grounds Cleaning and Maintenance	3.73%	2.37%	18.97%	3.42%	4.55%	11.82%	92.02%	-37.70%
Personal Care and Service	2.34%	2.10%	19.82%	2.70%	2.08%	12.42%	-0.63%	-37.33%
Sales and Related	15.08%	1.14%	20.51%	13.55%	1.91%	14.24%	67.48%	-30.55%
Office and Administrative Support	17.77%	1.16%	17.17%	17.55%	1.52%	13.30%	30.16%	-22.55%
Farming, Forestry, and Fishing	0.81%	4.10%	13.58%	0.56%	14.09%	13.75%	243.35%	1.22%
Construction and Extraction	5.53%	1.29%	16.25%	5.20%	4.74%	11.58%	267.51%	-28.74%
Installation, Repair, and Maintenance	3.56%	1.18%	16.09%	3.90%	1.69%	11.65%	43.31%	-27.56%
Production	7.48%	1.79%	17.20%	5.62%	4.91%	11.23%	173.95%	-34.72%
Transportation and Material Moving	5.64%	1.56%	16.89%	5.28%	3.16%	13.20%	103.28%	-21.84%
All Occupations	100.00%	1.44%	18.31%	100.00%	2.52%	13.49%	75.01%	-26.31%

Table 11 reports changes in the distribution of workers by industry from 1990 to 2000 by place of prior residence. Because we are examining the same sample group of workers, the aggregate totals for 1990 and 2000 are identical to those displayed in the previous table. Industry division Agriculture, Forestry, Fishing, and Hunting had the largest concentration of workers living outside of the United States and Puerto Rico in 1985 – 3.53%, whereas less than 0.8% of workers in the Construction industry division

lived outside of the United States and Puerto Rico in 1985. Industry division Agriculture, Forestry, Fishing, and Hunting continued the largest concentration of workers living outside of the United States and Puerto Rico in 1995 – 10.65%, whereas none of the Mining workers or Management of Companies and Enterprises workers sampled lived outside of the United States and Puerto Rico in 1995.

Table 11
Employment by Industry by Place of Prior Residence
Tampa-St. Petersburg-Clearwater MSA

Census Industry Division	1990 PUMS			2000 PUMS			% Change, 1990-2000	
	% of Sampled Workers	% Lived Outside US or Puerto Rico, 1985	% Lived in US, but not FL, 1985	% of Sampled Workers	% Lived Outside US or Puerto Rico, 1995	% Lived in US, but not FL, 1995	% Lived Outside US or Puerto Rico	% Lived in US, but not FL
Agriculture, Forestry, Fishing, and Hunting	1.82%	3.53%	12.38%	0.75%	10.65%	8.31%	201.35%	-32.88%
Mining	0.23%	2.78%	8.64%	0.11%	0.00%	3.45%	-100.00%	-60.09%
Construction	6.74%	0.79%	16.59%	6.92%	3.93%	11.97%	395.74%	-27.80%
Manufacturing	11.07%	1.77%	19.38%	8.29%	3.82%	13.24%	115.20%	-31.69%
Transportation and Warehousing	4.10%	1.57%	18.45%	3.77%	1.29%	14.81%	-18.12%	-19.69%
Utilities	1.42%	0.87%	12.42%	0.97%	0.40%	6.57%	-54.18%	-47.08%
Information	3.02%	1.21%	15.23%	3.81%	2.45%	16.87%	101.38%	10.74%
Wholesale Trade	4.84%	1.35%	16.53%	4.21%	2.40%	12.77%	77.76%	-22.76%
Retail Trade	14.07%	1.72%	21.26%	13.86%	2.28%	14.45%	32.79%	-32.03%
Finance and Insurance	6.62%	0.81%	18.69%	6.56%	1.15%	14.86%	41.74%	-20.49%
Real Estate, Rental, and Leasing	2.44%	0.94%	18.92%	2.46%	2.13%	13.41%	126.71%	-29.13%
Arts, Entertainment, and Recreation	1.59%	1.77%	19.56%	2.23%	1.83%	14.78%	3.08%	-24.44%
Accommodation and Food Services	7.34%	1.78%	20.92%	6.54%	4.92%	16.88%	176.88%	-19.31%
Health Care & Social Assistance	10.91%	1.28%	20.42%	11.92%	1.48%	12.54%	15.86%	-38.59%
Educational Services	6.38%	1.19%	11.90%	6.77%	1.89%	11.07%	59.66%	-6.95%
Professional, Scientific, and Technical Services	4.89%	1.18%	18.93%	6.63%	2.25%	14.75%	91.47%	-22.08%
Management of Companies and Enterprises	0.01%	1.09%	17.72%	0.03%	0.00%	31.25%	-100.00%	76.35%
Administrative, Support, and Waste Management Services	3.51%	1.52%	18.48%	4.96%	2.35%	15.68%	54.64%	-15.16%
Other Services (Except Public Administration)	5.05%	1.51%	19.61%	4.95%	3.57%	10.86%	136.02%	-44.62%
Public Administration	3.96%	1.59%	13.13%	4.24%	1.19%	9.62%	-25.10%	-26.75%
Total	100.00%	1.44%	18.31%	100.00%	2.52%	13.49%	74.75%	-26.31%

Table 12 reports changes in the distribution of workers by occupation from 1990 to 2000 by place of birth. In 1990, 7.93% of the sampled workers had been born abroad - outside the United States and its outlying areas.¹³ Farming, Forestry, and Fishing occupations had the largest concentration of workers born abroad. – 15.90%, whereas less than 4% of Protective Service were born abroad. By 2000, the percentage of sampled workers who had been born abroad rose to 11.69%. Farming, Forestry, and Fishing occupations continued to have the greatest percentage of workers born abroad, tripling to 48.80%, while several occupation groups, including Computer and Mathematical, Life, Physical and Social Sciences, and Community and Social Services all saw their percentages of workers born abroad increase by more than 67%. Occupations such as these may be prime candidates for offshore outsourcing, as the growth statistic indicates availability of occupational skill sets outside the U.S. Only occupation group Legal saw their percentage of workers born abroad decline from 1990 to 2000.

¹³ “Outlying Areas” includes Puerto Rico and protectorates such as Guam, U.S. Virgin Islands.

Table 12
Employment by Occupation by Place of Birth
Tampa-St. Petersburg-Clearwater MSA

Census Occupation Group	1990 PUMS			2000 PUMS			% Change, 1990-2000	
	% of Sampled Workers	% Born in US, Puerto Rico, or US Outlying Area	% Born Abroad	% of Sampled Workers	% Born in US, Puerto Rico, or US Outlying Area	% Born Abroad	% Born in US, Puerto Rico, or US Outlying Area	% Born Abroad
Management	8.61%	92.43%	7.57%	9.00%	90.66%	9.34%	-1.91%	23.28%
Business and Financial Operations	4.07%	93.30%	6.70%	4.77%	91.21%	8.79%	-2.24%	31.12%
Computer and Mathematical	1.25%	92.38%	7.62%	2.46%	87.19%	12.81%	-5.62%	68.17%
Architecture and Engineering	2.49%	92.38%	7.62%	1.66%	87.25%	12.75%	-5.55%	67.27%
Life, Physical, and Social Sciences	1.01%	92.40%	7.60%	0.56%	85.37%	14.63%	-7.61%	92.49%
Community and Social Services	1.07%	92.51%	7.49%	1.46%	85.51%	14.49%	-7.58%	93.61%
Legal	0.87%	92.52%	7.48%	1.22%	95.21%	4.79%	2.91%	-35.94%
Education, Training, and Library	4.49%	92.64%	7.36%	4.68%	91.03%	8.97%	-1.73%	21.78%
Arts, Design, Entertainment, Sports, and Media	1.73%	92.55%	7.45%	1.83%	89.29%	10.71%	-3.53%	43.83%
Healthcare Practitioners and Technical	3.76%	92.44%	7.56%	5.46%	86.09%	13.91%	-6.87%	84.03%
Healthcare Support	1.96%	90.03%	9.97%	2.07%	87.91%	12.09%	-2.35%	21.22%
Protective Service	1.73%	96.20%	3.80%	1.92%	94.75%	5.25%	-1.51%	38.12%
Food Preparation and Serving Related	5.02%	89.88%	10.12%	5.15%	85.07%	14.93%	-5.35%	47.50%
Building and Grounds Cleaning and Maintenance	3.73%	88.74%	11.26%	3.42%	82.33%	17.67%	-7.22%	56.90%
Personal Care and Service	2.34%	89.57%	10.43%	2.70%	87.80%	12.20%	-1.98%	17.05%
Sales and Related	15.08%	93.13%	6.87%	13.55%	90.41%	9.59%	-2.92%	39.55%
Office and Administrative Support	17.77%	93.73%	6.27%	17.55%	90.84%	9.16%	-3.08%	46.08%
Farming, Forestry, and Fishing	0.81%	84.10%	15.90%	0.56%	51.20%	48.80%	-39.11%	206.84%
Construction and Extraction	5.53%	91.64%	8.36%	5.20%	84.83%	15.17%	-7.43%	81.45%
Installation, Repair, and Maintenance	3.56%	91.67%	8.33%	3.90%	90.24%	9.76%	-1.57%	17.24%
Production	7.48%	88.47%	11.53%	5.62%	79.38%	20.62%	-10.28%	78.88%
Transportation and Material Moving	5.64%	92.55%	7.45%	5.28%	88.27%	11.73%	-4.62%	57.41%
All Occupations	100.00%	92.07%	7.93%	100.00%	88.31%	11.69%	-4.09%	47.48%

Table 13 reports changes in the distribution of workers by industry from 1990 to 2000 by place of birth. Because we are examining the same sample group of workers, the aggregate totals for 1990 and 2000 are identical to those displayed in the previous table. In 1990, industry division Agriculture, Forestry, Fishing, and Hunting had the largest concentration of workers born abroad. – 16.03%, whereas slightly more than 5% of workers in the Educational Services industry division were born abroad, the lowest of any industry division. In 2000, industry division Agriculture, Forestry, Fishing, and Hunting continued to have the greatest percentage of workers born abroad – 38.96%, while industry division Utilities had the lowest percentage – 6.18%. Industry division Mining saw triple-digit growth in their percentages of workers born abroad, albeit from a relatively low base. Overall, 18 of the 20 industry divisions experienced at least a double digit-percentage increase in their percentage of workers born abroad, suggesting increasing availability of industry skill sets outside the U.S.

Table 13
Employment by Industry by Place of Birth
Tampa-St. Petersburg-Clearwater MSA

Census Industry Division	1990 PUMS			2000 PUMS			% Change, 1990-2000	
	% of Sampled Workers	% Born in US, Puerto Rico, or US Outlying Area	% Born Abroad	% of Sampled Workers	% Born in US, Puerto Rico, or US Outlying Area	% Born Abroad	% Born in US, Puerto Rico, or US Outlying Area	% Born Abroad
Agriculture, Forestry, Fishing, and Hunting	1.82%	83.97%	16.03%	0.75%	61.04%	38.96%	-27.31%	143.05%
Mining	0.23%	98.00%	2.00%	0.11%	91.38%	8.62%	-6.76%	332.01%
Construction	6.74%	93.80%	6.20%	6.92%	86.57%	13.43%	-7.71%	116.57%
Manufacturing	11.07%	90.21%	9.79%	8.29%	82.59%	17.41%	-8.44%	77.76%
Transportation and Warehousing	4.10%	92.18%	7.82%	3.77%	88.94%	11.06%	-3.51%	41.37%
Utilities	1.42%	94.22%	5.78%	0.97%	93.82%	6.18%	-0.42%	6.91%
Information	3.02%	93.22%	6.78%	3.81%	91.79%	8.21%	-1.53%	21.10%
Wholesale Trade	4.84%	92.95%	7.05%	4.21%	88.52%	11.48%	-4.77%	62.90%
Retail Trade	14.07%	91.28%	8.72%	13.86%	89.99%	10.01%	-1.42%	14.87%
Finance and Insurance	6.62%	93.20%	6.80%	6.56%	91.03%	8.97%	-2.33%	31.88%
Real Estate, Rental, and Leasing	2.44%	92.95%	7.05%	2.46%	91.01%	8.99%	-2.09%	27.50%
Arts, Entertainment, and Recreation	1.59%	92.58%	7.42%	2.23%	91.48%	8.52%	-1.19%	14.83%
Accommodation and Food Services	7.34%	90.83%	9.17%	6.54%	83.71%	16.29%	-7.84%	77.63%
Health Care & Social Assistance	10.91%	91.96%	8.04%	11.92%	87.54%	12.46%	-4.80%	54.88%
Educational Services	6.38%	94.92%	5.08%	6.77%	90.91%	9.09%	-4.22%	78.91%
Professional, Scientific, and Technical Services	4.89%	92.66%	7.34%	6.63%	90.81%	9.19%	-2.00%	25.18%
Management of Companies and Enterprises	0.01%	93.79%	6.21%	0.03%	93.75%	6.25%	-0.05%	0.69%
Administrative, Support, and Waste Management Services	3.51%	91.04%	8.96%	4.96%	88.93%	11.07%	-2.32%	23.53%
Other Services (Except Public Administration)	5.05%	90.98%	9.02%	4.95%	85.61%	14.39%	-5.91%	59.62%
Public Administration	3.96%	94.62%	5.38%	4.24%	92.44%	7.56%	-2.31%	40.61%
Total	100.00%	92.07%	7.93%	100.00%	88.31%	11.69%	-4.09%	47.48%

Section 4: Changes in Economic Structure: International Trade

In this section, we examine the potential role of international trade on employment patterns in the Tampa – St. Petersburg – Clearwater MSA. We estimate employment of MSA workers by foreign firms, we estimate employment of foreigners by local firms, and we examine trends in the import of “Other Private Services,” a section of the U.S. Bureau of Economic Analysis (BEA) National Income and Product Accounts (NIPAs).

First, we attempt to assess changes in the ownership of the corporate structure by measuring, over time, the share of employment due to foreign corporations within a geographic region.¹⁴ The data sources combining to produce this information are the Foreign Direct Investment in the United States (FDIUS) statistics reported by the BEA for years 1993-2001 and data from Enterprise Florida. The latter keeps an inventory - available from its website - of foreign affiliated companies conducting business in Florida.¹⁵

To estimate employment by foreign firms in the MSA for years 1993-2001, we first acquired, from the Enterprise Florida website, a list of foreign affiliated companies conducting business in the MSA. We searched the 4th Quarter, 2001 Enhanced Quarterly Unemployment Insurance (EQUI) database to determine the employment levels for these companies. Enterprise Florida identified 125 companies conducting business in the MSA, and we were able to find employment records for 75 of these.

From the BEA, we obtained estimates of domestic employment for affiliates of foreign enterprises located in Florida for the years 1993-2001. We applied the employment findings from the previous step to the 2001 estimate to produce a ratio of MSA employment due to foreign direct investment (FDI) to state employment due to FDI. For 2001, we calculated a ratio of 1:24.75, that is, for every 25 employed persons in the state due to FDI, one employee is located in the Tampa - St. Petersburg - Clearwater, FL MSA. Because the Enterprise Florida list is not exhaustive, this ratio can be viewed as biased upward.

We applied the ratio to each of the annual estimates of Florida employment due to FDI to estimate the annual level of MSA employment due to FDI. We then calculated the share of annual total MSA employment due to MSA FDI employment.

¹⁴ The Florida Department of State, Division of Corporations, maintains a database of registered corporations. One field in the database, “State or Country of Origin,” indicates the jurisdiction in which the corporation was initially created, but does not provide insight into the current ownership of corporations. Thus, we have estimated employment by foreign corporations through national statistics on Foreign Direct Investment, defined by the U.S. BEA as “ownership or control, directly or indirectly, by one foreign person of 10 percent or more of the voting securities of an incorporated U.S. business enterprise or an equivalent interest in an unincorporated U.S. business enterprise.”

¹⁵ The database can be accessed at <http://www.eflorida.com/infocenter/fdi/fdi.asp?level1=25&level2=119>

Table 14 reports the annual estimates of Florida FDI employment, MSA FDI employment, total MSA employment and the share (expressed as a percentage) of total MSA employment composed of MSA FDI employment.

Table 14
Estimated Employment Due to Foreign Direct Investment (FDI)
Tampa-St. Petersburg-Clearwater, FL MSA 1993-2001

	1993	1994	1995	1996	1997	1998	1999	2000	2001
FL FDI Employment ¹	203,800	201,000	210,000	239,800	242,300	263,200	286,500	312,100	303,300
Estimated MSA FDI Employment ²	8,234	8,121	8,485	9,689	9,790	10,634	11,576	12,610	12,254
MSA Total Employment ³	961,600	1,003,206	1,044,437	1,098,688	1,142,171	1,205,422	1,263,840	1,303,820	1,340,264
% of Total MSA Employment	0.8563%	0.8095%	0.8124%	0.8818%	0.8571%	0.8822%	0.9159%	0.9671%	0.9143%

Sources

1 - Bureau of Economic Analysis

2 - 2001 Employment - EQUI, Enterprise Florida. Other years estimated by CEDR interpolation

3 - REMI Policy Insight™

The MSA has benefited from the offshore outsourcing of foreign enterprises. Estimated MSA FDI employment grew by 48.8% between 1993 and 2001, adding 4,020 employees during this time. During the same time period, MSA employment grew by 39.3%, adding more than 378,000 employees. The year-over-year changes in the percent of MSA FDI employment relative to total MSA employment appear cyclical hovering around 0.87%.

In addition to the FDIUS statistics, the BEA also reports annual estimates of U.S. Direct Investment Abroad (USDIA). Analogous to FDIUS, USDIA is a measure of the foreign operations of U.S. businesses. USDIA employment represents workers outside the U.S. financed by U.S. businesses. **Table 15** reports, for years 1992 through 2002, employment related to USDIA as well as the ratio of USDIA employment to U.S. Gross Domestic Product (GDP).

Table 15
U.S. GDP and USDIA Employment, 1992-2002

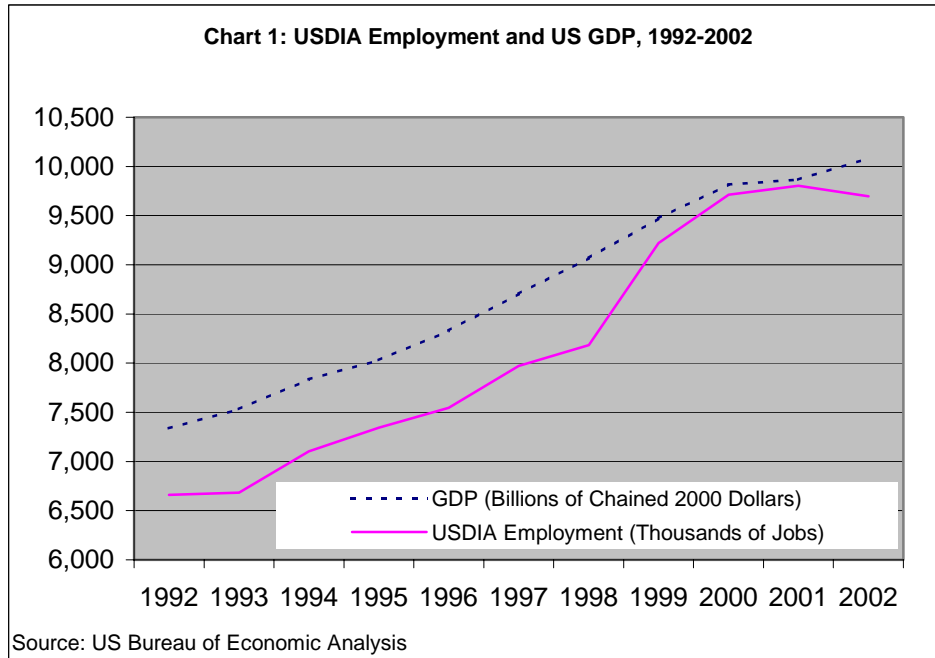
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
GDP ¹	7,336.6	7,532.7	7,835.5	8,031.7	8,328.9	8,703.5	9,066.9	9,470.3	9,817.0	9,866.6	10,083.0
USDIA Employment ²	6,660.1	6,684.6	7,104.6	7,344.9	7,544.1	7,972.5	8,183.8	9,220.2	9,713.0	9,803.6	9,695.9
USDIA Employment/GDP	0.9078	0.8874	0.9067	0.9145	0.9058	0.9160	0.9026	0.9736	0.9894	0.9936	0.9616

¹ Billions of Chained 2000 Dollars

² Thousands of Employees

USDIA employment increased rather steadily during the period, from 6.6 million workers in 1992 to 9.6 million workers in 2002, peaking in 2001 at 9.8 million workers. As a proportion of GDP, employees per \$1M of GDP rose from .9078 in 1992 to .9616 in 2002. This proportion rose and fell during the period of interest, reflecting the greater volatility of USDIA employment growth relative to GDP growth.

Chart 1 displays the year-to-year levels of U.S. GDP and USDIA Employment.



We obtained estimates of the MSA’s Gross Regional Product (GRP) from the REMI model. Assuming that (1), the level of direct investment abroad as a share of production is similar between the region and the nation, and that (2), the ratio of foreign employment due to regional direct investment abroad to GRP equals that of foreign employment due to USDIA to GDP, we apply the findings from Table 15, above, to the estimates of GRP to approximate the level of foreign employment due to regional investment abroad.

Table 16 shows, for years 1992-2002, estimates of GRP, foreign employment supported by regional direct investment abroad, the previously displayed MSA FDI employment levels, and - for years 1993-2001 - the net effect of international investment patterns on employment in the Tampa – St. Petersburg – Clearwater MSA.

Table 16
Estimated Effects of International Trade on MSA Employment, 1992-2002

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Gross Regional Product ¹	58.4781	60.3575	63.1837	64.8051	67.9002	72.2740	77.4370	82.0841	86.3972	88.9445	90.9804
Employment/Product (\$M)	0.9078	0.8874	0.9067	0.9145	0.9058	0.9160	0.9026	0.9736	0.9894	0.9936	0.9616
Foreign Employment Supported by GRP	53,086	53,562	57,290	59,264	61,502	66,204	69,895	79,916	85,482	88,376	87,487
MSA FDI Employment	N/A	8,234	8,121	8,485	9,689	9,790	10,634	11,576	12,610	12,254	N/A
MSA FDI Employment less Foreign Employment Supported by GRP	N/A	(45,328)	(49,169)	(50,779)	(51,813)	(56,414)	(59,261)	(68,341)	(72,872)	(76,122)	N/A

¹ (Bil Chained 00\$) Source, REMI *Policy Insight*™

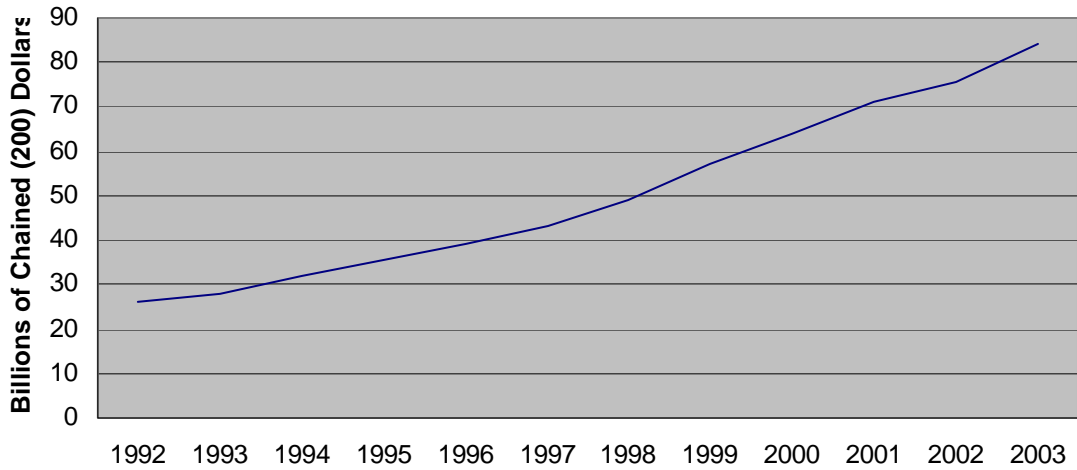
GRP rose in real terms from \$58.47 billion to \$90.98 billion between 1992 and 2002, a 55.6% increase. The estimated foreign employment – assuming similar patterns of direct investment abroad and production between the region and the nation as a whole – associated with GRP increased from 53,086 in 1992 to 87,487 in 2002, a 64.8% change. Therefore, regional outsourcing, measured by foreign employment, has grown faster than the regional economy (as measured by GRP) as a whole. For each of the years displayed our estimate is that foreign employment due to regional investment abroad exceeded regional employment due to foreign direct investment in the region. We approximate that in 2001, the net effect of this phenomenon was 76,000 workers. The 76,000 workers represent 6.61% of payroll employment and 5.08% of the total employment (including the self-employed) during that year.

While USDIA employment estimates the number of foreign-located workers employed by US affiliates, another form of offshore outsourcing involves the import of services from foreign firms. Technological innovations – increased Internet bandwidth and global Internet connectivity – have contributed to the growing feasibility of importation of business services, classified by the BEA as “Other Private Services.”¹⁶

Charts 2 through 4 display trends in Other Private Services imports for years 1992 through 2003.

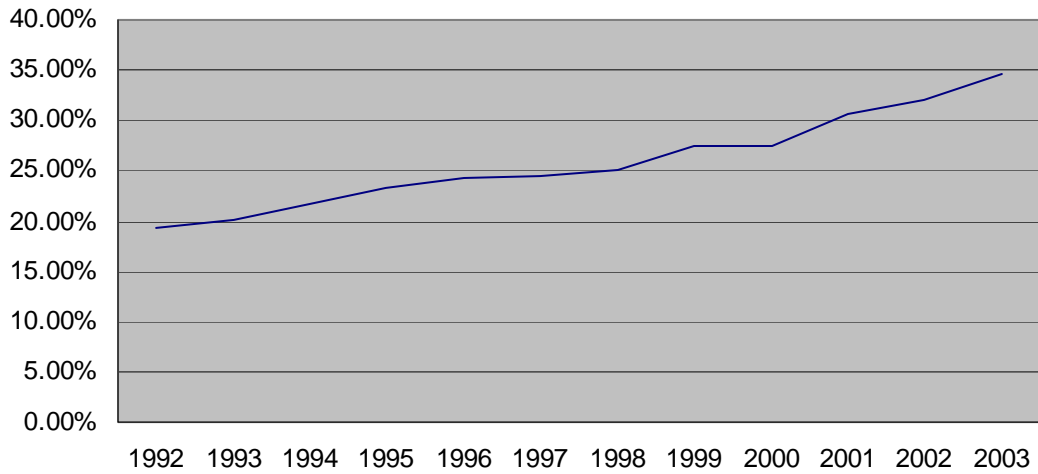
¹⁶ See http://www.bea.gov/bea/dn/GDP_outsourcing.pdf for information on outsourcing and the National Income and Product Accounts (NIPAs). Worthy of note, the offshore outsourcing of white-collar jobs composes only a portion, and not all, of the activities classified as “Other Private Services.”

Chart 2 - Imports of Other Private Services 1992-2003



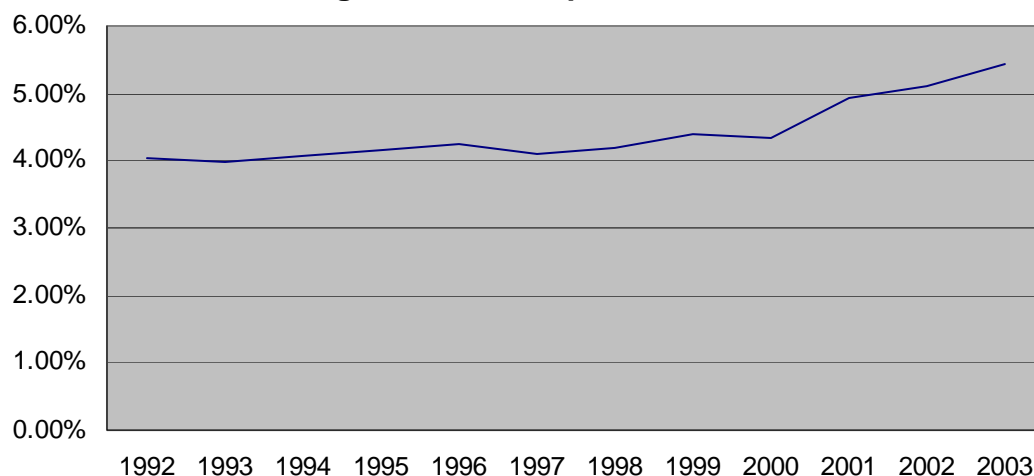
Source: U.S. BEA National Income and Product Accounts (NIPAs)

Chart 3 - U.S. Imports of Other Private Services as a Percentage of all U.S. Service Imports 1992-2003



Source: U.S. BEA National Income and Product Accounts (NIPAs)

Chart 4 - U.S. Imports of Other Private Services as a Percentage of all U.S. Imports 1992-2003



Source: U.S. BEA National Income and Product Accounts (NIPAs)

We find that national imports of Other Private Services grew steadily in real terms from \$26.1B in 1992 to \$82.1B in 1993. As a proportion of all U.S. Service imports during this time, Other Private Services accounted for roughly 1/5th of all service imports in 1992 to over 1/3rd in 2003. In terms of all imports, Other Private Services accounted for just over 4% of the 1992 total. In 2003, Other Private Services accounted for just over 5.3% of the 2003 total. If these are stable trends, the finding suggests that offshore outsourcing – as defined by the importation of Other Private Services – will continue to increase relative to other types of imports.

Section 5: Summary of Findings

In each year, 2001, 2002 and 2003, overall employment in the MSA slightly declined.¹⁷ Consistent with the possibility of outsourcing, employment in the Manufacturing sector and in the Information sector was down. On the other hand, employment in the Finance and Insurance sector, with which some call centers are associated, increased. In 2001 employment, as a percentage of total employment in the MSA, in the Manufacturing, Information, and Finance and Insurance sectors, was 6.86%, 3.27% and 6.02%, respectively. By 2003, the percentages were 6.23%, 3.01% and 6.24%, respectively.

Since 1997 there has been over one million people working in the Tampa – St. Petersburg – Clearwater MSA each year and that number has grown steadily through 2001. Between 1988 and 2001, employment in the MSA increased on average 2.66% - about 25,000 employees each year - with a low standard deviation of 1.90%, which indicates a stable employment structure. Manufacturing was the only industry division to experience a decline in employment over the period. In 1988, Manufacturing represented about 11.43% of total employment and by 2001 this percentage had fallen to 7.85% of total employment. Meanwhile, Services, which is the largest division of employment, had risen from 33.16% to 43.61% of total employment. Furthermore, between 1988 and 2001 the number of establishments in the Tampa – St. Petersburg – Clearwater MSA has increased from approximately 46,000 to 61,000, an average annual gain of 2.19%. The standard deviation of this annual percentage gain was 1.08%, indicating steady but stable growth. This addition of over 1,100 establishments, on average per year, is a notable source of job growth and employment in the region.

Because a significant shift in the divisional allocations of employment or establishments is indicative of a major change in a region's economic structure, and consistent with large-scale outsourcing, we tested the data for evidence of structural change. The finding for 2002 and 2003 is consistent with a shift in the employment structure and recent job dislocations in the MSA. And, although not conclusive, the data is also consistent with a finding that the MSA is recently undergoing a major shift in the allocation of the number of establishments within its industrial sectors.

Over the period 1993 to 2004, the fastest growing employment category by demand source was Exports to the Rest of the Nation, which grew at an average annual rate of 6%. Employment for Investment Activity also experienced relatively rapid growth at slightly below 6% over the same period. The slowest growing employment category by demand source from 1993 to 2004 was Exports to the Rest of the World for which employment increased at an average annual rate of only 1%. We also analyze detailed information for each demand source by subdividing the descriptive statistics by industry division and form quadrant correlations. From the quadrant correlations, we find evidence consistent with long-term structural change of increasing employment to fulfill demand for local consumption and demand by government for goods and services.

¹⁷ This decline in MSA employment was coincident with the national trend, for which the BLS reports total U.S. employment of 129.6 million in 2001, 128.2 million in 2002, and 127.8 million in 2003.

The most prevalent occupational category in the MSA is Sales and Sales-related Office and Administrative work. In 2004, this category comprised 30.5% of total employment. From 1993 to 2004, Sales and Sales-related Office and Administrative employment increased by 33.3%, which is roughly in line with the total increase in employment of 35.6%. However, the greatest increase in employment in the MSA in an occupational category was experienced by the Computer and Mathematical occupations, which grew by 169.3%. Still, in 2004 the Computer and Mathematical occupations represented only 3.8% of the area's total employment.

In 2004, the MSA's labor force totaled nearly 1.3 million residents resulting in a participation rate of 78.2% of the prime working-age population, ages 15 to 64. Since 1993, the Tampa – St. Petersburg – Clearwater MSA labor force has grown by 27.5%.

We also investigated changes in the composition of the labor force, with respect to prior residence and place of birth, in the Tampa - St. Petersburg - Clearwater MSA between 1990 and 2000. The sources of this labor force data are the Census Bureau's 5-Percent Public Use Microdata Sample (PUMS) databases for the 1990 and 2000 decennial censuses. In 1990, 7.93% of the sampled workers had been born abroad - outside the United States and its outlying areas. By 2000, the percentage of sampled workers who had been born abroad rose to 11.69%. Several occupational groups, including Computer and Mathematical, Life, Physical and Social Sciences, and Community and Social Services saw their percentages of workers born abroad increase by more than 67%. Occupations such as these may be prime candidates for offshore outsourcing, as the growth statistic indicates availability of occupational skill sets outside the U.S.

Lastly, we examined the international trade data in relation to employment patterns in the MSA. We estimate that employment due to foreign direct investment (FDI) in the MSA grew by nearly 50% between 1993 and 2001, resulting in approximately 12,250 more workers in 2001 (latest data available). Furthermore, from the U.S. Bureau of Economic Analysis, we obtained the national level of U.S. Direct Invest Abroad (USDIA) for 1992 through 2002. We then calculated USDIA employment – workers outside the U.S. financed by U.S. businesses – by assuming the national USDIA employment per Gross Domestic Product is the same as the USDIA employment per Gross Regional Product for the MSA. Foreign employment due to regional investment abroad exceeded regional employment due to foreign direct investment in the MSA. We approximate that in 2001, the net effect of this phenomenon was 76,000 workers.

While USDIA employment estimates the number of foreign-located workers employed by US affiliates, another form of offshore outsourcing involves the import of services from foreign firms. Technological innovations – increased Internet bandwidth and global Internet connectivity – have contributed to the growing feasibility of importation of business services, classified by the BEA as “Other Private Services.” As a percentage of all imports, the import of Other Private Services (the category in which so-called white collar outsourcing would be documented) has steadily increased over the

past decade or so, providing empirical support for what have been mostly anecdotal reports of offshore outsourcing.

Through an examination of the baseline structure of the Tampa – St. Petersburg – Clearwater MSA’s economy, we find evidence that the area’s economy has undergone structural shifts – primarily a shift from Manufacturing to Services – that is consistent with an “offshore outsourcing” hypothesis. However, we also determined that primary data to test the “offshore outsourcing” hypothesis applied to the MSA is lacking. However, using secondary data, we were able to estimate employment supported by FDI and USDIA. This in turn leads us to believe that future research into the “offshore outsourcing” hypothesis can appropriately be framed as an international investment and trade question.

Appendix A: Baseline Analysis of Telemarketing Employment and Wages in Tampa Bay, 2002

Note – This research, intended for future publication in The Tampa Bay Economy, CEDR’s journal of economic development research, was motivated by the passage and adoption of the National Do Not Call Registry. However, because telemarketing jobs are often cited as prime candidates for offshoring, we present - as excerpts from the larger article - characteristics of the telemarketing industry for perspective. The author is David Sobush, Research Associate at CEDR.

Introduction

The purpose of this article is to present employment, wage, and establishment data for the telemarketing industry (NAICS code 561422) in Hillsborough, Pasco, Pinellas, and Polk Counties, and also for the 7-county Tampa Bay Region (Hernando, Hillsborough, Manatee, Pasco, Pinellas, Polk, and Sarasota). This article also explores the possible ramifications of the National Do Not Call Registry, which went into effect October 1, 2003, prohibiting telemarketers’ sales pitches.

Description of Industry

Telemarketing bureaus provide “telemarketing services on a contract or fee basis for others.” These services typically fall into one of the following categories:

- Promotion of clients’ products or services by telephone
- Taking orders by telephone for clients products and services
- Providing information or soliciting contributions for clients by telephone

Economists and other researchers examining employment and wage trends typically utilize the Covered Employment and Wages (ES-202) unemployment insurance database, which contains employment and wage data by industry. The telemarketing industries in Hernando, Manatee, and Sarasota counties are not of a sufficient size to permit disclosure and therefore cannot be reported by county. However, we can present the Tampa Bay regional aggregate by using the Enhanced Quarterly Unemployment Insurance (EQUI) database, which presents employment, wage, and industry classification by establishment.

Telemarketing Establishments

A total of 98 establishments in Tampa Bay are telemarketing bureaus. Among the reportable counties, Polk County had the fewest establishments (10) and Pinellas County was home to the greatest number of establishments (37).

Table 1 presents the number of telemarketing establishments in each of the reportable areas of Tampa Bay for the first quarter of 2002.

Table 1: Telemarketing Establishments

Location	Establishments
Hillsborough	14
Pasco	15
Pinellas	37
Polk	10
Tampa Bay[#]	98

[#]7-County Aggregate

Employment

Telemarketing employment in the seven-county Tampa Bay region averaged 24,590 during the first quarter of 2002. Of the reportable areas, Hillsborough County had the lowest mean employment, 804 persons. The three remaining reportable counties all had average telemarketing employment greater than 3,200 persons. Pinellas County had the highest average telemarketing employment – 3,970 persons.

Table 2 presents the mean employment of telemarketing establishments in each of the reportable areas of Tampa Bay for the first quarter of 2002.

Table 2: Telemarketing Employment

Location	Mean Employment
Hillsborough	804
Pasco	3,307
Pinellas	3,970
Polk	3,222
Tampa Bay[#]	24,590

[#]7-County Aggregate

Wages

Persons employed by Tampa Bay area telemarketers earned an average weekly wage of \$471 during the first quarter of 2002. Of the four reportable counties, Pasco-based workers earned the lowest weekly wages - \$215 - and telemarketing employees in Polk County earned an average weekly wage of \$958, more than double the seven-county weighted average. The relatively high wages paid in Polk County were attributable to the nature of the telemarketing jobs - commission-based real estate sales.

Table 3 presents the mean weekly wages of telemarketing employees in each of the reportable areas of Tampa Bay for the first quarter of 2002.

Table 3: Telemarketing Wages

Location	Mean Weekly Wage*
Hillsborough	\$ 316
Pasco	\$ 215
Pinellas	\$ 370
Polk	\$ 958
Tampa Bay#	\$ 471

**Weighted Average*

#7-County Aggregate

Effects of Do Not Call Legislation

On March 11, 2003, President George W. Bush authorized the creation of the National Do Not Call (DNC) Registry. The registry, managed by the Federal Trade Commission (FTC) was created to “offer consumers a choice regarding telemarketing calls.” The legislation allows consumers to submit their phone numbers to a national database. Beginning October 1, 2003, telemarketers faced fines of \$11,000 for each call made to numbers registered before August 31 of that same year. Telemarketers were able to phone numbers registered after that date for three months without penalty.

Implementation of the Do Not Call registry, if enforced as written, almost certainly resulted in layoffs of telemarketers. An industry advocacy group, American Teleservices Association, predicted a reduction of 2 million jobs, although the U.S. Bureau of Labor Statistics accounted for only slightly more than 338,000 telemarketing employees in 2001. In any event, these workers, once displaced, either had to find alternate employment or exit the labor force if there were to be no change in the unemployment rate. What occupations are most likely to absorb job seekers with the skill set of telemarketers?

According to the Occupational Information Network, the occupations most similar to telemarketing are: retail salesperson, advertising sales agent, insurance sales agent, manufacturing/technical/scientific equipment sales representative, and driver/sales worker. These occupations were identified as similar by comparison of certain occupation-related criteria. For a more rigorous discussion of the methodology utilized to identify occupational similarity, please refer to Occupational Information Network. *O*Net Consortium – Content Model*. Available at <http://www.onetcenter.org>.

Table 4 displays, for each of the reportable areas of Tampa Bay, occupations similar to telemarketers, and the corresponding employment and wage characteristics for the first quarter of 2002.

Table 4: Occupations Similar to Telemarketers

	<u>Employment</u>	<u>Mean Weekly Wage</u>
Lakeland - Winter Haven, FL MSA		
Retail Salespersons	6,150	\$375
Advertising Sales Agents	110	\$621
Insurance Sales Agents	730	\$706
Equipment Sales Representatives	270	\$938
Driver/Sales Workers	610	\$360
<i>Weighted Average Wage for Alternative Occupations to Telemarketing</i>		\$433
Sarasota – Bradenton - Venice, FL MSA		
Retail Salespersons	9,720	\$406
Advertising Sales Agents	230	\$781
Insurance Sales Agents	290	\$1,054
Equipment Sales Representatives	500	\$856
Driver/Sales Workers	550	\$401
<i>Weighted Average Wage for Alternative Occupations to Telemarketing</i>		\$452
Tampa - St. Petersburg - Clearwater, FL MSA		
Retail Salespersons	33,060	\$403
Advertising Sales Agents	1,710	\$756
Insurance Sales Agents	3,790	\$850
Equipment Sales Representatives	3,740	\$1,218
Driver/Sales Workers	5,040	\$348
<i>Weighted Average Wage for Alternative Occupations to Telemarketing</i>		\$529
Tampa Bay*		
Retail Salespersons	48,930	\$400
Advertising Sales Agents	2,050	\$751
Insurance Sales Agents	4,810	\$840
Equipment Sales Representatives	4,510	\$1,161
Driver/Sales Workers	6,200	\$354
<i>Weighted Average Wage for Alternative Occupations to Telemarketing</i>		\$490

* Wage estimates are weighted averages

Appendix B – Test for Long-term Structural Changes in Employment by Demand Source

In **Table B1** we include a breakdown of employment data by industry division for each demand source. Then we test the detailed employment data by demand source for evidence of structural changes. The idea here is that structural change may require a long period of time to occur and detect. So in **Table B2** we report the growth rates of employment by industry division for each demand source. Following Groshen and Potter, we divide our time period into two segments.¹⁸ The segments are from 1993 to 1998 and from 1999 to 2004.¹⁹ We compare the growth rates by industry division by demand source in a time segment with the growth rate in employment for the entire regional economy. In Table B2 we label the growth rate for the entire regional economy the “Average.” The proportion of growth rates greater than Average and less than Average determine the Quadrant Correlations. Largely varying Quadrant Correlations from one time segment to another are evidence of a potential structural change.

By interpreting the Quadrant Correlations, we find evidence of long-term structural change of increasing employment to fulfill demand for local consumption and demand by government for goods and services. Employment to fulfill demand from other sources exhibits long-term stability.

Table B1
Employment by Demand Source
Tampa - St. Petersburg - Clearwater MSA

Panel B.1.1

Employment (units) Intermediate Demand Sources	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f
Durables Manuf.	8,411	8,688	8,763	9,013	8,731	8,870	9,180	9,279	9,761	9,070	8,743	8,630
Non-Durables Manuf.	13,380	13,398	13,405	13,468	13,893	14,447	14,077	13,872	13,937	13,494	13,353	13,298
Mining	39	39	36	34	42	43	55	55	54	53	52	53
Construction	7,806	8,215	7,569	8,187	7,784	7,866	8,937	9,991	10,022	9,979	9,625	9,526
Trans. & Public Util.	11,859	12,046	12,186	12,728	13,506	14,263	15,397	15,614	15,639	15,244	15,074	15,011
Fin. & Ins. & Real Estate	24,639	26,116	27,163	30,054	31,438	35,588	38,979	41,097	40,905	40,222	39,608	39,654
Retail Trade	20,542	20,168	19,725	18,080	15,949	11,841	12,552	11,028	11,939	11,835	12,127	12,473
Wholesale Trade	16,157	16,444	17,607	17,509	17,572	18,635	18,822	18,437	18,547	16,914	16,126	15,368
Services	92,236	95,941	102,603	110,391	116,300	122,476	129,335	133,166	136,427	135,313	134,957	137,000
Agri. & For. & Fish Services	7,171	7,391	7,495	8,112	8,224	8,665	9,599	10,583	11,534	11,602	11,707	11,855

Panel B.1.2

¹⁸ Groshen, Erica and Simon Potter, “Has Structural Change Contributed to a Jobless Recovery?,” *Current Issues in Economics and Finance*, Federal Reserve Bank of New York, Vol. 9, No.8, August 2003.

¹⁹ Recognizing that the employment data include REMI forecasts for the years 2001, 2002 and 2003, we also examine time segments from 1993 to 1996 and 1997 to 2000, thereby excluding the forecast years. Because of the recession which began in March 2001 and the ensuing drop off in employment, the analytical findings are quite different from the findings when the forecast years are considered. However, we believe the REMI forecasts correctly reflect the recession and we base our principal analysis on the data that includes the forecast years.

Employment (% change) Intermediate Demand													Std.
Sources	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f	Average	Dev.
Durables Manuf.	3.3%	0.9%	2.9%	-3.1%	1.6%	3.5%	1.1%	5.2%	-7.1%	-3.6%	-1.3%	0.3%	3.7%
Non-Durables Manuf.	0.1%	0.1%	0.5%	3.2%	4.0%	-2.6%	-1.5%	0.5%	-3.2%	-1.0%	-0.4%	0.0%	2.2%
Mining	0.0%	-7.7%	-5.6%	23.5%	2.4%	27.9%	0.0%	-1.8%	-1.9%	-1.9%	1.9%	3.4%	11.5%
Construction	5.2%	-7.9%	8.2%	-4.9%	1.1%	13.6%	11.8%	0.3%	-0.4%	-3.5%	-1.0%	2.0%	6.9%
Trans. & Public Util.	1.6%	1.2%	4.4%	6.1%	5.6%	8.0%	1.4%	0.2%	-2.5%	-1.1%	-0.4%	2.2%	3.3%
Fin. & Ins. & Real Estate	6.0%	4.0%	10.6%	4.6%	13.2%	9.5%	5.4%	-0.5%	-1.7%	-1.5%	0.1%	4.5%	5.1%
Retail Trade	-1.8%	-2.2%	-8.3%	-11.8%	-25.8%	6.0%	-12.1%	8.3%	-0.9%	2.5%	2.9%	-3.9%	9.9%
Wholesale Trade	1.8%	7.1%	-0.6%	0.4%	6.0%	1.0%	-2.0%	0.6%	-8.8%	-4.7%	-4.7%	-0.4%	4.6%
Services	4.0%	6.9%	7.6%	5.4%	5.3%	5.6%	3.0%	2.4%	-0.8%	-0.3%	1.5%	3.7%	2.8%
Agri. & For. & Fish Services	3.1%	1.4%	8.2%	1.4%	5.4%	10.8%	10.3%	9.0%	0.6%	0.9%	1.3%	4.7%	4.1%

Panel B.1.3

Employment (units)												
Local Consumption	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f
Durables Manuf.	2,108	2,138	2,195	2,352	2,354	2,428	2,489	2,476	2,728	2,741	2,772	2,817
Non-Durables Manuf.	6,435	6,379	6,485	6,448	6,474	6,671	6,777	7,237	7,567	7,574	7,707	7,646
Mining	1	1	1	1	1	1	1	1	1	1	1	1
Construction	2	2	3	4	6	7	8	8	96	190	277	368
Trans. & Public Util.	7,384	7,589	7,958	8,262	8,619	8,815	9,309	9,851	10,179	10,064	10,032	10,101
Fin. & Ins. & Real Estate	35,108	35,956	36,800	37,754	39,862	42,510	43,292	44,268	45,405	44,965	44,518	44,743
Retail Trade	157,618	161,883	172,396	180,247	183,414	188,299	191,280	194,258	204,562	200,140	200,280	198,417
Wholesale Trade	11,763	11,804	12,349	12,958	13,373	13,574	14,063	14,972	15,998	15,399	15,206	14,779
Services	174,503	177,296	185,347	192,276	197,232	204,253	207,902	213,280	221,058	221,065	220,184	221,593
Agri. & For. & Fish Services	2,463	2,662	2,812	2,868	3,228	3,299	3,383	3,571	4,049	4,181	4,301	4,477

Panel B.1.4

Employment (% change)													Std.
Local Consumption	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f	Average	Dev.
Durables Manuf.	1.4%	2.7%	7.2%	0.1%	3.1%	2.5%	-0.5%	10.2%	0.5%	1.1%	1.6%	2.7%	3.2%
Non-Durables Manuf.	-0.9%	1.7%	-0.6%	0.4%	3.0%	1.6%	6.8%	4.6%	0.1%	1.8%	-0.8%	1.6%	2.4%
Mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Construction	0.0%	50.0%	33.3%	50.0%	16.7%	14.3%	0.0%	1100.0%	97.9%	45.8%	32.9%	131.0%	322.6%
Trans. & Public Util.	2.8%	4.9%	3.8%	4.3%	2.3%	5.6%	5.8%	3.3%	-1.1%	-0.3%	0.7%	2.9%	2.3%
Fin. & Ins. & Real Estate	2.4%	2.3%	2.6%	5.6%	6.6%	1.8%	2.3%	2.6%	-1.0%	-1.0%	0.5%	2.3%	2.3%
Retail Trade	2.7%	6.5%	4.6%	1.8%	2.7%	1.6%	1.6%	5.3%	-2.2%	0.1%	-0.9%	2.1%	2.6%
Wholesale Trade	0.3%	4.6%	4.9%	3.2%	1.5%	3.6%	6.5%	6.9%	-3.7%	-1.3%	-2.8%	2.2%	3.6%
Services	1.6%	4.5%	3.7%	2.6%	3.6%	1.8%	2.6%	3.6%	0.0%	-0.4%	0.6%	2.2%	1.6%
Agri. & For. & Fish Services	8.1%	5.6%	2.0%	12.6%	2.2%	2.5%	5.6%	13.4%	3.3%	2.9%	4.1%	5.7%	4.1%

Panel B.1.5

Employment (units)

Government Demand	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f
Durables Manuf.	810	671	656	646	621	589	600	569	631	633	646	635
Non-Durables Manuf.	682	714	723	711	707	692	701	713	793	802	812	800
Mining	0	0	0	0	0	0	0	0	0	0	0	0
Construction	10,861	11,270	12,429	12,341	13,560	13,440	13,998	14,398	16,139	16,745	16,506	16,261
Trans. & Public Util.	1,039	1,066	1,107	1,116	1,137	1,116	1,173	1,239	1,310	1,314	1,311	1,272
Fin. & Ins. & Real Estate	944	1,056	1,072	1,121	1,078	1,111	1,122	1,137	1,217	1,219	1,204	1,162
Retail Trade	113	146	77	147	181	319	288	295	370	424	500	543
Wholesale Trade	1,071	1,077	1,102	1,135	1,179	1,150	1,166	1,189	1,340	1,326	1,346	1,311
Services	1,433	2,153	2,522	1,984	847	523	223	159	1,109	1,198	763	468
Agri. & For. & Fish Services	53	85	86	76	67	83	95	97	136	146	138	139

Panel B.1.6

Employment (% change)

Government Demand	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f	Average	Std. Dev.
Durables Manuf.	-17.2%	-2.2%	-1.5%	-3.9%	-5.2%	1.9%	-5.2%	10.9%	0.3%	2.1%	-1.7%	-2.0%	6.8%
Non-Durables Manuf.	4.7%	1.3%	-1.7%	-0.6%	-2.1%	1.3%	1.7%	11.2%	1.1%	1.2%	-1.5%	1.5%	3.8%
Mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Construction	3.8%	10.3%	-0.7%	9.9%	-0.9%	4.2%	2.9%	12.1%	3.8%	-1.4%	-1.5%	3.8%	5.0%
Trans. & Public Util.	2.6%	3.8%	0.8%	1.9%	-1.8%	5.1%	5.6%	5.7%	0.3%	-0.2%	-3.0%	1.9%	3.0%
Fin. & Ins. & Real Estate	11.9%	1.5%	4.6%	-3.8%	3.1%	1.0%	1.3%	7.0%	0.2%	-1.2%	-3.5%	2.0%	4.6%
Retail Trade	29.2%	-47.3%	90.9%	23.1%	76.2%	-9.7%	2.4%	25.4%	14.6%	17.9%	8.6%	21.0%	37.7%
Wholesale Trade	0.6%	2.3%	3.0%	3.9%	-2.5%	1.4%	2.0%	12.7%	-1.0%	1.5%	-2.6%	1.9%	4.1%
Services	50.2%	17.1%	-21.3%	-57.3%	-38.3%	-57.4%	-28.7%	597.5%	8.0%	-36.3%	-38.7%	35.9%	189.2%
Agri. & For. & Fish Services	60.4%	1.2%	-11.6%	-11.8%	23.9%	14.5%	2.1%	40.2%	7.4%	-5.5%	0.7%	11.0%	22.5%

Panel B.1.7

Employment (units)

Investment Activity	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f
Durables Manuf.	3,031	3,133	2,923	2,974	2,870	3,027	3,040	3,078	3,322	3,077	2,936	3,038
Non-Durables Manuf.	128	254	157	159	250	307	214	264	-73	138	178	328
Mining	7	7	6	6	8	7	7	8	10	8	7	7
Construction	31,117	33,132	34,450	36,730	39,215	43,042	43,724	45,128	51,251	47,348	44,324	42,642
Trans. & Public Util.	332	368	392	435	484	518	589	641	728	685	678	691
Fin. & Ins. & Real Estate	816	824	817	911	1,050	1,258	1,299	1,295	1,363	1,351	1,345	1,304
Retail Trade	4,393	6,569	5,498	5,881	7,308	8,183	6,622	6,710	2,919	5,332	5,809	7,618
Wholesale Trade	1,277	2,024	1,856	2,122	2,829	3,202	3,035	3,628	3,097	3,598	3,781	4,350
Services	8,891	9,792	10,505	12,098	14,825	17,490	20,696	24,485	29,021	28,420	29,051	31,002
Agri. & For. & Fish Services	23	26	27	32	35	37	42	47	58	58	61	67

Panel B.1.8

Employment (% change)

Investment Activity	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f	Average	Std. Dev.
Durables Manuf.	3.4%	-6.7%	1.7%	-3.5%	5.5%	0.4%	1.3%	7.9%	-7.4%	-4.6%	3.5%	0.1%	5.0%
Non-Durables Manuf.	98.4%	-38.2%	1.3%	57.2%	22.8%	-30.3%	23.4%	-127.7%	289.0%	29.0%	84.3%	-15.3%	110.3%
Mining	0.0%	-14.3%	0.0%	33.3%	-12.5%	0.0%	14.3%	25.0%	-20.0%	-12.5%	0.0%	1.2%	16.9%
Construction	6.5%	4.0%	6.6%	6.8%	9.8%	1.6%	3.2%	13.6%	-7.6%	-6.4%	-3.8%	3.1%	6.7%
Trans. & Public Util.	10.8%	6.5%	11.0%	11.3%	7.0%	13.7%	8.8%	13.6%	-5.9%	-1.0%	1.9%	7.1%	6.3%
Fin. & Ins. & Real Estate	1.0%	-0.8%	11.5%	15.3%	19.8%	3.3%	-0.3%	5.3%	-0.9%	-0.4%	-3.0%	4.6%	7.6%
Retail Trade	49.5%	-16.3%	7.0%	24.3%	12.0%	-19.1%	1.3%	-56.5%	82.7%	8.9%	31.1%	11.4%	36.8%
Wholesale Trade	58.5%	-8.3%	14.3%	33.3%	13.2%	-5.2%	19.5%	-14.6%	16.2%	5.1%	15.0%	13.4%	20.4%
Services	10.1%	7.3%	15.2%	22.5%	18.0%	18.3%	18.3%	18.5%	-2.1%	2.2%	6.7%	12.3%	7.9%
Agri. & For. & Fish Services	13.0%	3.8%	18.5%	9.4%	5.7%	13.5%	11.9%	23.4%	0.0%	5.2%	9.8%	10.4%	6.8%

Panel B.1.9

Employment (units)	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f
Exports to Rest of Florida	10,855	10,976	10,795	11,068	10,739	10,825	11,146	11,134	11,206	10,715	10,557	10,594
Durables Manuf.	10,855	10,976	10,795	11,068	10,739	10,825	11,146	11,134	11,206	10,715	10,557	10,594
Non-Durables Manuf.	10,012	9,733	9,467	9,115	9,456	9,966	9,746	9,780	9,989	9,997	10,118	10,130
Mining	131	132	128	124	141	136	146	148	141	132	127	126
Construction	4,132	4,240	4,371	4,758	5,251	5,574	5,714	5,907	6,246	6,078	5,835	5,698
Trans. & Public Util.	10,805	11,057	11,252	11,777	12,340	13,013	13,918	14,385	14,723	14,552	14,496	14,522
Fin. & Ins. & Real Estate	17,180	18,009	18,131	19,150	21,261	24,743	26,076	25,998	26,339	26,207	26,004	26,130
Retail Trade	14,932	16,621	16,800	18,494	14,823	15,299	15,218	14,840	15,229	15,100	15,126	15,113
Wholesale Trade	12,385	12,548	12,852	12,309	12,875	12,916	12,677	13,104	13,293	12,759	12,533	12,296
Services	54,905	55,819	55,852	65,688	67,851	69,683	70,981	76,544	78,640	78,919	79,536	81,431
Agri. & For. & Fish Services	735	738	764	805	784	852	944	1,022	1,121	1,138	1,154	1,176

Panel B.1.10

Employment (% change)	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f	Average	Std. Dev.
Exports to Rest of Florida	1.1%	-1.6%	2.5%	-3.0%	0.8%	3.0%	-0.1%	0.6%	-4.4%	-1.5%	0.4%	-0.2%	2.2%
Durables Manuf.	1.1%	-1.6%	2.5%	-3.0%	0.8%	3.0%	-0.1%	0.6%	-4.4%	-1.5%	0.4%	-0.2%	2.2%
Non-Durables Manuf.	-2.8%	-2.7%	-3.7%	3.7%	5.4%	-2.2%	0.3%	2.1%	0.1%	1.2%	0.1%	0.1%	2.9%
Mining	0.8%	-3.0%	-3.1%	13.7%	-3.5%	7.4%	1.4%	-4.7%	-6.4%	-3.8%	-0.8%	-0.2%	5.9%
Construction	2.6%	3.1%	8.9%	10.4%	6.2%	2.5%	3.4%	5.7%	-2.7%	-4.0%	-2.3%	3.1%	4.7%
Trans. & Public Util.	2.3%	1.8%	4.7%	4.8%	5.5%	7.0%	3.4%	2.3%	-1.2%	-0.4%	0.2%	2.8%	2.6%
Fin. & Ins. & Real Estate	4.8%	0.7%	5.6%	11.0%	16.4%	5.4%	-0.3%	1.3%	-0.5%	-0.8%	0.5%	4.0%	5.5%
Retail Trade	11.3%	1.1%	10.1%	-19.8%	3.2%	-0.5%	-2.5%	2.6%	-0.8%	0.2%	-0.1%	0.4%	8.0%
Wholesale Trade	1.3%	2.4%	-4.2%	4.6%	0.3%	-1.9%	3.4%	1.4%	-4.0%	-1.8%	-1.9%	0.0%	2.9%
Services	1.7%	0.1%	17.6%	3.3%	2.7%	1.9%	7.8%	2.7%	0.4%	0.8%	2.4%	3.8%	5.0%
Agri. & For. & Fish Services	0.4%	3.5%	5.4%	-2.6%	8.7%	10.8%	8.3%	9.7%	1.5%	1.4%	1.9%	4.4%	4.4%

Panel B.1.11

Employment (units)

Exports to Rest of Nation	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f
Durables Manuf.	16,872	16,956	16,731	16,845	16,437	16,477	17,304	17,801	16,543	15,829	15,750	16,088
Non-Durables Manuf.	6,329	6,047	5,666	5,333	5,610	5,908	5,782	5,818	5,692	5,716	5,807	5,833
Mining	859	900	897	829	830	811	840	839	745	703	684	677
Construction	2,995	2,516	2,781	3,354	3,270	3,451	3,381	3,504	3,507	3,411	3,314	3,258
Trans. & Public Util.	11,613	12,107	12,490	13,059	13,379	13,810	15,430	16,231	16,206	15,962	15,950	15,971
Fin. & Ins. & Real Estate	13,222	14,331	12,266	12,386	13,820	16,937	18,152	18,440	18,475	18,402	18,355	18,456
Retail Trade	8,298	8,728	4,758	8,355	3,646	5,290	6,296	8,161	8,300	8,252	8,348	8,369
Wholesale Trade	8,479	9,469	9,834	10,104	10,657	10,435	10,089	10,797	10,491	9,976	9,810	9,663
Services	57,171	69,773	83,610	84,758	98,358	117,625	144,369	148,753	149,549	150,017	153,272	159,191
Agri. & For. & Fish Services	3,934	4,311	4,329	5,064	4,807	4,079	3,814	3,696	3,979	4,048	4,127	4,227

Panel B.1.12

Employment (% change)

Exports to Rest of Nation	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f	Average	Std. Dev.
Durables Manuf.	0.5%	-1.3%	0.7%	-2.4%	0.2%	5.0%	2.9%	-7.1%	-4.3%	-0.5%	2.1%	-0.4%	3.4%
Non-Durables Manuf.	-4.5%	-6.3%	-5.9%	5.2%	5.3%	-2.1%	0.6%	-2.2%	0.4%	1.6%	0.4%	-0.7%	4.0%
Mining	4.8%	-0.3%	-7.6%	0.1%	-2.3%	3.6%	-0.1%	-11.2%	-5.6%	-2.7%	-1.0%	-2.0%	4.7%
Construction	-16.0%	10.5%	20.6%	-2.5%	5.5%	-2.0%	3.6%	0.1%	-2.7%	-2.8%	-1.7%	1.1%	9.2%
Trans. & Public Util.	4.3%	3.2%	4.6%	2.5%	3.2%	11.7%	5.2%	-0.2%	-1.5%	-0.1%	0.1%	3.0%	3.7%
Fin. & Ins. & Real Estate	8.4%	-14.4%	1.0%	11.6%	22.6%	7.2%	1.6%	0.2%	-0.4%	-0.3%	0.6%	3.4%	9.2%
Retail Trade	5.2%	-45.5%	75.6%	-56.4%	45.1%	19.0%	29.6%	1.7%	-0.6%	1.2%	0.3%	6.8%	37.1%
Wholesale Trade	11.7%	3.9%	2.7%	5.5%	-2.1%	-3.3%	7.0%	-2.8%	-4.9%	-1.7%	-1.5%	1.3%	5.2%
Services	22.0%	19.8%	1.4%	16.0%	19.6%	22.7%	3.0%	0.5%	0.3%	2.2%	3.9%	10.1%	9.7%
Agri. & For. & Fish Services	9.6%	0.4%	17.0%	-5.1%	-15.1%	-6.5%	-3.1%	7.7%	1.7%	2.0%	2.4%	1.0%	8.6%

Panel B.1.13

Employment (units)

Exports to Rest of World	1993	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f
Durables Manuf.	8,411	8,694	9,383	9,814	10,836	9,978	9,688	9,612	8,928	8,233	7,910	8,187
Non-Durables Manuf.	2,841	2,881	3,003	3,040	3,203	3,063	3,092	3,134	2,873	2,672	2,600	2,702
Mining	75	76	78	81	92	110	48	48	40	36	34	34
Construction	14	14	15	15	16	15	13	12	54	96	135	187
Trans. & Public Util.	4,909	5,221	5,758	6,086	6,143	6,154	6,158	6,644	6,070	5,586	5,281	5,288
Fin. & Ins. & Real Estate	2,972	3,417	3,516	3,830	4,190	4,375	4,619	4,544	4,248	4,062	3,967	4,144
Retail Trade	315	329	344	347	356	344	413	432	457	467	497	565
Wholesale Trade	6,740	7,044	7,599	7,763	8,335	7,778	8,062	8,421	8,243	7,668	7,568	7,864
Services	4,752	5,380	5,806	6,191	7,288	7,401	5,286	5,502	5,253	5,073	5,001	5,282
Agri. & For. & Fish Services	943	921	904	744	815	779	814	765	754	729	715	750

Panel B.1.14

Employment (% change)

Exports to Rest of World	1994	1995	1996	1997	1998	1999	2000	2001f	2002f	2003f	2004f	Average	Std. Dev.
Durables Manuf.	3.4%	7.9%	4.6%	10.4%	-7.9%	-2.9%	-0.8%	-7.1%	-7.8%	-3.9%	3.5%	-0.1%	6.4%
Non-Durables Manuf.	1.4%	4.2%	1.2%	5.4%	-4.4%	0.9%	1.4%	-8.3%	-7.0%	-2.7%	3.9%	-0.4%	4.6%
Mining	1.3%	2.6%	3.8%	13.6%	19.6%	-56.4%	0.0%	-16.7%	-10.0%	-5.6%	0.0%	-4.3%	19.9%
Construction	0.0%	7.1%	0.0%	6.7%	-6.3%	-13.3%	-7.7%	350.0%	77.8%	40.6%	38.5%	44.9%	104.8%
Trans. & Public Util.	6.4%	10.3%	5.7%	0.9%	0.2%	0.1%	7.9%	-8.6%	-8.0%	-5.5%	0.1%	0.9%	6.3%
Fin. & Ins. & Real Estate	15.0%	2.9%	8.9%	9.4%	4.4%	5.6%	-1.6%	-6.5%	-4.4%	-2.3%	4.5%	3.3%	6.5%
Retail Trade	4.4%	4.6%	0.9%	2.6%	-3.4%	20.1%	4.6%	5.8%	2.2%	6.4%	13.7%	5.6%	6.3%
Wholesale Trade	4.5%	7.9%	2.2%	7.4%	-6.7%	3.7%	4.5%	-2.1%	-7.0%	-1.3%	3.9%	1.5%	5.1%
Services	13.2%	7.9%	6.6%	17.7%	1.6%	-28.6%	4.1%	-4.5%	-3.4%	-1.4%	5.6%	1.7%	12.1%
Agri. & For. & Fish Services	-2.3%	-1.8%	-17.7%	9.5%	-4.4%	4.5%	-6.0%	-1.4%	-3.3%	-1.9%	4.9%	-1.8%	7.0%

f = REMI forecast

Table B2
Demand Source Quadrant Correlations by Industry Division
Tampa - St. Petersburg - Clearwater MSA

Panel B2.1

Intermediate Demand Sources	Growth	Growth	Growth	Growth
	93 - 98	99 - 04	93 - 96	97 - 00
Durables Manuf.	5.46%	-5.99%	7.16%	6.28%
Non-Durables Manuf.	7.97%	-5.53%	0.66%	-0.15%
Mining	10.26%	-3.64%	-12.82%	30.95%
Construction	0.77%	6.59%	4.88%	28.35%
Trans. & Public Util.	20.27%	-2.51%	7.33%	15.61%
Fin. & Ins. & Real Estate	44.44%	1.73%	21.98%	30.72%
Retail Trade	-42.36%	-0.63%	-11.99%	-30.85%
Wholesale Trade	15.34%	-18.35%	8.37%	4.92%
Services	32.79%	5.93%	19.68%	14.50%
Agri. & For. & Fish Services	20.83%	23.50%	13.12%	28.68%
Average	22.71%	5.65%	12.70%	13.09%

	Quadrant Correlations			
	93 - 98	99 - 04	93 - 96	97 - 00
Greater than Average	0.2	0.3	0.3	0.6
Less than Average	0.8	0.7	0.7	0.4

Panel B2.2

Growth	Growth	Growth	Growth
--------	--------	--------	--------

Local Consumption	93 - 98	99 - 04	93 - 96	97 - 00
Durables Manuf.	15.18%	13.18%	11.57%	5.18%
Non-Durables Manuf.	3.67%	12.82%	0.20%	11.79%
Mining	0.00%	0.00%	0.00%	0.00%
Construction	250.00%	4500.00%	100.00%	33.33%
Trans. & Public Util.	19.38%	8.51%	11.89%	14.29%
Fin. & Ins. & Real Estate	21.08%	3.35%	7.54%	11.05%
Retail Trade	19.47%	3.73%	14.36%	5.91%
Wholesale Trade	15.40%	5.09%	10.16%	11.96%
Services	17.05%	6.59%	10.18%	8.14%
Agri. & For. & Fish Services	33.94%	32.34%	16.44%	10.63%
Average	22.71%	5.65%	12.70%	13.09%

	Quadrant Correlations			
	93 - 98	99 - 04	93 - 96	97 - 00
Greater than Average	0.2	0.6	0.3	0.2
Less than Average	0.8	0.4	0.7	0.8

Panel B.2.3

Government Demand	Growth 93 - 98	Growth 99 - 04	Growth 93 - 96	Growth 97 - 00
Durables Manuf.	-27.28%	5.83%	-20.25%	-8.37%
Non-Durables Manuf.	1.47%	14.12%	4.25%	0.85%
Mining	nm	nm	nm	nm
Construction	23.75%	16.17%	13.63%	6.18%
Trans. & Public Util.	7.41%	8.44%	7.41%	8.97%
Fin. & Ins. & Real Estate	17.69%	3.57%	18.75%	5.47%
Retail Trade	182.30%	88.54%	30.09%	62.98%
Wholesale Trade	7.38%	12.44%	5.98%	0.85%
Services	-63.50%	109.87%	38.45%	-81.23%
Agri. & For. & Fish Services	56.60%	46.32%	43.40%	44.78%
Average	22.71%	5.65%	12.70%	13.09%

	Quadrant Correlations			
	93 - 98	99 - 04	93 - 96	97 - 00
Greater than Average	0.3	0.8	0.5	0.2
Less than Average	0.6	0.1	0.4	0.7

Panel B.2.4

Growth Growth Growth Growth

Investment Activity	93 - 98	99 - 04	93 - 96	97 - 00
Durables Manuf.	-0.13%	-0.07%	-1.88%	7.25%
Non-Durables Manuf.	139.84%	53.27%	24.22%	5.60%
Mining	0.00%	0.00%	-14.29%	0.00%
Construction	38.32%	-2.47%	18.04%	15.08%
Trans. & Public Util.	56.02%	17.32%	31.02%	32.44%
Fin. & Ins. & Real Estate	54.17%	0.38%	11.64%	23.33%
Retail Trade	86.27%	15.04%	33.87%	-8.18%
Wholesale Trade	150.74%	43.33%	66.17%	28.24%
Services	96.72%	49.80%	36.07%	65.16%
Agri. & For. & Fish Services	60.87%	59.52%	39.13%	34.29%
Average	22.71%	5.65%	12.70%	13.09%

	Quadrant Correlations			
	93 - 98	99 - 04	93 - 96	97 - 00
Greater than Average	0.8	0.6	0.7	0.6
Less than Average	0.2	0.4	0.3	0.4

Panel B.2.5

Exports to Rest of Florida	Growth 93 - 98	Growth 99 - 04	Growth 93 - 96	Growth 97 - 00
Durables Manuf.	-0.28%	-4.95%	1.96%	3.68%
Non-Durables Manuf.	-0.46%	3.94%	-8.96%	3.43%
Mining	3.82%	-13.70%	-5.34%	4.96%
Construction	34.90%	-0.28%	15.15%	12.49%
Trans. & Public Util.	20.43%	4.34%	9.00%	16.57%
Fin. & Ins. & Real Estate	44.02%	0.21%	11.47%	22.28%
Retail Trade	2.46%	-0.69%	23.85%	0.11%
Wholesale Trade	4.29%	-3.01%	-0.61%	1.78%
Services	26.92%	14.72%	19.64%	12.81%
Agri. & For. & Fish Services	15.92%	24.58%	9.52%	30.36%
Average	22.71%	5.65%	12.70%	13.09%

	Quadrant Correlations			
	93 - 98	99 - 04	93 - 96	97 - 00
Greater than Average	0.3	0.2	0.4	0.3
Less than Average	0.7	0.8	0.6	0.7

Panel B.2.6

Exports to Rest of Nation	Growth 93 - 98	Growth 99 - 04	Growth 93 - 96	Growth 97 - 00
---------------------------	-------------------	-------------------	-------------------	-------------------

Durables Manuf.	-2.34%	-7.03%	-0.16%	8.30%
Non-Durables Manuf.	-6.65%	0.88%	-15.74%	3.71%
Mining	-5.59%	-19.40%	-3.49%	1.08%
Construction	15.23%	-3.64%	11.99%	7.16%
Trans. & Public Util.	18.92%	3.51%	12.45%	21.32%
Fin. & Ins. & Real Estate	28.10%	1.67%	-6.32%	33.43%
Retail Trade	-36.25%	32.93%	0.69%	123.83%
Wholesale Trade	23.07%	-4.22%	19.16%	1.31%
Services	105.74%	10.27%	48.25%	51.24%
Agri. & For. & Fish Services	3.69%	10.83%	28.72%	-23.11%
Average	22.71%	5.65%	12.70%	13.09%

	Quadrant Correlations			
	93 - 98	99 - 04	93 - 96	97 - 00
Greater than Average	0.3	0.3	0.3	0.4
Less than Average	0.7	0.7	0.7	0.6

Panel B.2.7

Exports to Rest of World	Growth	Growth	Growth	Growth
	93 - 98	99 - 04	93 - 96	97 - 00
Durables Manuf.	18.63%	-15.49%	16.68%	-11.30%
Non-Durables Manuf.	7.81%	-12.61%	7.00%	-2.15%
Mining	46.67%	-29.17%	8.00%	-47.83%
Construction	7.14%	1338.46%	7.14%	-25.00%
Trans. & Public Util.	25.36%	-14.13%	23.98%	8.16%
Fin. & Ins. & Real Estate	47.21%	-10.28%	28.87%	8.45%
Retail Trade	9.21%	36.80%	10.16%	21.35%
Wholesale Trade	15.40%	-2.46%	15.18%	1.03%
Services	55.74%	-0.08%	30.28%	-24.51%
Agri. & For. & Fish Services	-17.39%	-7.86%	-21.10%	-6.13%
Average	22.71%	5.65%	12.70%	13.09%

	Quadrant Correlations			
	93 - 98	99 - 04	93 - 96	97 - 00
Greater than Average	0.4	0.2	0.4	0.1
Less than Average	0.6	0.8	0.6	0.9