

**FLORIDA EXTRUDERS – PROJECT EXPANSION ANALYSIS**

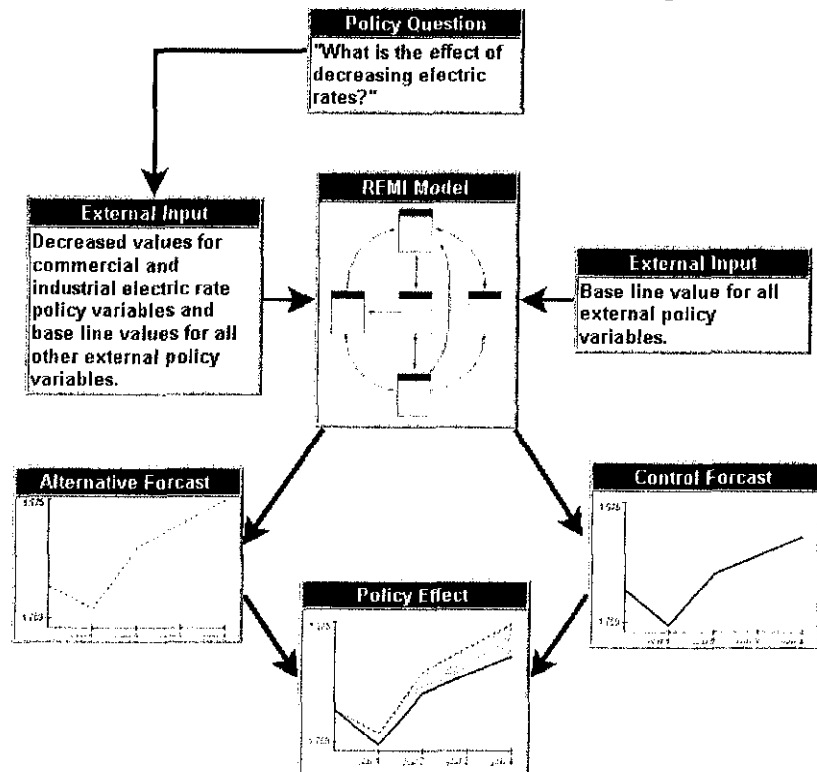
The East Central Florida Regional Planning Council has conducted an analysis of the effect on Seminole County's economy of expansion of Florida Extruders, a vertically integrated aluminum extruder, powder coat finisher, and window and door manufacturer. Currently the business has 435 employees; with the expansion, employment is expected to increase to 621 over the next 5 years. These employees will earn an average wage of \$26,387. Expansion plans include purchase of a 35-acre site for \$1.5 million, construction of a 224,000 square foot facility at a cost of \$8 million, and equipment purchases totaling \$2 million. Construction and equipment purchase would take approximately one year to complete.

**Results of Economic Analysis**

The Regional Planning Council used the Regional Economic Models Inc. (REMI) Policy Insight® model to generate the tables shown below. The model contains baseline projections for Seminole County that incorporate a wide variety of variables. When changes are entered into the model such as the changes resulting from expansion of Florida Extruders, the model produces an alternative forecast, which can then be compared to the baseline forecast. The results in this report are from the alternative forecast - they represent **changes from the baseline**, or no-change, scenario (ie, the company remaining at its current size). Figure 1 shows how the model works. A more comprehensive overview is provided at the end of this document.

This analysis takes into consideration the construction activity associated with the expansion, new employment, additional business, and the direct, indirect and induced impacts of project expansion. Table 1 shows the projected increase in employment resulting from the expansion.

**Figure 1:  
 the REMI**



**TABLE 1  
EMPLOYMENT CHANGES BY SECTOR IN SEMINOLE COUNTY  
RESULTING FROM EXPANSION OF FLORIDA EXTRUDERS**

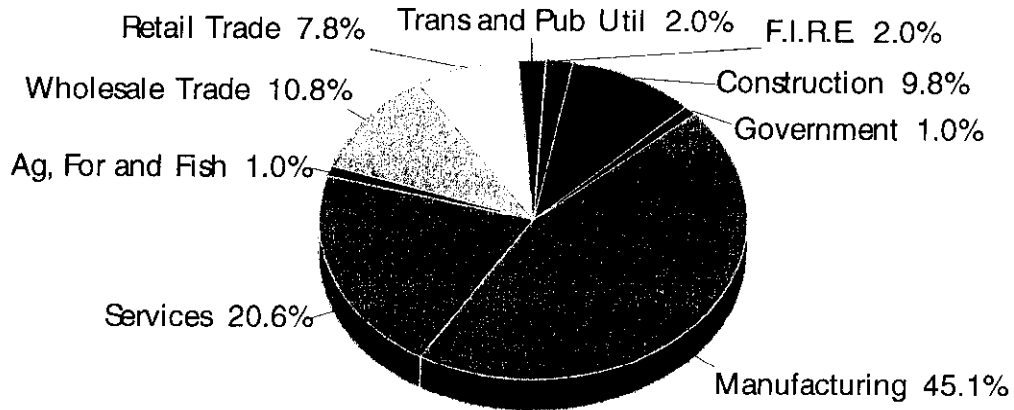
Employment	2004	2005	2006	2007	2008	2009	2010
Construction	67	39	39	40	38	37	35
Transportation and Public Utilities	7	7	8	8	8	8	8
Finance, Insurance Real Estate	8	6	6	6	5	4	4
Retail Trade	37	33	34	36	35	33	33
Wholesale Trade	43	44	46	49	49	49	49
Services	90	84	88	93	91	90	89
Agriculture, Forestry and Fisheries	3	3	3	3	3	3	4
Manufacturing - Durables	170	179	189	201	200	200	199
Manufacturing - Non-Durables	3	3	3	3	3	3	3
Government	2	2	3	4	4	5	6
Total	428	401	420	443	437	432	429

Note: These employment numbers reflect the expansion (186 additional employees) plus indirect employment. The company's existing 435 employees are not included.

Year 2004 reflects additional construction employment resulting from the expansion. Additional employees would be hired beginning in 2004. Future employment increases are attributed to increased demand for

### Employment by Sector, 2005\*

Expansion of Florida Extruders, Seminole County



\* The first full year of operation after the expansion.

F.I.R.E = Finance, Insurance and Real Estate

construction, wholesale and retail trade and services.

Table 2 below shows the increases in real personal income and Gross County Product resulting from the expansion. The County's investments and creation of new jobs will generate \$336 million in additional personal income for Seminole County households over the next 7 years, which translates into an average of approximately 13 dollars annually for every person in the County. Gross County Product (GCP) is derived as the sum of the gross county product originating in all industries in the county. In concept, an industry's GCP, or its value added, is equal to its gross output (sales or receipts and other operating income, commodity taxes, and inventory change) minus its intermediate inputs (consumption of goods and services purchased from other U.S. industries or imported). Thus, GCP often is considered the county counterpart of the national gross domestic product (GDP).

TABLE 2 INCREASE IN REAL PERSONAL INCOME AND GROSS COUNTY PRODUCT		
Year	Real Personal Income	Gross County Product
2004	\$38,114,913	\$9,262,000
2005	\$39,750,138	\$9,388,000
2006	\$44,391,659	\$10,530,000
2007	\$49,778,400	\$11,830,000
2008	\$52,205,200	\$12,480,000
2009	\$54,829,760	\$13,190,000
2010	\$57,713,816	\$13,930,000
Total	\$336,783,886	\$80,610,000

Table 3 shows projected increases in taxes to Seminole County resulting from the expansion and additional investment in the County. Additional property taxes are a result of both residential and non-residential investment. Additional residential investment results from employment increases (which total almost 450 jobs by 2008), because population increases follow an increase in jobs. Additional non-residential investment results from increases in consumer and business spending and investment, which generate a need for new businesses in the County. Projected increases in residential and non-residential investment are shown in Table 4.

TABLE 3 FISCAL IMPACTS TO SEMINOLE COUNTY			
Year	Property Tax	Sales Tax	Gas Tax
2004	\$148,600	\$57,730	\$11,030
2005	\$224,500	\$54,940	\$10,000
2006	\$299,500	\$58,190	\$10,420
2007	\$374,200	\$62,010	\$10,920
2008	\$442,500	\$61,540	\$10,730
2009	\$505,100	\$61,220	\$10,650
2010	\$563,000	\$61,110	\$10,610
Total	\$2,557,400	\$416,740	\$74,360

**TABLE 4  
ADDITIONAL RESIDENTIAL AND NON-RESIDENTIAL  
INVESTMENT IN SEMINOLE COUNTY**

Year	Residential	Non-Residential
2004	\$1,038,535	\$4,136,034
2005	\$924,079	\$4,168,190
2006	\$954,598	\$4,367,285
2007	\$997,549	\$4,607,902
2008	\$961,546	\$4,499,510
2009	\$939,635	\$4,414,283
2010	\$925,267	\$4,354,124
Total	\$6,741,209	\$30,547,328

**Economic Impact of Manufacturing Sector Jobs**

Expanding a manufacturing company such as Florida Extruders will have a larger overall economic impact than expanding a company that hires, for example, professional service employees. A similar analysis run on a company employing the same number of employees (but in the professional service sector rather than the manufacturing sector) and constructing a similar facility had the employment results shown in Table 5. Although the direct employees earned similar wages, the employment and other impacts differed significantly.

**TABLE 5  
EMPLOYMENT CHANGES BY SECTOR IN SEMINOLE COUNTY  
RESULTING FROM PROFESSIONAL SERVICE EMPLOYEES**

Employment	2004	2005	2006	2007	2008	2009	2010
Construction	34	6	6	6	6	5	5
Transportation and Public Utilities	1	1	1	1	1	1	1
Finance, Insurance Real Estate	4	3	3	3	3	3	3
Retail Trade	17	13	14	14	13	13	13
Wholesale Trade	3	2	2	1	1	1	1
Services	192	195	206	218	218	217	217
Agriculture, Forestry and Fisheries	1	1	1	1	1	1	1
Manufacturing - Durables	2	1	1	1	1	1	1
Manufacturing - Non-Durables	1	1	1	1	1	1	1
Government	1	2	2	3	3	3	4
Total	256	225	237	249	248	246	247

The professional service company expansion modeled above shows a smaller overall increase in employment -248 employees compared to 437 employees in Year 2008 for the Florida Extruders expansion (see Table 1). Additionally, these jobs are heavily clustered in the service sector, which tends to have a lower average wage than the manufacturing sector. (See Table 6.)

TABLE 6 AVERAGE WAGES BY SECTOR IN SEMINOLE COUNTY	
Employment Sector	Average Wage
Manufacturing Durables	\$43,489
Manufacturing Non-Durables	\$31,624
Mining	\$7,258
Construction	\$30,952
Transportation and Public Utilities	\$49,072
Finance, Insurance and Real Estate	\$24,326
Retail Trade	\$19,581
Wholesale Trade	\$52,690
Services	\$27,133
Agriculture, Forestry and Fisheries Services	\$14,643

Table 7 shows employment, productivity and output by sector for Seminole County. Even though the manufacturing sector represents only 5 percent of total employment in the County, the high level of productivity means that the manufacturing sector is responsible for over 16 percent of the County's output.

TABLE 7 EMPLOYMENT, PRODUCTIVITY AND OUTPUT BY SECTOR SEMINOLE COUNTY, 2003					
Sector	Employment		Productivity*	Output	% of total
	Number	% of total			
Manufacturing Durables	8,645	5.0%	\$344,629	\$321,437,728	16.6%
Manufacturing Non-Durables	2,572	1.5%	\$192,283	\$49,569,024	2.6%
Mining	107	0.1%	\$333,773	\$3,695,936	0.2%
Construction	17,282	10.0%	\$103,879	\$186,536,064	9.6%
Transportation and Public Utilities	7,278	4.2%	\$231,947	\$177,622,336	9.1%
Finance, Insurance and Real Estate	16,375	9.4%	\$244,960	\$415,901,504	21.4%
Retail Trade	42,510	24.5%	\$51,017	\$220,234,304	11.3%
Wholesale Trade	9,228	5.3%	\$144,480	\$140,554,272	7.2%
Services	66,231	38.2%	\$61,198	\$415,901,504	21.4%
Agriculture, Forestry and Fisheries Svcs	3,125	1.8%	\$33,181	\$10,218,176	0.5%

\* Productivity refers to output per employee (in 2003 dollars).

## **An Overview of REMI Policy Insight®**

### **What Is REMI Policy Insight®?**

Founded in 1980, Regional Economic Models, Inc. (REMI) constructs models that reveal the economic and demographic effects that policy initiatives or external events may cause on a local economy. REMI model users include national, regional, state and city governments, as well as universities, nonprofit organizations, public utilities and private consulting firms.

REMI Policy Insight combines years of economic experience with an easy-to-use software interface. A major feature of REMI is that it is a dynamic model that forecasts how changes in the economy and adjustments to those changes will occur on a year-by-year basis. The model is sensitive to a very wide range of policy and project alternatives and to interactions between the regional and national economies. By pointing and clicking, you can answer the toughest "What if...?" questions about federal, state, local or regional economies. REMI is dedicated to continuing economic research combined with quality customer service and support.

### **Model Introduction**

The East Central Florida Regional Planning Council's version of REMI Policy Insight includes a REMI model that has been built especially for the East Central Florida region. The model-building system uses hundreds of programs developed over the past two decades to build customized models for each area using data from the Bureau of Economic Analysis, the Bureau of Labor Statistics, the Department of Energy, the Census Bureau and other public sources.

The REMI model is a structural model, meaning that it clearly includes cause-and-effect relationships. The model shares two key underlying assumptions with mainstream economic theory: households maximize utility and producers maximize profits. Since these assumptions make sense to most people, the model can be understood by intelligent lay people as well as trained economists.

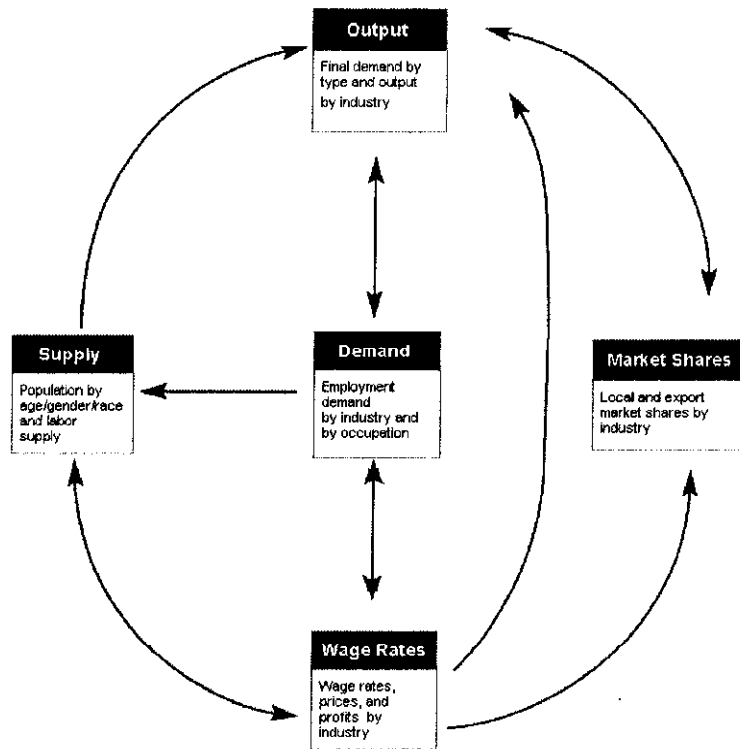
In the model, businesses produce goods to sell to other firms, consumers, investors, governments and purchasers outside the region. The output is produced using labor, capital, fuel and intermediate inputs. The demand for labor, capital and fuel per unit of output depends on their relative costs, since an increase in the price of any one of these inputs leads to substitution away from that input to other inputs. The supply of labor in the model depends on the number of people in the population and the proportion of those people who participate in the labor force. Economic migration affects the population size. More people will move into an area if the real after-tax wage rates or the likelihood of being employed increases in a region.

Supply and demand for labor in the model determine the wage rates. These wage rates, along with other prices and productivity, determine the cost of doing business for every industry in the model. An increase in the cost of doing business causes either an increase in price or a cut in profits, depending on the market for the product. In either case, an increase in cost would decrease the share of the local and U.S. market supplied by local firms. This market share combined with the demand described above determines the amount of local output. Of course, the model has many other feedbacks. For example, changes in wages and employment impact income and consumption, while economic



## Model Overview

Below is a pictorial representation of the model. The Output block shows a factory that sells to all the sectors of final demand as well as to other industries. The Labor and Capital Demand block shows how labor and capital requirements depend both on output and their



relative costs.

Population and Labor Supply are shown as contributing to demand and to wage determination in the product and labor market. The feedback from this market shows that economic migrants respond to labor market conditions. Demand and supply interact in the Wage, Price and Profit block. Once prices and profits are established, they determine market shares, which along with components of demand, determine output. The REMI model brings together all of the above elements to determine the value of each of the variables in the model for each year in the baseline forecasts. The model includes all the inter-industry relationships that are in an input-output model in the Output block, but goes well beyond the input-output model by including the relationships in all of the other blocks shown in the figure.

In order to broaden the model in this way, it was necessary to estimate key relationships. This was accomplished by using extensive data sets covering all areas in the country. These large data sets and two decades of research effort have enabled REMI to simultaneously maintain a theoretically sound model structure and build a model based on all the relevant data available. The model has strong dynamic properties, which means that it forecasts not only what will happen but when it will happen. This results in long-term predictions that have general equilibrium properties. This means that the long-term properties of general equilibrium models are preserved without



sacrificing the accuracy of event timing predictions and without simply taking elasticity estimates from secondary sources.