

**SAVANNAH ECONOMIC DEVELOPMENT AUTHORITY (SEDA):
FINDINGS OF ITS IMPACTS ON THE CHATHAM COUNTY AND COASTAL
REGION OF GEORGIA**

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Introduction

By definition economic development is a process. Anyone engaged in economic development understands that new economic opportunities do not materialize by luck. Firms make deliberate decisions based on expected bottom-line outcomes, and firms are particularly careful in regard to decisions made about the location of an operation. It is the job of the economic developer to understand the factors that make a location desirable, including what investments must be made in infrastructure which will make a location competitive and desirable to firms.

The Savannah Economic Development Authority (SEDA) has requested the preparation of estimates of the economic impact of its last ten years of effort on behalf of Chatham County. This report presents the findings on the economic impact of SEDA on the Chatham County economy and on the neighboring economies in coastal Georgia. The region wide impact analysis includes nine neighboring counties: Bulloch, Bryan, Camden, Chatham, Effingham, Glynn, Liberty, Long and McIntosh. Additionally, the impact analysis as examined here includes the economic impact of some of the ‘intangible’ investments made by SEDA in education, health and other infrastructure.

The following analysis shows that absent the efforts of SEDA, today’s Chatham County economy would be much smaller, and its residents would be much poorer. Between 1996 and 2007, SEDA attracted and/or retained nearly 15,320 jobs and attracted nearly \$1.8 billion in investment in the construction of plants and equipment. SEDA also contributed nearly \$500 million in low cost financing for public infrastructure, much of which was invested in facilities for higher education. As will be shown below these investments on public infrastructure are expected to continue to create between 200 and 300 jobs per year out to 2040.

Methodology and Data

To carry out the analysis of the economic impact, the Bureau of Business Research and Economic Development (BBRED) relied on the dynamic, regional modeling system REMI. REMI shares with input-output analysis the ability to show how jobs or expenditures created in one sector spill over and create jobs or expenditures in other sectors, the familiar multiplier analysis of most economic impact analyses. However, REMI also shows how markets adjust in the process. For example, expanding the number of jobs available in any sector of the economy increases the demand for labor which will tend to raise wages in that sector of employment. As labor is bid into the newly created jobs in a given sector by higher wages, to keep valuable workers in other sectors, wages also increase in other sectors. REMI traces out the market effects of economic development including increases in per capita income, changes in the value of housing as people with more purchasing power buy better homes, and changes in the number/value of businesses as new companies demand support services and as wealthier households spend more money.

As a policy model, REMI allows the analyst to answer ‘what if’ questions. For example, REMI

provides a means of showing: what if the jobs SEDA created in the last ten years were not here now? If those SEDA jobs were not captured in 2007 economy, how long would it take for the region to grow back to the size it is in 2007 with the SEDA jobs in the base of the economy?

SEDA provided data on all projects in which SEDA was engaged between 1996 and 2007. The most critical data provided were the number of jobs to be generated by the project in its initial year, the number of jobs present at the business in 2007, and initial investment in Chatham County in terms of plant and equipment plus any known additional investment. The data on the projects were cross-coded by BBRED to identify the NAICS code. The North American Industrial Classification System (NAICS) codes were used to assign the jobs to the appropriate REMI defined sector.

The assignment of jobs to the proper REMI sector is a critical step. In the goods and services production portion of the REMI model, the productivity in each sector is estimated based on sector specific factors, such as improvements in technology. Hence, the number of jobs required to produce the same output each year may vary. The impact of losses in output if certain jobs are removed from the economy will, therefore, vary depending on the expected changes in productivity in the sector. For example, one should expect a much greater impact on gross regional output if one loses jobs in an aerospace versus jobs in distribution.

Table 1
Jobs and Investment by Sector

Sector	Jobs Created	Percent	Invest/Expansion		Bonds (\$)	Percent
			Construction Costs (\$)	Percent		
Construction, Utilities, Mining	487	3%	41,199,986	2%	134,520,000	28%
Manufacturing	8,143	53%	774,420,000	43%	63,615,000	13%
Wholesale Trade, Retail Trade	2,057	13%	140,695,000	8%	23,000,000	5%
Transportation and Warehousing	2,477	16%	438,320,000	24%	85,000,000	17%
Prof and Tech Services	1,495	10%	226,790,000	13%	50,000,000	10%
Public Administration and Health	268	2%	55,997,000	3%	124,190,000	25%
Arts, Entertainment and Recreation	393	3%	118,600,000	7%	8,000,000	2%
Total	15,320		1,796,021,986		488,325,000	

Table 1 shows the summary of all SEDA projects from 1996 to 2007 by REMI sector. It should first be noted, that Table 1 shows the net total jobs created that still remain in the economy in 2007. SEDA in fact created or retained 16,115 jobs between 1996 and 2007. Of the 16,115 jobs only 795 did not survive until 2007. That means that the success rate for survival of a SEDA created job has been 95%.

Second, of the 15,320 jobs that were created or retained, 53% were in manufacturing. Another 16% were in transportation and warehousing. These jobs are directly related to, and support the growth of, the Port of Savannah. Professional and technical services and public administration and health combine to make up another 11% of the jobs created or retained. Wholesale and retail trade make up 13% of the jobs created or retained. In short, while SEDA clearly propelled the important growth sectors of manufacturing and warehouse/distribution, SEDA also made

essential investments in a balanced economy.

In terms of the investment in plant and equipment associated with the jobs created or retained, about 43% of the total investment was in manufacturing plants and equipments. Another 24% was in transportation and warehousing. This sector has historically been known as one that has a very high plant cost per worker, so a much higher investment in plant and equipment relative to the share of jobs created is to be expected.

Findings: SEDA's Impact on Chatham County

Once the data were summarized based on REMI's structure, two forecasts were prepared. The first forecast shows the expected path of growth of the Chatham County economy in which all of the 15,320 jobs created by SEDA between 1996 and 2007 remain in the base of the economy. In other words, the first scenario is a forecast of the path the Chatham County economy is likely to follow. The second forecast shows for 2007, and for all future years, a 'what if' scenario: what would have been the path of the Chatham County economy if SEDA had not attracted or retained 15,320 jobs between 1996 and 2007. The second scenario traces out the path of the Chatham County economy as if SEDA had not existed. The findings for each scenario are enumerated below.

Chatham County With and Without SEDA 2007

Table 2 shows the difference between the Chatham County economy in 2007 with the jobs SEDA created or retained and, in contrast, without those jobs. The measures of changes in the economy include changes in Gross Regional Product, Personal and Real Disposable Personal Income, Population, the value of Residential Capital Stock and Business Capital Stock.

Table 2
Impact in 2007: Chatham County

	With SEDA	Total Without	Change From 2007
Total Emp	175,760	162,314	-13,450
Total GRP (Fixed 2000\$)	10,233,000,000	9,179,000,000	-1,054,000,000
Personal Income (Nom \$)	9,351,000,000	8,852,000,000	-498,900,000
Real Disp Pers Inc (Fixed 2000\$)	7,047,000,000	6,693,000,000	-353,800,000
Population	242,393	239,889	-2,504
Capital Stock (2000\$)			
Residential			
Act Capital Stock	9,555,000,000	9,524,000,000	-31,620,000
Opt Capital Stock	12,988,000,000	12,336,000,000	-652,100,000
Non Residential			
Act Capital Stock	5,459,000,000	5,428,000,000	-30,940,000
Opt Capital Stock	9,545,000,000	8,661,000,000	-884,100,000

Jobs

In terms of jobs losses, removing the 15,320 jobs SEDA created between 1996 and 2007 does not lead to an absolute decrease in total jobs by the same amount. That is because even without the SEDA jobs the economy has some growth momentum.² Hence, without the 15,320 jobs created or retained by SEDA, total jobs in Chatham County would decrease from 175,760 to 162,314 for a total loss of 13,540 jobs in 2007 without the historical influence of SEDA.

All of the other adjustments shown in Table 2 for 2007 occur based on the REMI model's market dynamics. For example, the decrease in Gross Regional Product (GRP) is a direct function of the net loss of 13,450 jobs.

Gross Regional Product and Income

Without the jobs created or retained by SEDA, the total Chatham County output would decrease by approximately \$1.1 billion dollars. To translate this to what it would mean to an individual, the impact of the losses in output value amount to a decrease in Real Disposable *Per Capita* Personal Income in 2007 from \$29,000 to \$27,900. Without SEDA every person in Chatham County in 2007 would, on average have \$1,100 less in disposable income.

²It must be noted, that in some sense the so call forecast without SEDA is only the forecast without the accumulated SEDA jobs, but SEDA's economic efforts over the past have affected the trend in expected job growth. In effect, by forcefully accelerating the Chatham County economy, SEDA has increased the relative attractiveness of Chatham County compared to all other U.S. counties. The impact of this trend remains in the model's calculations.

Population and Value of Capital Stock

Had SEDA not created 15,320 jobs between 1996 and 2007, Chatham County in 2007, would be a smaller place by about 2,500 people. Places with an actively growing economy, an economy that is creating jobs, also attracts in-migration to fill those jobs. The process of in-migration, of course, creates additional demand for goods and services causing businesses to grow. It also creates additional demand for new housing, resulting in the growth of the value of the housing stock.

Without the SEDA jobs and the accompanying growth in both the demand for housing and other non-SEDA business growth, the actual value of the residential and business capital stock would be lower by \$31.6 million and \$30.9 million respectively. The actual *stock of wealth* owned by households would be lower by \$31.6 million and the actual stock of wealth owned by businesses would be lower by \$30.9 million.

Conclusions: SEDA's Impact on the 2007 Chatham Economy

Without the jobs that SEDA contributed to the Chatham County economy between 1996 and 2007, Chatham County in 2007:

- would have 13,450 fewer jobs;
- would have been a smaller place with population lower by 2,500;
- its residents would be poorer with \$1,100 less to spend per person;
- its residents also would have been poorer because the value of their home would be lower by a total of \$31.6 million; and,
- its businesses also would have been poorer and smaller by a total of \$30.9 million because the value of the businesses would be lower.

Chatham County With and Without SEDA: Beyond 2007

Tables 3 and 4 present the results respectively of the REMI forecast with and without the jobs created by SEDA between 1996 and 2007. Table 5 shows the net difference between the economic future with the SEDA jobs in the base and what Chatham County would have looked like if SEDA had not created and retained 15,320 between 1996 and 2007.

If the jobs created by SEDA between 1996 and 2007 were not present in the Chatham County economy in 2007, the underlying growth in the county would not bring Chatham back to the 2007 level until approximately 2020. Further, without the efforts of SEDA over the period between 1996 and 2007, the Chatham County economy, shown in Table 4 without SEDA, never reaches the level it will attain with the SEDA jobs in the base as shown in Table 3. In fact, without the SEDA jobs created or retained between 1996 and 2007, the Chatham County economy would fall ever further below its forecast path with the jobs accumulated between 1996 and 2007. This illustrates one key point: SEDA's acceleration of the Chatham County economy has fundamentally increased the economic competitiveness of the region.

Table 3
With SEDA: Baseline REMI Forecast for Chatham County

	2010	2020	2030	2040
Total Emp	179,941	191,560	196,423	204,711
Total GRP (Fixed 2000\$)	11,219,000,000	14,567,000,000	18,062,000,000	22,488,000,000
Personal Income (Nom \$)	10,886,000,000	16,434,000,000	23,860,000,000	34,867,000,000
Real Disp Pers Inc (Fixed 2000\$)	7,652,000,000	9,221,000,000	10,878,000,000	12,719,000,000
Population	247,854	265,049	276,784	291,983
Capital Stock (2000\$)				
Residential				
Act Capital Stock	10,493,000,000	13,761,000,000	17,020,000,000	20,502,000,000
Opt Capital Stock	15,004,000,000	18,820,000,000	22,516,000,000	27,059,000,000
Non Residential				
Act Capital Stock	5,958,000,000	7,710,000,000	9,466,000,000	11,367,000,000
Opt Capital Stock	10,153,000,000	12,535,000,000	14,842,000,000	17,786,000,000

Table 4
No SEDA REMI Forcast: Chatham County

	2010	2020	2030	2040
Total Emp	164,691	175,195	179,045	186,466
Total GRP (Fixed 2000\$)	9,905,000,000	12,761,000,000	15,687,000,000	19,440,000,000
Personal Income (Nom \$)	10,174,000,000	15,284,000,000	22,116,000,000	32,181,000,000
Real Disp Pers Inc (Fixed 2000\$)	7,192,000,000	8,601,000,000	10,103,000,000	11,757,000,000
Population	239,709	249,242	258,555	272,427
Capital Stock (2000\$)				
Residential				
Act Capital Stock	10,277,000,000	12,995,000,000	15,885,000,000	19,025,000,000
Opt Capital Stock	14,101,000,000	17,554,000,000	20,912,000,000	25,013,000,000
Non Residential				
Act Capital Stock	5,758,000,000	7,092,000,000	8,607,000,000	10,302,000,000
Opt Capital Stock	9,108,000,000	11,346,000,000	13,431,000,000	16,096,000,000

Table 5
No SEDA Change from Base Forecast: Chatham County

	2010	2020	2030	2040
Total Emp	-14,420	-15,460	-16,390	-17,200
Total GRP (Fixed 2000\$)	-1,219,000,000	-1,671,000,000	-2,193,000,000	-2,813,000,000
Personal Income (Nom \$)	-673,500,000	-1,085,000,000	-1,642,000,000	-2,528,000,000
Real Disp Pers Inc (Fixed 2000\$)	-434,600,000	-584,100,000	-728,500,000	-903,100,000
Population	-7,702	-14,900	-17,170	-18,410
Capital Stock (2000\$)				
Residential				
Act Capital Stock	-204,500,000	-721,800,000	-1,068,000,000	-1,388,000,000
Opt Capital Stock	-852,200,000	-1,192,000,000	-1,508,000,000	-1,921,000,000
Non Residential				
Act Capital Stock	-177,000,000	-542,600,000	-753,200,000	-933,700,000
Opt Capital Stock	-923,200,000	-1,042,000,000	-1,235,000,000	-1,481,000,000

Jobs

As shown in Table 3, when the base forecast from REMI is estimated with 15,320 SEDA generated jobs Chatham County is projected to have a total job base of approximately 200,000 jobs by 2040. Looking at Table 4, the forecast without the 15,320 SEDA created jobs in 2007, Chatham would reach the 2007 level of employment by 2020. Over the balance of the forecast horizon, the Chatham County economy without the SEDA created job base from 1996 to 2007 falls further and further below the expected path of with the SEDA jobs. As noted above, this finding underscores the that SEDA, by increasing the total labor pool has effectively improved the overall competitiveness of the region.³

On an annual basis the Gross Regional Product, GRP, in constant 2000 dollars loses between \$1.2 and \$2.8 billion dollars. Like the case with jobs, the gap between the growth in the economy with the SEDA jobs and the economy without the SEDA jobs increases overtime.

Gross Regional Product and Income

In each and every year of the forecast horizon, the Chatham County economy with the SEDA jobs in the base and the economy without the SEDA jobs, those economies diverge in total output produced. However, over a forecast horizon of 30 years while there is a continuing gap in the Real *Per Capita* Disposable Personal Income in constant 2000 dollars, the per capita income gap does narrow. For example 2010, the real *per capita* disposable personal income for the economy with the SEDA jobs in the base, Table 3, is \$30,873. For the economy without the SEDA jobs, the real *per capita* disposable personal income is \$30,000. The individuals in the economy without the SEDA created jobs about \$900 per year poorer in 2010. By 2040, the real per capita disposable income in the economy with the SEDA jobs in the base is \$43,560. In the economy without the SEDA jobs, the real per capita disposable personal income is \$43,160. The

³This is partially an agglomeration effect.

difference would have shrunk from \$900 to \$400 by 2040.

The economy without the SEDA jobs in the base is smaller in every year between 2010 and 2040 as measured by Gross Regional Product, GRP, losing between \$1.2 and \$2.8 billion in annual output. With the loss of production comes an associated loss in personal income. The individuals in that economy are also poorer by between \$400 and \$900 per person in every year between 2010 and 2040.

Population and Value of Capital Stock

It is estimated that in terms of population, the Chatham County economy without the SEDA jobs in the base would be about 18,000 persons smaller. That would equate to approximately 7,400 fewer households.

The result of a smaller population would be a lower stock of wealth in housing, and the capital stock of businesses would also be lower since there would be fewer businesses and businesses would tend to be smaller. In terms of the value of the actual capital stock, residential capital stock would be worth \$934 million less in the 2040 in the economy without the SEDA jobs. On the business side, without the SEDA jobs in the base, the actual value of the business capital stock would be less by \$1.4 billion in 2040.

Conclusions: SEDA's Impact on Chatham County Beyond 2007

The forecasts indicate that the jobs created and retained by SEDA between 1996 and 2007 forever changed the Chatham County economy. All of the variables examined show that without the SEDA jobs in the base; Chatham would be a smaller place and poorer economy. The perpetual gap between the path of the economy with the jobs created and retained by SEDA and the path of the economy without the SEDA jobs illustrates that SEDA has, in fact, improved the region's overall economic competitiveness. By 2040 the economy of Chatham County with the SEDA jobs will have:

- 17,200 more jobs than the economy without SEDA would have had;
- 18,410 more people, or 7,400 more households than the economy without SEDA would have had;
- a rate of output, in real 2000 dollars of \$2.8 billion more annually than the economy without SEDA would have had;
- a higher annual real *per capita* disposable personal income \$400 higher than the economy without SEDA would have had; and,
- the stock of households and business wealth \$934 million and \$1.4 billion higher respectively than the economy without SEDA.

The Coastal Region With and Without SEDA: Impact 2007

Region 12, Chatham County plus its nine neighbors would be a different place without the impact created by SEDA. The following section displays the spillover impact of SEDA's attraction of jobs to Chatham County by several different measures of economic impact: jobs, Gross Regional Product, Personal and Real Disposable Personal Income, population, the value of Residential Capital Stock and Business Capital Stock.

Jobs

Table 6 presents the results respectively of the REMI forecast with and without the jobs created by SEDA between 1996 and 2007. Although the majority of the impacts take place in Chatham County, any jobs created or retained in Chatham County have broader impacts in the regional economy. As stated previously, SEDA helped retain or create 15,320 jobs in Chatham County from 1996 through 2007. Table 6 displays the number of jobs presence in 2007 with and without the efforts of SEDA. Thanks in large part to the efforts of SEDA the overall Region 12 economy has 17,060 more jobs then it would have had without SEDA. The previously estimated impact of the SEDA jobs if lost in the Chatham County economy alone was a decrease in jobs of 13,540. Hence the spillover effect of SEDA to the region is approximately 3,520 jobs in nine counties attributable to SEDA's attraction of jobs to Chatham County between 1996 and 2007.

Table 6
Impact in 2007: Coastal Region 12

	With SEDA	Total Without	Change
Total Employment	349,280	332,222	-17,060
Total GRP (Fixed 2000\$)	19,162,000,000	17,966,000,000	-1,196,000,000
Personal Income (Nom \$)	19,605,000,000	18,911,000,000	-693,400,000
Real Disposable Personal Income (Fixed 2000\$)	14,676,000,000	14,186,000,000	-490,000,000
Population	586,972	582,750	-4,221
Capital Stock (2000\$)			
Residential			
Act Capital Stock	19,428,000,000	19,385,000,000	-42,870,000
Opt Capital Stock	26,471,000,000	25,587,000,000	-883,900,000
Non Residential			
Act Capital Stock	11,091,000,000	11,047,000,000	-43,720,000
Opt Capital Stock	19,302,000,000	18,052,000,000	-1,249,000,000

* some calculations maybe off due to rounding

Non-Job Impact Measures

The removal of the jobs created by SEDA resulted in a \$1.1 billion loss in Gross Regional Product in Chatham County alone. The above loss in Gross Regional Product is approximately \$1.2 billion meaning that the impact on the nine neighboring counties is an added loss of \$100.0 million. To translate this to what it would mean to an individual, the impact of the losses in output value amount to a decrease in Real Disposable Per Capita Personal Income in 2007 from \$25,000 to \$24,343. Without SEDA every person in Region 12 in 2007 would, on average have \$657 less in real disposable income.

The region also would have less total population with the SEDA jobs gone. The region-wide loss in population is 4,221 with approximately 2,500 of that population loss in Chatham County. Therefore in the nine neighboring counties there is an almost equivalent loss of population of 1,721. The process of in-migration, of course, creates additional demand for goods and services causing business to grow. It also creates additional demand for new housing, resulting in the growth of the value of the housing stock.

Without the SEDA jobs and the accompanying growth in both the demand for housing and other non-SEDA business growth, the actual value of the residential and business capital stock in the region would be lower by \$42.9 and \$43.7 million respectively. Most of these effects would be in Chatham County with losses of \$31.6 million and \$30.9 million respectively. The net loss felt in the nine counties would be, not insignificant losses, but in residential and business capital stock value of \$11.3 million and \$12.8 million respectively.

Conclusions: SEDA's Impact on the 2007 Coastal Economy

Without the jobs that SEDA contributed to the Chatham County economy between 1996 and 2007, the nine counties neighboring Chatham in 2007:

- would have 3,520 fewer jobs;
- would have a small population by 1,721;
- would have \$657 less in real disposable per capita income;
- would be poorer as measure by lower value of homes and business by \$11.3 and \$12.8 million respectively.

The Coastal Region With and Without the SEDA Jobs: Beyond 2007

If the jobs created by SEDA between 1996 and 2007 were not present in the Chatham County in 2007 with the associated spillover effect on Region 12, the underlying growth in the region would not bring Region 12 back to the 2007 level until 2020. Region 12 recovers much faster than Chatham County due to the relative size differences between the two models. The larger the economy is the easier it is for that economy to absorb shocks to its equilibrium. The without SEDA impacts between 2010 and 2040 are displayed in Table 7. These are compared to the future growth path with the SEDA jobs as of 2007 in Table 8.

Table 7
No SEDA Region 12

	2010	2020	2030	2040
Total Employment	337,488	353,661	357,911	372,207
Total GRP (Fixed 2000\$)	19,290,000,000	24,096,000,000	29,163,000,000	35,979,000,000
Personal Income (Nom \$)	21,835,000,000	32,747,000,000	47,384,000,000	68,459,000,000
Real Disposable Personal Income (Fixed 2000\$)	15,302,000,000	18,286,000,000	21,490,000,000	24,839,000,000
Population	583,503	608,974	632,903	667,967
Capital Stock (2000\$)				
Residential				
Act Capital Stock	21,068,000,000	26,983,000,000	33,037,000,000	39,491,000,000
Opt Capital Stock	29,364,000,000	36,525,000,000	43,530,000,000	51,715,000,000
Non Residential				
Act Capital Stock	11,824,000,000	14,713,000,000	17,841,000,000	21,254,000,000
Opt Capital Stock	19,103,000,000	23,561,000,000	27,740,000,000	33,077,000,000

As shown in Table 7, the region with no SEDA jobs in Chatham County in 2007 only reaches total employment in 2040 of 372,207 with a population of 667,967. As shown in Table 8, the regional forecast with the SEDA jobs in Chatham County in 2007 is expected to reach total employment of 394,356 and population of 698,974.

Table 8
Baseline REMI Forecast Region 12 With SEDA

	2010	2020	2030	2040
Total Employment	356,101	374,043	379,314	394,356
Total GRP (Fixed 2000\$)	20,700,000,000	26,076,000,000	31,728,000,000	39,218,000,000
Personal Income (Nom \$)	22,791,000,000	34,342,000,000	49,780,000,000	72,108,000,000
Real Disposable Personal Income (Fixed 2000\$)	15,921,000,000	19,142,000,000	22,550,000,000	26,140,000,000
Population	596,689	635,039	662,488	698,974
Capital Stock (2000\$)				
Residential				
Act Capital Stock	21,349,000,000	28,014,000,000	34,562,000,000	41,459,000,000
Opt Capital Stock	30,551,000,000	38,236,000,000	45,676,000,000	54,422,000,000
Non Residential				
Act Capital Stock	12,076,000,000	15,502,000,000	18,925,000,000	22,581,000,000
Opt Capital Stock	20,432,000,000	25,069,000,000	29,501,000,000	35,159,000,000

Note that the total employment in Table 7, the region without the SEDA jobs in Chatham County in 2007, never reaches the level it will attain with the SEDA jobs in the base as shown in Table 8. In fact, across time the economic performance as measured by jobs gained become worse. As shown in Table 9 below, the difference between the region with and without the SEDA jobs in Chatham County in 2007 is: 18,618 fewer jobs in 2010; 20,382 fewer jobs in 2020; 21,403 in 2030; and 22,149 in 2040. This illustrates the key value of the SEDA jobs created between 1996 and 2007; the presence of those jobs in the economy changes the relative competitiveness of the entire region.

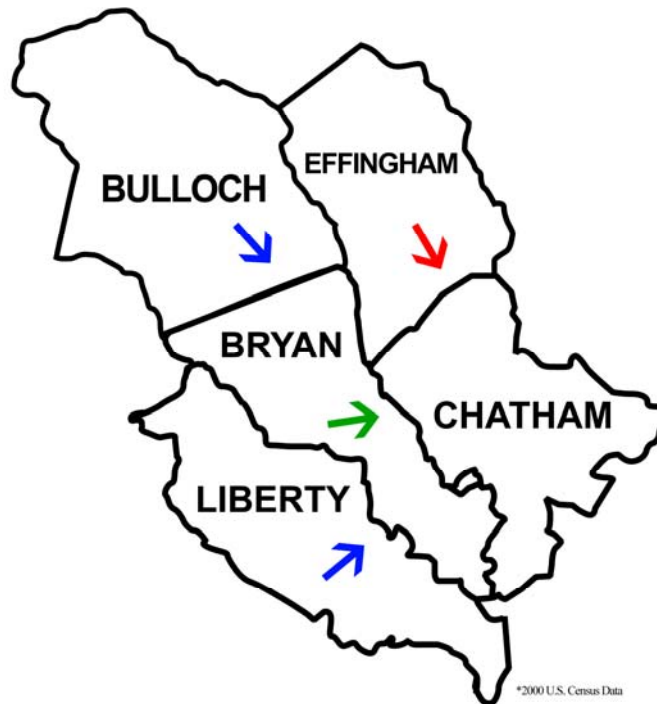
Table 9
Change from Base: No SEDA Region 12

	2010	2020	2030	2040
Total Employment	-18,610	-20,380	-21,400	-22,150
Total GRP (Fixed 2000\$)	-1,410,000,000	-1,980,000,000	-2,565,000,000	-3,239,000,000
Personal Income (Nom \$)	-955,900,000	-1,595,000,000	-2,396,000,000	-3,649,000,000
Real Disposable Personal Income (Fixed 2000\$)	-618,900,000	-856,900,000	-1,060,000,000	-1,300,000,000
Population	-13,190	-26,060	-29,590	-31,010
Capital Stock (2000\$)				
Residential				
Act Capital Stock	-280,900,000	-1,031,000,000	-1,525,000,000	-1,968,000,000
Opt Capital Stock	-1,188,000,000	-1,712,000,000	-2,146,000,000	-2,707,000,000
Non Residential				
Act Capital Stock	-252,000,000	-789,200,000	-1,084,000,000	-1,327,000,000
Opt Capital Stock	-1,329,000,000	-1,507,000,000	-1,761,000,000	-2,082,000,000

Conclusions: SEDA's Impact on the Coastal Economy Beyond 2007

Without the 15,320 jobs created or retained by SEDA, the initial impact on Region 12 is a loss of 17,060 jobs in 2007. The spillover impact on the neighboring nine counties is approximately 3,520 jobs lost in 2007. Further there is a region-wide loss of economic competitiveness that means the growth path without the SEDA jobs in the base diverges from the path the economy is expected to follow with the SEDA jobs as of 2007.

**Figure 1
Commuter Flow into Chatham County**



Commuter Flow Scale
Blue = 2,000 – 2,999
Green = 3,000 – 6,999
Red = 7,000 – 10,000

There are several weaknesses in this study methodology which cause BBRED to conclude that the assessment of the impact of SEDA underestimated the total economic impact of SEDA on the region. First, it should be noted that the impact of removing the SEDA jobs is most likely concentrated in the counties immediately surrounding Chatham County: Effingham; Bulloch; Bryan; and Liberty Counties. For example, Figure 1 shows the rates of daily commuter flows into Chatham County for work. Hence, while some jobs actually spillover to neighboring counties, some of the impact attributed to the Chatham only economy is really exported to neighboring communities. Workers from Effingham, Bulloch, Bryan and Liberty counties carry home income earned in Chatham county jobs that were created by SEDA.

Second, the Brunswick region is an independent growth center with its own port driven economic growth which is not significantly effected by the Chatham growth center. Therefore, the high inter-connection of the northern portion of the Chatham growth center as shown by the commuter patterns between Chatham and Bulloch, Bryan, Effingham and Liberty counties represents a significant impact on the upper four county sub-regional economy.

Third, the REMI model is designed to capture inter-dependent economic transactions, but is not fully equipped to capture the impact of corporate/business relationships. An example of what is missed in terms of the economic impact of SEDA on the region are decisions like the location of the Target distribution center in Liberty county because of the internal economies of scale created by the Target distribution center in Chatham county. This missing element also results in an under estimation of the regional economic impact of SEDA.

Findings: SEDA's Investment in Education, Health and Other Infrastructure

As shown in Table 1 SEDA contributed about \$500 million in low cost financing for public infrastructure. These investments were in such projects as the development of the Georgia Tech Regional Engineering Program Center. Other investments were in the health sector, arts/culture and utilities. In each case no direct jobs were associated with these investments. The following describes estimates of the economic impact in terms of the number of jobs that grew from these public investments.

The methodology employed to quantify the jobs created by SEDA's public infrastructure investments was to adjust the growth rates in the sectors these investment impacted. So for example, educational infrastructure received the most support, approximately 25% of the investment. It was assumed that SEDA's investment increased the rate of growth in the educational services sector. Hence, in REMI the growth rate in the educational services sector was reduced by 25%. For other sectors where the investments were smaller, growth rates were reduced from 2% to 5%.

The impact of reducing the growth rates in each effected sector was about 500 fewer jobs in 2007. Going beyond 2007, the slower growth rates result in 250 to 300 fewer jobs annually. The SEDA investments in public infrastructure therefore, are shown to have a tangible connection to job creation of between 250 and 500 jobs.

Overall Conclusions

The performance of the Chatham County and Coastal Region Economies has been significantly impacted by SEDA's efforts between 1996 and 2007. Without the jobs that SEDA contributed to the Chatham County economy between 1996 and 2007, Chatham County in 2007:

- would have 13,450 fewer jobs;
- would have been a smaller place with population lower by 2,500;
- its residents would have been poorer with \$1,100 less to spend per person;
- its residents also would have been poorer because the value of their home would be lower by a total of \$31.6 million; and,
- its businesses also would have been poorer and smaller by a total of \$30.9 million because the value of the businesses would be lower.

Beyond 2007, the forecasts show that the jobs created and retained by SEDA between 1996 and

2007 forever changed the Chatham County economy. All of the variables examined show that without the SEDA jobs in the base; Chatham would be a smaller place and poorer economy. The perpetual gap between the path of the economy with the jobs created and retained by SEDA and the path of the economy without the SEDA jobs illustrates that SEDA has, in fact, improved the region's overall economic competitiveness.

Without the jobs that SEDA contributed to the Chatham County economy between 1996 and 2007, the nine counties neighboring Chatham in 2007:

- would have 3,520 fewer jobs;
- would have a smaller population by 1,721;
- would have \$657 less in real disposable per capita income;
- would be poorer as measure by lower value of homes and business by \$11.3 and \$12.8 million respectively.

There are several weaknesses in this study methodology with respect to the regional impact which cause BBRED to conclude that the assessment of the impact of SEDA underestimated the total economic impact of SEDA on the region. First, it should be noted that the impact of removing the SEDA jobs is most likely concentrated in the counties immediately surrounding Chatham County: Effingham; Bulloch; Bryan; and Liberty Counties. For example, Figure 1 shows the rates of daily commuter flows into Chatham County for work. Hence, while some jobs actually spillover to neighboring counties, some of the impact attributed to the Chatham only economy is really exported to neighboring communities. Workers from Effingham, Bulloch, Bryan and Liberty counties carry home income earned in Chatham county jobs that were created by SEDA.

Second, the Brunswick region is an independent growth center with its own port driven economic growth which is not significantly effected by the Chatham growth center. Therefore, the high inter-connection of the northern portion of the Chatham growth center as shown by the commuter patterns between Chatham and Bulloch, Bryan, Effingham and Liberty counties represents a significant impact on the upper four county sub-regional economy.

Third, the REMI model is designed to capture inter-dependent economic transactions, but is not fully equipped to capture the impact of corporate/business relationships. An example of what is missed in terms of the economic impact of SEDA on the region are decisions like the location of the Target distribution center in Liberty county because of the internal economies of scale created by the Target distribution center in Chatham county. This missing element also results in an under estimation of the regional economic impact of SEDA.

Additionally, the investment that SEDA has made in public infrastructure has contributed to growth in education and those sectors dependent on human capital. It is estimated that between 250 and 500 jobs are created each year as a result of public infrastructure developed by SEDA.