



**Tampa Bay Regional Planning Council
Regional Economic Analysis Program
Featuring REMI Policy Insight® and IMPLAN®**

Treasure Island Redevelopment Scenarios

The Tampa Bay Regional Planning Council (TBRPC) has conducted an analysis on two redevelopment scenarios for increased tourism in Treasure Island. The first scenario (A) assumes an additional 279,210 tourist/days while the second scenario (B) assumes an additional 243,678 tourist/days in Treasure Island. TBRPC utilized its REMI Policy Insight model to generate the economic forecasts.

Input Assumptions

Each table below identifies the additional spending by industry sector associated with additional tourist/days in each scenario.

Scenario A Additional Spending (\$ millions)	
Transit and ground passenger transportation	2.44
Amusement, gambling, and recreation	16.34
Accommodation	28.02
Food services and drinking places	7.53
Retail trade	4.23
total change	58.56

Scenario B Additional Spending (\$ millions)	
Transit and ground passenger transportation	2.21
Amusement, gambling, and recreation	15.01
Accommodation	25.41
Food services and drinking places	6.64
Retail trade	3.84
total change	53.11

Economic Impacts

The following tables summarize the economic impacts of each scenario.

Scenario A							
Category	Units	2018	2020	2022	2024	2026	2028
Total Employment	Individuals (Jobs)	813.375	817	792.563	766.625	746.063	733.25
Gross Domestic Product	Millions of Fixed (2014) Dollars	46.152	49.039	48.914	48.25	47.914	48.219
Value Added	Millions of Fixed (2014) Dollars	45.406	48.215	48.117	47.5	47.195	47.531
Personal Income	Millions of Fixed (2014) Dollars	21.191	27.227	30.246	31.703	32.531	33.773

Scenario B							
Category	Units	2018	2020	2022	2024	2026	2028
Total Employment	Individuals (Jobs)	653.563	655.688	635.938	615.125	598.688	587.688
Gross Domestic Product	Millions of Fixed (2014) Dollars	37.008	39.242	39.156	38.609	38.336	38.5
Value Added	Millions of Fixed (2014) Dollars	36.41	38.586	38.492	38.008	37.758	37.945
Personal Income	Millions of Fixed (2014) Dollars	16.996	21.715	24.074	25.266	26.031	26.805

About 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. A major feature of REMI Policy Insight is that it is a dynamic model which 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.

Model Introduction

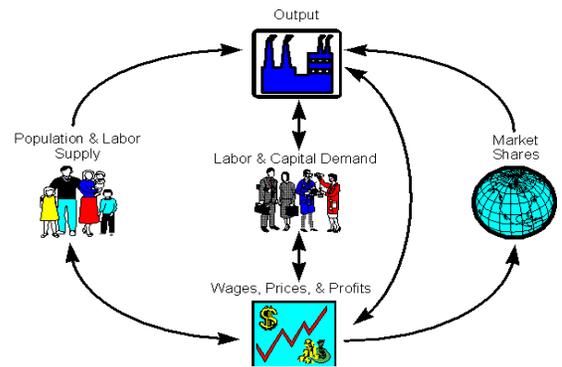
Tampa Bay Regional Planning Council’s REMI Policy Insight includes a REMI model that has been built especially for the Tampa Bay region version of the model and a state model. The model-building system uses hundreds of programs developed over the past two decades to build customized models for each area 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 expansion changes investment and population growth impacts government spending.

Model Overview

A pictorial representation of the model is adjacent. 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.

In addition to direct employment exceeding 40,000, with an annual wage bill of \$794 million, the indirect and induced effects of the scenario will create a total of 59,960 jobs in Hillsborough County. These combined jobs generate an average of \$1.76 billion annually in personal income.

Total new employment would contribute \$3.5 billion to the Gross County Product each year. The Gross County Product (GCP) is a concept analogous to the national Gross Domestic Product. As such, GCP is equal to output excluding the intermediate inputs, and represents compensation and profits. Below is a table depicting the annual impact for Hillsborough County.

Due to the scale of the scenario, there are spillover effects in the other three counties of the Tampa Bay Region. These impacts yield total Gross Regional Product exceeding \$4.1 billion and total employment of about 64,000 with aggregate personal income of \$2.5 billion.