



The Economic Impact of Sail Baltimore

Submitted by:

Sage Policy Group, Inc.

Submitted to:

Sail Baltimore Stakeholders

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The Economic Impacts of Sail Baltimore

Executive Summary

Sail Baltimore is a 501(c)(3) nonprofit located in Baltimore that operates under the auspices of a volunteer board of directors that deploys an efficient staff augmented by community volunteers. The organization is primarily supported by corporate and individual donations and receives a modicum of public funding.

Visiting Ships, the organization’s signature endeavor, welcomes a variety of ships to Baltimore’s waterfront. Especially interesting and historic ships are much sought after in many harbors, and Sail Baltimore supplies Baltimore with a capacity to compete for these ship visits. Sail Baltimore’s Visiting Ships program attracts approximately 100,000 visitors to the Inner Harbor each year. This is remarkable for an organization that has only one full-time employee and three-part timers.

The enterprise also organizes events, including the monumental Star-Spangled Sailabration of 2012, the Star-Spangled Spectacular of 2014, and the Maryland Fleet Week & Air Show of 2016, for which the organization was an important partner. These events attract hundreds of thousands of additional visitors to Baltimore, generating additional large-scale economic and fiscal impacts in the process. Those impacts have been characterized in other reports and are not encompassed by this Sage study.

Based on Sage’s modeling, we estimate that in a typical year Sail Baltimore supports \$11.2 million in augmented visitor spending. Excluding events-related impacts, Sail Baltimore supports more than 170 annual FTEs in Baltimore City. This is equivalent to a sizeable company. Those employees are associated with employee compensation approaching \$6.6 million. Local business sales are augmented by nearly \$15 million.

Economic impacts trigger fiscal ones. In total, Sail Baltimore supports approximately \$440,000 in annual tax collections in Baltimore City and an additional \$460,000 for the State of Maryland based on Sage’s modeling.

Exhibit E1: Ongoing Annual Economic & Fiscal Impacts

	Jobs (FTEs)	Employee Compensation	Business sales	Baltimore City Tax Revenues	Maryland Tax Revenues
<i>Baltimore City</i>					
Direct effects	143	\$4,741,291	\$9,629,024	-	-
Indirect effects	15	\$1,039,924	\$3,178,240	-	-
Induced effects	14	\$794,799	\$2,168,377	-	-
Total	172	\$6,576,014	\$14,975,641	\$436,457	\$459,503

Source: Sage, IMPLAN

The Economic Impacts of Sail Baltimore

Introduction

Sail Baltimore commissioned Sage Policy Group, Inc. (Sage) to assess the organization's economic contributions to Baltimore City. Sail Baltimore is a 501(c)(3) nonprofit located in Baltimore that operates under the auspices of a volunteer board of directors that deploys an efficient staff augmented by community volunteers. The organization is primarily supported by corporate and individual donations and receives a modicum of public funding.

Visiting Ships, the organization's signature endeavor, welcomes a variety of ships to Baltimore's waterfront. Sail Baltimore commits significant resources to attracting tall ships, historic and current military vessels, and other types of ships to the Inner Harbor. Especially interesting and historic ships are much sought after in many harbors, and Sail Baltimore supplies Baltimore with a capacity to compete for these ship visits. This supports greater spending in the local economy, hotel and other tax revenues, and employment. Over time, Sail Baltimore has developed a global reputation for reliability, and Baltimore has established itself as a noteworthy maritime destination.

But Sail Baltimore does more than just attract ships to the harbor. Staff and volunteers tend to every detail pertinent to a ship's visit through departure. Meetings are coordinated, embassies notified, ceremonies organized, and needed services provided to crews.

Sail Baltimore's Visiting Ships program attracts approximately 100,000 visitors to the Inner Harbor each year. This is remarkable for an organization that has only one full-time employee and three-part timers. Total organizational compensation is just \$120,000/annum. The organization has an operating budget of about \$250,000.

While the organization's ability to attract visitors to the harbor represents its primary source of positive economic impact, there are others. Sail Baltimore also serves as an important partner in organizing events, including the monumental Star-Spangled Sailabration of 2012, the Star-Spangled Spectacular of 2014, and the Maryland Fleet Week & Air Show of 2016. These events attract hundreds of thousands of additional visitors to Baltimore, generating large-scale economic and fiscal impacts in the process.

These impacts have been studied by others and are not included as part of this Sage study. Rather, Sage has focused this analysis on the economic impacts of Sail Baltimore's signature endeavor, Visiting Ships, as well as upon the impacts stemming from its operational spending within Maryland.

Methodology & Inputs

To quantify economic impacts, Sage uses IMPLAN economic modeling software and its embodied multipliers to generate estimates of employment, employee compensation, and output.¹ The multipliers are specific to Baltimore's economy.

Calculated employment impacts include both full- and part-time workers. Results are presented in the form of full-time equivalents (FTE), meaning that one job is the equivalent of one year of full-time employment. Labor income encompasses all forms of employment income including employee compensation (wages and benefits) and proprietor income (earnings of business owners). Output represents the sum of business sales (goods and services) that occur as a result of Sail Baltimore's operational activities.

To conduct the fiscal portion of the analysis, Sage accessed publicly available information including government-published tax rates and budgetary information. Some fiscal impacts were created within IMPLAN, which incorporates community-specific tax rates. Other fiscal estimates were developed outside the model using estimates of effective tax rates.

Economic impacts are presented in the form of direct impacts as well as in the form of secondary impacts. Direct impacts are generated by Sail Baltimore's operational spending as well as by the first round of visitor spending in the local economy.

Secondary impacts can collectively be considered the multiplier effect, and can be segmented into two types of impacts – indirect and induced. Indirect benefits are generated through the expanded volume of business-to-business transactions attributable to a larger local economy. For instance, increased spending at restaurants due to expanded visitation will likely lead to increased sales among local food distributors. Induced benefits are triggered when workers primarily or secondarily supported through enhanced economic activity spend their earnings in the local economy.

To the extent that expenditures by businesses or consumers take place beyond Baltimore City's boundaries, they are not considered in Sage's impact estimates. Appendix A at the end of this report supplies additional detail regarding the workings of the IMPLAN model.

¹ IMPLAN is the most commonly used econometric software for analyses of its type and has emerged as the industry standard for this type of quantification. The model is comprised of economic multipliers that reflect the statistical relationship between various local industries and the likelihood that certain goods and services will be sourced locally as opposed to outside the community. These multipliers are updated each year and Sage purchases model licenses on an annual basis. This study utilizes the most recent multipliers to date (2015).

- **Visitor-Related Impacts**

Sail Baltimore attracted 111,500 visitors in 2016, due partly to the Maryland Fleet Week & Air Show Baltimore. In a non-event year — which has tended to be every other year — Sail Baltimore attracts roughly 80,000 visitors. Accordingly, to model annual impacts this model uses an estimate of 95,000 visitors/annum to model impacts flowing from visitor spending.

Sage recently completed a comprehensive economic impact study on the National Aquarium, the Inner Harbor’s premier attraction. That study used data produced by IMPACTS Research & Development (IMPACTS) that estimated the spending habits of visitors to the National Aquarium.

For the purposes of this analysis, Sage used findings from that recent study to assess probable day-trip visitor spending habits. Based on parameters supplied by that study, visitor spending related to Visiting Ships is estimated at \$11.2 million. However, this is likely an understatement since this figure presumes that no overnight stays are attributable to Sail Baltimore. This presumption is made because of an absence of data indicating how many people stay overnight in Baltimore due to the presence of tall ships or other similarly situated opportunities made possible by Sail Baltimore. Exhibit 1 provides relevant statistical detail.

Exhibit 1: Visitor Spending Estimates 2016

Category	Per Visitor Spending	Total Visitor Spending
Visitors	-	95,000
Local Transportation	\$12.38	\$1,176,100
Food & Beverage	\$41.78	\$3,969,100
Shopping	\$20.89	\$1,984,550
Gas Stations	\$4.12	\$391,400
Recreation	\$38.32	\$3,640,400
Total	\$117.49	\$11,161,550

Source: IMPACTS Research & Development; Tourism Economics, Sage

- **Operational Impacts**

As noted previously, Sail Baltimore’s operating budget is relatively small. Still, for purposes of this assessment and in the interests of thoroughness, impacts related to local budgetary spending are included. It is important to note that the \$250,000 annual budget referenced above pertains to a non-event year. During event years, operational spending is significant higher. For instance, in 2012, Sail Baltimore’s annual budget was \$436,400. In 2016, it was \$606,000. Much of the additional spending was on local contractors. For modeling purposes, the study team used the average organizational budget for the last six years, which translates to \$386,571.

Economic & Fiscal Impacts

Excluding event-related impacts, Sail Baltimore supports more than 170 annual FTEs in Baltimore City. This is equivalent to a sizeable company. Those employees are associated with employee compensation (which includes the value of benefits) approaching \$6.6 million. Local business sales are augmented by nearly \$15 million. Exhibit 2 supplies summary detail.

Exhibit 2: Ongoing Annual Economic Impacts

	Jobs (FTEs)	Employee Compensation	Business sales
<i>Baltimore City</i>			
Direct effects	143	\$4,741,291	\$9,629,024
Indirect effects	15	\$1,039,924	\$3,178,240
Induced effects	14	\$794,799	\$2,168,377
Total	172	\$6,576,014	\$14,975,641

Source: Sage, IMPLAN

Sage used computations of effective tax rates to derive associated income tax estimates based on data from the State of Maryland's Comprehensive Annual Financial Report and the U.S. Bureau of Economic Analysis. Effective local and State income tax rates are estimated at 2.41 percent and 3.57 percent, respectively. The IMPLAN model directly supplies parameters allowing for the estimation of sales tax and property tax collections. In total, Sail Baltimore supports about \$440,000 in annual tax collections in Baltimore City and an additional \$460,000 for the State of Maryland. Exhibit 3 summarizes.

Exhibit 3: Ongoing Annual Fiscal Impacts

Location and type of impact	Value
<i>Baltimore City</i>	
Income Tax Revenues	\$158,482
Property Tax Revenues	\$277,975
Total	\$436,457
<i>Maryland</i>	
Income Tax	\$234,764
Sales Tax	\$224,739
Total	\$459,503

Source: Sage, IMPLAN

Conclusion

Sail Baltimore supports a tremendous amount of economic activity for an organization with only one full-time employee. The organization also contributes to the educational and entertainment value of Charm City's working waterfront. Positive reputation effects are immense, but have not been quantified in this analysis.

Even without that quantification, its signature program, Visiting Ships, through related visitor spending and operational expenditures, supports \$11.2 million in augmented visitor spending. This activity also supports more than 170 annual FTEs in Baltimore City. This is equivalent to a sizeable company. Those employees are associated with employee compensation approaching \$6.6 million. Local business sales are augmented by nearly \$15 million. Annual City tax collections are augmented by \$440,000, while State of Maryland tax collections are bolstered by \$460,000/annum.

Sage Policy Group, Inc.

Sage Policy Group, Inc., a Sub Chapter S Corporation, was established in 2004 by Anirban Basu. Sage is an eleven-person economic and policy consulting firm specializing in economic, fiscal and legislative analysis, program evaluation, and organizational and strategic development. The firm's clients include public agencies at every level of government, law firms, developers, money managers and an array of nonprofit organizations operating in a variety of segments. As experts in research methods, our corporate focus is to utilize sound, widely accepted analytical techniques that provide our clients and their stakeholders with valid and reliable knowledge and information to support critical organization and decision-making requirements.

As perhaps the most recognizable economic/policy consultancy in Maryland, Sage knows how to provide insight into the policy choices that an economic or fiscal environment may produce. Sage is also adept at working with various stakeholders. In recent times, we have worked with local governments in several states, state agencies, private developers, and a diverse group of other businesses.

Sage's clients appreciate the firm's capacity and willingness to go beyond trend forecasts and to envision likely scenarios and their impacts on key variables, including revenues and expenditures. One of our principal strengths is the capacity to predict real estate and construction-related variables, which is important along both economic and fiscal dimensions. We are also immensely capable public speakers, and we are always willing and able to convey key findings of the study in a way that is impactful and attracts significant attention.

Appendix – IMPLAN

IMPLAN is an economic impact assessment software system. The system was originally developed and is now maintained by the Minnesota IMPLAN Group (MIG). It combines a set of extensive databases concerning economic factors, multipliers and demographic statistics with a highly refined and detailed system of modeling software. IMPLAN allows the user to develop local-level input-output models that can estimate the economic impact of new firms moving into an area as well as the impacts of professional sports teams, recreation and tourism, and residential development. The model accomplishes this by identifying direct impacts by sector, then developing a set of indirect and induced impacts by sector through the use of industry-specific multipliers, local purchase coefficients, income-to-output ratios, and other factors and relationships.

There are two major components to IMPLAN: data files and software. An impact analysis using IMPLAN starts by identifying expenditures in terms of the sectoring scheme for the model. Each spending category becomes a "group" of "events" in IMPLAN, where each event specifies the portion of activity allocated to a specific IMPLAN sector. Groups of events can then be used to run impact analysis individually or can be combined into a project consisting of several groups. Once the direct economic impacts have been identified, IMPLAN can calculate the indirect and induced impacts based on a set of multipliers and additional factors.

Secondary benefits can be segmented into two types of impacts, indirect and induced. Indirect benefits are related to the business-to-business transactions that take place due to increased demand for goods and services that accompanies augmented investment and business operations. Impacted businesses sell everything from office furniture and copiers to computer and graphic design services. Induced benefits are created when workers directly or indirectly supported by increased economic activity spend their earnings in the local economy. Indirect and induced benefits together comprise total multiplier effects.

The hallmark of IMPLAN is the specificity of its economic datasets. The database includes information for five-hundred-and-twenty-eight different industries (generally at the three or four digit Standard Industrial Classification level), and twenty-one different economic variables. Along with these data files, national input-output structural matrices detail the interrelationships between and among these sectors. The database also contains a full schedule of Social Accounting Matrix (SAM) data. All of this data is available at the national, state, and county level.

Another strength of the IMPLAN system is its flexibility. It allows the user to augment any of the data or algorithmic relationships within each model in order to more precisely account for regional relationships. This includes inputting different output-to-income ratios for a given industry, different wage rates, and different multipliers where appropriate. IMPLAN also provides the user with a choice of trade-flow assumptions, including the modification of regional purchase coefficients, which determine the mix of goods and services purchased locally with each dollar in each sector. Moreover, the system also allows the user to create custom impact analyses by entering changes in final demand. This flexibility is a critically

important feature in terms of the Sage proposed approach. Sage is uniquely qualified to develop data and factors tailored to this project, and, where appropriate, overwrite the default data contained in the IMPLAN database.

A final advantage of IMPLAN is its credibility and acceptance within the profession. There are more than five hundred active users of IMPLAN databases and software within the federal and state governments, universities, and among private sector consultants. The following list provides a sampling of IMPLAN users.

Sample of IMPLAN Users:

Academic Institutions

Alabama A&M University
Albany State University
Auburn University
Cornell University
Duke University
Iowa State University
Michigan Tech University
Ohio State
Penn State University
Portland State University
Purdue University
Stanford University
Texas A&M University
University of California – Berkeley
University of Wisconsin
University of Minnesota
Virginia Tech
West Virginia University
Marshall University/College of Business

Federal Government Agencies

Argonne National Lab
Fed. Emergency Man. Agency (FEMA)
US Dep't of Agriculture, Forest Service
US Dep't of Ag., Econ Research Service
US Dep't of Int., Bureau of Land Mgmt.
US Dep't of Int., Fish and Wildlife Serv.
US Dep't of Int., National Parks Service
US Army Corps of Engineers

State Government Agencies

MD Dep't of Natural Resources
Missouri Department of Economic Development
California Energy Commission
Florida Division of Forestry
Illinois Dep't of Natural Resources
New Mexico Department of Tourism
South Carolina Employment Security
Utah Department of Natural Resources
Wisconsin Department of Transportation

Private Consulting Firms

Coopers & Lybrand
Batelle Pacific NW Laboratories
Boise Cascade Corporation
Charles River Associates
CIC Research
BTG/Delta Research Division
Crestar Bank
Deloitte & Touche
Ernst & Young
Jack Faucett Associates
KPMG Peat Marwick
Price Waterhouse LLP
Sage Policy Group, Inc.
Economic Research Associates
American Economics Group, Inc.
L.E. Peabody Associates, Inc.
The Kalorama Consulting Group
West Virginia Research League