

# THE ECONOMIC IMPACT OF THE INDEPENDENCE VISITOR CENTER CORPORATION ON THE CITY OF PHILADELPHIA AND THE COMMONWEALTH OF PENNSYLVANIA



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## Table of Contents

1.0 Introduction and Methodology	2
2.0 IVCC's Contribution to the Annual Economic and Fiscal Impact of the Tourism Industry within the Philadelphia Region	3
3.0 The Philadelphia Historic District's Annual Economic and Fiscal Impact within the City of Philadelphia and the Commonwealth of Pennsylvania	11
4.0 Conclusion	15
Appendix A Economic and Fiscal Impact Methodology	A-1

## 1.0 INTRODUCTION AND METHODOLOGY

Since its establishment over a decade ago, **Independence Visitor Center Corporation (IVCC)** has made a significant contribution to visitor spending throughout the Philadelphia region. In 2012, 2.4 million people visited the Independence Visitor Center, seeking information, advice, and attraction tickets.

The Visitor Center is an important hub within the **Philadelphia Historic District**, which is

a major draw for tourism activity for the City of Philadelphia and the Commonwealth of Pennsylvania. While the Philadelphia Historic District has always been a popular destination for tourists, its role as a generator of economic activity has grown considerably over the past ten years. Over the past decade, the Visitor Center has become an essential gateway for visitors to the Philadelphia Historic District and to attractions throughout the region.

The purpose of this report is to help answer two questions related to the role of IVCC and the Visitor Center in the economic vitality of the City and Commonwealth:

- First, what is the contribution of the IVCC and the Visitor Center to the annual economic impact of tourism within the Philadelphia region?
- Second, how much economic impact is generated within the City and Commonwealth by the Philadelphia Historic District as a whole?

It is not possible to know the answers to these questions at a precise level, as 1) it is difficult to disentangle the many factors of a visitor's spending decisions and 2) it is difficult to track all of the ways that a visitor's spending courses through a regional economy. Nevertheless, by utilizing a variety of primary and secondary data sources, industry standard input-output modeling methodologies, and (as needed) conservative assumptions, these questions can be addressed at a sufficient level to highlight the importance of IVCC, the Visitor Center, and the Philadelphia Historic District in terms of economic activity, job creation, and tax revenue generation.



## 2.0 IVCC'S CONTRIBUTION TO THE ANNUAL ECONOMIC AND FISCAL IMPACT OF THE TOURISM INDUSTRY WITHIN THE PHILADELPHIA REGION

Tourism is a major contributor to the local and state economy. According to the Greater Philadelphia Tourism and Marketing Corporation's "Greater Philadelphia Tourism Profile 2012" report, 15 million overnight visitors and 23 million day trip visitors produced a total economic impact of \$9 billion in 2011, supporting 86,000 jobs, and generating \$600 million in local and state taxes (see Table 2.1).

Table 2.1 – Tourism Activity and Economic Impact within the Philadelphia Region

	2011	2009	2007
Overnight Visitors (M)	14.8	13.1	13.8
Day Trip Visitors (M)	23.1	22.9	23.0
Total Visitors (M)	37.9	36.0	36.8
Hotel Room Nights (M)	8.3		
Economic Impact (\$B)	\$9.34	\$8.17	\$9.29
Jobs Supported (000)	87	84	88
Local Tax Revenues Generated (\$M)	\$285	\$258	\$292
State Tax Revenues Generated (\$M)	\$315	\$279	\$315

Source: Greater Philadelphia Tourism and Marketing Corporation (2012), Smith Travel Research (2012), PKF Consulting (2012), Tourism Economics (2012), Econsult Solutions (2013)

IVCC and the Visitor Center are significant contributors to these economic impact amounts. As an **introductory site** and **information hub**, it is an **important gateway** for the 2.4 million visitors it interacts with each year. These visitors come to the Visitor Center seeking information, advice, and tickets; as a result they have a more enjoyable experience in the Philadelphia region, often spending additional time and money within the Philadelphia region.

Over three-quarters of visitors to the Visitor Center are in Philadelphia for leisure (see Table 2.2). They come to the Visitor Center to (in order of frequency)

obtain general information, purchase tickets, see an exhibit, and create an itinerary for their Philadelphia visit (see Table 2.3).

Thus, IVCC is well-positioned to influence tourist activity towards more positive experiences and higher spending levels. Importantly, this does not only mean that each visit is more likely to result in increased spending while within the City, but it also that each tourist is more likely to say positive things about their trip to others and to return in the future. For tourists coming to Philadelphia for the first time, the Visitors Center offers a place of guidance. Maps and concierges provide free help, including travel tips and explanations on “the lay of the land” to visitors; this is highly valuable. Such positive experiences create a very real impact through word of mouth. Visitors are likely to tell family and friends about their positive experience, as well as recommend places and attractions to see.

**Table 2.2 – Distribution of 2012 to the Independence Visitor Center Visitors by Reason for Visiting Philadelphia<sup>1</sup>**

	All Visitors	US Visitors	Non-US Visitors
Leisure	78%	75%	89%
Business	9%	10%	6%
Convention	6%	7%	1%
Local	8%	8%	4%

*Source: Independence Visitor Center Corporation (2012), Econsult Solutions (2012, 2013)*

**Table 2.3 – Distribution of 2012 Independence Visitor Center Visitors by Reason for Visiting the Visitor Center**

	All Visitors	US Visitors	Non-US Visitors
General Info	46%	44%	50%
Purchase Tickets	21%	22%	19%
IVCC Exhibit	20%	21%	17%
Create Itinerary	13%	13%	14%

*Source: Independence Visitor Center Corporation (2012), Econsult Solutions (2012, 2013)*

<sup>1</sup> Tables 2.2 through 2.5 are based on 5,400 survey responses received by Econsult Solutions throughout 2012.

About one-fifth of visitors to the Visitor Center come from outside the US, with China, Germany, and the United Kingdom as the three most common origins (see Table 2.4). Half of visitors to the Visitor Center, including about 90 percent of visitors from outside the US, are visiting Philadelphia for the first time (see Table 2.5). Thus, to the Visitor Center serves as a **trusted first stop** from which the Philadelphia region can be experienced more enjoyably and more efficiently.

**Table 2.4 – Distribution of 2012 Visitors to the Independence Visitor Center by Origin**

All Visitors	US Visitors	Non-US Visitors
US 78%	PA 17%	China 14%
Non-US 22%	NJ 10%	Germany 10%
	NY 9%	United Kingdom 9%
	All Other 64%	All Other 67%

*Source: Independence Visitor Center Corporation (2012), Econsult Solutions (2012, 2013)*

**Table 2.5 – Distribution of 2012 Visitors to the Independence Visitor Center by Whether First Time to Philadelphia/ the Visitor Center**

	All Visitors	US Visitors	Non-US Visitors
First Time to Philadelphia	50%	42%	88%
First Time to the Visitor Center	75%	70%	96%

*Source: Independence Visitor Center Corporation (2012), Econsult Solutions (2012, 2013)*

The existence and magnitude of IVCC's influence on tourism activity within the Philadelphia region can be supported in three ways:

1. First, a 2010 survey conducted by The Melior Group identified a significant number and proportion of tourists whose **visit to the Visitor Center convinced them to visit an attraction they had not previously considered visiting**; this was true for popular destinations but particularly so for less well-known sites (see Table 2.6).

**Table 2.6 – Additional Attraction Visits Made Possible in Part by Visit to the Independence Visitor Center (Selected Attractions)<sup>2</sup>**

Attraction	Annual # Visitors (M)	% Visitors to Visitor Center Planning on Going	% Whose Decision Was Influenced by Visitor Center	Est. Addn. Visitors Influenced by Visitor Center
Liberty Bell	2,026,898	93%	2%	45
Independence Hall	3,572,767	89%	4%	85
Reading Terminal Market	4,871,512	26%	48%	300
Penn's Landing	2,000,000	20%	50%	240
Philadelphia Zoo	1,200,000	11%	55%	145
PA Academy of Fine Arts	179,330	5%	28%	34
Adventure Aquarium	600,000	6%	43%	62
Please Touch Museum	570,789	4%	50%	48
Once Upon A Nation	205,006	4%	69%	66

Source: The Mellor Group (2010), Econsult Solutions (2013)

1. Second, and related to the above point, the Visitor Center sells tickets to many of these destinations (**over 54,000 tickets to over 50 destinations sold in 2012**), facilitating visitors' decision making process from (1) contemplating and desiring to do something fun, to (2) discovering options as to what venues they might enjoy, to (3) finally purchasing a ticket (see Table 2.7). This is of particular importance for the many "hidden treasures" within the City that are less well-known by out-of-town visitors.

<sup>2</sup> "Estimated Additional Visitors Influenced by Visitor Center" is calculated as follows (using Reading Terminal Market as an example):

1. 2.4 million people visited the Visitor Center in 2012.
2. Twenty-six percent of those surveyed, or about 624,000, said they planned on going to Reading Terminal Market.
3. Forty-eight percent of those who said they planned on going to Reading Terminal Market, or about 300,000, said their decision to do so was influenced in part by their visit to the Visitor Center.



Table 2.7 – 2012 Ticket Sales at the Visitor Center for Selected Attractions<sup>3</sup>

Attraction	Tickets Sold by IVCC	Ticket Price (Adult)
Academy of Natural Sciences	144	\$15
Adventure Aquarium	908	\$25
African American Museum	165	\$14
Audio Walk	144	-
Battleship New Jersey	95	\$22
Betsy Ross House	4,384	\$5
Boat Rentals/Sale	503	-
Christ Church Burial Ground	135	\$2
City Food Tours	19	-
City Pass	1,781	\$49
Crayola Factory	5	\$10
Eastern State Penitentiary	1,364	\$17
Flower Show	17	-
Franklin Footsteps Walking Tour	2,825	\$19
Franklin Institute	1,670	\$18
Garden State	3	-
German Walking Tour	84	-
Ghost Tour of Phila/Haunted Trolley	436	\$30
Grasso's Magic theater	10	-
Grim Philly	202	\$20
Independence After Hours	62	\$70
Independence Seaport Museum	85	\$4
Liberty 360	834	\$6
Longwood Gardens	119	\$18
Mural Arts	95	-
Mutter Museum	1,024	\$15
National Constitution Center	11,774	\$18
National Liberty Museum	81	\$7
National Museum of American Jewish History	486	\$12
Penn Academy of Fine Arts	389	\$15
PHAAT Tours	6	\$30
Phila Chocolate Tours	8	\$40
Phila Pass	3,887	\$49
Phila. Sightseeing Tours	2,068	\$27
Philadelphia Museum of Art	1,029	\$24
Philadelphia Zoo	349	\$18
Philly Carousel	19	\$2
Philly Mini Golf	14	\$9

<sup>3</sup> Attractions shown are those for which IVCC ticket sales data were available.



Attraction	Tickets Sold by IVCC	Ticket Price (Adult)
Please Touch Museum	383	\$16
Preservation Alliance	45	-
PTW - Bus Tours	13,994	\$27
PTW - Carriage Tours	183	\$35
QVC Studios Tour	4	\$8
Ride the Ducks	1,822	\$27
Riverlink Ferry	756	\$7
Sesame Place	8	\$60
Shark Shuttle	152	\$2
South Magic	2	-
Spirit of Phila	7	-
Taste of Philly	10	-
Tippler's Tour	50	\$35
UPenn Museum of Archeology and Anthropology	125	\$12
Urban Adventures	46	\$20
Villanova Basketball	18	-
<b>Total</b>	<b>54,828</b>	

*Source: Philadelphia Business Journal (2012), Independence Visitor Center Corporation (2013), Econsult Solutions (2013)*

1. Third, Melior Group's survey found that about one-quarter of the **parties that visit the Visitor Center each year end up spending more** in Philadelphia as a result of their visit to the Visitor Center, and that the average increase in spending is about \$240, which translates into about \$84 million in additional visitor spending per year as a result of the Visitor Center (see Table 2.8).<sup>4</sup>

<sup>4</sup> Inflation would suggest the per-party spending amount is about 10 percent higher than this estimate from three years prior. However, visits to the Visitor Center were down about 10 percent from three years prior. Therefore, this \$84 million estimate is considered reasonably good for the present day, although it is probably conservatively low.

**Table 2.8 – Additional Visitor Spending Generated by the Independence Visitor Center**

# Parties Visiting the Visitor Center	% Reporting Increased Spending Because of Visit to the Visitor Center	Average Increase in Spending per Party	Estimated Additional Aggregate Annual Visitor Spending (\$M)
1.6M	22%	\$240 <sup>5</sup>	\$84

Source: *The Melior Group (2010), Econsult Solutions (2013)*

In summary, the Visitor Center is responsible for a meaningful proportion of the total visitor activity within the Philadelphia region. It interfaces with over two million out-of-town visitors each year, and the advice, itineraries, and tickets it provides allow them to see more attractions and, as a result, spend more within the Philadelphia region (see Table 2.9).

**Table 2.9 – The Contribution of the Independence Visitor Center to Total Visitor Activity within the Philadelphia Region**

Metric	Contribution of the Visitor Center	Total for Philadelphia Region	Visitor Center Proportion
# Visitors	2.2M non-local	37.9M	6%
Visitor Spending	\$84M	\$4.6B	2%

Source: *The Melior Group (2010), Tourism Economics (2012), Independence Visitor Center Corporation (2012), Econsult Solutions (2013)*

Conservatively assuming that the Visitor Center's presence is responsible for no less than 2 to 4 percent of the Philadelphia region's tourism activity, that means the Visitor Center adds a considerable amount of economic impact to the Philadelphia region: **\$200 million to \$400 million more per year, supporting about 1,700 to 3,400 more jobs and generating about \$12 million to \$24 million more per year in local and state tax revenues** (see Table 2.10). Effectively, one can

<sup>5</sup> This number is an average. In 2010 the reported increase was \$155; in 2009, the reported increase was \$311; in 2008, the reported increase was \$254

say that, absent the Visitor Center's work in receiving and assisting visitors, the tourism industry would have a significantly smaller economic impact within the Philadelphia region.

**Table 2.10 – The Contribution of the Independence Visitor Center to the Annual Economic and Fiscal Impact of the Tourism Industry within the Philadelphia Region**

	<b>Philadelphia Region</b>	<b>Visitor Center Contribution</b>
<b>Economic Impact</b>	<b>\$9.34 Billion</b>	<b>\$200 Million – \$400 Million</b>
<b>Jobs Supported</b>	<b>87,000</b>	<b>1,700 – 3,400</b>
<b>Local and State Tax Revenues Generated</b>	<b>\$600 Million</b>	<b>\$12 Million – \$24 Million</b>

*Source: Greater Philadelphia Tourism and Marketing Corporation (2012), Tourism Economics (2012), Econsult Solutions (2013)*

### 3.0 THE PHILADELPHIA HISTORIC DISTRICT'S ANNUAL ECONOMIC AND FISCAL IMPACT WITHIN THE CITY OF PHILADELPHIA AND THE COMMONWEALTH OF PENNSYLVANIA

The Visitor Center is an important hub within the Philadelphia Historic District, which is home to three of the Philadelphia region's top ten attractions by visitor count (see Table 3.1) and to some of the most iconic destinations in the United States at large such as the Liberty Bell and Independence Hall. As such, the Philadelphia Historic District is a must-see for almost all visitors, and therefore a **major tourist draw and economic engine for the City and Commonwealth.**

Table 3.1 – Top 10 Tourist Attractions by Number of Visitors in 2011  
(\* = Located within the Philadelphia Historic District)

Attraction	# Visitors in 2011
Independence National Historical Park *	3.6 Million
SugarHouse Casino	2.0 Million
Peddler's Village	1.6 Million
Valley Forge National Historical Park	1.3 Million
Philadelphia Zoo	1.2 Million
Longwood Gardens	1.0 Million
National Constitution Center *	0.8 Million
Franklin Institute	0.8 Million
Franklin Square *	0.8 Million
Philadelphia Museum of Art	0.7 Million

Source: Philadelphia Business Journal (2013), Econsult Solutions (2013)

It is estimated that **the Philadelphia Historic District is currently responsible for about 5 million visitors and about \$560 million in direct visitor spending per year.**<sup>6</sup> Furthermore, annual operations at publicly maintained sites such as Independence National Historical Park represent at least an additional \$40 million in direct expenditures.<sup>7</sup> Therefore, a conservative estimate of the direct expenditures represented by the Philadelphia Historic District is about \$600 million.

This amount of direct expenditures has a ripple effect throughout the City and Commonwealth economy, supporting additional activity by local vendors and providing earnings to local employees that are in turn spent within the local economy. Based on industry standard input-output multipliers provided by the US Department of Commerce, the scale of the total impact generated by the Philadelphia Historic District can be estimated (see Table 3.2 and Table 3.3).<sup>8</sup>

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<sup>6</sup> A 2007 study by Urban Partners, "The Economic Impact of Visitor Expenditures in the Philadelphia Historic District," utilized attraction attendance data and visitor spending surveys to estimate an aggregate 5.26 million visitors and \$522 million in direct visitor spending. A 2011 study by Econsult Corporation and Urban Partners, "Economic Benefits of Historic Preservation Activities in Pennsylvania," utilized attraction attendance data and cost of living indexes to update these estimates to 5.45 million visitors and \$560 million in direct visitor spending.

Visits to the Visitor Center were down about 10 percent from three years prior. However, inflation would suggest that spending per visitor is about 10 percent higher than from three years prior. Therefore, this \$560 million estimate is considered reasonably good for the present day, although it is probably conservatively low.

<sup>7</sup> This includes such publicly operated locations as Independence Hall and Betsy Ross House, and excludes direct expenditures from annual operations at non-publicly operated locations such as National Constitution Center and National Museum of American Jewish History, which are covered in larger part by ticket sales and related visitor spending (concessions, souvenirs) and are therefore partially (although not fully) accounted for in the visitor spending amount. Therefore, this amount should be considered conservatively low.

<sup>8</sup> See Appendix A for Econsult Solutions' economic and fiscal impact methodology.

**Table 3.2 – Estimated Economic Impact of the Philadelphia Historic District  
(Annual Operations and Visitor Spending)**

	City of Philadelphia	Philadelphia Five-County Region	Commonwealth of Pennsylvania
Direct Expenditures (\$M)	\$600	\$600	\$600
Indirect & Induced Expenditures (\$M)	\$313	\$575	\$597
<b>Total Expenditures (\$M)</b>	<b>\$913</b>	<b>\$1,175</b>	<b>\$1,197</b>
<b>Total Employment (Jobs)</b>	<b>9,900</b>	<b>15,050</b>	<b>16,850</b>
<b>Total Earnings (\$M)</b>	<b>\$180</b>	<b>\$346</b>	<b>\$363</b>

Source: Urban Partners (2007), Pennsylvania Historical and Museum Commission (2010), Internal Revenue Service (2012), US Department of Commerce (2011), Econsult Solutions (2011, 2013)

**Table 3.3 – Estimated Fiscal Impact of the Philadelphia Historic District  
(Annual Operations and Visitor Spending)**

	City of Philadelphia	Commonwealth of Pennsylvania
Income Tax Revenues	\$6.8	\$6.6
Sales Tax Revenues	\$1.3	\$21.2
Business Tax Revenues	\$1.9	\$2.5
<b>Total Tax Revenues</b>	<b>\$9.9</b>	<b>\$30.3</b>

Source: Urban Partners (2007), Pennsylvania Historical and Museum Commission (2010), Internal Revenue Service (2012), US Department of Commerce (2011), Econsult Solutions (2011, 2013)

Within the City, the Philadelphia Historic District generates about **\$900 million in economic activity** each year, supporting about **10,000 jobs** and generating about **\$10 million in local tax revenues**.<sup>9</sup> Within the Commonwealth, the

<sup>9</sup> As a point of reference, it was estimated by the National Park Service that the Independence Hall National Park itself, with its 3.6 million visitors, was responsible for about \$150 million in direct visitor spending from which 1,900 local jobs were supported and over \$100 million in local Gross Domestic Product generated. "Economic Benefits to Local Communities from National Park Visitation, 2011," National Park Service (February 2013).

Philadelphia Historic District generates about **\$1.2 billion in economic activity** each year, supporting about **17,000 jobs** and generating about **\$30 million in state tax revenues**.<sup>10</sup>

While any source of an economic and fiscal impact this large is welcomed within the City and Commonwealth, there are multiple reasons why the Philadelphia Historic District is of great importance for the City and Commonwealth. First, it represents something **unique about the City and Commonwealth**, which no other place can offer. The Philadelphia Historic District is the foundation of this nation—a history important to all Americans and an attraction for international visitors. Second, and on a related note, it **draws visitors into the City and Commonwealth**, whose importation of purchasing power benefits local merchants, supports local jobs, and generates local tax revenues. Third, it spans a **wide range of employment and economic opportunities for City and Commonwealth residents**, because it represents a diversity of sectors (leisure, hospitality, retail) and of job levels (entry-level, semi-skilled, and managerial).

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<sup>10</sup> Because the City is contained completely within the Commonwealth, Commonwealth economic impact figures include City economic impact figures, and the difference between the two represents the economic impact that occurs in the parts of the Commonwealth outside the City. Because the City and Commonwealth are distinct government jurisdictions, the City and Commonwealth fiscal impact figures do not overlap, as each set of figures represents the estimated tax revenues generated to a particular government jurisdiction.



## 4.0 CONCLUSION

As expected, the contribution of the IVCC and the Visitor Center to the tourism industry's economic impact within the Philadelphia region is significant (see Table 4.1). By serving as a welcoming first stop for visitors, dispensing information and advice, and promoting itineraries and attractions, the Visitor Center maximizes the visitor's experience of the Philadelphia region. This leads to increased spending per visitor, as well as happier visitors who in turn have more things to say to their friends and family and more reasons to return.

**Table 4.1 – The Contribution of the Independence Visitor Center to the Annual Economic and Fiscal Impact of the Tourism Industry within the Philadelphia Region**

	<b>Visitor Center Contribution</b>
<b>Economic Impact</b>	<b>\$200 Million – \$400 Million</b>
<b>Jobs Supported</b>	<b>1,700 – 3,400</b>
<b>Local and State Tax Revenues Generated</b>	<b>\$12 Million – \$24 Million</b>

*Source: Greater Philadelphia Tourism and Marketing Corporation (2012), Tourism Economics (2012), Econsult Solutions (2013)*

Also as expected, the Philadelphia Historic District is a major economic generator for the City and Commonwealth (see Table 4.2). Its concentration of iconic destinations and cultural treasures draw in millions of visitors per year, whose spending benefits local merchants and generates local tax revenues. And, importantly for a time of stubbornly high unemployment, it represents a wide range of job levels and job types.

**Table 4.2 – Estimated Economic and Fiscal Impact of the Philadelphia Historic District (Annual Operations and Visitor Spending)**

	<b>City of Philadelphia</b>	<b>Commonwealth of Pennsylvania</b>
<b>Economic Impact</b>	<b>\$900 Million</b>	<b>\$1.2 Billion</b>
<b>Jobs Supported</b>	<b>10,000</b>	<b>17,000</b>
<b>Local and State Tax Revenues Generated</b>	<b>\$10 Million</b>	<b>\$30 Million</b>

*Source: Urban Partners (2007), Pennsylvania Historical and Museum Commission (2010), Internal Revenue Service (2012), US Department of Commerce (2011), Econsult Solutions (2011, 2013)*

# Appendix A – Economic and Fiscal Impact Methodology

## A.1 Economic Impact Model

The methodology and input-output model used in this economic impact analysis are considered standard for estimating such expenditure impacts, and the results are typically recognized as reasonable and plausible effects based on the assumptions (including data) used to generate the impacts. In general, any economic activity can be described in terms of the total output generated from every dollar of direct expenditures. If an industry in a given region sells \$1 million of its goods, there is a direct infusion of \$1 million into the region. These are referred to as *direct expenditures*.

However, the economic impact on the region does not stop with that initial direct expenditure. Regional suppliers to that industry have also been called upon to increase their production to meet the needs of the industry to produce the \$1 million in goods sold. Further, suppliers of these same suppliers must also increase production to meet their increased needs as well. These are referred to as *indirect expenditures*. In addition, these direct and indirect expenditures require workers, and these workers must be paid for their labor. These wages and salaries will, in turn, be spent in part on goods and services produced locally, engendering another round of impacts. These are referred to as *induced expenditures*.

Direct expenditures are fed into a model constructed by Econsult Solutions and based on data provided by the US Department of Commerce's Bureau of Economic Analysis through its Regional Input-Output Modeling System (RIMS II). The model then produces a calculation of the total expenditure effect on the regional economy. This total effect includes the initial direct expenditure effect, as well as the ripple effects described, the indirect and induced expenditure effects.

Part of the total expenditure effect is actually the increase in total wages and salaries (usually referred to as earnings), which the model can separate from the expenditure estimates. Direct payroll estimates are fed into the "household" industry of the input-output model. Impacts of this industry are estimated using the personal consumption expenditure breakdown of the national input-output table and are adjusted to account for regional consumption spending and leakages from personal taxes and savings. The direct, indirect, and induced earnings represent a component of the total economic impact attributable to wages and salaries. Finally, the model calculates the total expenditures affecting the various industries and translates this estimate into an estimate of the total labor (or jobs) required to produce this output.<sup>11</sup>

In short, the input-output model estimates the total economic activity in a region that can be attributed to the direct demand for the goods or services of various industries. This type of approach is used to estimate the total economic activity attributable to the expenditures associated with various types of spending in the region.

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<sup>11</sup> In the input-output model, the estimate of increased employment will always be in terms of the employment required for a given level of production, usually referred to as *person-years* of employment. As such, these estimates cannot be interpreted as specifying *permanent jobs*.

## A.2 FISCAL IMPACT MODEL

The RIMS II model provides estimates of the economic impact of a new project or program on the regional economy. It does not, however, estimate the fiscal impact of the increased economic activity on state and local governments. Econsult has constructed a model that takes the output from the RIMS II model and generates detailed estimates of the increases in state and local tax collections that arise from the new project. Those revenues are in fact a part of the total economic impact of a new project that is often ignored in conventional economic impact analyses.

The RIMS II model provides estimates of direct, indirect, and induced expenditures, earnings, and employment within the defined region. The Econsult fiscal impact model combines the RIMS II output with U. S. Census Bureau County Business Patterns data to produce estimates of the distribution of additional employment and earnings by county. In addition, the 2000 Census "Journey to Work" data on commuting flows are utilized to estimate income earned by residents of each county within the region, regardless of where they work. The fiscal model can then estimate the increase in earned income taxes by county and for the state as a whole resulting from the new project. For complex cases, like Philadelphia, the model can differentiate between residents and nonresidents and apply the proper wage tax rate. Pennsylvania state business and sales taxes, as well as business taxes in Philadelphia, are estimated based on the most recent data on average sales tax base per employee by major industry, as contained in publications from the Pennsylvania Department of Revenue.



Figure A.1 – Glossary of Terms for Input-Output Models

**Multiplier Effect** – the notion that initial outlays have a ripple effect on a local economy, to the extent that direct expenditures lead to indirect and induced expenditures.

**Economic Impacts** – total expenditures, employment, and earnings generated.

**Fiscal Impacts** – local and/or state tax revenues generated.

**Direct Expenditures** – initial outlays usually associated with the project or activity being modeled; examples: one-time upfront construction and related expenditures associated with a new or renovated facility, annual expenditures associated with ongoing facility maintenance and/or operating activity.

**Direct Employment** – the full time equivalent jobs associated with the direct expenditures.

**Direct Earnings** – the salaries and wages earned by employees and contractors as part of the direct expenditures.

**Indirect Expenditures** – indirect and induced outlays resulting from the direct expenditures; examples: vendors increasing production to meet new demand associated with the direct expenditures, workers spending direct earnings on various purchases within the local economy.

**Indirect Employment** – the full time equivalent jobs associated with the indirect expenditures.

**Indirect Earnings** – the salaries and wages earned by employees and contractors as part of the indirect expenditures.

**Total Expenditures** – the sum total of direct expenditures and indirect expenditures.

**Total Employment** – the sum total of direct employment and indirect employment.

**Total Earnings** – the sum total of direct earnings and indirect earnings.

**Total Value-Added** – the sum total of contribution to Gross Domestic Product.

*Source: Econsult Solutions (2013)*