

# **An Economic Assessment** of the **Impact** of the **Memphis International Airport**

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**Prepared for the  
Memphis-Shelby County Airport Authority**

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## MAJOR POINTS

- In FY2012, total combined direct expenditures (which may be thought of as sales or revenue) of cargo and passenger operations and construction projects and expenditures at MEM totaled over \$12.5 billion, resulting in total output (the production and sales of goods and services) in the Memphis Metropolitan Statistical Area (MSA) of almost \$23.3 billion and earnings of \$5.3 billion, while supporting 139,820 jobs.

### Cargo Operations Impact

- Pounds of cargo enplaned increased at MEM between FY2008 and FY2012, up 3.8 percent from just over 4.3 billion pounds in 2008 to nearly 4.5 billion pounds in 2012.
- MEM had nearly 4.5 billion pounds of cargo enplaned during FY2012. With revenue per pound averaging \$2.66, this equates to more than \$11.9 billion in revenue associated with cargo enplaned in Memphis.
- Direct expenditures (total cargo revenue) of more than \$11.9 billion are estimated to have resulted in an impact of almost \$10.2 billion in indirect expenditures, for a total impact of more than \$22.1 billion in output, while supporting a total of 132,380 jobs and total earnings of over \$5.0 billion.

### Passenger Operations Impact

- Coinciding with Delta Air Lines' merger with Northwest Airlines, passenger enplanements fell 29.4 percent between FY2008 and FY2012. International enplanements experienced the largest percentage decrease, declining 75.7 percent due to a loss of feeder flights and the change to seasonal status (now eliminated) of the Memphis-Amsterdam route.
- Direct expenditures (total passenger mile revenue) of nearly \$510.9 million are estimated to have resulted in an impact of \$436.2 million in indirect expenditures for a total impact of more than \$947.1 million in output, while supporting a total of 5,666 jobs and total earnings of nearly \$214.8 million.

### Construction Impact

- In FY2012, direct construction expenditures of \$91.2 million are estimated to have resulted in an impact of \$101.5 million in indirect expenditures for a total impact of \$192.7 million in output, supporting 1,774 jobs and total earnings of \$65.6 million.

### Tourism and Visitor Impact

- Over 900,000 domestic and international visitors were estimated to have come to Memphis via MEM in 2012. Direct expenditures of these visitors exceeded \$383 million, generated \$742 million in output and \$221 million in earnings, and supported over 9,000 jobs. While not directly responsible for these visitors, MEM provides an important means of getting to the area. If air service grows, so too will the impact from visitors and tourists.

### Surveys of Area Businesses and Airport Tenants

- Over 82.0 percent of tenant respondents and 85.0 percent of area business respondents rated the Airport's economic impact as somewhat to very important to their company's overall business activity.
- A majority of both tenant and area business respondents agreed or strongly agreed with the statement, "*A growing airport facility could provide an incentive for your company to move more activities to Memphis.*"

## EXECUTIVE SUMMARY

Memphis International Airport (MEM) continues to be the single most important public infrastructure investment available to support economic activity in the Mid-South. While roads, rail, and river provide important transportation linkages essential to the movement of goods and services across the nation, MEM's runways are the community's global economic connection. Over the next 50 years, a global airport will determine if the community is a winner or loser in the dynamic global competition for economic growth and prosperity.

The impact of Memphis International Airport is multi-dimensional. It reflects a balance between the massive air-cargo operations and a much smaller but no less important passenger operation. MEM is primarily a cargo-driven airport thanks to the massive domestic and international operations of FedEx. The presence of FedEx at MEM makes MEM and FedEx major drivers of the local economy. Memphis was the largest air-cargo airport in the U.S. in 2012 and was statistically tied for first in the world, two-tenths of one percent behind Hong Kong International Airport. Cargo operations at MEM provide opportunities for local businesses seeking to participate in the global economy.

- In FY2012, total combined direct expenditures (which may be thought of as sales or revenue) of cargo and passenger operations and construction projects and expenditures at MEM totaled over \$12.5 billion, resulting in total output (the production and sales of goods and services) in the Memphis Metropolitan Statistical Area (MSA) of almost \$23.3 billion and earnings of \$5.3 billion, while supporting 139,820 jobs.

### Cargo Operations Impact

For nearly 20 years, MEM was the world's busiest cargo airport in terms of cargo volume handled, having only recently been edged out by Hong Kong (and just barely at that). The high volume is due primarily to the operation of FedEx Super Hub which handles 99.0 percent of all cargo at MEM.

- While cargo movements decreased, pounds of cargo enplaned actually increased at MEM between 2008 and 2012, up 3.8 percent from just over 4.3 billion pounds in 2008 to nearly 4.5 billion pounds in 2012.
- MEM had nearly 4.5 billion pounds of cargo enplaned during FY2012. With revenue per pound averaging \$2.66, this equates to more than \$11.9 billion in revenue associated with cargo enplaned in Memphis.
- Direct expenditures (total cargo revenue) of more than \$11.9 billion are estimated to have resulted in an impact of almost \$10.2 billion in indirect expenditures, for a total impact of more than \$22.1 billion in output, while supporting a total of 132,380 jobs and total earnings of over \$5.0 billion.

### Passenger Operations Impact

Memphis passenger traffic has declined as a result of the impact of the Great Recession, the high cost of travel, and the reduction in flights by Delta Air Lines. The absence of a large population base in Memphis and the Mid-South prevents the community from being a major generator of passenger traffic. MEM ranked 47<sup>th</sup> nationally in passenger volume in FY2012, and 44<sup>th</sup> in calendar year 2011. While the economic recovery currently underway will increase

passenger traffic, other factors may continue to have a negative impact on passenger enplanements at MEM until alternative arrangements are completed to improve passenger service—both price and quantity. The addition of AirTran and Southwest passenger services at MEM will be a positive addition.

Businesses in Memphis report that passenger service is very important for their current and future business activities. Passenger air service is an essential factor in sustaining and growing the Memphis economy. The impact assessment of passenger expenditures for tickets at MEM is one part of a larger story about the movement of passengers and the future of Memphis as a global economy.

- Coinciding with Delta Air Lines' merger with Northwest Airlines, passenger enplanements fell 29.4 percent between 2008 and 2012. International enplanements experienced the largest percentage decrease, declining 75.7 percent due to a loss of feeder flights and the change to seasonal status (now eliminated) of the Memphis-Amsterdam route.
- Direct expenditures (total passenger mile revenue) of nearly \$510.9 million are estimated to have resulted in an impact of \$436.2 million in indirect expenditures for a total impact of more than \$947.1 million in output, while supporting a total of 5,666 jobs and total earnings of nearly \$214.8 million.

### **Construction Impact**

In addition to the enormous impact on the Memphis MSA economy of its passenger and cargo operations, MEM is almost continuously undergoing improvements or expansions that bring about another large impact via construction expenditures. Construction totaled nearly \$420.0 million during the past five fiscal years. Projects have included everything from taxiway improvements to passenger facility improvements.

- In FY2012, direct construction expenditures of \$91.2 million are estimated to have resulted in an impact of \$101.5 million in indirect expenditures for a total impact of \$192.7 million in output, supporting 1,774 jobs and total earnings of \$65.6 million.

### **Historical Comparison**

Passenger volume has decreased considerably over the past few years. In contrast, cargo volume has grown. Most of the decrease in passenger volume took place between FY2007 and FY2012 as MEM transitioned from a Northwest Airlines hub to a Delta hub and as the world economy fell into recession.

- Adjusted for inflation, the total direct impact of MEM in FY2012 was approximately 15.5 percent less than it was in FY2007.
- In real terms, the direct impact (expenditures) from cargo operations in FY2012 was 15.1 percent less than in FY2007, while the direct impact from passenger operations was 26.6 percent less.
- Domestic passenger enplanements were 25.2 percent less in FY2012 than in FY2004, while international passenger enplanements were 70.4 percent less.
- Total cargo volume was up 12.2 percent in 2012 over 2004. This was due primarily to a substantial increase in international cargo volume which grew by 76.3 percent during the period.

## **Tourism Impact**

MEM plays a vital support role for the tourism, entertainment, and hospitality industries. Declining air services, fewer passenger enplanements, the recession, and the elimination of the direct flight to Amsterdam all had a negative impact on the economic strength of these local industries. Increases in air service and ticket price relief would have a large positive impact on the local tourism and hospitality industries and the local economy.

Tourism and hospitality are two of the industries that are directly associated with passenger air services. More, better, and cheaper passenger air service would have a positive impact on tourism, hospitality, and many related industries. Most other businesses and all of the public depend on passenger air services at MEM. Visitor spending is an important economic engine that drives the community forward.

- In 2012, average expenditures per visitor to Memphis were \$144 per day, distributed between lodging, food and drinks, and retail shopping.
- Over 900,000 domestic and international visitors were estimated to have come to Memphis via MEM in 2012. The direct expenditures of those visitors exceeded \$383 million and generated \$742 million in output, \$221 million in earnings, and supported over 9,000 jobs.

## **Surveys of Area Businesses and Airport Tenants**

As part of this economic impact study, the Sparks Bureau of Business and Economic Research (SBBER) conducted two on-line surveys of Airport tenants and businesses in the Memphis area. With the assistance of the Greater Memphis Chamber, the SBBER contacted over 9,000 local businesses and received 400 completed surveys. Similarly, the SBBER also attempted to contact all MEM tenants.

- Airport tenant respondents averaged more than \$3.0 million in wages and salaries and non-wage expenses, while area business respondents averaged more than \$17.0 million in wages and salaries and almost \$12.0 million in non-wage operating expenses.
- Airport tenants reported average local capital expenditures of over \$580,000, while business respondents averaged almost \$3.0 million in capital expenditures.
- Over 70.0 percent of tenant and business respondents used MEM to transport customers and business associates, while almost 90.0 percent of businesses and 64.0 percent of tenants used MEM to transport company employees.
- Both tenant and business respondents indicated that MEM was somewhat to very important in its impact on their level of business activity, with almost 70.0 percent of the tenants indicating that MEM was very important.
- Fifty percent of the tenants and almost 58.0 percent of the area business respondents indicated that they felt the quality of passenger air service was low or very low at Memphis International.

## Introduction

Memphis International Airport (MEM) continues to be the single most important public infrastructure investment available to support economic activity in the Mid-South. While roads, rail, and river provide important transportation linkages essential to the movement of goods and services across the nation, MEM's runways are the community's global economic connection. Memphis International Airport is the foundation of the local economy. The success of Airport operations and services, both passenger and cargo, has been a major determinant of the future of the Mid-South economy. For the last 50 years, the growth and direction of the Memphis economy have been defined more by the quality of the Airport, Airport-based businesses, and air services than any other single factor. Over the next 50 years, a global airport will determine if the community is a winner or loser in the dynamic global competition for economic growth and prosperity.

While air services at MEM have been harmed by industry changes, declining competition, and the Great Recession, the quality of air services and air cargo operations in general at the Airport remains high. Challenged by the transition after the merger of Northwest Airlines and Delta Air Lines and faced with a high fare structure for many flights, MEM is being forced to find a new normal for air service. Similar to conditions found in many non-hub cities across the nation, the Memphis-Shelby County Airport Authority (Airport Authority) is working to form new partnerships and find new ways to deliver the highest quality air services for local consumers and businesses.

Recent announcements regarding the pursuit of new air routes via AirTran and Southwest, using novel financial incentives by the Airport Authority and EDGE (Economic Development and Growth Engine), are one outcome of the community's recognition that air service is an essential determinant of our economic success. Pursuing alternative passenger service providers and working with the community on plans to activate the nearly decade-old America's Aerotropolis initiative are two additional ways MEM is participating in efforts to expand economic opportunities in Memphis.

Time is a valuable asset. It can be the community's best friend or worst enemy. As domestic and international markets grow at different rates and economic activity flows rapidly



and seamlessly across borders, time-sensitive production, distribution, and consumption will play a larger role in defining the community's future. Many of Memphis' largest employers are based upon the economic advantages found in closing the distances in time and space. Those distances are closing rapidly as advanced logistics, internet production, purchasing, and distribution processes all minimize the time and cost involved in meeting the demands of a new generation of consumers. The economic future of Memphis will be based upon our ability to be an active participant in this global economic revolution—shrinking the distances and time between people and markets around the world.

While the community focuses much of its attention on the major industries and industrial strengths in distribution and logistics, tourism, music and film, business headquarters, and medical, including bio-medical and bio-logistics (some of the most frequently mentioned targets for expansion), MEM is working behind the scenes to make Memphis a more attractive place to live and do business. The Airport Authority is in charge of the complex air operations at MEM.

Memphis International Airport is self-financed and does not receive funding from controversial local tax sources. Yet, air services are an essential factor of production for the community; all of the target industries and all of our largest employers rely on the use of passenger and/or cargo operations that take place at the Airport. Clearly, air cargo operations provide a competitive advantage for many local employers and businesses, and the community cannot grow and prosper without strong connections to domestic and world markets. The development of Memphis as America's Aerotropolis will increase the interdependence between the future of Memphis and the success of MEM. Memphis International Airport has an impact on the production processes, input requirements, customers, and competitors in every sector of the local economy.

This report examines the economic impact of MEM and how its annual operations support many sectors of the local economy. The economic impact of the Airport examined in this report focuses on payroll, employment, capital expenditures, flights, and tons of cargo that move through the Airport. But, the impact of MEM goes beyond the economic impact discussed in the following pages. The future of Memphis, its plans, and its economic opportunities are bound together with the success of MEM. Memphis International Airport is a reflection of the city—a first impression of Memphis for people and businesses from around the world.

## A Brief Review of Memphis International Airport, FY2008–FY2012

The four years from FY2008 through FY2012 have seen considerable change at Memphis International Airport and throughout the aviation world. The effects of rising energy prices coupled with a global recession are reflected throughout nearly all statistics on aviation and related services at MEM. The statistics on aircraft movements in Table 1 reflect many of the changes seen nationally. Total aircraft movements during the four-year period decreased by 21.4 percent (from 372,350 to 292,783), but the story was not in the change in total movements, but instead was within the composition of total movements.

In particular, there has been a marked downward trend in movements/flights by major/national passenger airlines (-51.9 percent), along with a small decrease (-4.2 percent) in movements/flights by cargo carriers. The decrease in passenger movements/flights reflects a national trend that has been caused substantially by major airlines' cost-cutting efforts via fleet and route reductions in an effort to survive the Great Recession.

**Table 1. MEM Aircraft Operations, FY2008–FY2012\***

Fiscal Year	Majors/ Nationals	Regional	Cargo	General Aviation	Military	Total	Total Percent Change
2012	32,190	106,014	125,526	27,491	1,562	292,783	-11.3%
2011	37,942	139,370	125,438	25,968	1,542	330,260	-1.2%
2010	40,842	144,704	122,222	25,193	1,284	334,245	-4.1%
2009	48,580	146,026	124,564	27,897	1,413	348,480	-6.4%
2008	66,978	132,242	131,006	40,583	1,541	372,350	—

\*Takeoffs and landings.

Source: Memphis-Shelby County Airport Authority, FY2012 Comprehensive Annual Financial Report.

While cargo movements decreased, pounds of cargo enplaned actually increased at MEM over the four-year period, up 3.8 percent from just over 4.3 billion pounds in FY2008 to nearly 4.5 billion pounds in FY2012 (Table 2). The bulk of this increase was in international freight, despite weak economic conditions globally, with cargo enplaned rising a substantial 55.9 percent from 185.3 million pounds in FY2008 to 288.9 million pounds in FY2012. Domestic freight also rose during this same period, up 1.5 percent from 4.1 billion pounds in FY2008 to 4.2 billion in FY2012.

**Table 2. Cargo Enplaned at MEM, FY2008–FY2012 (In 000 Pounds)**

Fiscal Year	Domestic Freight	Domestic Percent Change	International Freight	International Percent Change	Air Mail	Air Mail Percent Change	Total	Total Percent Change
2012	4,197,787	1.1%	288,865	14.4%	540	-8.5%	4,487,192	1.9%
2011	4,151,373	0.9%	252,539	14.9%	590	-76.7%	4,404,502	1.6%
2010	4,113,590	5.6%	219,809	14.2%	2,527	-25.3%	4,335,926	6.0%
2009	3,894,212	-5.8%	192,506	3.9%	3,382	-34.3%	4,090,100	-5.4%
2008	4,133,907	—	185,332	—	5,149	—	4,324,388	—

Source: Memphis-Shelby County Airport Authority, FY2012 Comprehensive Annual Financial Report.

Coinciding with Delta Air Lines’ merger with Northwest Airlines, passenger enplanements decreased substantially over the four-year period, with the largest drop occurring during FY2012 when the airline cut flights and routes out of MEM in an effort to offset weak demand (Table 3). Overall, passenger enplanements fell 29.4 percent between FY2008 and FY2012. International enplanements experienced the largest percentage decrease, declining 75.7 percent due to a loss of feeder flights and the change to seasonal status (now eliminated) of the Memphis-Amsterdam route.

**Table 3. Domestic and International Passenger Enplanements, FY2008–FY2012**

Fiscal Year	Domestic Enplanements	Domestic Percent Change	International Enplanements	International Percent Change	Total	Total Percent Change
2012	3,878,176	-17.5%	46,405	-39.4%	3,924,581	-17.8%
2011	4,699,355	- 2.8%	76,630	-44.0%	4,775,985	- 3.9%
2010	4,834,578	- 2.8%	136,884	-26.6%	4,971,462	- 3.6%
2009	4,971,728	- 7.4%	186,393	- 2.3%	5,158,121	- 7.2%
2008	5,369,881	—	190,823	—	5,560,704	—

Source: Memphis-Shelby County Airport Authority, FY2012 Comprehensive Annual Financial Report.

Table 4 shows fiscal-year comparisons of MEM passenger enplanements and cargo volume with those of other selected cities. As shown, MEM ranked 47<sup>th</sup> of all U.S. airports in passenger<sup>1</sup> enplanements but first in cargo volume. The shift in Delta flights from MEM to Atlanta (ATL) is evident as Atlanta’s airport has nearly eleven times the volume of passenger enplanements as does MEM. However, ATL has less than 8.0 percent of MEM’s cargo volume. Louisville International, home of UPS’ major air cargo hub, ranked 2<sup>nd</sup> nationally in cargo volume with 58.9 percent of MEM’s 2012 total.

<sup>1</sup> Alternatively, [Airports Council International](#) ranked MEM 44<sup>th</sup> in passenger enplanements in calendar year 2011.

**Table 4. Passenger Enplanements and Cargo Volume Comparisons, Selected Cities, FY2012\***

Airport	Passenger Enplanements (Departures, in 000)	U.S. Rank	Percent of Memphis	Cargo (000,000 of Lbs.)	U.S. Rank	Percent of Memphis
Memphis (MEM)	3,780	47	100.0%	7,682	1	100.0%
Atlanta (ATL)	40,559	1	1,073.0%	601	14	7.8%
Birmingham (BHM)	1,421	72	37.6%	55	90	0.7%
Charlotte (CLT)	18,061	8	477.8%	217	36	2.8%
Dallas/Fort Worth (DFW)	25,048	3	662.6%	654	13	8.5%
Indianapolis (IND)	3,553	48	94.0%	1,867	4	24.3%
Louisville (SDF)	1,611	68	42.6%	4,522	2	58.9%
Nashville (BNA)	4,724	34	125.0%	81	74	1.1%

\*For twelve months ended in July 2012.

Source: U.S. Bureau of Transportation Statistics, Research and Innovative Technology Administration.

## The Economic Impact of Memphis International Airport

Similar to other public and private investments, one measure of a successful major airport is its contribution to the local economy as a result of its operation. Like many other major airports, MEM generates measurable, positive economic returns, including employment, earnings, economic output, and tax revenues. As will be shown, these benefits are widespread and considerable. The remainder of this study focuses on developing quantitative estimates of the economic impact of MEM.

### Methodology

The methodology used in this analysis involves estimating the direct and indirect economic impacts of the operation of MEM on the Memphis Metropolitan Statistical Area (MSA). The analysis was conducted primarily through the use of the U.S. Bureau of Economic Analysis' (BEA) RIMS II output (i.e., goods and services produced as a result of the economic activity in question), earnings, and employment multipliers for the Memphis MSA. Specifically, the methodology examines the link between the industry in question (MEM) and other local industries and MEM's impact on local households.

### Data Sources

Major sources of data included:

- Memphis-Shelby County Airport Authority Comprehensive Annual Financial Reports for fiscal years 2008–2012.

- Output, Earnings, and Employment Multipliers. Multipliers from the Regional Input-Output Modeling System (RIMS II) developed by the U.S. Bureau of Economic Analysis were used to measure linkages between output, job creation, and payroll generation.

### The Impact of Air Cargo

For nearly 20 years, MEM was the world’s busiest cargo airport in terms of cargo volume handled, having only recently been edged out by Hong Kong (and just barely at that). Such high volume is due primarily to the operation of FedEx Super Hub which handled 99.0 percent of all cargo at MEM during FY2008-FY2012. The high ranking of the air cargo operations at MEM also comes with a very large impact on the Memphis MSA’s economy. To estimate the size of this impact, it was first necessary to estimate the dollar value of the volume of cargo enplaned at MEM, which is presented in Table 5. As shown by the figures, MEM had nearly 4.5 billion pounds of cargo enplaned during FY2012. With revenue per pound averaging \$2.66, this equates to more than \$11.9 billion in revenue associated with cargo enplaned in Memphis.

**Table 5. Estimated Air Cargo Revenue, FY2012**

<b>Total Pounds of Cargo Enplaned</b>	4,487,192,000
<b>Average Revenue Per Pound</b>	_____ x \$2.66
<b>Total Cargo Revenue</b>	<b>\$11,935,930,720</b>

Note: The FY2012 average revenue per pound is from FedEx Express Corporation's Financial Highlights Per Q4 FY12 Statistical Book found on-line at <http://investors.fedex.com/phoenix.zhtml?c=73289&p=irol-statbooks>, while total pounds of cargo enplaned is from Memphis-Shelby County Airport Authority's Comprehensive Annual Financial Report, FY2012.

Total cargo revenue from Table 5 was taken and multiplied by the RIMS II multipliers to derive the multiplier impact. As shown in Table 6, direct expenditures (total cargo revenue) of more than \$11.9 billion are estimated to have resulted in an impact of almost \$10.2 billion in indirect expenditures, for a total impact of more than \$22.1 billion in output (the production of goods and services), while supporting a total of 132,380 jobs and total earnings of over \$5.0 billion. The indirect impact is a result of the businesses and individuals who work in the local air cargo industry spending their earnings and gross receipts in the local community and from the earnings and gross receipts of local businesses and individuals who in some manner support the air cargo industry.

**Table 6. Multiplier Impacts of Air Cargo Operations at Memphis International Airport, FY2012**

RIMS Category	Direct Expenditures	Output	Impacts Earnings	Employment
Air Transportation	\$11,935,930,720	\$22,128,021,962	\$5,017,865,275	132,380

### The Impact of Passenger Operations

In addition to the large volume of cargo operations at MEM, the Airport also has significant passenger operations, ranking 47<sup>th</sup> nationally in passenger enplanements and serving as one of Delta Air Lines' U.S. hubs. As with cargo operations in the preceding section, it was necessary to first estimate a dollar value of passenger operations at MEM to use with the RIMS II multipliers.

Combining data from the U.S. Bureau of Transportation Statistics (T-100 Market and Segment data) and MEM's domestic and international enplanements for FY2012, an estimate of total domestic and international passenger revenue/sales is presented in Table 7. It is estimated that for FY2012 the average domestic passenger trip length was 879 miles, while the average international passenger trip length was 4,523 miles.

**Table 7. Estimated Air Passenger Revenue/Sales, FY2012**

	Domestic	International
Enplanements	3,878,176	46,405
Average Passenger Trip Length	879	4,523
Estimated Total Passenger Miles	3,408,916,704	209,889,815
Revenue Per Passenger Mile	\$0.141	\$0.144
Total Revenue/Sales	\$480,657,255	\$30,224,133
<b>Total Domestic and International Sales Combined</b>	<b>\$510,881,388</b>	

Note: International mileage used represents the MEM-AMS flight.

Sources: U.S. Bureau of Transportation Statistics, Research and Innovative Technology Administration, and Memphis-Shelby County Airport Authority, FY2012 Comprehensive Annual Financial Report.

Multiplying the mileage figures by their respective enplanements (3,878,176 for domestic and 46,405 for international) results in a total of over 3.4 billion domestic passenger miles and nearly 210.0 million international passenger miles. Then, multiplying these two figures by the revenue per domestic passenger mile of \$0.141 and \$0.144 per international passenger mile results in an estimate of domestic passenger revenue/sales of almost \$480.7 million and

international passenger revenue/sales of approximately \$30.2 million, for a combined total of \$510.9 million.

Total passenger mile revenue/sales from Table 7 were taken and multiplied by the RIMS II multipliers to derive the multiplier impact. As shown in Table 8, direct expenditures (total passenger mile revenue) of nearly \$510.9 million are estimated to have resulted in an impact of \$436.2 million in indirect expenditures for a total impact of more than \$947.1 million in output (the production of goods and services), while supporting a total of 5,666 jobs and total earnings of nearly \$214.8 million. The indirect impact is a result of the businesses and individuals who work in the local air passenger industry spending their earnings and gross receipts in the local community and from the earnings and gross receipts of local businesses and individuals who in some manner support the air passenger industry.

**Table 8. Multiplier Impacts of Passenger Operations at Memphis International Airport, FY2012**

RIMS Category	Direct	Impacts		
	Expenditures	Output	Earnings	Employment
Air Transportation	\$510,881,389	\$947,123,006	\$214,774,536	5,666

### The Impact of Construction at MEM

In addition to the enormous impact on the Memphis MSA economy of its passenger and cargo operations, MEM is almost continuously undergoing improvements or expansions that bring about another large impact via construction expenditures. Table 9 shows that construction expenditures made by MEM over the past five fiscal years (FY2008–FY2012) have totaled over \$419.1 million. Projects have included everything from taxiway improvements to passenger facility improvements. In FY2012, construction expenditures at MEM totaled approximately \$91.2 million.

**Table 9. Total Construction Expenditures at MEM, FY2008–FY2012**

Fiscal Year	Expenditures
2012	\$ 91,188,186
2011	\$ 67,179,154
2010	\$ 53,400,514
2009	\$ 77,577,539
2008	\$129,777,727
<b>Total</b>	<b>\$419,123,120</b>

Source: Memphis-Shelby County Airport Authority.

The FY2012 construction amount of \$91.2 million was combined with the RIMS II construction multipliers to derive the estimated economic impact on the Memphis MSA of construction at MEM. The results of these computations are presented in Table 10.

**Table 10. Multiplier Impacts of Construction at Memphis International Airport, FY2012**

RIMS Category	Direct Expenditures	Output	Impacts Earnings	Employment
Construction	\$91,188,186	\$192,689,756	\$65,573,425	1,774

As shown in Table 10, direct construction expenditures of \$91.2 million are estimated to have resulted in an impact of \$101.5 million in indirect expenditures for a total impact of \$192.7 million in output (the production of goods and services), while supporting 1,774 jobs and total earnings of almost \$65.6 million.

### Total Impact of Memphis International Airport

Table 11 shows the results of combining the impacts of cargo operations, passenger operations, and construction at MEM. As shown in the table, total combined direct expenditures (may be thought of as sales or revenue) of cargo and passenger operations and construction projects and expenditures at MEM totaled over \$12.5 billion, resulting in total output in the Memphis MSA (the production and sales of goods and services) of almost \$23.3 billion and earnings of nearly \$5.3 billion, while supporting almost 140,000 jobs.

**Table 11. Total Impact of Memphis International Airport, FY2012**

Category	Direct Expenditures	Output	Impacts Earnings	Employment
Cargo Operations	\$11,935,930,720	\$22,128,021,962	\$5,017,865,275	132,380
Passenger Operations	\$ 510,881,389	\$ 947,123,006	\$ 214,774,536	5,666
Construction Expenditures	\$ 91,188,186	\$ 192,689,756	\$ 65,573,425	1,774
<b>Total</b>	<b>\$12,538,000,295</b>	<b>\$23,267,834,724</b>	<b>\$5,298,213,236</b>	<b>139,820</b>

### Historical Comparison

The next few tables present a comparison of the results of the present study with results of studies done in 2005 and 2009. The impact study in 2005 focused on MEM operations in FY2004, whereas the 2009 study focused on FY2007. Table 12 shows the differences between the results in 2004, 2007, and 2012 in terms of passenger enplanements and pounds of cargo



enplaned. As shown, domestic passenger enplanements were 25.2 percent less in 2012 than in 2004, while international passenger enplanements were 70.4 percent less. In total, passenger enplanements were down 26.5 percent in 2012 over 2004. Most of the decrease took place between FY2007 and FY2012 as MEM transitioned from a Northwest Airlines hub to a Delta hub and as the world economy fell into recession. The addition of air service by AirTran and Southwest should help to reverse the downward trend.

While passenger volume has decreased considerably over the past few years, in contrast cargo volume has grown. Total cargo volume was up 12.2 percent in 2012 over 2004. This was due primarily to a substantial increase in international cargo volume which grew by more than 76.0 percent during the period. The volume of air mail, on the other hand, has declined dramatically, dropping almost 92.0 percent between 2004 and 2012. The decrease in air mail volume was more than offset, however, by increases in both domestic and international cargo volume.

**Table 12. Comparison of Passenger and Cargo Operations, FY2004, FY2007, and FY2012**

<b>Passenger Operations</b>	<b>Domestic</b>	<b>International</b>	<b>Total</b>	
<b>FY2004 Enplanements</b>	<b>5,185,615</b>	<b>156,838</b>	<b>5,342,453</b>	
<b>FY2007 Enplanements</b>	<b>5,263,394</b>	<b>180,050</b>	<b>5,443,444</b>	
<b>FY2012 Enplanements</b>	<b>3,878,176</b>	<b>46,405</b>	<b>3,924,581</b>	
<b>2012 vs. 2004</b>	<b>-25.2%</b>	<b>-70.4%</b>	<b>-26.5%</b>	
<b>2012 vs. 2007</b>	<b>-26.3%</b>	<b>-74.2%</b>	<b>-27.9%</b>	
<b>Cargo Operations</b>	<b>Domestic</b>	<b>International</b>	<b>Air Mail</b>	<b>Total</b>
<b>FY2004 Enplanements (lbs.)</b>	<b>3,829,523,000</b>	<b>163,837,000</b>	<b>6,659,000</b>	<b>4,000,019,000</b>
<b>FY2007 Enplanements (lbs.)</b>	<b>4,174,759,000</b>	<b>181,219,000</b>	<b>10,934,000</b>	<b>4,366,912,000</b>
<b>FY2012 Enplanements (lbs.)</b>	<b>4,197,787,000</b>	<b>288,865,000</b>	<b>540,000</b>	<b>4,487,192,000</b>
<b>2012 vs. 2004</b>	<b>9.6%</b>	<b>76.3%</b>	<b>-91.9%</b>	<b>12.2%</b>
<b>2012 vs. 2007</b>	<b>0.6%</b>	<b>59.4%</b>	<b>-95.1%</b>	<b>2.8%</b>

Source: Memphis-Shelby County Airport Authority.

The differences in passenger and cargo volumes between FY2004, FY2007, and FY2012 are also reflected in dollar amounts. For comparison purposes and as shown in Table 13, the 2007 numbers were converted to 2012 dollars, focusing only on FY2007 and FY2012 as the greatest changes occurred during that time period. The direct impact (expenditures) from cargo operations in FY2012 was just over 15.1 percent less than in FY2007 in real terms, while the

direct impact from passenger operations was 26.6 percent less. In real terms, the total direct impact of MEM in FY2012 was approximately 15.5 percent less than it was in FY2007.

**Table 13. Inflation-Adjusted Comparison of FY2007 and FY2012 Direct Expenditures**

Category	Inflation Adjusted			Percent Difference
	FY2007 Direct Expenditures	FY2012 Direct Expenditures	Difference	
Cargo Operations	\$14,064,807,701	\$11,935,930,720	-\$2,128,876,981	-15.1%
Passenger Operations	\$ 696,060,477	\$ 510,881,389	- \$185,179,089	-26.6%
Construction Expenditures	\$ 75,281,956	\$ 91,188,186	\$15,906,230	21.1%
<b>Total</b>	<b>\$14,836,150,134</b>	<b>\$12,538,000,295</b>	<b>-\$2,298,149,839</b>	<b>-15.5%</b>

As mentioned previously, the Great Recession and Delta Air Lines' merger with Northwest Airlines account for the drop in passenger operations and revenues. On the cargo side, however, there was an increase in volume between FY2007 and FY2012. The drop in cargo revenues is accounted for by a decrease in revenue per pound, from \$2.92 per pound in 2007 to \$2.66 per pound in FY2012 in nominal terms.

Table 14 shows the differences between the total impact of FY2012 operations at MEM versus the total impact of FY2007 operations. Memphis International Airport's total impact on output (again, roughly analogous to the value of the production of goods and services) was 26.2 percent smaller in FY2012, while the earnings impact was nearly 40.0 percent less. The FY2012 impact on employment was 36.5 percent less than it was in FY2007. As was seen in Tables 12 and 13, these differences are primarily attributable to decreases in passenger volume at MEM between FY2007 and FY2012, but are also due to lower revenue per pound for cargo (again, cargo volume increased but revenue decreased).

**Table 14. Inflation-Adjusted Comparison of FY2007 and FY2012 Total Impacts**

Fiscal Year	Output	Earnings	Employment
2007	\$31,544,185,058	\$8,776,372,667	220,154
2012	\$23,267,834,724	\$5,298,213,236	139,820
Difference	- \$8,276,350,334	-\$3,478,159,431	-80,334
Percent Difference	-26.2%	-39.6%	-36.5%

### Comparisons with Other Airports

With an impact of nearly \$23.3 billion on the Memphis MSA's economy and an employment impact of almost 140,000 jobs, MEM is a primary contributor to the local economy.

In FY2012, MEM accounted for 22.3 percent of total MSA employment, or just over one in five jobs, a decline from one in three jobs in FY2007. Both air cargo operations and air passenger operations have a substantial impact on the local economy, but the lion's share of that impact comes from air cargo.

In terms of air cargo operations, MEM has been North America's busiest cargo airport every year since 1992 (second in the world behind Hong Kong with over 4.0 million metric tons of air cargo in calendar year 2010). As shown in Table 15, the closest North American competitor to MEM is the Anchorage airport, which managed less than 65.0 percent of the air cargo volume processed by MEM in calendar year 2011.

**Table 15. Top Ten Air Cargo Volume U.S. Airports, 2011 (Calendar Year)**

Airport	Total Air Cargo (metric tons)	Rank	Percent of MEM
Memphis (MEM)	3,916,410	1	100.0%
Anchorage (ANC)	2,543,105	2	64.9%
Louisville (SDF)	2,188,422	3	55.9%
Miami (MIA)	1,841,929	4	47.0%
Los Angeles (LAX)	1,681,611	5	42.9%
JFK-New York (JFK)	1,348,992	6	34.4%
Chicago O'Hare (ORD)	1,311,622	7	33.5%
Indianapolis (IND)	971,664	8	24.8%
Newark (EWR)	813,209	9	20.8%
Atlanta Hartsfield (ATL)	663,162	10	16.9%

Source: Airports Council International – North America.

Table 16 presents a comparison of economic impacts for a few selected airports around the country. In terms of employment impacts, MEM's figures trail behind those of Houston's George Bush Intercontinental Airport by nearly 60,000 jobs and \$97 million in earnings. Despite this lag, MEM's impact exceeds Houston's by \$11.9 billion in total output. Louisville's airport was included since it hosts UPS' hub, a primary FedEx competitor. The 2009 Louisville study showed an economic impact of less than 25.0 percent of MEM's impact. Indianapolis' airport is included since it, too, hosts a FedEx hub. However, Indianapolis' airport has an economic impact on output of less than 15.0 percent of MEM's impact. All of the airports' impacts (Table 16) were driven primarily by passenger operations.

**Table 16. Comparison of Economic Impacts of Selected Airports, Selected Years**

Airport/City	Year	Output	Earnings	Employment
Dallas	2010	\$15,776,530,582	\$7,427,188,791	268,239
George Bush/Houston	2010	\$11,300,975,736	\$5,367,092,916	192,721
Hobby/Houston	2010	\$ 2,923,804,617	\$1,267,986,093	44,859
Denver	2008	\$22,296,664,100	\$7,064,743,700	217,459
Detroit	2006	\$ 5,238,000,000	\$1,007,000,000	30,535
Indianapolis	2007	\$ 3,336,477,400	N/A	N/A
Louisville	2009	\$ 5,600,000,000	\$1,900,000,000	55,608
Nashville	2006	\$ 3,744,208,000	\$1,180,462,000	39,540

Note: See Appendix for sources.

## The Economic Impact of Tourism and Business Visitors from Memphis International Airport

Declining aircraft movements (Table 2), passenger enplanements (Table 3), and the elimination of the MEM–AMS route certainly have had a negative effect on the Memphis economy. While some of this is due to reduced demand attributable to the Great Recession, some of it is also attributable simply to reduced passenger service to and from MEM. Some of this impact shows up in the local tourism and hospitality industries.

While the Airport in and of itself is not necessarily a tourist destination or a reason to come to the Memphis area, MEM does provide a way to get to Memphis. Without this connection, many of the area’s would-be tourists and business visitors might not come to the area, especially international tourists and visitors from more than a day’s drive away. To this extent, MEM can claim to have an impact on bringing tourists and their revenue influx to the Memphis area. Again, while it is local businesses and the area’s tourist attractions, such as Graceland, Beale Street, and Tunica, that spark interest in coming to Memphis, MEM actually provides a way for a substantial number of visitors to get to the area.

Memphis-Shelby County Airport Authority data show 1,860,000 origin and destination passengers (passengers boarding in or flying to MEM, i.e., not connecting passengers) for FY2012. Assuming half of the origin and destination passengers are visitors (casual, business, etc.) and not local residents, then 930,000 visitors came to Memphis via MEM in FY2012. Table 17 splits this into domestic and international, with 872,340 domestic passengers and 57,660 international visitors who came to Memphis via MEM in FY2012.

**Table 17. MEM Passengers With Memphis As Their Destination, FY2012**

Passenger Category	Total Passengers
Domestic Passengers	872,340
International Passengers	57,660*
<b>Total</b>	<b>930,000</b>

\*Based upon data provided by InterVISTAS, from U.S. DOT Origin and Destination Passenger Survey, fiscal year ended June 30, 2012. InterVISTAS is an airport consulting agency that works for MEM.

According to the Memphis Convention and Visitors Bureau,<sup>2</sup> Memphis receives over 10.0 million visitors per year; therefore, about 9.3 percent of these visitors to the Memphis area arrive by air at MEM. Table 18 presents estimates of visitor spending attributable to the 930,000 guests who came to the Memphis area via MEM in FY2012, using spending estimates from the Memphis Convention and Visitors Bureau (CVB). The CVB has estimated that out-of-town guests spend an average of \$405 per day per average party of 2.8 persons (roughly \$144 per person) while in the Memphis area and stay an average of 2.86 days. Thus, it is estimated that visitors who came to the Memphis area via MEM in 2012 spent in excess of \$383.0 million.

**Table 18. Total Spending by Visitors Via MEM, FY2012**

Category	Daily Average Per Guest	Total for 930,000 Visitors
Lodging	\$ 72.43	\$192,654,634
Food and Drinks	33.26	88,475,587
Retail Shopping	38.30	101,880,979
<b>Total</b>	<b>\$144.00</b>	<b>\$383,011,200</b>

Note: Total average per guest is from Memphis Convention and Visitors Bureau. The breakdown of spending amounts (as a percentage) came from survey responses collected in an analysis of the economic impact of the Southern Festival of Books conducted in Memphis in September 2004.

Table 19 presents a tabulation of the economic impact of visitor spending. As the table shows, visitors to the Memphis area who came via MEM had a total impact of over \$742.4 million on output (the production of goods and services and sales of such), \$220.9 million on earnings, and supported 9,103 jobs. However, these numbers are based on a time period in which there were significantly more available flights in and out of MEM. Going forward, the data will reflect decreased service and the elimination of much of MEM's international service (especially MEM-AMS). Accordingly, a decrease in the number of visitors to Memphis can be anticipated.

<sup>2</sup>See *Economic Impact: Memphis & Shelby County* (October 2012) at <http://memphistravel.com>.

**Table 19. Multiplier Impacts of MEM Visitor Spending, 2012**

RIMS Category	Direct	Impacts		
	Expenditures	Output	Earnings	Employment
Accommodation	\$192,654,634	\$363,828,276	\$99,929,958	3,418
Food Services and Drinking Places	88,475,587	188,948,464	61,101,241	3,547
Retail Trade	101,880,979	189,651,443	59,855,075	2,137
<b>Total</b>	<b>\$383,011,200</b>	<b>\$742,428,182</b>	<b>\$220,886,274</b>	<b>9,103</b>

To be certain, even with a large reduction in passenger service, a substantial number of persons will still come to Memphis. Importantly, a 10.0 percent increase in persons visiting Memphis due to increased passenger service would mean a potential gain of nearly \$22.1 million in earnings and up to 910 jobs. Increasing passenger service at MEM will provide substantial benefits to the local area.

## Surveys of Area Businesses and Airport Tenants

The Sparks Bureau of Business and Economic Research conducted two on-line surveys of Airport tenants and businesses in the Memphis area. The surveys were conducted on-line through web links distributed by e-mail. Ten questions were utilized for both the tenant and business surveys, while the business survey contained three questions unique to its audience. The Airport Authority compiled e-mail addresses for Airport tenants, while e-mail addresses for local businesses were compiled by the Greater Memphis Chamber. The survey of businesses was conducted during November 2012 with the assistance of the Greater Memphis Chamber.

During two separate periods, the Chamber sent over 9,000 e-mails to members requesting their participation in the survey. Approximately 400 businesses linked to the on-line survey, although not all respondents answered all questions. Respondents to the business survey represented all sectors of the local economy, including finance, insurance, real estate, health care, education, manufacturing, tourism, sales, construction, etc.

A parallel survey was administered to Airport tenants during mid-October. Airport tenants are businesses housed on Airport property and include restaurants, financial services, transportation, shipping/cargo, and other aircraft services. At least one major air carrier tenant responded to the survey. E-mail survey notifications were sent to 58 tenants, and 27 responses were received. Again, as with the business survey, not all respondents answered all questions.

The responses below to question 1 provide information on the average number of full- and part-time employees of the tenant and business respondents. Tenant respondents averaged 3,215 full-time and 91 part-time employees, while business respondents averaged 631 full- and 109 part-time employees. The full-time employment average for tenants was skewed by the inclusion of the major air carrier, which listed 85,000 full-time employees.

**Question 1:**

How many people did your business employ in 2011?	Response Average	Response Average
	Full-Time	Part-Time
<b>Tenant Respondents (n = 27)</b>	3,215	91
<b>Business Respondents (n = 341)</b>	631	109

As indicated below, in 2011 Airport tenants averaged more than \$3.0 million in wages and salaries and non-wage operating expenses, with an additional \$582,273 in local capital expenditures. Business respondents averaged more than \$17.0 million in wages and salaries, almost \$12.0 million in non-wage operating expenses, and almost \$3.0 million in local capital expenditures.

**Question 2:**

In 2011, how much did your company spend locally on:	Response Average	Response Average	Response Average
	Wages, salaries, and benefits	Non-wage operating expenditures	Local capital expenditures
<b>Tenant Respondents (n = 11)</b>	\$ 3,828,494	\$ 3,555,309	\$ 582,273
<b>Business Respondents (n = 147)</b>	\$17,262,316	\$11,959,216	\$2,614,552

As shown below, both tenants and businesses were more likely to use MEM to transport company personnel, customers, and business associates than to ship in raw materials or ship out finished products. Over 70.0 percent of tenant and business respondents used MEM to transport customers and business associates, while almost 87.0 percent of businesses and almost 64.0 percent of tenants used MEM to transport company employees.

**Question 3:**

How does your company use Memphis International Airport? (check all that apply)	Response Percent	
	Tenant Respondents (n = 11)	Business Respondents (n = 243)
To ship in supplies, raw materials, and/or intermediate goods	18.2	21.0
To ship (out) your products	9.1	22.6
To transport company personnel	63.6	86.8
To transport customers and business associates	72.7	73.3

During an average month, both tenant and local business respondents indicated they occasionally or frequently used MEM for business travel, as presented below. Almost 75.0 percent of the tenant respondents and almost 86.0 percent of the business respondents indicated that they occasionally or frequently use MEM for travel by company employees. Almost 53.0 percent of the tenants and 61.0 percent of the businesses use MEM to facilitate visits by customers, clients, or suppliers.

**Question 4:**

During an average month, how often is Memphis International Airport used for business travel? Response Percent	Not at All		Occasionally (3)	(4)	Frequently (5)
	(1)	(2)			
<b>By your company's employees?</b>					
Tenant Respondents (n = 16)	18.8	6.3	31.3	0.0	43.8
Business Respondents (n = 250)	5.2	9.2	30.0	18.8	36.8
<b>By customers, clients, or suppliers visiting your firm?</b>					
Tenant Respondents (n = 17)	29.4	17.6	17.6	0.0	35.3
Business Respondents (n = 245)	7.3	15.5	28.2	0.0	33.1

Both surveys asked the respondents to rate the economic impact of the Memphis Airport on their company in three different areas: *overall level of business activity*, *obtaining supplies for the company*, and *selling the business' products or services*. The results for this question are



presented below. Both tenant and business respondents indicated that MEM was somewhat to very important in its impact on their level of business activity, with almost 71.0 percent of tenants indicating MEM is very important. Tenant respondents were almost equally divided on the impact of MEM on obtaining supplies, with 35.0 percent reporting MEM was not very important, while almost 30.0 percent considered it to be very important. Business respondents were more likely to report that MEM was not very important when it came to obtaining supplies. Finally, a clear majority, 58.8 percent, of tenant respondents indicated that MEM was very important in selling the tenant’s product or service.

#### Question 5

Please rate the economic impact of Memphis International Airport on your company in the following areas: <i>Response Percent</i>	Not Very Important (1)	(2)	Somewhat Important (3)	(4)	Very Important (5)
<b>Overall level of business activity</b>					
<b>Tenant Respondents (n = 17)</b>	11.8	5.9	5.9	5.9	70.6
<b>Business Respondents (n = 250)</b>	6.8	8.0	24.4	24.4	36.4
<b>Obtaining supplies for your company</b>					
<b>Tenant Respondents (n = 17)</b>	35.3	5.9	11.8	17.6	29.4
<b>Business Respondents (n = 244)</b>	28.7	22.1	24.6	8.6	16.0
<b>Selling your business’ product or service</b>					
<b>Tenant Respondents (n = 17)</b>	23.5	5.9	0.0	11.8	58.8
<b>Business Respondents (n = 248)</b>	14.1	13.3	21.0	20.2	31.5

The data below present tenant and business responses to question 6 concerning the future impact of Memphis International Airport. Each survey group was asked to indicate their agreement or disagreement with three statements: *growth at Memphis International Airport would automatically cause your business to grow*, *your company’s future decisions to invest in your Memphis facilities will be partially based upon the services offered by Memphis International Airport*, and *a growing airport facility could provide an incentive for your company to move more activities to Memphis*.

**Question 6:**

To what extent do you agree with the following statements about the future impact of Memphis International Airport?	Strongly Disagree		Agree		Strongly Agree
<i>Response Percent</i>	(1)	(2)	(3)	(4)	(5)
<b>Growth at Memphis International Airport would automatically cause your business to grow</b>					
<b>Tenant Respondents (n = 16)</b>	12.5	18.8	18.8	6.3	43.8
<b>Business Respondents (n = 244)</b>	6.6	30.7	30.3	12.3	20.1
<b>Your company's future decisions to invest in your Memphis facilities will be partially based upon the services offered by Memphis International Airport</b>					
<b>Tenant Respondents (n = 16)</b>	12.5	25.0	18.8	0.0	43.8
<b>Business Respondents (n = 243)</b>	11.5	27.6	31.3	12.3	17.3
<b>A growing airport facility could provide an incentive for your company to move more activities to Memphis</b>					
<b>Tenant Respondents (n = 16)</b>	18.8	25.0	12.5	6.3	37.5
<b>Business Respondents (n = 240)</b>	15.0	26.3	23.3	13.8	21.7

As can be expected, tenant respondents were more likely to strongly agree that their business decisions would be affected by growth and improvements at MEM. A majority of tenant respondents strongly agreed with each of the three statements. Business respondents were more likely to agree or slightly disagree on the impact Airport growth would have on their businesses.

Tenants and local businesses were asked to rate the economic impact of the availability of international flights on their company in the areas of: *overall level of business activity, obtaining supplies for your company, and selling your business' product or service*. As shown below, a clear majority of the tenant respondents felt that the availability of international flights would not be very important to their company. While many business respondents indicated that

international flights were not very important, a significant number did respond that the availability of international flights would be important to very important to their company.

**Question 7:**

<b>Please rate the economic impact of the availability of international flights on your company in the following areas:</b>					
<i>Response Percent</i>	<b>Not Very Important (1)</b>	<b>(2)</b>	<b>Important (3)</b>	<b>(4)</b>	<b>Very Important (5)</b>
<b>Overall level of business activity</b>					
<b>Tenant Respondents (n = 16)</b>	50.0	12.5	12.5	6.3	18.8
<b>Business Respondents (n = 239)</b>	26.4	18.8	21.3	11.3	22.2
<b>Obtaining supplies for your company</b>					
<b>Tenant Respondents (n = 16)</b>	56.3	12.5	12.5	0.0	18.8
<b>Business Respondents (n = 235)</b>	46.8	27.7	15.3	3.8	6.4
<b>Selling your business' product or service</b>					
<b>Tenant Respondents (n = 16)</b>	56.3	6.3	0.0	6.3	31.3
<b>Business Respondents (n = 237)</b>	30.4	21.9	17.7	8.9	21.1

Both survey groups were asked to agree or disagree with statements about the future of international flights. These statements included: *growth in international flights would automatically cause your business to grow*, *your company's future decisions to invest in your Memphis facilities will be partially based upon growth in international flights*, and *growth in international flights could provide an incentive for your company to move more activities to Memphis*. Similar to the results presented for question 7, the responses to question 8 indicate that a majority of both the tenant and local business respondents strongly disagreed or disagreed with the statements about future impacts. However, about 31.0 percent of the tenants strongly agreed that growth in international flights would automatically cause their company to grow, probably reflecting the respondents' belief that more passengers at MEM would translate to more customers at tenant businesses.

**Question 8:**

To what extent do you agree with the following statements about the future impact of international flights? <i>Response Percent</i>	Strongly Disagree (1)	(2)	Agree (3)	(4)	Strongly Agree (5)
<b>Growth in international flights would automatically cause your business to grow</b>					
<b>Tenant Respondents (n = 16)</b>	37.5	12.5	18.8	0.0	31.3
<b>Business Respondents (n = 238)</b>	20.6	34.5	20.6	10.9	13.4
<b>Your company's future decisions to invest in your Memphis facilities will be partially based upon growth in international flights</b>					
<b>Tenant Respondents (n = 16)</b>	37.5	18.8	18.8	12.5	12.5
<b>Business Respondents (n = 237)</b>	28.7	36.3	19.4	8.9	6.8
<b>Growth in international flights could provide an incentive for your company to move more activities to Memphis</b>					
<b>Tenant Respondents (n = 16)</b>	43.8	25.0	6.3	0.0	25.0
<b>Business Respondents (n = 237)</b>	27.8	31.6	20.3	9.3	11.0

The data from question 9 represent responses to a series of statements asking survey respondents to rank the Memphis International Airport in the areas of the quality of passenger and air cargo services as well as the cost relative to the quality of passenger and cargo services. Fifty percent of the tenants and almost 58.0 percent of the business respondents indicated that they felt the quality of passenger air service was low or very low at Memphis International.

**Question 9:**

<b>How would you rank the following at Memphis International Airport? Response Percent</b>	<b>Very Low (1)</b>	<b>Low (2)</b>	<b>No Opinion (3)</b>	<b>High (4)</b>	<b>Very High (5)</b>
<b>The quality of passenger air services</b>					
<b>Tenant Respondents (n = 16)</b>	25.0	25.0	6.3	37.5	6.3
<b>Business Respondents (n = 236)</b>	22.0	35.6	10.2	28.4	3.4
<b>The quality of cargo air services</b>					
<b>Tenant Respondents (n = 16)</b>	6.3	6.3	50.0	12.5	25.0
<b>Business Respondents (n = 232)</b>	2.6	4.7	29.3	24.6	38.8
<b>The cost relative to quality of passenger air services</b>					
<b>Tenant Respondents (n = 16)</b>	40.0	6.7	6.7	13.3	33.3
<b>Business Respondents (n = 235)</b>	50.2	15.7	3.4	3.4	27.2
<b>The cost relative to quality of cargo air services</b>					
<b>Tenant Respondents (n = 16)</b>	12.5	0.0	50.0	18.8	18.8
<b>Business Respondents (n = 231)</b>	4.3	9.1	41.1	24.7	20.8

This is in contrast to each group's assessment of the quality of air cargo services, with less than 13.0 percent of the tenants and over 7.0 percent of the businesses ranking air cargo services as low to very low. As expected, most tenant and business respondents also ranked the cost relative to the quality of passenger service as low to very low. Tenant and business respondents were not as clear in their opinion of the cost of air cargo services; 50.0 percent of the tenants and 41.0 percent of the businesses had no opinion about this statement.

On question 10, survey respondents were asked to rate by level of importance several Airport characteristics or efforts. Information on the responses is presented below. As might be expected, both tenants and businesses believe that the cost of passenger air service is very important to their company. More than 56.0 percent of the tenants and 74.0 percent of the businesses listed this factor as very important. While important, the cost of air cargo services was not as important as passenger costs to both sets of respondents. The expansion of the Aerotropolis effort was viewed as not very important to most of the tenant respondents, while a majority of local business respondents felt it was important to very important to their company.

**Question 10:**

<b>How important are the following airport characteristics and/or efforts to your business?</b>	<b>Not Very Important</b>		<b>Important</b>		<b>Very Important</b>
<i>Response Percent</i>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>
<b>The cost of passenger service</b>					
Tenant Respondents (n = 16)	18.8	6.3	12.5	6.3	56.3
Business Respondents (n = 401)	0.5	1.7	9.0	14.7	74.1
<b>The cost of cargo air service</b>					
Tenant Respondents (n = 16)	43.8	0.0	6.3	6.3	43.8
Business Respondents (n = 398)	23.4	17.1	27.6	11.8	20.1
<b>The expansion of the Aerotropolis effort</b>					
Tenant Respondents (n = 16)	46.7	6.7	26.7	0.0	20.0
Business Respondents (n = 395)	10.1	14.7	34.4	20.5	20.3
<b>Attracting new carriers such as Southwest</b>					
Tenant Respondents (n = 16)	31.3	0.0	12.5	12.5	43.8
Business Respondents (n = 400)	0.0	1.0	6.5	15.3	77.3
<b>The opening of the new parking garage</b>					
Tenant Respondents (n = 16)	56.3	6.3	6.3	18.8	12.5
Business Respondents (n = 401)	15.0	24.9	31.7	15.0	13.5
<b>The decline in passenger air service</b>					
Tenant Respondents (n = 16)	25.0	6.3	18.8	0.0	50.0
Business Respondents (n = 401)	1.0	3.5	15.5	16.7	63.3
<b>The attractiveness of the airport area</b>					
Tenant Respondents (n = 16)	12.5	6.3	43.8	6.3	31.3
Business Respondents (n = 397)	1.8	8.6	30.5	30.2	29.0
<b>The safety of the airport area</b>					
Tenant Respondents (n = 16)	6.3	6.3	12.5	6.3	68.8
Business Respondents (n = 399)	0.5	2.5	15.0	23.3	58.6

A majority of both tenant and business respondents felt attracting new carriers was important to very important to their company. However, neither survey group felt the opening of the new parking garage would be that important to their company, with more than 56.0 percent of the tenants indicating it was not very important. A solid majority of the respondents from both groups recognized that the decline in passenger air service, the attractiveness of the Airport area, and the safety of the Airport area were important to very important to their company.

The business survey contained three questions not included on the tenant survey. The data below present information on responses to question 11: *Why is your company located in the Memphis Area?* While respondents were allowed to check all responses that applied, a clear majority (73.3 percent) indicated that Memphis' close proximity to their markets was a deciding location factor. More than a quarter of the respondents also identified Memphis' rail and highway infrastructure and the FedEx Hub as important reasons for locating in the Memphis area. Only about 13.0 percent of the respondents indicated that their company was in Memphis to take advantage of the Delta Hub.

**Question 11:**

<b>Business Respondents, why is your company located in the Memphis area? Check all that apply</b>	<b>Response Percent</b>
<b>To take advantage of the time savings of being near the FedEx Hub (n = 43)</b>	26.1
<b>To take advantage of the Delta Air Lines Hub (n = 21)</b>	12.7
<b>To take advantage of Memphis' rail and highway infrastructure (n = 46)</b>	27.9
<b>Close proximity to a large portion of the nation's population (n = 121)</b>	73.3

Business respondents were asked about the importance of air express and air freight access to their company. As indicated below, a majority of respondents felt access to air express was important to very important to their company. Air freight access was not viewed as important to the local respondents.

**Question 12:**

<b>Business Respondents, how important is access to air express/air freight services to your company? Response Percent</b>	<b>Not Very Important (1)</b>	<b>(2)</b>	<b>Important (3)</b>	<b>(4)</b>	<b>Very Important (5)</b>
<b>Air Express (n = 228)</b>	21.5	12.7	28.1	14.5	23.2
<b>Air Freight (n = 230)</b>	33.9	18.7	25.2	6.5	15.7

Finally, local business respondents were asked if congestion around MEM was a concern. As shown below, a majority of the respondents felt that congestion was either a limited concern or not a concern at all.

**Question 13:**

Business Respondents, is congestion around Memphis International Airport a concern for your business? Response Percent	Not a Concern at All		Somewhat of a Concern		Very Much a Concern
	(1)	(2)	(3)	(4)	(5)
(N = 235)	48.9	16.2	24.7	6.4	3.8

## Conclusions: The Role of Memphis International Airport

Memphis International Airport is the community’s window to the world outside the Mid-South. In the past, opportunities that surrounded the Airport were taken for granted or ignored as economic challenges and threats increased and competitors across the nation and around the world gained strength. The potential advantages associated with Memphis as America’s Aerotropolis declined every day the community postponed action related to growth opportunities around the Airport.

The future of the Memphis economy is at risk if the community continues to overlook the advantages provided by MEM. The advantages that remain provide solid opportunities that need to be protected and used to globalize the Memphis economy. The economic impact of the Airport is enormous, and only the Airport provides the potential for making Memphis a global hub of economic activity. Recognizing the potential for building an aero-based economy and facing the challenges from competitors head-on are some of the best economic strategies available for Memphis. Planning for the future must highlight the advantages that air services and air cargo operations at MEM provide for Memphis-area businesses. Community plans to compete in global markets and surpass the efforts of other communities will require a dramatic commitment to building an aero-based economy.

The economic impact of MEM will fluctuate over time as economic and industry conditions change. However, the importance of the Airport to the future of Memphis and the Mid-South will continue. We move either forward or backward in a highly competitive world economy. Memphis International Airport is a critical factor in determining the future of



Memphis in a rapidly-evolving market that recognizes the importance of time and mobilizes global resources to meet the demands of consumers. Time is the asset, and the community has an advantage, even if temporary, to make Memphis a global economic competitor.

### **Aerotropolis Plans and Memphis International Airport**

Memphis has a large and vibrant business community that excels at being competitive globally. The America's Aerotropolis initiative is designed to take advantage of the community's assets and current economic strengths. A world-class airport, overnight time-sensitive delivery of packages around the world, a highly-regarded healthcare industry, abundant affordable land for development, a friendly business climate, diverse tourism and entertainment opportunities, high-quality housing stock, and an enthusiastic workforce make Memphis a city of choice.

No single project or effort will determine the future of Memphis. But, the success of the Aerotropolis will clearly elevate the city's growth path and generate a new level of positive momentum for the city. Our global status as an economic participant is dependent upon a grand vision of our future and of the role we can play. Memphis must strive to compete effectively with all of the global cities of the world. Economic opportunities come in global clusters, and only a few cities will become global business centers.

Memphis must be a magnet community that attracts talent from around the globe to fill employment and income opportunities in the local labor market. Our ability to increase the growth of local employers and attract new world-class employers will reflect the success or failure of the Memphis Aerotropolis project. The eyes of the community must be focused on the importance of competing for global trade and global business opportunities. The window to the world opens at Memphis International Airport.

Communities throughout the world are taking notice of the Aerotropolis growth model, so the time is short for action. Memphis was the first community in the world to benefit from the overnight delivery advantages provided by FedEx. Now, those same advantages are available throughout the world. Any future economic success in global markets will depend upon the community's ability to build on the market advantages that remain or that can be generated by the community's investment in the Airport and by the presence of the world's foremost global logistics company—FedEx.

Globally-competitive companies are anxious to expand operations into new and profitable markets. Memphis' central location and its advantages with logistics make Memphis a logical center for economic activity in the future. Business opportunities of the future will be global in nature. The growth of world-class manufacturing, logistics, and service businesses will define our future or the future of other communities. Memphis International Airport will increase in importance as the community builds on its advantages to compete in the new global economy. The Aerotropolis project and work being done at Memphis International Airport are advantages that will move the Memphis-area community in the right direction.

## APPENDIX

## Other Airport Impact Studies, Sources

- Dallas: [http://ftp.dot.state.tx.us/pub/txdot-info/avn/avninfo/eco-impact/2011/eco\\_dfw.pdf](http://ftp.dot.state.tx.us/pub/txdot-info/avn/avninfo/eco-impact/2011/eco_dfw.pdf)
- George Bush/Houston: [http://ftp.dot.state.tx.us/pub/txdot-info/avn/avninfo/eco-impact/2011/eco\\_iah.pdf](http://ftp.dot.state.tx.us/pub/txdot-info/avn/avninfo/eco-impact/2011/eco_iah.pdf)
- Hobby/Houston: [http://ftp.dot.state.tx.us/pub/txdot-info/avn/avninfo/eco-impact/2011/eco\\_hou.pdf](http://ftp.dot.state.tx.us/pub/txdot-info/avn/avninfo/eco-impact/2011/eco_hou.pdf)
- Denver: [http://www.coloradodot.info/programs/aeronautics/PDF\\_Files/2008TechReport.pdf](http://www.coloradodot.info/programs/aeronautics/PDF_Files/2008TechReport.pdf)
- Detroit: [http://www.metroairport.com/pdf/DTW\\_Economic\\_Impact\\_Report.pdf](http://www.metroairport.com/pdf/DTW_Economic_Impact_Report.pdf)
- Indianapolis: <http://www.indianapolisairport.com/files/contribute/04.06.10ExternalStrategicPlan.pdf>
- Louisville: <http://www.flylouisville.com/wp-content/uploads/LRAA%20Econ%20Web%202.pdf>
- Nashville: <http://www.flynashville.com/about/pdfs/Final%20Technical%20Report.pdf>