

Economic Impact of the Columbus Museum of Art in 2007

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Introduction

The Columbus Museum of Art plays a significant role in bringing an understanding and appreciation of art to the Columbus region. In addition to this, the operations of the Museum result in quantifiable economic impacts on the regional economy. As will be explained below, these impacts arise from three sources:

- The Museum's purchases from local suppliers.
- The wages and salaries paid to employees of both the Museum and suppliers – which the employees spend on goods and services within the area.
- Purchases of goods and services by tourists from outside the region who come to Columbus to visit the Museum.

This report measures the quantifiable impacts of 2007 operations of the Columbus Museum of Art on the Columbus Metropolitan Statistical Area (MSA). The MSA, defined by the federal government on the basis of worker commuting flows, includes eight counties in Central Ohio: Delaware, Fairfield, Franklin, Licking, Madison, Morrow, Pickaway, and Union. The nonquantifiable impact of the Museum on economic and workforce development in the region is also discussed.

Key findings of this study include:

- The total operating impact in 2007 of the Columbus Museum of Art, its suppliers, and Museum and supplier employees was \$14.1 million. These activities sustained more than 150 full-time equivalent jobs in the region. Of the Museum's purchases during 2007, 37.5 percent were made within the Columbus MSA.
- The tourist impact in 2007 could have been on the order of \$2.6 million, with an additional 43 jobs sustained. This impact is provisional in that necessary information on the characteristics of these tourists is unavailable and is thus assumed. This impact is estimated to give a general sense of its scale.
- By supporting the quality of life in the region, particularly the vitality of the regional arts community, the Columbus Museum of Art plays a meaningful role in regional economic and workforce development efforts. These efforts are particularly important given the significant decline in regional working age population predicted over the coming 20 to 25 years.

The Nature and Measurement of Economic Impact

The key focus of an economic impact assessment is the increase in **output** of the regional economy that results from the economic activity of a specific entity. Output is measured by the value of goods and services produced in a given area over a given period of time; this is often referred to as Gross Domestic Product (GDP). A second consideration is the jobs that are created or sustained as a result of the target entity's activities.

Museum operations create economic impact through admissions and parking, sales in the restaurant and gift shop, and donations and grants funding Museum operations. Further, the spending of out-of-region visitors to the Museum creates output and sustains jobs in local retailers, hotels, and restaurants. But these **direct** output and employment impacts are only part of the total impact. To the extent that these payments for purchases and wages and salaries are made to suppliers and employees within the MSA, the region's economic activity and output is increased further. The sales and purchases of local suppliers increase, increasing output, and their employment may increase as well. Employees of the Museum and its suppliers use their wages paid as a result of the increased output to make household purchases of all types. This creates further rounds of spending and output growth. It is important to emphasize that this

additional spending would not occur if the Museum were not operating. For this reason, these **indirect** impacts are as much a part of the economic impact as are the direct impacts.

These indirect output and employment impacts can be estimated by applying an economic impact model to the direct spending increase. Several generally-accepted models are available for this purpose; this analysis uses the Regional Input-Output Modeling System (RIMS-II), developed by the United States Bureau of Economic Analysis. As is the case for the other impact models, RIMS-II is based on a framework called an input-output table. For a given industry in a given geographic area, the input-output table shows the increase in purchases from other local firms by industry and the sales to other local firms by industry that result from a one dollar increase in the given industry's output. Thus, the input-output table can be used to derive the impact on other local firms of an increase in production within a specific industry.

These impacts are specific both to a given industry and to a given region. The array of suppliers that benefit from the demand for the Museum's services, and the goods and other services purchased by tourists is generally the same regardless of location. But if the structure of the Columbus MSA economy is such that the Museum and its suppliers and the retailers, hotels, and restaurants serving tourists are forced to make most of their purchases from vendors outside the region, then most of the impact will leak from the local economy. Conversely, a broad local economy with many local suppliers will keep more of the impact of the output increase circulating within the local economy, and the indirect impacts will be much greater. Thus, the values within the input-output table are unique to the Columbus MSA.

RIMS-II summarizes the information in the regional input-output table by calculating a set of unique impact factors for each of 490 detailed industries within the Columbus MSA. Because of their origin in the input-output table, the factors implicitly reflect the structure of the local economy and the presence or absence of local suppliers. One of these factors represents the total increase in regional output resulting from a one-dollar increase in output within a given industry. When this factor is multiplied by the increase in direct output, the result is the total regional increase in output; the indirect output impact is simply the difference between the total and direct impacts.

Other factors measure impacts on employment. One of these represents the total number of regional jobs sustained as a result of each \$1 million of output within the specific industry.¹ Again, the indirect employment impact is the difference between total employment and direct employment (i.e., that in the firms providing goods and services to the museum and tourists, and those providing the household needs of Museum and other employees).

It is possible to measure an economic impact simply by multiplying the revenues of the target establishment (valued at producer prices) by the output multiplier for that industry. This approach reflects the Museum's likely supplier network in general terms. But a more precise, defensible approach is to determine the specific purchases made by the Museum within the MSA, reflect these purchases in producer prices where necessary, and apply the appropriate industry multiplier to each result. This reflects the specific purchase behavior of the Columbus Museum of Art, and is the approach taken here. A second benefit of this approach is that it allows the indirect impacts to be allocated between those arising from the increase in demand for goods and services of the suppliers themselves (**supplier** impacts) and those occurring elsewhere in the regional economy (**induced** impacts).

Operating Impacts

Not all Museum revenues can be included as direct operating impacts. In general, impact on regional output results from the sale of Museum admissions, food in the restaurant, merchandise in the gift shop, parking, and rental of Museum space to outside users. Memberships, donations, and grants that fund

¹ Referring to the indirect jobs as "sustained" rather than "created" is a subtle, but important, distinction. The implication of the economic impact calculation is that the activity exists to support jobs in other industries. The model cannot determine whether the activity results in actual job creation or in existing employees increasing their output.

operations are also a direct impact in that they also provide the wherewithal to support supplier purchases and allow the Museum to keep admission charges reasonable. A donation to purchase a work of art is not part of regional economic impact, however, because it represents simply the exchange of one asset for another and does not create economic activity. (The purchase of land or an existing building would be a similar example.) Revenues from the gift shop and restaurant must be converted to producer prices to make them consistent with the general measurement of gross domestic product.² The direct impact of Museum operations on regional GDP totaled \$7.381 million in 2007.

The Museum supplied a complete list of purchases by category and supplier ZIP code. Total purchases made from suppliers within the eight-county Columbus MSA were identified from this list and were converted to a producer-price basis as appropriate. Purchases made by the Museum within the MSA during 2007 totaled \$1.708 million, 37.5 percent of the \$4.548 million total. Local purchases totaled \$1.620 million in producer-price terms.

This omits the largest purchase from local suppliers, however: suppliers of labor. The Museum paid \$2.396 million in wages and salaries to its 181 full-time, part-time, and contingent employees during 2007, generating \$48,000 in income taxes paid to the city of Columbus. Under the same logic as above, the wages used in the impact analysis should include only those paid to workers living within the Columbus MSA. Those paid to residents of other areas leak from the local economy just as does money paid to suppliers outside the region. But because only four employees live outside the region, reflecting this leakage would raise confidentiality concerns and would not have a material impact on the results. Accordingly, this leakage is ignored.

The direct and indirect output and employment impacts of the operations of the Columbus Museum of Art during 2007 are as follows:

	Output (GDP)	Employment (full-time equivalent)
Direct impact	\$ 7,381,000	92
Indirect impacts		
Supplier	\$ 4,064,000	13
Induced	<u>2,658,000</u>	<u>48</u>
Total indirect	<u>6,722,000</u>	<u>61</u>
Total operating impact	<u>\$ 14,103,000</u>	<u>154</u>

Visitor Impacts

As noted earlier, the Columbus Museum of Art also increases the output and economic well-being of the Columbus MSA by attracting tourists from outside the region – particularly for its major exhibitions. These tourists are likely not only to visit the Museum, but also make incidental purchases while in town. Some may stay overnight. Approximately 11 percent of the Museum's 209,000 visitors during 2007 came from outside the region.

For a variety of reasons, measuring the impact of these visitors is not straightforward. As a result, the results in this section are meant to be illustrative rather than conclusive. The key problem is that the Museum has no information regarding these visitors – how many stay overnight, how much they spend outside the Museum during their visit, and the ultimate reason for their visit to Columbus. Each of these factors influence the economic impact that is created.

The amount of outside expenditures is actually the easiest of these factors to address. Survey data for 2003 from Experience Columbus provide the amount and breakdown of spending of the typical visitor to Columbus. Average daily expenditures per person are given for food and restaurants, retail, auto and other transportation expenditures, recreation, and lodging. These averages must be inflated to current-

² Generally, only goods purchases are reduced to producer prices; purchases of services are not.

dollar amounts and taxes must be extracted and reflected separately. This is because payments to government have a different impact from payments to restaurants, retailers, or gas stations.

The question of how many visitors stay overnight is crucial because these individuals spend more than day visitors and bear the substantial expense of overnight lodging. Without specific information, it is assumed that 10 percent of the outside visitors stay overnight. The daily room rate (including tax) for lodging is assumed to be \$75.00. It is assumed that on average, two visitors share a room.

The principal reason for these individuals' visit to Columbus is also important in measuring the visitor impact. If their reason for coming to town is something other than visiting the Museum – attending a convention, for example, with a side trip to the Museum – only the purchases within the Museum would be a legitimate impact of the Museum. While other purchases would certainly increase regional output, this impact would belong to the convention, not the Museum, because the convention is the ultimate motivation for these individuals' being in Columbus. The number of tourists whose primary reason for coming to the region was to visit the Museum of Art is not available. It is assumed that this is the prime motivation for 75 percent of the out-of-town visitors.

The results of these calculations are below. The direct economic impacts here are conceptually different from those above: they represent the impact not from the Museum, but from the direct recipients of tourists' spending. The indirect impacts are from those businesses' suppliers and employees. In the context of the operating impacts above, though, all of these impacts are induced.

It bears repeating that because so much crucial information is unavailable, these impact estimates cannot be given the same weight as the operating impacts summarized above. They are presented to give a general sense of the possible current impact of the Museum on the regional tourist economy. To the extent that an expanded Museum will draw more visitors from outside the region, its impact on the economy will be greater from that standpoint as well as from its expanded operations.

	Output (GDP)	Employment (full-time equivalent)
Direct impact	\$ 1,184,000	31
Indirect impact	<u>1,402,000</u>	<u>12</u>
Total	\$ 2,586,000	43

Other Impacts

Previous paragraphs have summarized the quantifiable impacts of the Columbus Museum of Art on the gross domestic product and employment of the Columbus MSA. There are certainly further impacts of the Museum that cannot be measured as explicitly. But just because they cannot be reduced to dollars and jobs does not make them any less real. In fact, the presence of the Museum of Art in Columbus has a definite impact on the community's ability to recruit jobs and investment to the region, and to attract and retain the outstanding talent needed by the region's new and existing employers.

A growing body of research (e.g., Florida³ and Cortright⁴) suggests that the old notion that workers will go wherever the jobs are is no longer true – if it ever really was. Thanks to technology and the increasingly knowledge-driven economy, people can live and work anywhere. But that does not imply that they will work just anywhere. To many knowledge workers, the quality of life offered by a place is as important as the availability of work. A significant number of especially younger workers will select a desired location, move there, and only then look for a job. The availability of a strong workforce is usually the key criterion

³ Richard Florida, *The Rise of the Creative Class, and How It's Transforming Work, Leisure, Community, and Everyday Life*, Basic Books, 2002.

⁴ Joseph Cortright, "The Young and Restless in a Knowledge Economy," CEOs for Cities, September 2004.

evaluated by an employer in a relocation or expansion decision. These arguments imply that rather than workers following jobs, jobs are now following workers. Further, Florida in particular calls attention to the importance of a rich arts community and the availability of spaces for informal interaction in stimulating the creativity of knowledge workers. In contributing to the vitality of the arts landscape and by providing opportunities for interaction, the Columbus Museum of Art plays an important role in regional economic and workforce development efforts.

These efforts are important now, but they will become even more important in coming years. Based on projections by the Ohio Department of Development's Office of Policy Research and Strategic Planning, the Columbus MSA's population over the next 25 years should continue to grow at close to its current rate of 1.1 percent per year. But demographic shifts will cause the growth of the prime working-age population (ages 20 to 59) to slow dramatically. This population, which grew 6.0 percent between 2000 and 2005, is projected to grow 2.9 percent between 2010 and 2015, 3.5 percent between 2015 and 2020, and only 1.9 percent between 2020 and 2025. In particular, there will be 16,000 fewer people between 35 and 49 in the region in 2020 than there will be in 2010. The tendency toward later retirement will cushion the impact on workforce growth somewhat, but the implication definitely is that there is a looming worker shortage. National-level populations suggest that the trend will be even worse elsewhere than it is here, so addressing this shortage will require us to attract more than our fair share of this population. That is the motivation for the region's Attract and Retain Talent Initiative: to attract this population (who are now in their 20s and early 30s) here now when they are more mobile than they will be ten years from now. Our arts community – anchored by the Columbus Museum of Art – plays a vital role in this effort.