



**The Economic Impact of the
Sterling and Francine Clark Art Institute**

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Executive Summary

The cultural arts constitute a multi-billion dollar industry in the United States and produce a total annual economic impact of over \$3.4 billion in Massachusetts alone.¹ These staggering numbers have spurred national interest in the economic impact of the arts, and have initiated extensive research by the RAND Corporation, Richard Florida of Carnegie Mellon University, and others. Growing national recognition of the value of the arts, in terms of economic generation and cultural benefit, has had particular resonance in the Berkshires. With the arts and tourism ranked a top sector of the region's economy, cultural and community leaders have long recognized the importance of the distinctive cluster of cultural institutions in the Berkshires, and have actively pursued initiatives to further develop and sustain the creative economy of the region.²

In anticipation of fifty years of continuous, year-round public service in the Berkshires, the Sterling and Francine Clark Art Institute commissioned the Connecticut Center for Economic Analysis (CCEA) at the University of Connecticut in 2004 to analyze the Clark's economic impact on the surrounding region. Although the Clark has long been recognized as a cultural leader in the Berkshires, its economic impact had not been quantified. For this report, CCEA combined specific data analysis of the Institute's operations in 2003 with leading national research to gauge the impact of the Clark in the region.

CCEA's resulting analysis of the Clark aims to contribute to the collective effort to understand the economic impact of the arts in the Berkshires, and to raise national consciousness about the economic contribution that arts organizations make to their communities. That the Clark is a principal contributor to the national conversation on public policy and the arts and that the Berkshires—home to a distinctive cluster of cultural arts institutions and regarded as America's premier cultural resort—help position this report as a frame for more broadly considering the impact of the arts in the nation.

As the results of this report demonstrate, the Clark today is a leader in the group of Berkshire cultural institutions and is committed to further economic growth of the

¹ Total economic impact of cultural organizations in Massachusetts in 2000. See *New England's Creative Economy: the Non-Profit Sector-2000*. New England Foundation for the Arts, 2003.

² According to recent information collected by the Harvard Business School and distributed to the Berkshire Economic Development Corporation.

region. With an annual operating budget of nearly \$11 million, the Clark employs over 80 full-time employees with a payroll of close to \$4 million. More than 175,000 annual visitors make the Clark the largest year-round cultural attraction in the Berkshires; a recent study shows that almost half of those visitors come to the region specifically for the Clark.³ In the course of its analysis, CCEA has highlighted the following critical economic impacts of the Clark:

SUMMARY OF ECONOMIC IMPACT OF THE CLARK⁴

- \$20.3 million annually, in new spending by visitors to the Clark
- \$14 million annually, in additions to the personal income of the region
- \$19 million annually, in additions to the total economic output of the region
- 380 new, full-time equivalent jobs in the region, stimulated by the Clark

Beyond these benefits, analysis of the data reveals that the Clark’s most important contributions can be viewed in three distinct ways:

1. Quality of life, Social Networking, and Community and Region Building

Community-oriented art museums and research centers like the Clark are invaluable to the vitality of their region. Numerous studies show that they are central to the quality of life and critical to the attraction and retention of professionals and businesses. Work by Richard Florida demonstrates the value of creative workers, nourished by cultural institutions, to vibrant cities. A recent survey reports that nearly all chief executive officers cite the availability of cultural activities as a principal consideration when choosing a new location. The presence of the Clark and its colleague institutions and organizations in Berkshire cultural life help create and sustain the social capital of the region.

³ 43% Hayward, Jeff (2001). “Berkshire Cultural Attractions 2001 Summer Visitor Analysis,” People, Places & Design Research, Northampton, MA.

⁴ Based on statistics from fiscal year 2003.

2. Promotion of Cultural Tourism and Support of Cultural Institutions

The Clark plays a major role in cultural tourism in the region, attracting significant numbers of visitors from other states and countries. Cultural tourism is critical to sustaining the local economy, and cultural tourists stay longer and spend more money than other types of visitors. As a cultural leader in the region, the Clark maintains close and collaborative relationships with various cultural partners, including: the Berkshire Museum, Berkshire Theatre Festival, Hancock Shaker Village, Jacob's Pillow, MASS MoCA, Norman Rockwell Museum, Tanglewood Music Center, and Williamstown Theatre Festival. The Clark is a principal constituent in this cluster of arts and cultural institutions in the Berkshires. The presence of the Clark stimulates collective visitorship and economic growth, and it is central to the long-term prosperity of the region.

3. Community Education and Higher Learning

The Clark, like other leading museums, plays an increasingly important role in public arts education, in part because of the recognized developmental benefits of arts education, and in part because of deteriorating budgets for such programs in the nation's public schools. The Clark contributes significantly to arts education by serving as a central component of the social and educational fabric of the community and region. Over the years, the Clark's programmatic mission has adapted according to the needs of the community, and continues to sustain a dynamic, comprehensive approach to arts education for people of all ages.

ABOUT THE CLARK

Among the country's best-loved museums, the Sterling and Francine Clark Art Institute is also one of the world's foremost centers of research and higher education in the visual arts. The Clark's exceptional collection of Old Master, Impressionist, and nineteenth-century American art, displayed in a series of intimate galleries, is complemented by an ambitious special exhibitions program. These exhibitions, often organized in partnership with leading national and international arts institutions, promote new scholarship and engage audiences with significant works of art from around the

world. Along with the Getty and National Gallery of Art, the Clark is one of only three centers for advanced study in the visual arts in the United States. As a greenhouse for collaborative discussion about the visual arts and culture, the Clark draws international scholars to advance their research, and promotes a rigorous, year-round schedule of symposia, colloquia, lectures and conferences. The Clark's art research library—one of the largest in the country—attracts an interested public and top researchers in the field. The Clark is also home to the Williamstown Art Conservation Center and, in collaboration with Williams College, offers the country's leading master's degree in the history of art. All of the Clark's programs are enhanced by its pastoral setting on 140 acres in the Berkshires of Western Massachusetts. Taken together, the Clark's renowned collections, extensive programs, and stewardship of its natural resources make the Clark an institution of international impact, national consciousness, and regional responsibility.

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I. Introduction

Art collectors and philanthropists Sterling and Francine Clark established the Clark in Williamstown, Massachusetts, in 1955. Today, the Clark is one of America's most beloved art museums, and one of the few supporting an internationally-recognized program of advanced research and higher education in the visual arts. No other institution of its scale and character is dedicated to the complex and exhilarating mission of advancing and extending the public understanding of art—complex because interrelating the differing purposes of an art museum and a center for research and higher education is so challenging, and exhilarating because the possibilities and implications of this combination are so dynamic. The Clark's mission and its geographical location define three essential, interrelated aspects of its character and identity: the quality of its art, the depth of its commitment to the generation of ideas, and the beauty of its pastoral setting.

The Clark is home to a diverse collection of European and American paintings, sculpture and works on paper, all exhibited in intimate galleries with a domestic refinement and scale that fosters individual contemplation and engagement with outstanding works of art. The Clark has gained a special reputation for its impressive collection of French Impressionist and nineteenth-century American paintings. More recently, the Clark has assembled a remarkable photography collection, with an impressive representation of nineteenth-century European and American works. In addition to its permanent collection, the Clark also presents an ambitious program of special exhibitions, designed to promote new scholarship and engage audiences with significant works of art from around the world.

As a research and academic center, the Clark is committed to the generation of ideas and serves as a greenhouse for collaborative discussion about visual culture. Each year, the Clark Fellows program draws outstanding scholars from around the world to advance research in the arts. A rigorous schedule of symposia, colloquia, lectures and conferences engages these scholars and other art professionals in a series of programs designed to stimulate critical inquiry and build intellectual capital. To further its academic and research missions, the Clark contributes digitized versions of its collection to the Art Museum Image Consortium (AMICO) national database; this online library

makes works of art in the Clark collection accessible to universities, colleges and public libraries throughout the world. The art research library and visual resources collection at the Clark are among the largest in the country, staffed by a team of dedicated and highly-trained reference librarians. Library holdings include nearly one-quarter million volumes, subscriptions to almost 1,000 periodicals, and a rich collection of rare books. As an institute of higher learning, the Clark collaborates closely with Williams College to offer a two-year course of study for the degree of Master of Arts. Students enrolled in the Williams College Graduate Program in the History of Art at the Clark work with faculty at Williams College and have access to collections at the Clark, the Williams College Museum of Art, the Massachusetts Museum of Contemporary Art and the Chapin Rare Book Library. Students participate in a work/study appointment, and are afforded opportunities to organize or co-organize exhibitions at the Clark. From 1992 to 2002, 133 students graduated from this program and went on to pursue employment in the field or further their education.

Because of the benefit to the community, the Clark is deliberately situated within walking distance of Williams College, on 140 acres near the New York and Vermont borders. As an environmentally-conscious institution, the Clark is a dedicated steward of its natural resources and works to preserve and sustain the natural beauty of the region. Beyond its proximity to Williams College and physical beauty, the Clark's location has another important advantage. Berkshire County is the locus of a cluster of premier cultural institutions, which present outstanding artistic, cultural, and historic programming. Some of the Clark's fellow cultural arts institutions include the Berkshire Museum in Pittsfield, Berkshire Theatre Festival, Hancock Shaker Village, Jacob's Pillow, MASS MoCA, Norman Rockwell Museum, Tanglewood Music Center in Lenox, and Williamstown Theatre Festival. The Clark contributes greatly to the cultural community, and attracts one of the largest shares of visitors: because the Clark draws visitors to the region, they are more likely to stay in the area and visit other cultural institutions in the area; the number and proximity of all these cultural activities increases visitorship among all the institutions. The relationship between Tanglewood Music Center in Lenox and the Clark, for example, has been shown to be particularly symbiotic:

tourists who visit the Clark during the day frequently include a visit to Tanglewood in their evening plans.⁵

An overview of the Clark's two capacities as (1) a museum with extensive public programming and (2) a research and academic center, along with its location amid a cluster of cultural institutions provides compelling evidence that the Clark plays a significant role in the region's economy and cultural life. In this study, the Connecticut Center for Economic Analysis (CCEA) quantifies the economic impact in an eight-county region. This region, centered in Berkshire County, Massachusetts, includes Albany, Columbia, and Rensselaer Counties in New York, Bennington County in Vermont, and Hampden, Hampshire, and Franklin Counties in Massachusetts.

After fifty years of continuous, year-round public service in the Berkshires, the Sterling and Francine Clark Art Institute commissioned the Connecticut Center for Economic Analysis (CCEA) at the University of Connecticut to analyze the Clark's economic impact on the surrounding region. The Clark is recognized as a cultural leader in the Berkshires and a principal contributor to the national conversation on public policy and the arts: it is a convener of the Berkshire Conference,⁶ guiding member of the American Association of Museum Directors, and a major supporter of regional and national initiatives to support the arts. With its long record of serving audiences of all ages, devotion to the cultural arts, and established authority in arts policy, the Clark is an appropriate model for gauging the economic impact of the arts in the Berkshires. Home to a distinctive cluster of cultural arts institutions, and regarded as America's premier cultural resort, the Berkshires serve as a frame for more broadly considering the impact of the arts in the nation. Combining specific, quantifiable data analysis of the Clark in the eight-county region with leading national research, this report aims to use the example of the Clark in the Berkshires to raise national consciousness about the economic contribution that arts organizations make to their communities.

⁵ Hayward, Jeff. Presentation and Discussion of the Berkshire Cultural Attractions 2001 Summer Visitor Analysis, People, Place & Design Research, Northampton MA. December 11, 2001.

⁶ The Berkshire Conference brings together leaders in the visual and performing arts to discuss critical issues related to the promotion of culture in America.

II. Analysis of Current Operations at the Clark

II.A Modeling Strategy

The Clark has a multifaceted impact on the region's economy. To analyze and quantify the impact of the Clark's current operations to the eight-county region, we account for all the labor and financial inputs and outflows required to operate the Clark for a single year, both as a museum and as a research and academic center. We additionally estimate what value the Clark adds to the region as a cultural amenity. We then use this information to simulate the region's economy *in the absence of* the Clark, using a dynamic economic model that covers the region; this is a counterfactual analysis. By removing the Clark's economic activity from the region, we estimate its contribution to the region's economy on a yearly basis.⁷

We begin by describing in detail the labor and financial inputs and outputs from the Clark for a typical year. We use this data to run our regional economic model. To capture the Clark's capacity as a museum, we determine how many people are employed, from where revenues originate, how they are used, and how the Clark affects the regional tourism industry. To analyze the economic impact of the Clark's educational and research capacities, we determine the financial linkages of the graduate school and how colloquia and conferences impact local spending. Lastly, we quantify how the Clark enhances the quality of life, a factor economists call amenity value, in the region.

II.B. The Clark's Economic Drivers

II.B.1 Employment

More than many other industries, the cultural arts depend on human capital. The Clark is no exception: as with most cultural institutions, the Clark's operations bring together a highly creative and educated workforce. The proportion of the Clark's staff in the community is significant: the Clark typically employs around 80 full-time employees.

Because of the heavy dependence on labor inputs, a large portion of the annual budget flows to wages, salaries, and benefits. In 2003, the total wage bill (payroll) amounted to \$3.894 million. The majority of the Clark's staff (86%) live in Berkshire County. Thus, most of the wages and salaries paid to employees (83%) circulate back

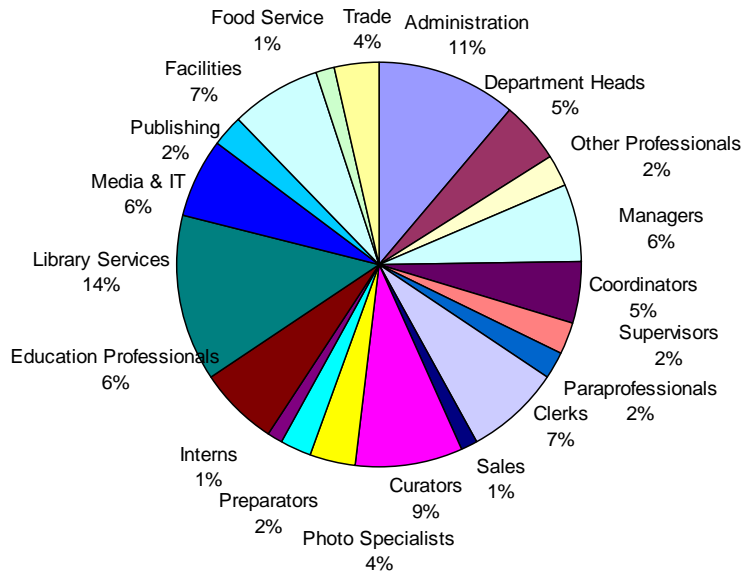
⁷ For more information on this "counterfactual" approach and the REMI model, see Appendix B

into Berkshire County. The 14% of employees not living in Berkshire County are evenly split between New York and Vermont. Table II.B.1 lists total wages and worker distribution in Berkshire and the surrounding counties.

Table II.B.1 Clark Full Time Equivalent (FTEs) Employees by County				
County	State	FTE Employees	Total Wage Bill	Percent of Total Wage Bill
Berkshire	MA	65.7	\$3,220,788	82.7%
Albany	NY	1.0	\$39,185	18.4%
Rensselaer	NY	2.0	\$151,515	3.9%
Greene	NY	1.0	\$58,001	1.5%
Saratoga	NY	2.0	\$213,031	5.5%
Bennington	VT	6.0	\$210,751	5.4%
Total		77.7	\$3,893,270	100%

Because the Clark performs manifold functions as an art museum, research center, graduate school (with Williams College), and library, it employs individuals in a wide variety of occupations and levels of education. It requires regional labor services from a spectrum of skills and capabilities. A large portion of the Clark’s staff requires specialized skills, in turn attracting a trained, highly-educated professional workforce to the region. These individuals also tend to have higher wages and salaries, increasing purchasing power in the region. Figure II.B.1 displays a breakdown of occupations at the Clark. Based on this data, we estimate that 75% of total employment at the Clark works in the museum sector, with the remaining 25% employed in the education sector.

Figure II.B.1 Occupations at the Clark



In addition to the direct employment described above, the Clark offers fellowships that attract researchers from around the world to live and work on the Clark campus. In the academic year 2002-2003, the Clark hosted 22 research fellows. Because fellows frequently stay for less than one calendar year, we estimate that these researchers represent 6 full-time-equivalent employees per year.⁸

Lastly, in addition to their studies, graduate students provide labor through work-study programs or internships. Each graduate student in the joint program with Williams College must work eight hours per week as an intern at the Clark or a regional institute such as the Williamstown Art Conservation Center (WACC), MASS MoCA, or Williams College. In 2003, based on the total 25 students enrolled, this amounted to five FTEs over the school year. During the summer, the Clark hires an average of five interns working at 35 hours per week. Combined, these internship programs translate to 3.7 FTEs per year.⁹ Because the purpose of these internships is to train students, they are

⁸ Given each fellow's attendance dates, we calculate their attendance for the fraction of a year and sum to find the total FTE.

⁹ Spring and fall semesters are assumed to be 14 weeks long, with summer 12 weeks long.

included in the amenity value of the Clark instead of employment.¹⁰ This decision emphasizes the importance of the Clark in building human as well as social capital for the region.

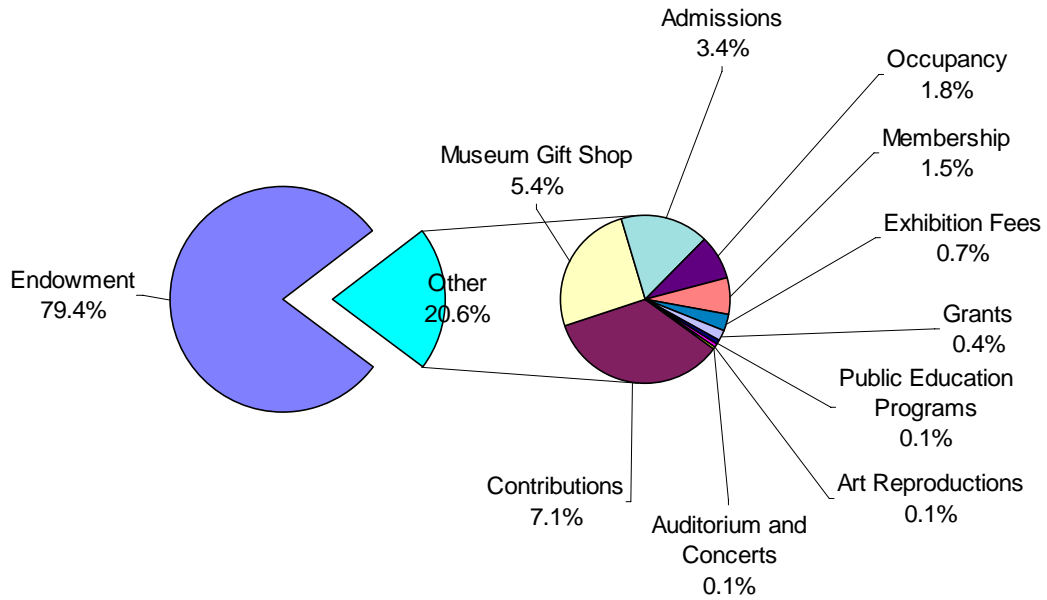
Clark employees affect their local economies by spending their wages. As they purchase goods and services such as housing, food, entertainment, their expenditures support the vitality of local businesses. This “multiplier effect” makes the Clark an economic driver for Berkshire County and the surrounding area.

II.B.2 Revenues and Expenditures

The Clark is non-profit organization with a mission to serve the public. Thus, it sponsors many free programs, offers free admission for most of the year (children under 18 are admitted free year-round), and provides consideration to arts and cultural initiatives in the region. As such, the Clark depends upon returns from its endowment for 79.4% of its annual revenue. The Clark also depends on philanthropic contributions, which account for its second largest revenue stream. In addition to these sources, the Clark earns revenue from its on-going operations in the gift shop, membership fees, exhibition fees, and admission; these operations generate a percentage of income and provide a public service that helps the Clark fulfill its mission. Figure II.B.2 displays sources of revenue for the Clark’s 2003 budget.

¹⁰ The Clark does occasionally host other full-time interns during the year from other programs. One such ‘project assistant/intern’ is included in the employment figures discussed above. This intern is not included in the amenity value of the Clark

Figure II.B.2 Clark Revenue Sources, 2003

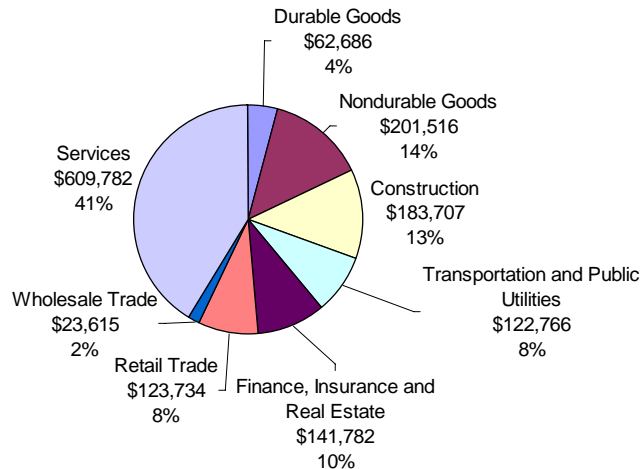


While most of the Clark’s revenues pay salaries and benefits, some portion purchases goods and services within the region. Of the Clark’s \$10.7 million operating budget for the 2003 fiscal year, roughly \$1.53 million purchased goods and services within the eight counties listed in the introduction. Key local expenses include advertising, legal and financial services, communication, other professional or technical services, printing, art transportation and the cost of capital improvements. Table II.B.2 and Figure II.B.3. display the Clark’s major operating expenditure categories.¹¹

County	State	Expenditures	Percent of Total Wage Bill
Berkshire	MA	\$1,033,102	75.4%
Hampden	MA	\$183,334	13.4%
Hampshire	MA	\$36,075	2.6%
Franklin	MA	\$22,467	1.6%
Albany	NY	\$64,144	4.7%
Columbia	NY	\$30,806	2.2%
Rensselaer	NY	\$67,794	4.9%
Bennington	VT	\$31,865	2.3%
Total		\$1,369,928	100%

¹¹ Expenditures are grouped in sector categories used by the REMI model.

Figure II.B.3 Clark Regional Operating Expenditure Distribution, 2003



II.B.3 Tourism

In addition to its impact on the local economy through yearly employment and expenditures, the Clark benefits the region by attracting thousands of tourists each year. Tourists bring new business to the region for hotels, retailers, local attractions and eating and drinking establishments. Berkshire County is a tourist destination not only for its scenic beauty but also as a hub of cultural attractions. In addition to the Clark, the region has other notable cultural attractions including Tanglewood, MASS MoCA, and the Norman Rockwell Museum. The agglomeration effects of these and other cultural attractions create a synergistic appeal that is greater than sum of its individual parts. As one of the most established and popular attractions in the region, the Clark enhances the appeal of other attractions and plays an important role in attracting tourists to the eight-county region.

CLARK VISITORS

The Clark draws visitors to its art gallery, library, education and research programs. Between 2001 and 2003, the Clark drew an average annual visitorship in excess of 175,000.

CCEA assumes that library and public education program visitors are either local or at the museum for conferences. The economic impact of the latter is discussed below. Based on a 2001 tourism survey of Berkshire Cultural attractions,¹² we estimate that of the visitors:

- 24% stay in a hotel or motel overnight;
- 58% visit from local areas and do not stay overnight (day-trippers); and,
- 18% stay overnight with friends or relatives.

For visitors staying overnight, CCEA estimates stays of 2.4 days in Berkshire County. This figure is based on an average of two recent surveys of cultural tourists in Massachusetts.^{13,14}

CCEA assumes, day-trippers and visitors staying with friends and relatives spend \$60 per day, and visitors staying in a hotel or motel spend \$150 per day.¹⁵ The Travel and Industry Association of America, in performing a study for the Massachusetts Office of Travel and Tourism (MOTT), estimates that tourists in Massachusetts spend 42% of their travel budget on transportation, 23% on lodging, 20% on food service, 9% on retail purchases, and 6% on entertainment and recreation (see Figure II.B.4).

Not all of these visitors (and their spending) are 'net new' to the area. Some of these visitors would come to Berkshire County even if the Clark did not exist. Visitors come to see other attractions, or simply spend a day in the region. To estimate more accurately the number of visitors to Berkshire County due to the Clark, it is necessary to

¹² Hayward, Jeff (2001). "Berkshire Cultural Attractions 2001 Summer Visitor Analysis," People, Places & Design Research, Northampton, MA.

¹³ Research Department of the Travel Industry Association of America (2003). "Economic Impact of Travel on Massachusetts' Counties 2002," Washington, DC.

¹⁴ Mt. Auburn Associates, Inc. and Economic Development Research Group (2002) "Economic Impact of the Museum of Fine Arts, Boston," Boston, MA.

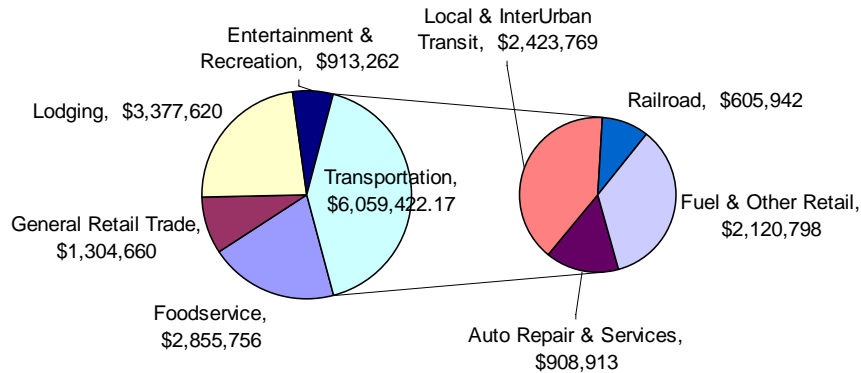
¹⁵ Values derived from previous CCEA study: The Economic Impact of the Wadsworth Atheneum Museum of Art, available at <http://ceea.uconn.edu/studies/Atheneum%20Economic%20Impact.pdf>

net out these visitors and consider net new visitors only as the driving force of the Clark’s economic contribution to the region.

According to Hayward (2001), **43% of the Clark’s visitors came to Berkshire County specifically because of the Clark.** CCEA assumes that, if the Clark were not located in Berkshire County, these visitors would not travel to the region; therefore 100% of their expenditures is attributable to the Clark. The remaining 57% of Clark visitors came to the region for other reasons such as visiting friends and family or to engage in multiple cultural activities (including the Clark). For these visitors, CCEA assumes that only 50% of their expenditures, on average, are attributable to the Clark and therefore ‘net new’ to the region.

In total, visitors to the Clark spend an estimated \$20.3 million in the eight-county region, \$14.5 million is ‘net new’ spending. The distribution of visitor spending is summarized in Figure II.B.4 below.¹⁶

Figure II.B.4 Clark Visitor Expenditures



¹⁶ Transportation expenditures are allocated throughout the eight-county region based on origin of the visitor; these expenditures include ground transportation costs.

II.C The Clark as a Center for Higher Education

The Clark, with the Getty and the National Gallery of Art, is one of only three research institutes in the country, and one of a select group of museums that also supports a thriving graduate program. Through visiting fellowships, conferences, and lectures, the Clark contributes to a broader understanding of the contribution of art to culture as well as the body of art history research. The Clark's collection, library and personnel serve as a basis for a two-year Masters of Art program and a vibrant scholarship program. The Master's program, offered in conjunction with William's College, prepares students for professions in the academic and museum worlds. These programs contribute to the local economy in tangibly, through student and visitor expenditures in the region and intangibly through the generation of skills and ideas.

II.C.1 Graduate Program

The two-year Graduate Program in the History of Art attracts students from around the world to live, learn and study in Berkshire County. Students interact with research fellows and the Clark's resources to engage in art and art history research. Students also receive practical work experience in gallery programming, organizing exhibitions, and restoring artwork, to name but a few aspects of their training. Since its inception in 1972, this program has accepted, on average, 12 students to the two-year program annually. In the 2002-2003 academic year, 25 students were enrolled across two classes. The Clark provides extensive support and resources in partnership with Williams College, the degree-granting institution, and the Clark's reputation is an important draw for the program.

The Graduate Program affects the economy in three principal ways. When students move to Berkshire County from other places, they buy goods and services from local businesses, which contribute to the gross regional product. During their tenure in the program, students work locally at the Clark, MASS MoCA, or the Williamstown Art Conservation Center, expanding their skill set. Finally, some students remain in the region even after graduation and contribute their skills to the working economy through their employment at a local art or cultural center. For a cultural hub such as the Berkshires, the specialized skills and training that students acquire in the program

become an important resource for the region. Their work contributes to the community in a richer array of art programs, which in turn generates social capital and strengthens the community.

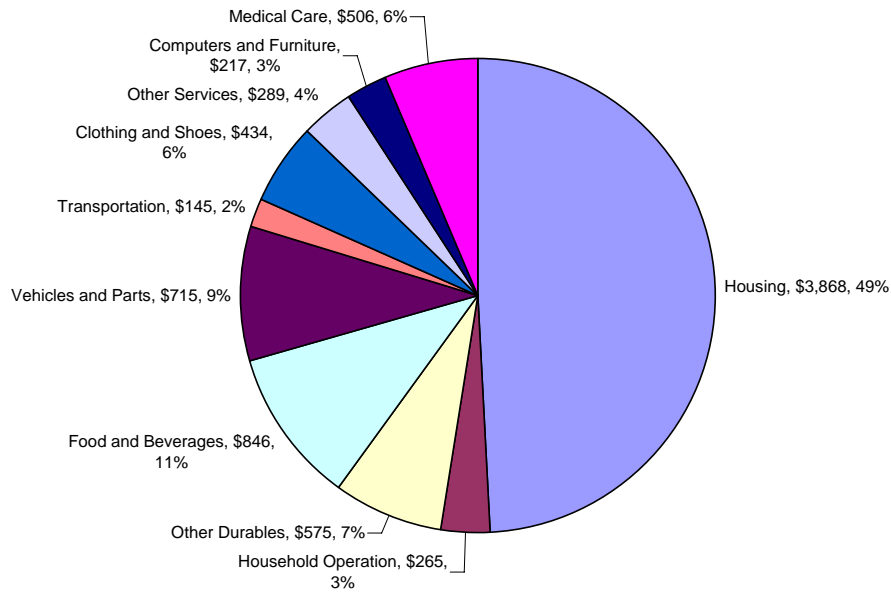
Student Expenditures

Students living in Berkshire County have an economic impact through their daily expenditures, which increase sales for local businesses. Williams College estimates that students spend an average of \$7,860 per year in the community, outside of tuition costs.¹⁷ This total includes spending on housing, food, educational supplies, transportation, and other goods and services. The expenditure distribution is based on U.S. Bureau of Labor Statistics' consumer spending categories. Housing is assumed to cost no less than \$3,700 (based on residence fees for first year Master's students) and the remaining expenditure per student is distributed as shown in Figure II.C.5 below.¹⁸ Based on an average enrollment of 25 per year, total student spending is estimated to be \$196,500 per year. Students typically live and spend in Berkshire County.

¹⁷ We consider this figure, derived from <http://www.williams.edu>, to be very conservative.

¹⁸ Spending categories based on CCEA (2003) "The Economic Impact of the Continuing Operations of the University of Connecticut", <http://ceea.uconn.edu/studies/UCONN%20Impact%20Study.pdf>

Figure II.C.5 Clark Student Annual Spending Profile



Occupational Supply

The Clark supplies skilled graduates to national and international labor markets. Of the 133 graduates between 1992 and 2002, eight live and work in the region. Six graduates currently work in Berkshire County (five work for Williams College), one works in Hampshire County, MA, and one works in Rensselaer County, NY. These figures indicate that the graduate program contributes, on average, one skilled employee¹⁹ each year to the region. Table II.B.3 breaks this labor supply contribution down by county.

County	State	Occupational Supply	Annual Occupational
		1992-2002	Supply
Berkshire	MA	6	0.55
Hampshire	MA	1	0.09
Rensselaer	NY	1	0.09
Total		8	0.73

¹⁹ Based on full-time equivalent status.

II.C.2 Conferences, Symposia, and Colloquia

The Clark hosts a series of conferences, symposia, colloquia, conversations, and lectures each year. Through these events, the Clark attracts additional visitors that further enhance the local tourism industry. To calculate the economic impact arising from these events, we estimate the number of attendees each year, how long they stay, and how much they spend.

We begin by assuming that attendance at shorter events such as lectures consists of local residents and day-trippers, though we acknowledge that some enthusiasts do travel specifically for these talks (an average of 810 attendees per year). This implies that these events do not contribute significantly to net new visitor spending. The Clark also hosts longer full day and two-day events that require a greater investment of time. Based on past attendance data provided by the Clark, CCEA estimates that of the 750 annual visitors for these events, 590 attend two-day events, and 160 attend one-day events.

Some of these visitors travel from a near distance to allow them to drive each day. We assume that attendees living further than 90 miles from the Clark purchase lodging in town.²⁰ Based on past attendance records about 50% of attendees live further than 90 miles away and stay in Berkshire County overnight. Visitors stay three-nights for a two-day event and two nights for a one-day event. The remaining visitors are day-trippers, traveling to and from Berkshire County.

The majority of attendees are from outside the eight-county region. Within the region, Berkshire County has the largest number of attendees. Table II.C.1 below shows the geographical origin of conference attendees.²¹

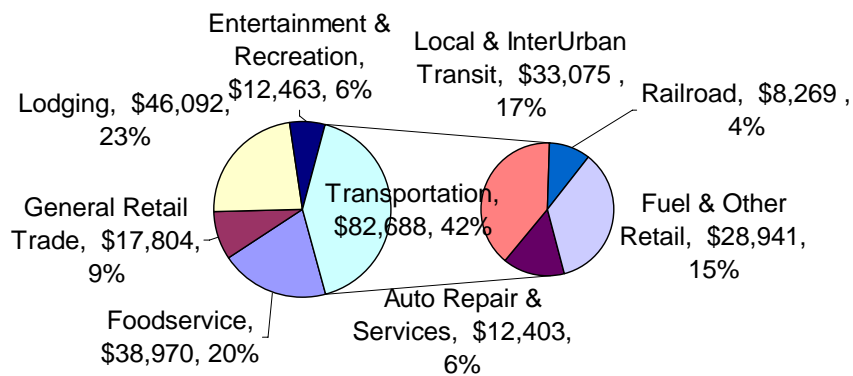
²⁰ CCEA assumes that individuals would stay in Berkshire County if attending a day program beyond a travel time of 2.5 hours, which is approximately a 90-mile distance from the Clark.

²¹ Imputed from 2001-2003 Clark attendance patterns.

Table II.C.1: Conference Attendee Origin			
County	State	Number	Percent
Berkshire	MA	216	28.9%
Hampden	MA	5	0.6%
Hampshire	MA	25	3.3%
Franklin	MA	2	0.3%
Albany	NY	18	2.4%
Columbia	NY	4	0.5%
Rensselaer	NY	13	1.7%
Bennington	VT	30	3.9%
Total In Region		313	41.7%
Outside of Region		437	58.3%
Total		750	100.0%

Spending patterns for conference attendees are assumed to be the same as tourist visitors (see figure II.B.4). Attendees also enjoy the cultural richness of the area. They purchase gifts and food as well as pay for transportation. Visitors staying overnight each spend an average of \$150 per day, and day-trippers spend an average of \$60 per day per person. Total visitor spending attributable to conference attendees is \$197,850 (Figure II.C.1).

Figure II.C.1 Clark Conference Attendee Expenditures



Cultural Amenity Attributable to the Clark

In addition to its economic value of contributing employment, expenditures, and visitor spending, the Clark adds cultural value and improves quality-of-life in the region through the services it provides and its ties to the community. By enhancing the region's quality of life, or amenity value, the Clark makes the community more attractive and draws people to visit and live in the region.

Because consumers do not purchase "amenity" explicitly, it is inherently difficult to estimate its value. We estimate amenity value by making assumptions about which of the Clark's services, activities, or resources add to the region's desirability. Specific values are defined as what local residents and travelers are willing to pay for the service, or if the service is free, what costs are required to provide it. This 'willingness-to-pay' approach assumes that the value of the Clark's services and programs is at least as large as what one must pay for them. In this instance, the 'willingness to pay' is necessarily *underestimated* because many programs have no calculable costs.

We further estimate how the amenity value is distributed among the eight counties in the study area. When an explicit allocation across the eight county region is not possible, we allocate the amenity value in proportion to visitorship. Visitors 'consume' amenity value by accessing the Clark's resources. The majority of the amenity value accrues to Berkshire County because of proximity to the Clark. Some of the amenity accrues to visitors outside the eight-county region as well.²²

In our conservative estimate, the total amenity value estimate is \$1.7 million with 72% or \$1.2 million accruing to the eight-county region. Below, we discuss the estimates of the Clark's amenity contribution ***to the eight-county region*** only. We estimate that the Clark's amenity value has seven distinct components (see Figure II.D.1):

- 1) The value of ***volunteer services to the community*** constitutes the Clark's most significant contribution, in terms of dollars, with an annual value of \$399,700.

The Clark brings together unpaid interns, docents, and other volunteers who provide extensive services to the local community, including gallery talks,

²² For example, the Clark budgets \$40,000 per year to restore and maintain its collection. In doing so, the Clark preserves our collective cultural heritage. People from the world over view the conserved works of art and derive value from their preservation. In this instance, the amenity value is shared out based on the portion of visitors from the eight-county region. Consequently, only \$11,094 of the \$40,000 expenditure accrues regionally.

- lectures, and various free programs for adults and children. Volunteerism increases residents' investment in their communities, expands social networks and increases social capital, which improves the quality of life in the region.²³ We calculate the total value of this component by estimating the time spent by volunteers and the opportunity cost of their time.
- 2) The Clark *art research library* provides extensive free services worth at least \$295,650 based on the number of books used (\$14 per book)²⁴ and photocopies made (5¢ per photocopy) per year. We assume each visitor receives \$2 worth of reference assistance per visit either from staff or from electronic resources available at the library.²⁵ Because these figures derive from literature discussing the economic benefits of general public libraries (see Appendix A), we believe that there are additional and extensive benefits that result from the distinctiveness of the Clark's collection of books and the library staff's possession of advanced degrees. Amenity value is distributed among the eight counties by the distribution of library attendance.
 - 3) We estimate that *community education programs* contribute \$257,760 annually to the region's amenity value. The Clark provides for an array of educational and entertainment programs, including concerts, films, special events, and travel that engage visitors of all ages and collectively build social capital. Additionally, the Clark's school bus reimbursement program provides stipends to pay for student travel to and from the museum. For free programs such as this, we calculate their value according to their production cost or total attendance fees. We distribute amenity value proportionally among counties by attendance.
 - 4) The *significance of the Clark's permanent collection* allows it to attract and borrow significant works of art from around the world, enriching its already

²³ Sheppard, et. al., define social capital as “a form of capital that derives from individuals' relationship to the social structure. It acknowledges the fact that there are resources embedded in social structures. These are resources individuals can draw upon beyond their human capital resources, which are more individually based. To acquire social capital is to possess a resource for action.” Sheppard, et al. (2005). “Culture and Revitalization: The Economic Effects of MASS MoCA on its Community,” Center for Creative Community Development, Report NA2.2005.

²⁴ Holt, Glen E., Donald Elliott, and Amonia Moore (2004) “Placing a Value on Public Library Services”. <http://www.slpl.lib.mo.us/libsrc/restoc.htm>.

²⁵ McClure, Charles R., Bruce T. Fraser, Timothy W. Nelson, Jane B. Robbins, (2000) “Economic Benefits and Impacts from Public Libraries in the State of Florida.” <http://dlis.dos.state.fl.us/bld/finalreport/>.

- impressive body of works. Loans bring extraordinary works of art to the region and enable the Clark to present special exhibitions, which attract considerable numbers of visitors and stimulate new scholarship and critical inquiry. The leverage value of the Clark's permanent collection is incalculable; we estimate it to vastly exceed the \$161,382 spent annually in transportation costs and other fees associated with getting and receiving loaned art. This component of amenity value is distributed to counties according to museum attendance by county.
- 5) The Clark regularly makes *donations to other cultural organizations* in the area. In fiscal year 2003, the Clark provided more than \$108,000, but this amount represents only a fraction of the total contributions to regional organizations, in terms of direct financial support, in-kind support, time, and meeting space. With all of its contributions, the Clark serves as a pillar of the cultural community and gathering space that fosters social networking. This figure includes a lower-bound estimate of the implicit rent subsidy provided to the Williamstown Art Conservation Center (WACC) housed on the Clark's grounds. We assume this represents an average annual amount and that it is distributed among the eight counties by location of recipient.
 - 6) We estimate that *art conservation programs* at the Clark, separate from operations at the Williamstown Art Conservation Center, add a value of \$11,093 to the eight-county region annually, derived from expenditures toward these programs. However, this sum does not adequately capture the incalculable value of preserving the collective cultural history of the region. CCEA allocates this sum to counties based on the distribution of museum attendance.
 - 7) We estimate the Clark's *research and academic programs*, which include conferences, symposia, colloquia, workshops, lectures, and the Clark fellows program to greatly exceed the \$9,644 generated annually by the heavily-subsidized attendance fees. The world-renowned scholars attracted to these programs stimulate interaction in the intellectual community, further building the Clark's reputation and regional social capital, especially with Williams College. We allocate this amount to counties based on regional conference attendance.

Figures II.D.1 and II.D.2 below summarize the distribution of the quality of life impact on the region. There is an additional \$494,075 impact outside the eight-county region.²⁶

Figure II.D.1 Distribution of Clark Amenity Value by Component

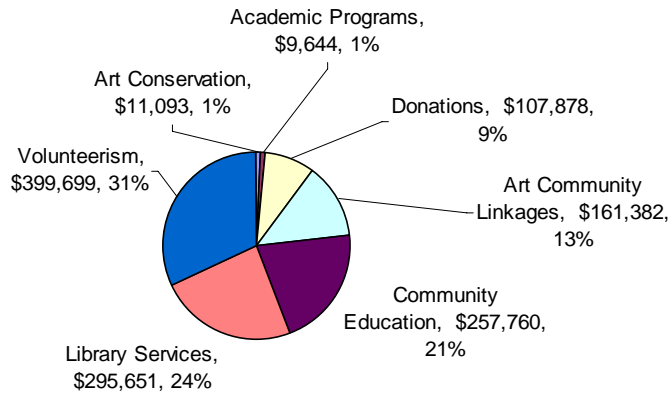
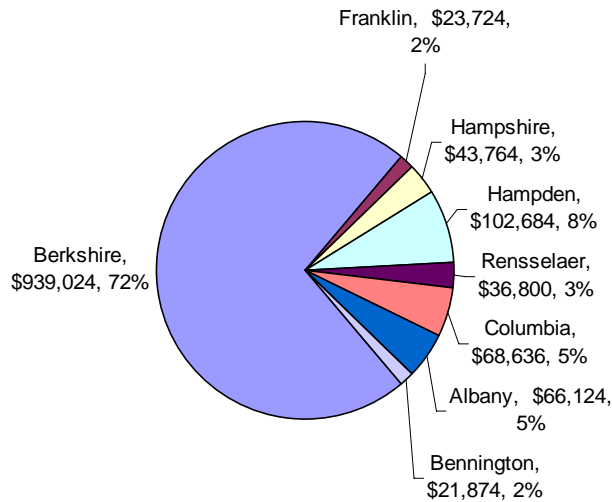


Figure II.D.2 Distribution of Clark Amenity by County



²⁶ We calculate the total amenity value the Clark creates (\$1,737,183) and that that accrues to the eight-county region (\$1,243,108) based on the distribution of admissions.

III. Economic Impact Results of Current Operations

In this section, CCEA presents the economic impact of the Clark as it exists, accounting for all current operations. The Clark attracts visitors and conference attendees and employs workers, all of whose expenditures positively impact the eight-county region containing the Clark. Most of the economic impact accrues to Berkshire County, but there is measurable impact in each county in the region. This analysis focuses on the region composed of: Berkshire, Hampden, Hampshire, and Franklin counties in Massachusetts; Albany, Rensselaer, and Columbia counties in New York; and Bennington County, Vermont.

The results presented in this section are the changes from the expected level of economic activity in the absence of the Clark as it operates today. This is a counterfactual analysis that asks what the region would suffer were the Clark not to exist.

Section III.A focuses on the effect of the current operations on gross ‘regional’ product and personal income. Gross regional product is the value of all goods and services produced in the eight-county region. Personal income represents individuals’ income from all sources. Section III.B presents the changes in employment and population that occur in the region due to the Clark’s current operations.

III.A Output (Value Added) and Personal Income Impact

The Clark stimulates economic activity in the region in the form of increased visitor traffic—visitors who spend money at the Clark and throughout the region—and the Clark’s purchases of intermediate goods used in its current operations. The Clark creates demand for labor and other local goods and services, creating a ripple effect of spending and demand for intermediate goods across the region. Gross regional product is the dollar value of all final goods and services produced in one year in the region using a value added approach. The value added in the region at each stage of the production process aggregates to produce the final value of the good or service.

Figure III.A.1 The Clark Art Institute's Current Operations Average Change in Gross Regional Product (GRP) and Personal Income (PI)

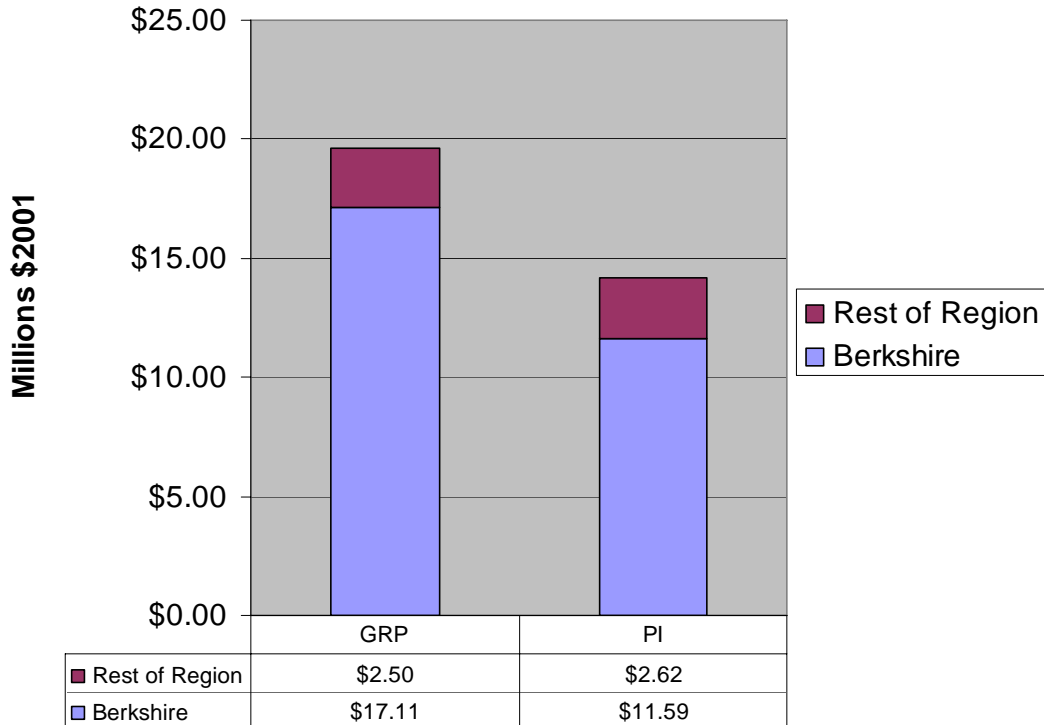


Figure III.A.1 shows the average annual change in gross regional product (GRP) and personal income in Berkshire County and the other seven counties aggregated to ‘rest of region’. The Clark’s current operations have an average annual GRP impact of \$17.11 million on Berkshire County, MA. For the rest of the region, the Clark has an average annual average GRP impact of \$2.5 million. Approximately 87 % of the GRP impact accrues to Berkshire County.

The Clark’s current operations generate an annual average increase of \$11.59 million in personal income within Berkshire County. The rest of the region realizes an annual average change of \$2.62 million in personal income. The impact on average personal income, measured on an annual basis throughout the region, is \$13.97 million.

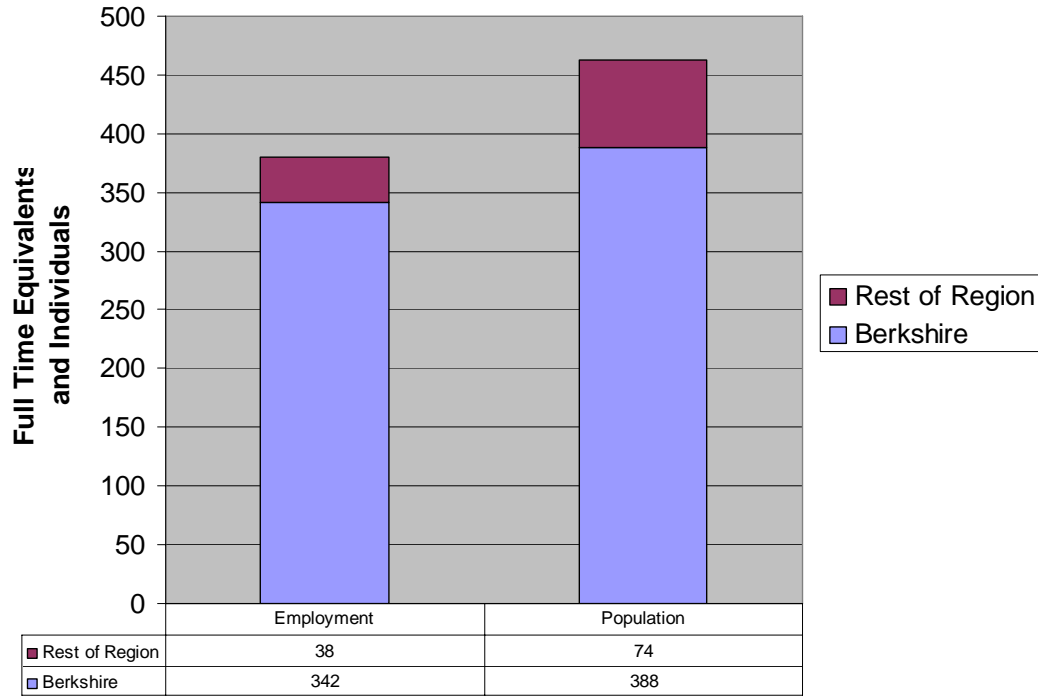
III.B Employment and Population Impact

As a cultural and research and academic institution, the Clark increases the relative attractiveness of the region through its amenity value. This induces in-migration, increasing population, demand, and economic activity within the region. Figure III.B.2 shows the average annual population attributed to the Clark's current operations is 388 new individuals in Berkshire County and 74 new individuals in the rest of the region. The Clark's expenditures on intermediate goods drive economic activity in surrounding businesses and lead to an increase in jobs within the region.

Employment is measured in full-time equivalents (FTEs), based on an average 40-hour work week, 50 weeks per year.²⁷ Full and part time workers are aggregated into these equivalents. Figure III.B.2 illuminates the Clark's impact on the employment and population of the region. **The Clark's current operations generate an average of 342 jobs on an annual basis to Berkshire County, 90% of the total impact, and 38 jobs in the rest of the region.**

²⁷ The Clark's average work week is 35 hours per week.

Figure III.B.2 The Clark Art Institute's Current Operations Average Annual Change in Employment and Population



III.C Clark’s Current Operations Summary

Shown below in Table III.C.1 is a summary of the Clark’s impact on economic variables in Berkshire County, in the rest of the region, and in the entire region as a whole. The Clark benefits the eight-county region as an economic driver, contributing more than an average of \$19 million to GRP on average annually due to multiplier effects.

Table III.C.1 Regional Economic Impact of Clark Art Institute's Current Operations			
Variable	Berkshire County, MA		
	Berkshire County, MA	Rest of Region	Total
	Average	Average	Average
Employment	342	38	380
Population	388	74	462
Gross Regional Product (Million 2001 \$)	\$17.11	\$2.50	\$19.03
Personal Income (Million 2001 \$)	\$11.59	\$2.62	\$13.97

The Clark’s operations bring new economic activity, jobs, and migrants (new residents) to the region. In terms of related economic activity, the Clark is responsible for an average annual contribution of \$13.97 million to personal income in the region due to multiplier effects that in turn increase consumer demand for goods and services. The

Clark stimulates an average of 380 full time equivalent positions per year throughout the region. The expenditure multiplier magnifies the economic impact of these increases in personal income and the impact of employees, as consumer expenditure on goods induces business expenditure on the intermediate goods used in the production of the final goods provided to consumers.

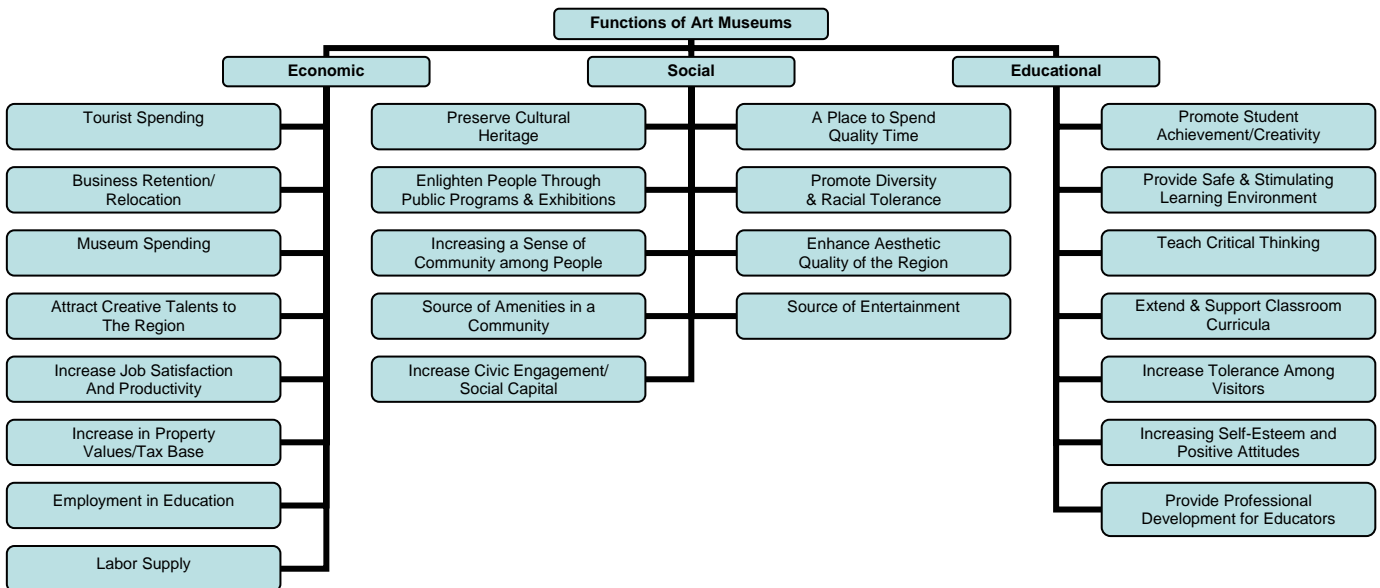
Appendix A: Literature Review

A.1 Museums

In estimating the economic impact of the Sterling and Francine Clark Art Institute it is important to recognize how art museums affect their communities. In addition, the approach to accumulating and processing the data necessary for such an undertaking must be defined. Fortunately, as many similar studies have been done in this area of research, a healthy literary precedent already exists.

Figure 1 summarizes the three functions of art museums. This figure demonstrates the myriad ways that art museums contribute to individual well-being and societal development. We list education issues related to cultural awareness and increasing knowledge about art under the social function of museums to reflect the cultural awareness and national unity promoted by learning through art.

Figure 1: Functions of Art Museums



Note: See Welch, N and A. Green, 1995, Schools, Communities, and the Arts: A research Compendium. Tempe, AZ: Morrison Institute for Public Policy, School of Public Affairs

Art museums, especially research and higher education institutions such as the Clark, contribute to a region’s economy in ways that go far beyond the “money in, money out” facets of the average local business. Of course, basic economic components are an

important part of an art museum's role in the community, but there are other aspects of its involvement that, while difficult to directly quantify, have significant impacts on the surrounding region. The economic impacts of an art museum such as the Clark can be defined as:

Direct Impacts: These include such things as employment opportunities and the resulting payroll expenses, sales from museum gift shops and eating establishments, and purchases of goods and services from off-site area vendors.²⁸ Almost anything that brings “new” money into the region due to the presence of the museum can be considered a direct impact of the institution.

Visitor Spending Impacts: Visitor purchases in the area from lodging establishments, restaurants and bars, admission sales to other cultural attractions, retail and wholesale trade, and so on, boost the regional economy.^{29,30} Revenues generated by sales to those in the area who visit or study at the Clark allow businesses to flourish and expand.

Indirect Impacts: These occur when area businesses use their increased revenues (whether from direct spending from the Clark or from its patrons and students) to increase their purchases from other area suppliers, hire more employees and/or increase employee salaries, upgrade their facilities, and so on. The increase in employment and wages leads to increased spending by households. Thus, the Clark has an indirect and irreplaceable effect on the region. These business and homeowner improvements can lead to quantifiable increases in the market worth of the surrounding communities.³¹

Intangible Impacts: Some of the most important impacts that an art museum or other major cultural center has on its region are the ways in which it effects the perception of the community. Cultural attractions encourage tourism and, more importantly they

²⁸ Mt. Auburn Associates, Inc and Economic Development Research Group, 2002, Economic Impact of the Museum of Fine Arts, Boston

²⁹ Stynes, Daniel J., Vander Stoep, Gail A., Sun, Ya-Yen, 2004, Estimating Economic Impacts of Michigan Museums.

³⁰ Travers, Tony; Glaister, Stephen. Valuing Museums: Impacts and Innovation Among National Museums. 2004.

³¹ MASS MoCA Economic Impact Report, 2001.

improve the overall quality of life in the region. A rich and diverse art and cultural environment is an important factor in the attractiveness of the community; it attracts skilled, educated workers to the area, which in turn attracts new businesses. While the presence of a museum or other cultural institution may not necessarily be a determining factor in relocating a business, its presence is still widely considered an important secondary factor.³² The Tampa Bay Business Committee for the Arts reported that “companies seeking to relocate consistently rank availability of the arts among their top three criteria.”³³ Another survey revealed that 99% of the Chief Executive Officers of companies cite that the availability of cultural activities in an area as an important consideration for choosing a new location.³⁴ Culturally-minded communities are seen as safe, prosperous areas with potential for future growth. The more prominent the area’s art and culture institutions and influences, the greater its regard by those both inside and outside the community. Art museums are irreplaceable in their dramatic effect on the overall quality of life and visual aesthetics within a region.

The Clark has long been recognized for its significant impact in the region, contributing in large part to the \$255 million tourism revenue experienced in recent years. This trend is only expected to continue. Berkshire County has a vibrant cultural atmosphere, including Jacob’s Pillow, Jiminy Peak ski resort, Mass MoCA, Tanglewood, Williamstown Theatre Festival, and many fine restaurants and other local attractions. Media and government agencies, residents and business owners often cite the Clark as one of the strongest attractions for tourism and relocation (both residential and commercial) to the area. Its positive impacts on the quality of life as well as the market value of the region are unmistakable.

Tourism is one of the most prominent economic impacts a museum has on its region. However, it is important to note that art museums attract a different variety of tourist than a theme park or baseball stadium would. These cultural tourists are most drawn to historic sites, museums and art galleries, theater and performing arts venues, cultural events, festivals, and fairs, ethnic communities and neighborhoods, architectural and archaeological sites, and national and state parks. They are often well educated,

³² Lyall 1997, p.1.

³³ Tampa Bay Business Committee for the Arts at <http://www.co.pinellas.fl.us/BCC/art/Economic.htm>.

³⁴ Economic Impact of the Cultural Industries on South Carolina at www.state.sc.us/arts.

married, and from households with annual incomes over \$50,000.³⁵ It has also been recognized that “cultural tourists tend to be slightly older than other travelers and spend more on the trips than other age groups. The sophistication of this market will demand an experience that is authentic, high quality, and in many cases, customized to meet individual interests and needs.”³⁶ The Massachusetts Cultural Council has recognized that “cultural tourism is the fastest growing sector of the travel industry” and that “cultural tourists spend \$62 more per day and \$200 more per trip than other travelers, include multiple destinations during a visit and stay one-half day longer at each destination, and have higher levels of income.”³⁷ This tourist is the most attractive type; it is one of the Clark’s primary audiences and well worth attracting to the region.

Other important aspects of the Clark are its educational and research benefits. The Clark is more than an art museum; it is also a key enhancing aspect of the Master of Arts program offered collaboratively with William’s College. This has an important affect on the region’s creative economy. While the presence of a museum alone creates or vastly increases a creative economy, a museum with formal educational and research facilities allows for much greater expansion in this area. Professional artists and art historians are attracted by teaching and learning opportunities, and in turn contribute to the cultural vibrancy of the community through advocacy of the arts and by participating in the cultural arena.³⁸ The constant influx of young, talented students has a similar effect, and once their development of skills has been achieved, there exists a dynamic resource of fresh, creative talent for the business community.

The educational benefits of the Clark are not limited to the faculty and students of William’s College, however. Museums enhance the creative economy of an area by stimulating the imaginative and inventive natures of its residents.³⁹ Many studies have been conducted that show the arts to be a crucial aid in teaching children. In studies conducted in 1995 and in 1998, SAT scores for students indicate that those who studied art scored higher than those who did not. Furthermore, arts education contributes to

³⁵ Museum Association of New York, *Cultural/Heritage Tourism: Opportunity, Impact, and Implications* at www.manyonline.org.

³⁶ Webb, Amy Jordan. “2001 Outlook for Cultural Heritage Tourism,” National Trust for Historic Preservation, 2001.

³⁷ *Cultural Tourism 101* at www.massculturalcouncil.org/issues/tourism.html

³⁸ *Mt Auburn Associates, Inc*, 2002, p.vii.

³⁹ Yantis, Jack. Arts Learning and the Creative Economy, at www.newhorizons.org.

creative thinking, problem solving, and communication skills.^{40,41} The arts enable students to understand the world in which they live, promote the development of intellectual skills, contribute to social and emotional growth and better teaching, and support the formation of a community. The arts also bring recuperative joy to those who experience or partake in them.⁴² Educators who include the arts (such as music, visual arts, performing arts, and so on) as an active and integral part of their curriculum see significant improvements in their students as opposed to those denied these important creativity stimulants.^{43,44,45} “Art in the homes, neighborhoods, and communities of our students gives meaning and life-long purpose to what we teach, and hopefully, to what our students learn.”⁴⁶ A study by James S. Catterall reported significant improvement in students’ learning and test scores after they participated in arts education programs. Perhaps more importantly, participation in such programs was associated with positive attitudes toward achievement and learning.⁴⁷ Similarly, Ashbacher and Herman found that students who participated in the Humanitas program—an interdisciplinary curriculum that incorporates arts, literature, and social studies—demonstrated better class attendance, a lower dropout rate, and more positive attitudes toward classes and their academic achievement.⁴⁸

Despite the ever-increasing number of studies proving the crucial role of arts education in educating children, there are major deficiencies in both time and

⁴⁰ In 1995, SAT scores for students who studied the arts more than four years were 59 points higher on the verbal and 44 points higher on the math portion than students with no coursework or experience in the arts. (Economic Impact of the Cultural Industry on South Carolina at www.state.sc.us/arts/economic.html)

⁴¹ College Board, 1998. “1998 College-Bound Seniors: A Profile of SAT Program Test Takers” at www.collegeboard.org.

⁴² Fox, Louis; Goodheart, Christine. Creative Schools, Connected Communities: Developing Partnerships for Arts Education, 2001 at www.newhorizons.org.

⁴³ Oddleifson, Eric, 1990. “A Fifty School Arts Education Demonstration Project,” On the Beam Vol. XI No.1 Fall 1990 p.4-5: 251

⁴⁴ Catterall, James, UCLA, “Involvement in the Arts and Success in Secondary School,” Americans for the Arts: Monographs. Vol. 1 No.9 Dec 97/Jan 98 p.1-12.

⁴⁵ Dr. Shirley Brice Heath, Stanford University. “Living the Arts Through Language + Learning: A Report on Community-Based Youth Organizations,” Americans for the Arts: Monographs. Nov 1998.

⁴⁶ Joseph, AnnRene, 2002. The Value of Arts to the Community and Education at www.newhorizons.org

⁴⁷ Catterall, James, 1995, Different Ways of Knowing: 1991-1994 National Longitudinal Study Final Report. (Los Angeles, California: The Galef Institute of Los Angeles.)

⁴⁸ Ashbacher, Pamela, and Herman, Joan, 1991, The Humanitas Program Evaluation, 1990-91. (Los Angeles, California: Center for the Study of Evaluation, UCLA Graduate School of Education).

commitment in public schools.⁴⁹ Art museums have worked to fill this void: a majority of art museums offer more community outreach programs and serve as better public educational institutions in their communities. According to one survey, between 1990 and 2000, a survey of the state of the nation’s art museums indicated that museum spending on education increased 96%.⁵⁰

These educational advantages are not limited to children; adults also benefit from the opportunities presented by a museum. Museums not only form excellent social hubs for the adults in a community, providing forums for entertainment as well as socializing, they also act to improve the “innovation infrastructure” of a community.⁵¹ “Innovation infrastructure” is the result of stimulating creativity in adults as well as in children, generating more focused, productive, and innovative workers.⁵² Tangible indicators of the importance of the Clark to local businesses and corporations are evident in that many businesses host events at the Clark.

⁴⁹ Leonhard, Charles, 1991, *The Status of Arts Education in American Public Schools*. (Urbana, Illinois: National Arts Education Research Center at the University of Illinois).

⁵⁰ Association of Art Museum Directors, 2002, *Survey on State of the Nation’s Art Museums*, (New York, NY: Association of Art Museum Directors).

⁵¹ Yantis, Jack. 2004 *Arts Learning and the Creative Economy*, at www.newhorizons.org.

⁵² Seaman, Bruce, 1990, “Arts Impact Studies: A Fashionable Excess.” *In Economic Impact of Arts: A Sourcebook*, edited by William T. Pound, (Washington, DC: National Conference of State Legislatures), p.46.

A.2 Libraries

Although literature on the subject of the economic impact of a library, public or private, is limited, it is still necessary to look to contemporaries to set a precedent for this study. This will serve to create a background of information for part of the research of this study.

Like any aspect of a region's cultural industry, libraries have certain tangible and intangible benefits. Tangible benefits are easier to measure, as direct numerical values and estimates can be attributed to them. The wages and salaries of employees, the number of employees, purchases made by the organization (especially in relation to the publishing industries in the region), entrance or membership fees, and all other direct material expenditures and proceeds can be easily recorded. Should some of these values be missing or unattainable, they can be estimated with a fair degree of accuracy based on other available figures. This is not the case with intangible benefits. Evaluating aspects of an institution that, by their nature, have no definitively-measurable values can be more difficult. Often overlooked or unconsidered, these "hidden benefits," must be determined.

Some of these positive impacts can be considered direct benefits. These are the effect of services on those who make use of the facilities and services offered. Patrons are able to borrow books and materials from the library rather than purchasing them. Similarly reference books, periodicals, and newspapers are provided to users without charge. It has become standard for libraries to offer access to the Internet, saving patrons the cost of a computer and Internet connection. Specialized research libraries even offer special databases—cost-prohibitive to the average individual patron, were they to subscribe on their own—that enable more thorough research.

Librarians also provide a multitude of services free of charge. These include consulting with patrons to identify, analyze, and fulfill their informational needs; select and acquire information in any of the varied formats in which it is available; and develop and organize electronic databases and other organizational structures to quickly catalogue and retrieve information when needed. Librarians also plan and implement programs such as exhibitions, literacy programs, informational lectures, etc. While the direct benefits of the information gained through the assistance of a librarian are difficult to

quantify, they can be measured in time saved by the patron. A valuation can be estimated for these intangible goods and services, but it cannot form a static figure in a model, as benefits are dependent on conditions unique to each individual region.

There are also indirect, or societal, benefits to consider. These are effects that the surrounding community experiences because of both the presence of a library and the individuals benefiting from it. In the long-term, research opportunities allow businesses to expand, students to become more adept in their studies, and graduates and professionals to enhance their current skills, all which translate into increased labor productivity in the region. Information supports businesses and professionals.⁵³

Libraries raise the market worth of their communities, and bolster retail shopping in the area. In California, “county officials found that studies in a number of communities nationwide indicated libraries, if maintained and administered well, increased property values in the community served. The American Association of Certified Appraisers states that appraisers look to see if a community has a local library when assessing property values.”⁵⁴ In addition, studies have shown that in the United Kingdom in 1985, 51% of surveyed library patrons combined trips to the library with shopping,⁵⁵ while in British Columbia in 1994, 75% regularly purchase goods and services while visiting their local libraries.⁵⁶ Furthermore, the money saved by local businesses by the utilization of free information and information services allows them to invest the time and money saved elsewhere. It is imperative that benefits such as these be quantified and considered in any library impact analysis.

The most widely accepted methods used for obtaining this information involve several surveys to various target groups (i.e., patrons, local businesses, teachers, librarians, library directors), though the analysis of the data gained through these surveys is still debated. A study done by Florida State University regarding the benefits and impacts of public libraries in Florida used a series of service logs and surveys of patrons, library directors/managers, and targeted groups of patrons, local development officials, and librarians. A focus on defining and evaluating the benefits of a public library

⁵³ *Cultural Partnerships Branch, Oct. 1996 2nd ed.*, p.5

⁵⁴ *Cooper and Crouch*, 1994, p.232-233

⁵⁵ *Cheshire County Council*, 1985, Table 3.6

⁵⁶ *Surrey Public Library*, 1994, introduction.

resulted in approval percentages representing how those surveyed viewed the intangible effects of a library on varied aspects of local and state economies, individual business development, and individuals' personal finances. Despite the ability to quantify many of the economic benefits and impacts individually, "many others are very difficult to quantify or may never be quantified either because they are not reducible to dollar values or they are essentially impossible to measure in practical terms."⁵⁷ Hence, an overall dollar amount or ratio was not presented

A similar study of the Saint Louis Public Library administered various surveys to patrons, librarians, business owners, and schoolteachers to quantify intangible benefits using contingent valuation measures. Using a combination of willingness-to-pay, willingness-to-accept, and cost of time approaches in their surveys, the team produced a range of values with which to work instead of trusting the study to one method of estimation, thus creating more credible values.⁵⁸ The results were combined with figures gathered from tangible benefits to produce a cost-benefit analysis that, at its most conservative, estimated a return of four dollars for every one dollar invested. Their system produced definitive, credible numeric results where other studies have been unsuccessful. It is necessary to define such an important aspect of every community's social, cultural, and financial economy.

⁵⁷ *Information Use Management and Policy Institute*, p.5-29

⁵⁸ *Holt, Elliot, Moore*, methodology

Appendix B: Description of REMI model and modeling strategies

The REMI Model

REMI is a dynamic, multi-sector, regional model used as an analysis tool by the Connecticut Center for Economic Analysis. The REMI model includes all of the major inter-industry linkages among 466 private industries aggregated into 49 major industrial sectors. With the addition of farming and three public sectors (state and local government, civilian federal government, and military), there are 53 sectors represented in the model.

The REMI model is based on a nationwide *input-output* (I/O) model that the U.S. Department of Commerce (DoC) developed and continues to maintain. Modern input-output models are largely the result of groundbreaking research by Nobel laureate Wassily Leontief. Such models focus on the inter-relationships between industries, and provide information about how changes in specific variables—whether economic variable such as employment or prices in a certain industry or other variables like population—affect factor markets, intermediate goods production, and final goods production and consumption.

The REMI Connecticut model takes the U.S. I/O “table” results and scales them according to traditional regional relationships and current conditions, allowing the relationships to adapt dynamically at reasonable rates to changing conditions. Some of the salient structural characteristics of the REMI model are:

- Consumption is determined on an industry-by-industry basis, and is based on real disposable income in Keynesian fashion, i.e., with prices fixed in the short run and GDP (Gross Domestic Product) determined solely by aggregate demand.
- The demand for labor, capital, fuel, and intermediate inputs per unit of output depends on relative prices of inputs. Changes in relative prices cause producers to substitute cheaper inputs for relatively more expensive inputs.

- Supply and demand for labor in a sector determine wages weighted by regional differences. The supply of labor depends on the size of the population and the size of the workforce.
- Migration – which affects population size – depends on real after-tax wages as well as employment opportunities and amenity value in a region relative to other areas.
- Wages and other measures of prices and productivity determine the cost of doing business. Changes in the cost of doing business will affect profits and/or prices in a given industry. When the change in the cost of doing business is specific to a region, it will also affect the share of local and U.S. markets supplied by local firms. Market share and demand determine local output.
- “Imports” and “exports between states are related to relative prices and relative production costs.
- Property income depends only on population and its distribution adjusted for traditional regional differences, *not* on market conditions or building rates relative to business activity.
- Estimates of transfer payments depend on unemployment details of the previous period, and total government expenditures are proportional to population size.
- Federal military and civilian employment is exogenous and maintained at a *fixed* share of the corresponding total U.S. values, unless specifically altered in the analysis.

Because the variables in the REMI model are all related, a change in any one variable affects many others. For example, if wages in a certain sector rise, the relative prices of inputs change and may cause the producer to substitute capital for labor. This changes demand for inputs, which affects employment, wages and other variables in those industries. Changes in employment and wages affect migration and the population level, which in turn affect other employment variables. Such chain-reactions continue

throughout the model. Depending on the analysis performed, the nature of the chain of events cascading through the model economy can be as informative for the policymaker as the final aggregate results. Because the model generates such extensive sectoral detail, it is possible for experienced economists in this field to discern the dominant causal linkages involved in the results. Results reported are the combined direct, indirect and induced effects of the economic activity.

Counterfactual Modeling Approach to Analyzing Current Operations

Most economic models, including the REMI model, measure the Connecticut economy in its present form as a baseline. Any changes in the economy either add to or subtract from that baseline depending on the nature of the change. Because the Clark already exists in the baseline model, we generate the most accurate measure of the Institute's current impact of its operations by hypothetically removing the Institute from the economy. Intuitively, the results contained in this report measure the losses to the economy resulting from the disappearance of the Institute. However, it is more appropriate to interpret these results as the positive impact of the Institute's continuing operations by reversing the signs of the economic variables. We assume that there are no exogenous substitute economic activities for the Institute in its absence. We want the instantaneous effect of the disappearance of all activities related to the Institute's operation. Otherwise, we would obtain results for an opportunity cost analysis that invites debate as to the next best alternative.

Appendix C: The Clark Current Operations Economic Impact Summary

Tables by County

The Clark's current operations generate jobs in several sectors of the regional economy. In this thought experiment, we estimate the economic value of the Clark as it exists today by determining how the region would suffer in its absence. The flip side that we display in these tables and charts represents the spontaneous appearance of the Clark as it exists today. As a result of its operations, jobs are created, sales are generated, new people come into the region and local and state governments realize new taxes and provide expanded services for the new population. Once the Clark spontaneously appears, the economy adjusts over time to the economic forces it sets in motion. We observe the adjustment process over 30 years and summarize economic activity in that period with the annual average change from the baseline or status quo forecast of the regional economy for each economic variable. This summary measure is the sum of the number of new jobs created each year due to the Clark's current operations divided by 30. Table C.1 shows the annual average changes in employment, GRP, population, personal income, wage and salary disbursements. Figure C.1 shows the annual average distribution of FTE jobs in the region by major industry group or sector.

Appendix C, Table 1: Current Operations Economic Impact Summary by County								
	Massachusetts Counties				New York Counties			Vermont
	Berkshire	Franklin	Hampden	Hampshire	Albany	Columbia	Rennselaer	Bennington
Average Annual Change in:								
Employment (FTE's)	222.1	2.0	38.0	17.9	30.4	12.9	16.0	15.7
Population (Individuals)	249.2	5.0	56.8	29.0	24.1	22.9	30.3	21.5
Gross Regional Product (Millions \$2001)	\$11.26	\$0.15	\$2.24	\$0.96	\$1.65	\$0.63	\$0.84	\$0.64
Personal Income (Millions \$2001)	\$7.49	\$0.27	\$2.80	\$1.53	\$1.72	\$1.05	\$1.52	\$0.86
Wage and Salary Disbursements(Millions \$2001)	\$8.27	\$0.08	\$1.88	\$0.73	\$1.66	\$0.41	\$0.78	\$0.37

Figure C.1 Annual Average Employment Impact by Sector

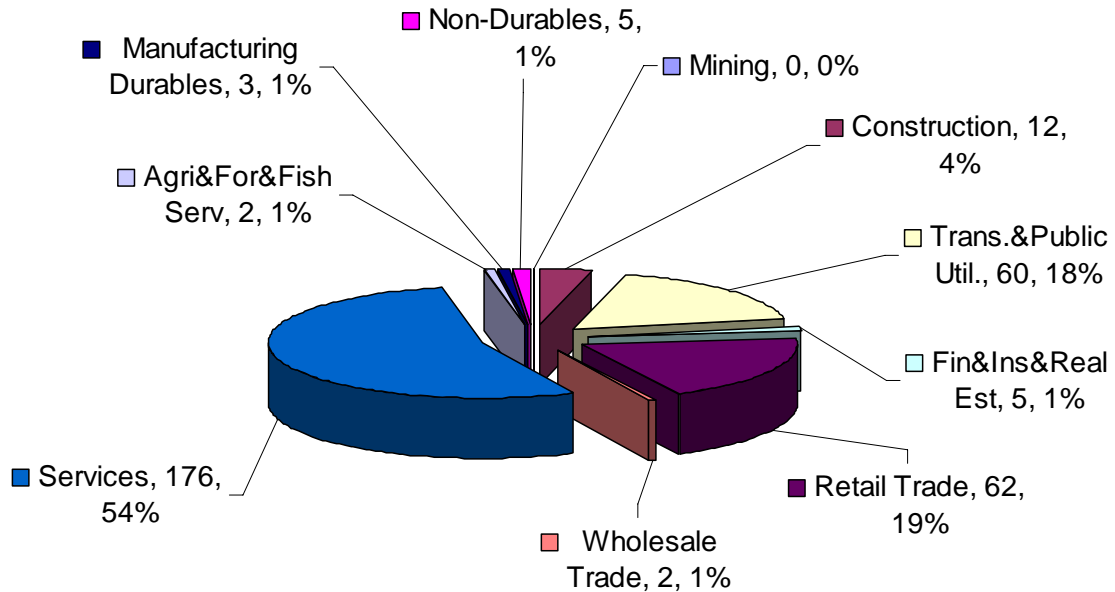


Figure C.2 shows the average annual changes in wage rates for ten major industry groups (same as in Figure C.1 with the exception of the Agriculture, Fisheries and Forestry sectors). Wage rates appear as dollars per year in 2001-dollar terms. They are each negative reflecting the crowding out effect the Clark's current operations have had on wage rates in the region. This is due to people coming into the region to live or work and creating a surfeit of labor that slightly depresses prevailing wage rates. The magnitude of these changes is quite small: the largest change is \$44.39 per year on average in the Transportation, Communication and Public Utilities sectors; the smallest is 66 cents per year on average in the Retail Trade sector.

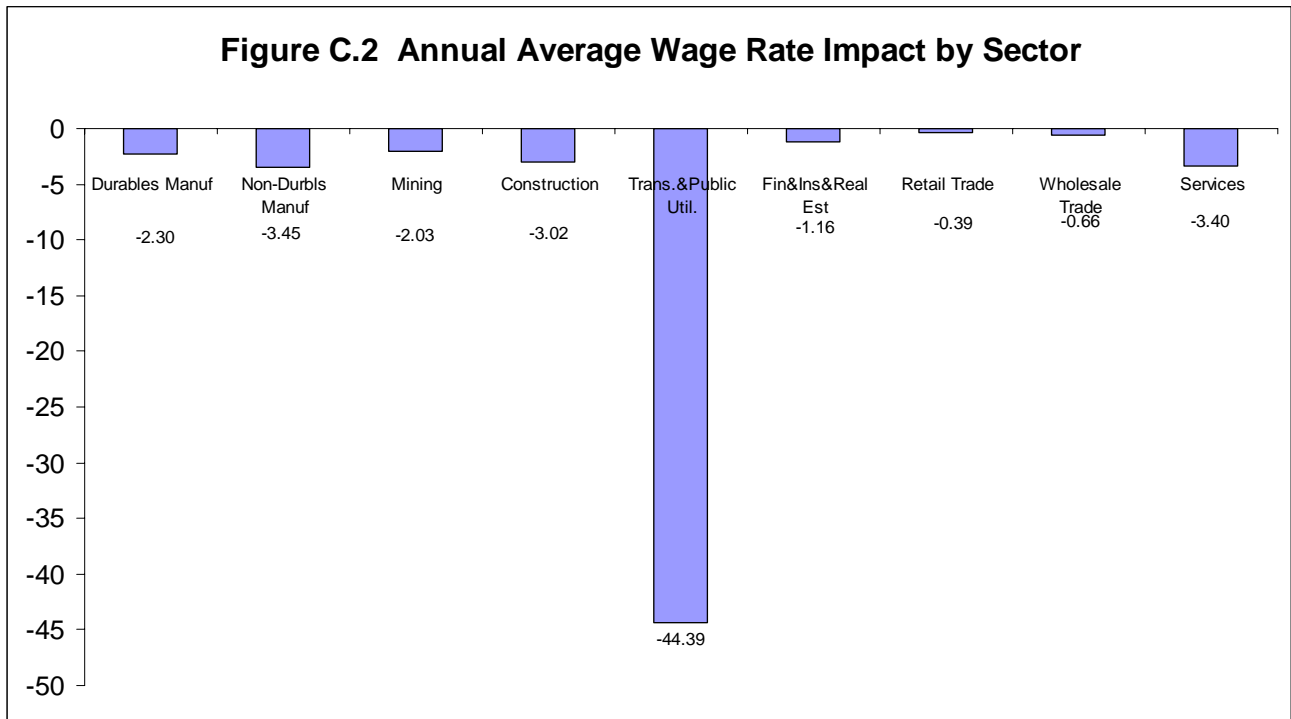


Table C.2 shows the distribution by occupation of the new jobs generated by the Clark’s operations. The top 40 occupations represent 314 FTEs in the eight-county region (88% of all jobs created through current operations).

Rank	Occupation	FTE Employment
1	Motor vehicle operators	37.45
2	Management occupations	20.05
3	Building cleaning workers	18.17
4	All other sales and related workers	16.78
5	Secretaries, administrative assista	16.48
6	Food and beverage serving workers	15.64
7	Primary, secondary, and special edu	14.08
8	Information and record clerks	13.67
9	Retail salespersons	12.16
10	Other health professionals and tech	11.49
11	Construction trades and related wor	10.06
12	Material recording, scheduling, dis	7.90
13	Cooks and food preparation workers	7.71
14	Vehicle and mobile equipment mechan	6.98
15	Material moving occupations	6.83
16	Library, museum, training and othe	6.67
17	Financial clerks	6.21
18	Healthcare support occupations	6.18
19	Other installation, maintenance, an	5.31
20	Computer specialists	5.28
21	Business operations specialists	5.06
22	All other and misc. counselors,soc	5.00
23	Child care workers	4.74
24	Other food preparation and serving	4.54
25	Supervisors, sales workers	4.11
26	Personal and home care aides	3.78
27	Law enforcement workers	3.72
28	Other protective service workers	3.69
29	Other teachers and instructors	3.61
30	Postsecondary teachers	3.59
31	Financial specialists	3.27
32	Health diagnosing and treating prac	3.02
33	Grounds maintenance workers	2.79
34	Religious workers	2.78
35	Recreation and fitness workers	2.76
36	Firstline supervisors/managers	2.69
37	Social workers	2.55
38	Counselors	2.50
39	Gaming occupations	2.47
40	Other production occupations	2.33

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