

# ECONOMIC IMPACT ANALYSIS

An Extension  
Community  
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UNIVERSITY OF MINNESOTA  
**EXTENSION**

# Economic Impact of Projects Leveraged by the Minnesota Historic Rehabilitation Tax Credit



Photo: The O'Donnell Shoe Company (1914) project in St. Paul is preserving this important historic structure, while providing affordable workforce housing. Aeon is the developer for the project known as the Renaissance Box.

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**Table of Contents**

<b>Title</b>	<b>Page</b>
<b>Introduction</b>	1
<b>Highlights</b>	2
<b>Profile of the Study Area Economy</b>	4
<b>Economic Impact</b>	6
Direct Effects	6
Indirect and Induced Effects	8
Total Impacts	8
A Note on the Analysis	10
<b>Methodology</b>	12
<b>Conclusions</b>	14

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## INTRODUCTION

For many Americans, historic preservation is valued for its creation of a sense of community, its ability to generate a personal connection with history, its gifts to quality of life, and its ability to enhance cultural landscapes. For others, historic preservation is a means to contribute to our state and national economy, through jobs in construction, architecture, engineering, and other fields.

In 1966, following increasing recognition of the importance of historic places, the United States' Congress passed the National Historic Preservation Act. The Act, and related legislation, created a partnership between the federal government (National Park Service) and state governments (State Historic Preservation Offices). Since 1976, the federal government has provided a historic tax credit as a financial incentive to assist in the preservation of important historic structures. This tax credit has resulted in billions of dollars of economic activity and has resulted in saving thousands of historic structures.

In April 2010 the Minnesota Historic Rehabilitation Tax Credit was signed into law. The law promotes private investment in historic properties with the goal of stimulating job growth, increasing the tax base, and revitalizing communities. Eligible property owners can receive a state income tax credit of up to 20 percent of qualifying expenses. A grant in lieu of a credit (equal to 90 percent of allowable credit) is an alternative available to property owners. The state tax credit is offered along with the federal tax credit. Properties must be eligible for the federal tax credit in order to receive the state credit. The State Historic Preservation Office, in conjunction with the Minnesota Department of Revenue, administers the credit.

To be eligible for the Minnesota Historic Rehabilitation Tax Credit, the property must be a certified historic structure, that is, a building listed on the National Register of Historic Places or certified as contributing to a registered historic district. In addition, the building must be rehabilitated for an income producing use and the project must meet a substantial rehabilitation test. All work on the property must meet the Secretary of Interior's Standards for Rehabilitation and the completed work approved by the National Park Service and the Minnesota State Historic Preservation Office.

As part of the legislation, the Minnesota State Legislature required that the Minnesota Historical Society "must annually determine the economic impact to the state from the rehabilitation of property for which credits or grants are provided" (Minnesota Statutes, Chapter 290.0681, Subdivision 9). To complete this charge, the Minnesota State Historical Society contracted with University of Minnesota Extension's Economic Impact Analysis (EIA) program. This contract has two deliverables: a written report summarizing the study and a facilitated presentation of the study results. This report is the first deliverable of the program.

## Highlights of the Economic Impact of Projects Leveraged by the Minnesota Historic Rehabilitation Tax Credit

Passed in April 2010, the Minnesota Historic Rehabilitation Tax Credit provides to eligible property owners a state income tax credit of up to 20 percent of qualifying rehabilitation expenses or a grant in lieu of the credit.

- By June 30, 2011, 14 projects had received preliminary approval for the credit, had begun renovation projects, and were included in this study.
- An estimated \$343 million dollars will be spent on these projects, with \$250 million on local, qualifying rehabilitation expenses.
- The project developers anticipate hiring 1,808 construction workers. They will pay \$83.7 million to their employees.
- Other industries will benefit including the wholesale trade, the housing market and the architectural, engineering, and related services industries. Finally, wages earned by construction workers will spur additional economic activity in the food service and beverage industry and the general retail industry.
- The total economic impact of projects currently being leveraged by the Minnesota Historic Rehabilitation Tax Credit is \$451 million. This includes \$152 million in labor income. Projects spurred by the credit support 2,948 jobs.

<b>Total Economic Impact of Projects Leveraged by the Minnesota Historic Rehabilitation Tax Credit</b>				
	Direct	Indirect	Induced	Total
Output	\$250,309,800	\$96,335,400	\$104,034,000	<b>\$450,679,200</b>
Employment (FTE's)	1,808	532	608	<b>2,948</b>
Labor Income	\$83,727,220	\$34,676,800	\$34,026,700	<b>\$152,430,720</b>
Estimates by the University of Minnesota Extension Center for Community Vitality				



- Provided the projects are completed as planned and meet the requirements of the program, an estimated \$49.1 million will be awarded by the Minnesota Historic Rehabilitation Tax Credit to leverage these projects. Therefore, for every state dollar of tax credit or grant allowed, \$9.20 in economic activity is generated in the State of Minnesota.
- This is a conservative analysis, focused primarily on construction-related spending. The economic benefits of the potential new commercial activity are not included in this study. Further, this study does not measure any non-market values.
- Additional projects are now in development, but are not included in this analysis.

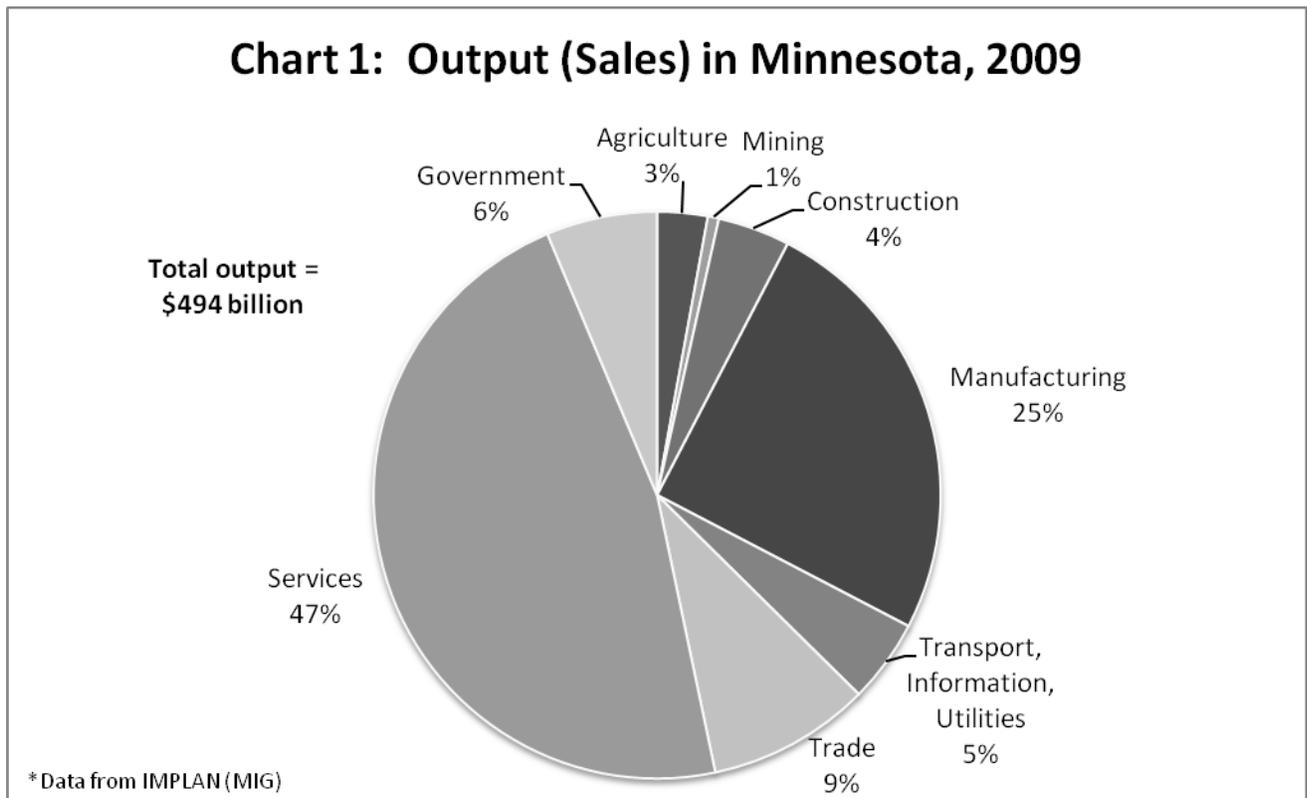
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## PROFILE OF THE STUDY AREA ECONOMY

The study area for this analysis is the State of Minnesota. The state was chosen as the study area since the historic rehabilitation tax credit can be issued in any community in Minnesota. The spending on historic rehabilitation tax credit projects can be compared to \$494 billion of output in all sectors of Minnesota's economy in 2009. There were 3.4 million jobs in all sectors in the state.

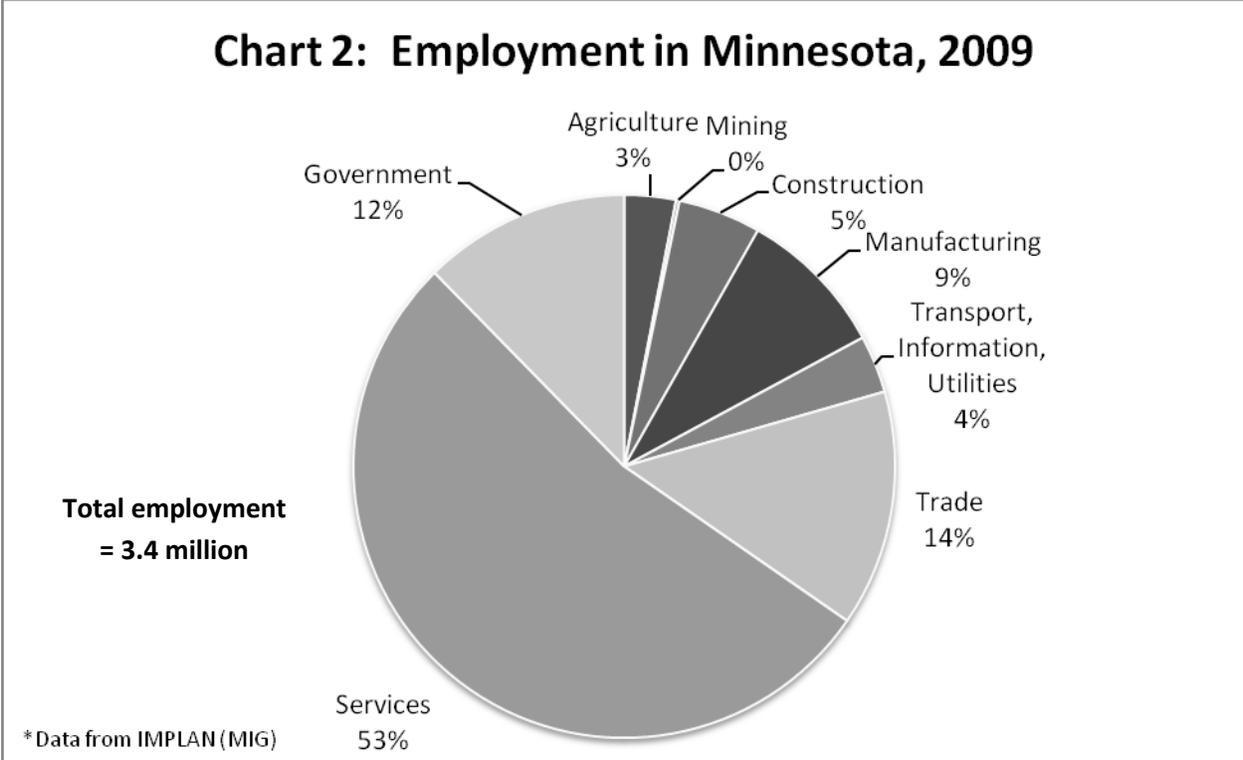
Chart 1 depicts total output by industry category. The service sector created nearly half (47 percent) of total output in 2009, making it the largest single industry in the state. Manufacturing contributed 25 percent of output. In the database used for this analysis, output is defined as the total value of industry sales.



Employment by industry category is shown in Chart 2. The service industry has the largest share of employees in Minnesota (53 percent). Trade (14 percent) and government (12 percent) have the second and third largest shares respectively. The construction industry employs 5 percent of workers in Minnesota. In 2009, there were 167,000 construction workers in the state.

While manufacturing creates 25 percent of output, it only employs 9 percent of all workers. There are two possible reasons for this observation. One, in the database, one job is one job, regardless of its status as part-time, full-time, or seasonal. Since the service sector tends to employ more part-time

employees and manufacturing more full-time, manufacturing's share of employment may appear lower. Second, manufacturing tends to have higher dollar-volume-productivity per worker.



## **ECONOMIC IMPACT**

Total economic impact is equal to the summation of direct, indirect, and induced effects. The direct effect is the initial change triggered by an economic event. This could be the opening of a new business, the closing of a plant, or construction spurred on by a tax credit. The direct effect triggers additional economic activity to occur, therefore setting off a ripple in the local economy. These ripples fall into two categories, indirect effects (created by business-to-business transactions) and induced effects (created by consumer-to-business transactions). In an economic impact analysis, researchers quantify the direct effects. An input-output model then measures the indirect and induced impacts. In this study, researchers “ground-truthed” the direct effect using primary data collection. The input-output model used was IMPLAN (MIG, Inc).

### **Direct Effects**

The direct effect of the historic tax credit program is the value of the construction activity spurred by the credit. From the beginning of the tax credit program (April 2010) through June 30, 2011, 14 renovation projects received National Park Service Part II approval. This means the projects received initial approval and began making construction expenditures. They will not receive final approval and the tax credit until all work is completed and approved by the National Park Service and the State Historic Preservation Office (a process known as Part III certification).

Table 1 lists the 14 renovation projects that received Part II approval prior to June 30, 2011. The historic name of the property, the current property name, and the property’s proposed use are provided in the table. The historic property name reflects the original use and designation of the building. The proposed use column indicates what the building will be used for following the renovation project. The projects are primarily in the Twin Cities metropolitan area, but there are two in northern Minnesota. Additional projects are anticipated throughout the State of Minnesota.

<b>Historic Property Name</b>	<b>Current Property Name</b>	<b>County</b>	<b>Proposed Use</b>
Abbott Hospital	Abbott Hospital	Hennepin	Residential
Parlin and Orendorff Plow Company Warehouse	Holden Building	Hennepin	Mixed Use
Buzza Company Building	Florence M. Lehmann Multi-Educational Center	Hennepin	Residential
Commerce Building	Commerce Club Apartments	Ramsey	Residential
Minneapolis Ford Plant	Ford Centre	Hennepin	Commercial
None	213 E 4 <sup>th</sup> St.	Ramsey	Commercial
Chamber of Commerce	Minneapolis Grain Exchange	Hennepin	Commercial
Cedar Square West	Riverside Plaza	Hennepin	Mixed Use
Minnesota Building	Minnesota Building	Ramsey	Mixed Use
Young Women's Christian Association of Duluth	Young Women's Christian Association of Duluth	Saint Louis	Residential
Saint Louis County Jail Building	Saint Louis County Jail Building	Saint Louis	Commercial
Foley Brothers and Kelly Warehouse	Northern Warehouse	Ramsey	Mixed Use
O'Donnell Shoe Factory	Renaissance Box	Ramsey	Residential
Minneapolis North Branch Library	None	Hennepin	Commercial

The direct impact of Minnesota Historic Rehabilitation Tax Credit projects is shown in Table 2. Total project costs are the total costs as estimated by the developer. In economic impact analysis theory, acquisition costs do not create an economic impact. This is because they are simply a transfer of wealth (cash for land and/or a building). Therefore, acquisition costs cannot be included in the economic impact. Further, not all costs associated with the rehabilitation qualify for the tax credit. Column two in the table reflects the total qualifying project costs minus any acquisition costs. Developers also provided an estimate of the number of construction workers they anticipate employing to complete each project.

<b>Total Estimated Rehabilitation Project Costs</b>	<b>Total Qualifying Rehabilitation Project Costs (Excluding Acquisition)</b>	<b>Estimated Minnesota Historic Rehabilitation Tax Credit</b>	<b>Number of Construction Employees</b>
\$343,353,467	\$278,122,000	\$49,099,164	1,808

Total estimated costs for the 14 projects total \$343 million. Excluding acquisitions and non-qualifying expenses, project costs are estimated at \$278 million. To complete these projects, developers anticipate hiring 1,808 construction workers, which is 1.1 percent of the total construction labor force. These employment estimates are for construction crew members only and do not account for architects,

lawyers, and other professionals working for firms contracted by the developer.<sup>1</sup> These projects are being leveraged by an estimated \$49.1 million in tax credits/grants. Given these estimates, for every dollar of the Minnesota Historic Rehabilitation Tax Credit, private developers will be investing \$7 of their own funds.

The total project costs, excluding acquisitions and non-qualifying expenses, are the direct effect of the Minnesota Historic Rehabilitation Tax Credit. The study area for this project is the State of Minnesota. Only construction spending that occurs in Minnesota can be entered into the model. Since the state is a diverse economy, it is assumed that the majority (90 percent) of construction-related purchases can be made in-state.<sup>2</sup> Therefore, the direct impact of the credit entered into the model is \$250 million.

### **Indirect and Induced Effects**

Now that the direct impacts are quantified, the data can be entered into an input-output model. Input-output models trace the flow of dollars throughout a local economy and can capture the indirect and induced, or ripple effects, of an economic activity. The input-output modeling software and data from IMPLAN (MIG, Inc) was used in this report.

Indirect effects are those associated with a change in economic activity due to spending for goods and services. In this case, these are the changes in the local economy occurring because developers need to purchase construction materials (lumber, cement, equipment, for example) and construction-related services (architectural, law, engineering, etc.). These are business-to-business impacts.

Induced effects are those associated with a change in economic activity due to spending by the employees of businesses (labor) and by households. Primarily, in this study, these are economic changes related to spending by construction workers hired to perform the rehabilitation work. These are business-to-consumer impacts.

### **Total Impact**

The total economic impact of projects leveraged by the Minnesota Historic Rehabilitation Tax Credit in 2010-2011 was \$451 million dollars. To produce \$451 million in output, 2,948 workers were employed and \$152 million in payments were made those employees. Total economic impact is comprised of direct, indirect, and induced impacts. These are each detailed in Table 3.

- Direct impacts, determined using the process outlined here-to-fore, include \$250 million in new construction-related sales (output), 1,808 new construction jobs, and \$83.7 million in payments to construction workers.

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<sup>1</sup> Estimates of employment created in architectural/engineering and law firms are indirect effects and are generated by the model. See the discussion of total impacts.

<sup>2</sup> The 90 percent local spending assumption is an estimate based on the knowledge and experience of the analyst. Any further specificity would require primary data collection. It is unlikely 100 percent of construction spending occurs in the State of Minnesota. However, given the size of the study area economy, it appears reasonable the large majority of spending does occur in-state.

- Spending on construction-related materials creates indirect impacts. Indirect impacts from the tax credit total \$96.3 million in sales (output), including 532 jobs in all sectors of the economy and \$34.7 million in payments to those workers.
- Finally, spending by the construction workers creates induced impacts. Induced impacts from the tax credit total \$104 million in sales (output), including 608 jobs in all sectors of the economy and \$34 million in payments to those workers.

Provided the projects are completed as planned, the Minnesota Historic Rehabilitation Tax Credit granted to these projects will total \$49.1 million. Therefore, for every state dollar of tax credit or grant allowed, \$9.20 in economic activity is generated in the State of Minnesota. This activity is mostly driven by additional investments by project developers, but also includes the ripple effects of construction-related spending.

	Direct	Indirect	Induced	Total
Output (Sales)	\$250,309,800	\$96,335,400	\$104,034,000	\$450,679,200
Employment (FTE's)	1,808	532	608	2,948
Labor Income	\$83,727,220	\$34,676,800	\$34,026,700	\$152,430,720

Estimates by the University of Minnesota Extension Center for Community Vitality

The top five industries impacted by projects of the Minnesota Historic Rehabilitation Tax Credit are shown in Tables 4 and 5. Table 4 lists the top five industries sorted by output and Table 5 sorted by employment. Clearly, renovation projects have large impacts for the construction sectors. These are primarily direct impacts. The projects also have significant impacts on output in the wholesale trade industry (suppliers), the imputed rental activity industry (a proxy for the housing market), and petroleum refineries. The top five industries impacted accounted for 63 percent of total output (sales) generated by tax credit projects.

Industry	Total Output
Construction/Renovation of Residential Structures	\$150,849,000
Construction/Renovation of Nonresidential Commercial Structures	\$99,460,800
Wholesale Trade Businesses	\$15,684,330
Imputed Rental Activity for Owner-occupied Dwellings	\$12,246,590
Petroleum Refineries	\$10,260,940
Top Five Total	\$282,501,660
Total	\$450,679,200

Estimates by the University of Minnesota Extension Center for Community Vitality

For employment, the construction industry is again significantly impacted, see Table 5. These are the construction crew jobs. The food service and beverage industry will see 84 new jobs as a result of the

construction projects. This reflects the wages being paid to the construction workers. The architectural, engineering, and related services sector will see increased employment as it provides services to the construction industry. Finally, workers will be spending wages in local retail establishments, creating more jobs. Table 5 is shown in full-time equivalents. The top five industries impacted account for 61 percent of total employment supported by tax credit projects.

Industry	Employment
Construction/Renovation of Nonresidential Commercial Structures	787
Construction/Renovation of Residential Structures	776
Food Services and Beverages	84
Architectural- Engineering- and Related Services	79
Retail Stores - General Merchandise	66
Top Five Total	1,792
Total	2,948

Estimates by the University of Minnesota Extension Center for Community Vitality

### **A Note on the Analysis**

This study examines the economic impact of projects spurred by the Minnesota Historic Rehabilitation Tax Credit. This is a distinction from examining the economic impact of the tax credit itself. An economic impact study of the tax credit itself would apply a “*but for*” test. But for the existence of the tax credit, would some of these projects have gone forward? Likely, some of them would. Equally likely, some would have not. Those that would have gone forward without the tax credit would not be attributable to the tax credit itself. While the “*but for*” test is outside the scope of this study, a baseline comparison demonstrates the power of the state tax credit. In years prior to the Minnesota Historic Rehabilitation Tax Credit, an average of 4 projects used the federal credit each year. In the first year of the credit, 14 projects have already begun, thus demonstrating that the Minnesota Historic Rehabilitation Tax Credit is a critical factor in rehabilitation decisions.

Further, this analysis focused on the economic impact of construction-related activity leveraged by the Minnesota Historic Rehabilitation Tax Credit. It should be noted that this is a conservative definition of economic impact. The analysis does not consider the future utilization of the property. For instance, if a new company moves into the building or a business can expand into the new space, then there would be additional economic activity generated by the credit. Further, the analysis does not include non-market benefits which may accrue, for example, the value of having well-maintained historic properties in a community.

The projects included in this study are those that received NPS Part II approval. This means they were given preliminary approval to begin work. However, receipt of the credit or grant is contingent upon finishing the rehabilitation work within the parameters of state and federal law. All projects must receive final approval before they will receive the credit. Only a few of the projects included in this analysis have received final approval. There is a small risk that a project included in this analysis will not

receive the credit. In addition, there are several other projects that have applied for the credit but are still pending for NPS Part II approval. Using the NPS Part II approval as the determination for which projects are included in the analysis is transparent and is replicable in future years.

## METHODOLOGY

Special models, called input-output models, exist to conduct economic impact analysis. There are several input-output models available. IMPLAN (IMPact Analysis for PLANning, Minnesota IMPLAN Group)<sup>3</sup> is one such model. Many economists use IMPLAN for economic contribution analysis because it can measure output and employment impacts, is available on a county-by-county basis, and is flexible for the user. IMPLAN has some limitations and qualifications, but it is one of the best tools available to economists for input-output modeling. Understanding the IMPLAN tool, its capabilities, and its limitations will help ensure the best results from the model.

One of the most critical aspects of understanding economic impact analysis is the distinction between the “local” and “non-local” economy. The local economy is identified as part of the model-building process. Either the group requesting the study or the analyst defines the local area. Typically, the study area (the local economy) is a county or a group of counties that share economic linkages. In this study, the study area is the entire State of Minnesota.

A few definitions are essential in order to properly read the results of an IMPLAN analysis. The terms and their definitions are provided below.

### Output

Output is measured in dollars and is equivalent to total sales. The output measure can include significant “double counting.” Think of corn, for example. The value of the corn is counted when it is sold to the mill, again when it is sold to the dairy farmer, again as part of the price of fluid milk, and yet again when it is sold as cheese. The value of the corn is built into the price of each of these items and then the sales of each of these items are added up to get total sales (or output).

### Employment

Employment includes full- and part-time workers and is measured in annual average jobs, not full-time equivalents (FTE’s). IMPLAN includes total wage and salaried employees, as well as the self-employed, in employment estimates. Because employment is measured in jobs and not in dollar values, it tends to be a very stable metric.

### Labor Income

Labor income measures the value added to the product by the labor component. So, in the corn example when the corn is sold to the mill, a certain percentage of the sale goes to the farmer for his/her labor. Then when the mill sells the corn as feed to the dairy farmer, it includes some markup for its labor costs in the price. When the dairy farmer sells the milk to the cheese manufacturer, he/she includes a value for his/her labor. These individual value increments for labor can be measured, which amounts to labor income. Labor income does *not* include double counting.

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<sup>3</sup> IMPLAN Version 3.0 was used in this analysis. The trade flows model with SAM multipliers was implemented.

### Direct Impact

Direct impact is equivalent to the initial activity in the economy. In this study, it is construction spending generated by projects leveraged by the Minnesota Historic Rehabilitation Tax Credit.

### Indirect Impact

The indirect impact is the summation of changes in the local economy that occur due to **spending for inputs** (goods and services) by the industry or industries directly impacted. For instance, if employment in a manufacturing plant increases by 100 jobs, this implies a corresponding increase in output by the plant. As the plant increases output, it must also purchase more inputs, such as electricity, steel, and equipment. As the plant increases purchases of these items, its suppliers must also increase production, and so forth. As these ripples move through the economy, they can be captured and measured. Ripples related to the purchase of goods and services are indirect impacts. In this study, indirect impacts are those associated with spending by the developers to purchase construction materials (lumber, cement, equipment, and so forth) and construction-related services (architectural, law, engineering, etc.).

### Induced Impact

The induced impact is the summation of changes in the local economy that occur due to **spending by labor**, that is spending by employees in the industry or industries directly impacted. For instance, if employment in a manufacturing plant increases by 100 jobs, the new employees will have more money to spend to purchase housing, buy groceries, and go out to dinner. As they spend their new income, more activity occurs in the local economy. This can be quantified and is called the induced impact. Primarily, in this study, the induced impacts are those economic changes related to spending by construction workers hired to perform the rehabilitation work.

### Total Impact

The total impact is the summation of the direct, indirect, and induced impacts.

## CONCLUSIONS

For many Minnesotans, historic preservation is valued for its creation of a sense of community, its ability to generate a personal connection with history, its economic contributions, its gifts to quality of life, and its ability to enhance cultural landscapes. In April 2010, the Minnesota Historic Rehabilitation Tax Credit was signed into law. The law promotes private investment in historic properties with the goal of stimulating job growth, increasing the tax base, and revitalizing communities. The Minnesota State Legislature has asked for an annual report answering the question “What is the economic impact of projects leveraged by the Minnesota Historic Rehabilitation Tax Credit.”

As of June 30, 2011, 14 renovation projects have received preliminary approval under the Minnesota Historic Rehabilitation Tax Credit. Project developers anticipate spending \$250 million in qualified, non-acquisition related, construction expenditures. The developers will hire 1,808 workers to complete the work and pay \$83.7 million to those workers.

The total economic impact of projects currently leveraged by the Minnesota Historic Rehabilitation Tax Credit is \$451 million. This includes \$152 million payments to labor. The projects and related-activity spurred by the credit will support 2,948 jobs.

Provided the projects are completed as planned and meet the requirements of the program, an estimated \$49.1 million will be awarded by the Minnesota Historic Rehabilitation Tax Credit to leverage these projects. Therefore, for every state dollar of tax credit or grant allowed, \$9.20 in economic activity will be generated in the State of Minnesota. This activity is mostly driven by additional investments by project developers, but also includes the ripple effects of construction-related spending.

Minnesota’s construction industry will benefit most significantly from projects completed using the Minnesota Historic Rehabilitation Tax Credit. However, other construction-related industries will also benefit from the projects. These include the housing market, wholesale trade, and the architectural, engineering, and related services industry. Finally, the wages earned by construction workers will spur additional economic activity in the food service and beverage industry and the general retail industry.

This is a conservative analysis, focused primarily on construction-related spending. The economic benefit of any potential new commercial activity is not included in this study. Further, this study does not measure any non-market benefits, such as improved community atmosphere, aesthetics, or historic preservation significance.