ECONOMIC IMPACT OF HISTORIC PRESERVATION IN
TEXAS

UPDATE 2015

TECHNICAL ANALYSIS

TEXAS
The University of Texas at Austin

RUTGERS

ECONOMIC IMPACT OF HISTORIC PRESERVATION IN TEXAS

UPDATE 2015

TECHNICAL ANALYSIS

TEXAS

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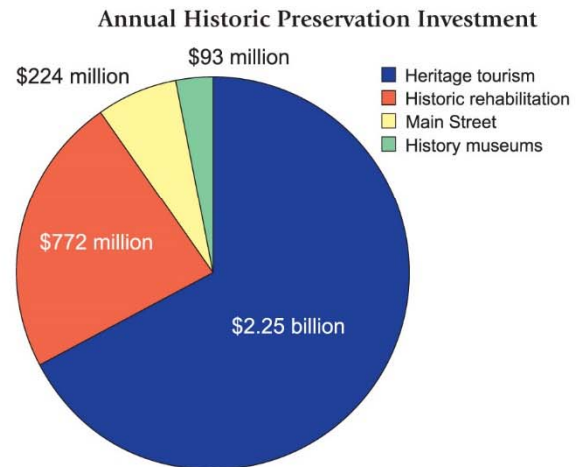
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Summary of Annual Economic Investment, 2013

Annual Spending (2013)

- Historic rehabilitation $772 million
- Heritage tourism $2.25 billion
- Main Street $224 million
- Historic museums $93 million
- **Total $3.34 billion**

Annual Historic Preservation Investment

$93 million
$224 million

Legend:
- Heritage tourism
- Historic rehabilitation
- Main Street
- History museums

$772 million
$2.25 billion

Total Economic Impacts of Annual Historic Preservation in Texas: $3.34 billion annually

In-state benefits of the $3.34 billion annual investment, based on multipliers:

Jobs	79,419
Income	$3,260 million
Gross domestic product (GDP)	$4,264 million
Total taxes	$1,129 million
State and local taxes	$291 million
In-state wealth	$4,111 million

In-state GDP by Annual Historic Preservation (000$)

Sector	Value
Construction	543
Manufacturing	519
Retail Trade	398
Services	2,620
Other Sectors	184
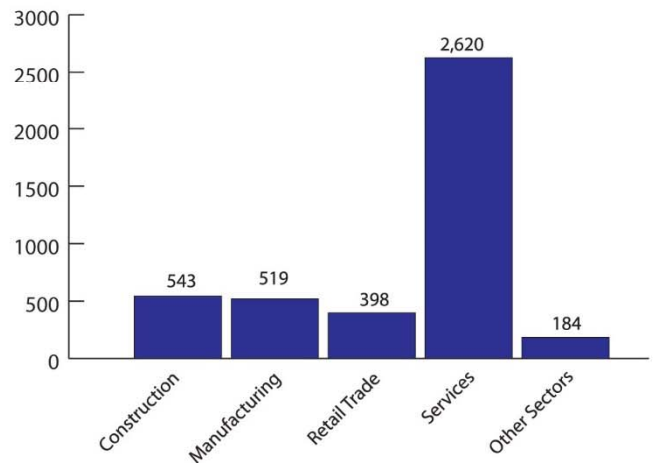
Jobs and Gross Domestic Product (GDP) in Texas supported by annual historic preservation:

Sector	Jobs	GDP (millions $)
Construction	7,782	543
Manufacturing	6,602	519
Retail Trade	7,949	398
Services	50,071	2,620
Other Sectors	7,015	184
Total Jobs	**79,419**	**4,264**

In-state Employment Created by Annual Historic Preservation (jobs)
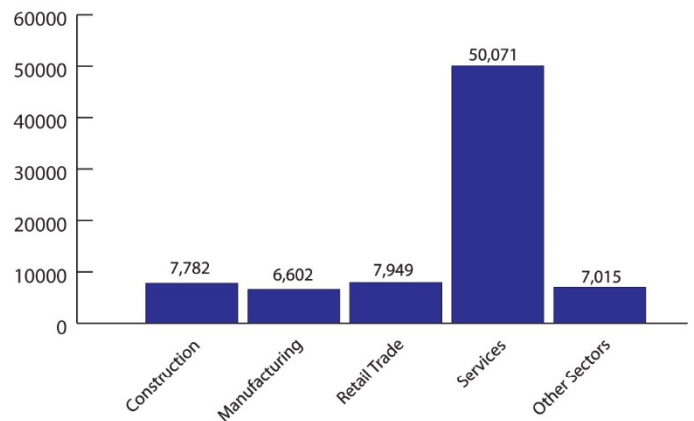
Sector	Jobs
Construction	7,782
Manufacturing	6,602
Retail Trade	7,949
Services	50,071
Other Sectors	7,015

Total Impacts of Cumulative Main Street Investment in Texas: $5.29 billion

In-state benefits of the $5.29 billion annual investment, based on multipliers:

Jobs	126,719
Income	$5,763 million
Gross domestic product (GDP)	$7,362 million
Total taxes	$1,264 million
State and local taxes	$563 million
In-state wealth	$6,675 million

In-state GDP by Cumulative Main Street Investment (000$)

Jobs and Gross Domestic Product (GDP) in Texas supported by cumulative Main Street investment:

Sector	Jobs	GDP (millions $)
Construction	36,886	2,069
Manufacturing	10,217	725
Retail Trade	23,403	1,096
Services	49,179	2,642
Other Sectors	7,034	880
Total Jobs	**126,719**	**$7,362**
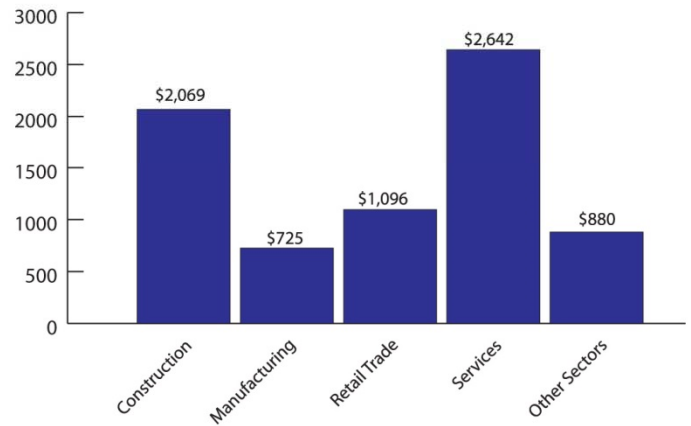
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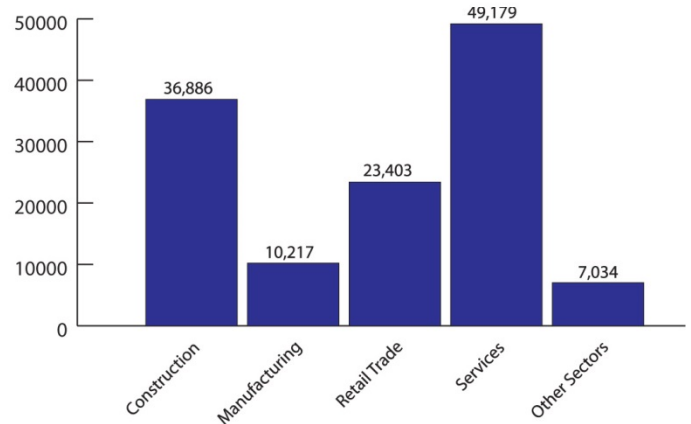
Summary of Investment and Benefits:
Cumulative Federal Tax Credit Rehabilitation in Texas

Total Impacts of Cumulative Federal Tax Credit Rehabilitation in Texas $1.78 billion

In-state benefits of the $1.78 billion cumulative investment, based on multipliers:

Jobs	126,719
Income	$1,896 million
Gross domestic product (GDP)	$2,401 million
Total taxes	$535 million
State and local taxes	$140 million
In-state wealth	$2,195 million

Jobs and Gross Domestic Product (GDP) in Texas supported by Federal Historic Tax Credit:

Sector	Jobs	GDP (millions $)
Construction	14,266	1,039
Manufacturing	3,754	2,669
Retail Trade	3,016	169
Services	12,645	715
Other Sectors	2,065	212
Total Jobs	**35,746**	**$2,401**

In-state GDP by Cumulative Federal Tax Credit Rehabilitation in Texas (000$)
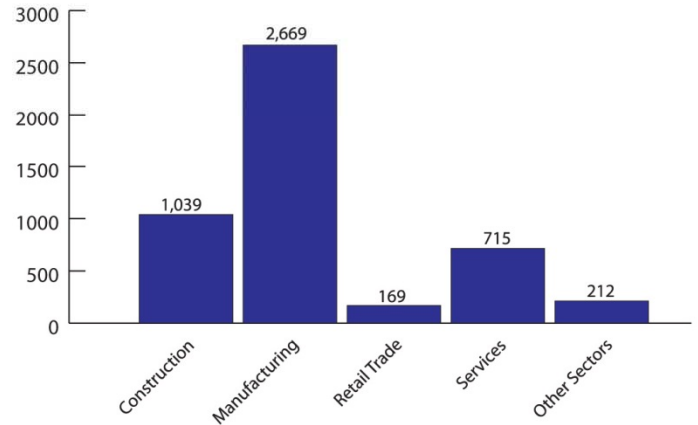
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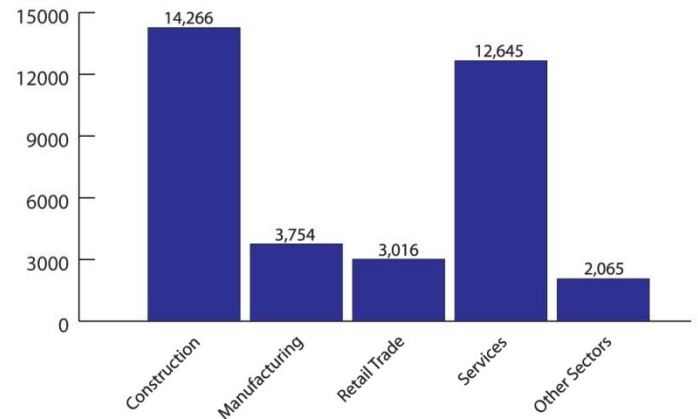
Summary of Investment and Benefits:
Cumulative Texas Historic Courthouse Preservation

Total Impacts of Cumulative Texas Historic Courthouse Preservation: $447 million

In-state benefits of the $447 million annual investment, based on multipliers:

Jobs	9,607
Income	$501 million
Gross domestic product (GDP)	$615 million
Total taxes	$140 million
State and local taxes	$36 million
In-state wealth	$561 million

Jobs and Gross Domestic Product (GDP) in Texas supported by cumulative Historic Courthouse Preservation:

Sector	Jobs	GDP (millions $)
Construction	3,994	265
Manufacturing	997	69
Retail Trade	788	44
Services	3,318	186
Other Sectors	520	51
Total Jobs	**9,607**	**$615**

In-state GDP by Cumulative Texas Historic Courthouse Preservation (000$)
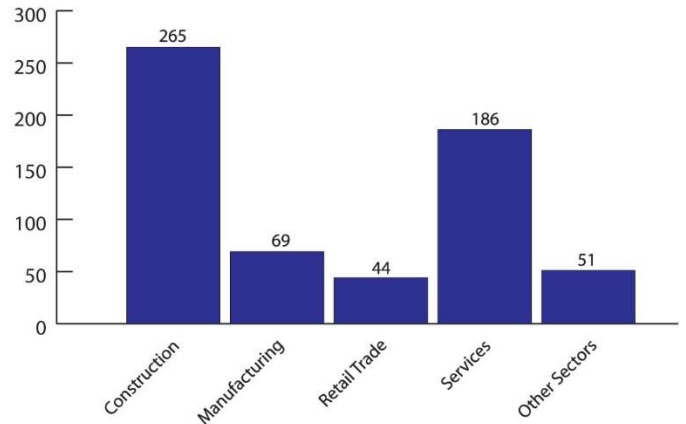
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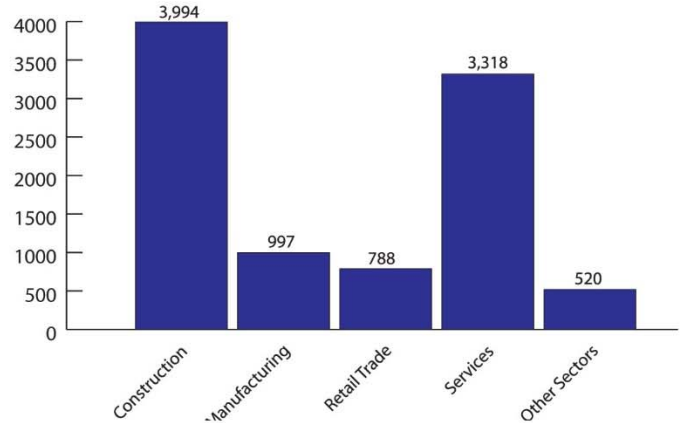
DETAILED SUMMARY OF THE TECHNICAL ANALYSIS OF THE ECONOMIC IMPACTS OF HISTORIC PRESERVATION IN TEXAS

Texans are proud of the state's rich and diverse heritage and are committed to the continued economic growth that is a vital part of that heritage. Historic preservation is not an alternative to economic growth but a key component of it.

The Texas Historical Commission (THC) in 1999 commissioned a study (a collaboration between Rutgers University and UT-Austin) that quantified the economic contributions of historic preservation in Texas. The 1999 study became one of the earliest and most comprehensive research efforts on this topic in the United States. This 2015[1] study updates the economic impact investigation, and expands it to include programs launched since 1999. Once again, UT-Austin and Rutgers University collaborate on this 2015 study.

The 2015 study includes quantitative economic impact investigation (detailed shortly) as well as qualitative case studies and other research. This technical report focuses on the quantitative economic impact analysis. This research focuses on applying an advanced economic analysis tool, the Preservation Economic Impact Model (PEIM), developed by Rutgers to quantify the total impacts of historic preservation, encompassing both direct and secondary economic effects. (Full details on the economic models are found at Appendix B.) To illustrate: lumber purchased at a hardware store for historic rehabilitation is a direct impact. Secondary impacts include purchases by the mill that produced the lumber and the household expenditures of the workers at both the mill and the hardware store.

Economists estimate direct and secondary impacts, which sum to total impacts using an input-output (I-O) model. The PEIM is a sophisticated I-O model specifically tailored to be applied in historic preservation applications. The results of the PEIM include many fields of data. The fields most relevant to this study are the following:

- JOBS: Employment, both part- and full-time, by place of work, estimated using the typical job characteristics of each industry.
- INCOME: "Earned" or labor income; specifically, wages, salaries, and proprietor income.
- WEALTH: Value-added—the sub-national equivalent of gross domestic product (GDP).
- OUTPUT: The value of shipments, as reported in the Economic Census.[2]
- TAXES: Tax revenues generated by the activity, which include taxes to the federal government and to state and local governments.[3]

In the Texas investigation, the PEIM is applied to both annual and aggregate direct economic investments of different components of historic preservation. Annual 2013 direct economic effects from historic preservation activity in Texas include at a minimum $772 million in historic rehabilitation spending (combines $741 million in annual average private sector historic

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[1] The analysis for this study has been conducted in 2014, using the data available at the time.
[2] Of all these measures, output is the least significant. As such, we report output in the technical detailed details but do not discuss the output impacts
[3] The state and local taxes examined are calibrated to the area (specific state and local governments) to which the PEIM is applied. For example, Texas does not have a state income tax. . Therefore, the PEIM applied in Texas does not include state income taxes generated by an economic activity while the PEIM applied in New Jersey would calculate state income tax effects.

rehabilitation outlays and $31 million annual average public capital improvements to Texas courthouses[4]), $2.25 billion in heritage tourism spending, $224 million in net[5] Main Street Program activity, and $93 million in net[6] history museum operations—for a total of $3.34 billion (all in annual 2013 dollars). Further, three long-term programs are examined in this study: the 1978-2013 federal historic rehabilitation investment tax credit applied in Texas, the state's 1981-2013 Main Street-related activity, and the state's 2001-2015 $447 million historic courthouse restoration work. These three long term or cumulative investments amount respectfully to $1.78 billion (tax credits), $5.29 billion (Main Street), and $447 million (historic courthouses), in direct economic effects (adjusted for inflation using 2013 dollars) over the lives of the initiatives.

In all cases, base data were assembled and applied to project total effects (direct and secondary) of these activities. Results are summarized in Tables E.1 and E.2. When multiplier effects are taken into account from the $3.34 billion annual preservation investment, the total annual impacts to the *nation* include a net economic gain of 114,122 jobs, $4,433 million in income, $7,307 million in Gross Domestic Product (GDP), and $1,596 million in total (federal, state, and local) tax revenues ($492 million in state and local taxes) (Table E.1). These are the effects realized by the entire nation. Renovation of a historic home in Austin may require lumber from Oregon, plumbing fixtures from Ohio, and paint from Tennessee. Texas garners roughly 70 to 80 percent of total jobs, income, wealth, and tax benefits of preservation activities that accrue to the nation. On an annual basis, the *in-state effects to Texas* from the annual $3.34 billion investment in historic preservation include 79,419 jobs, $3,260 million in income, $4,624 million in state GDP, and $1,129 million in total taxes ($291 million in state and local taxes). The net in-state wealth (state GDP less federal indirect business taxes) added to the economy is roughly $4,111 million annually. In other words, Texas does well in retaining the wealth generated by historic preservation activity.

The cumulative (aggregate direct spending over time) impacts are not surprisingly quite significant. We shall focus here on impacts to the state of Texas. The 1978- 2013 federal historic rehabilitation investment tax credit applied in Texas ($1.78 billion) generated cumulative state-level impacts of 35,746 jobs, $1,896 million in income, $2,401 million in GDP, $140 million in state and local taxes and $2,195 million of in-state wealth. The 1981-2013 aggregate Main Street investment in Texas ($5.29 billion) generated cumulative state-level impacts of 126,719 jobs, $5,763 million in income, $7.362 million in state GDP, $563 million in state and local taxes, and $6,675 million of in-state wealth. Finally, the 2001-2015 aggregate historic courthouse investment has generated in Texas 9,607 jobs, $501 million income, $615 million GDP, $36 million state and local taxes, and $561 million of in-state wealth. Again, Texas does well in retaining the wealth generated by federal tax credit-associated rehabilitation, Main Street activity, and historic courthouse investment.

What sectors of the economy benefit from the historic preservation investment in Texas? Take for instance the 79,419 jobs from the annual $3.34 billion historic preservation spending. Of that 79,

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[4] The $31 million annual average public capital improvements to Texas Courthouses counted in this analysis does *not* comprise the full amount of significant public expenditures for historic rehabilitation in Texas. The full amount of publically-aided historic rehabilitation in Texas was infeasible to track within the scope of the current investigation. As such, this study's quantification of the economic impacts of historic rehabilitation in Texas undercounts the full economic benefit from this activity.

[5] Excludes Main Street spending already tallied in historic rehabilitation and heritage tourism.

[6] Excludes museum spending already tallied in historic rehabilitation and heritage tourism

419 total, the largest benefit –50, 071 jobs – accrues to the service sector[7] (e.g., 24, 811 jobs alone in the service category of arts, entertainment, recreation, and hospitality), followed by retail trade (7,949 jobs), construction (7,782 jobs), manufacturing (6,602 jobs) and other sectors[8] (7,015 jobs). In short, while certain economic sectors benefit the most from Texas historic preservation, namely services, retail trade, construction, and manufacturing, because of the interconnections in the economy, *all* Texas business sectors benefit from historic preservation investment. Similar widespread benefit results from the cumulative impacts of historic preservation activity reported above. For example, of the total 126,719 Texas jobs generated from the 1981-2013 aggregate Main Street investment in Texas of $5.29 billion, 49,179 jobs were realized by the services sector, followed by 36,886 jobs in construction, 23,403 jobs in retail, 10,217 jobs in manufacturing and 7,034 in other sectors. So again, the benefits of Texas historic preservation are distributed throughout this state's economy with understandably certain sectors (e.g. services, construction and retail) realizing the greatest benefits.

The results reported in the study are conservative. The positive effects of historic preservation activities on Texas's economy are certainly more extensive, but the numbers reported here are limited to those that can be directly quantified and modeled. Every effort has been made to avoid double-counting. For example, the Main Street results exclude historic building rehabilitation spending in Main Street cities because they are already counted in the Rehabilitation section.

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[7] The services sector includes arts, entertainment, recreation, and hospitality; educational services; health-care and social assistance; professional and business services; finance, insurance, real estate, rental and leasing; information; and other services (including government).

[8] The "other" sectors include agriculture, mining, utilities, wholesale trade and transportation and warehousing.

Table E.1
Summary of the <u>Annual</u> Economic Impacts of Historic Preservation in Texas, 2013

		I	II	III	IV	
		Historic Rehabilitation[††]	*Heritage Tourism*	*Main Street Program*[†]	*History museums*[†]	*Total Examined Economic Impacts*
TEXAS DIRECT EFFECTS		**$772 million** annually of historic rehabilitation expenditures results in:	**$2.25 billion** annually of heritage travel-attributed expenditures results in:	**$224 million** annually of construction and added retail payroll results in:	**$93 million** annually of spending expenses results in:	**$3.34 billion** *(I + II + III+IV)*
↓		**National Total (Direct and Multiplier) Impacts**				
NATIONAL TOTAL IMPACTS (DIRECT AND MULTIPLIER)	Jobs (person-years)	31,457	70,166	6,901	5,598	**114,122**
	Income ($ million)	1,058	2,819	324	232	**4,433**
	GDP* ($ million)	2,283	4,211	428	385	**7,307**
	Taxes ($ million)	377	1,030	109	80	**1,596**
	Federal ($ million)	248	726	73	57	**1,104**
	Local/State ($ million)	129	304	36	23	**492**
↓		**In-State Texas Total (Direct and Multiplier) Impacts**				
TEXAS PORTION OF NATIONAL TOTAL IMPACTS	Jobs (person-years)	15,398	54,204	5,385	4,432	**79, 419**
	Income ($ million)	827	2,029	240	163	**3,260**
	GDP* ($ million)	1,041	2,976	310	296	**4,624**
	Taxes ($ million)	234	763	77	54	**1,129**
	Federal ($ million)	173	572	53	41	**838**
	Local/State ($ million)	61	191	24	14	**291**
	In-state wealth* ($ million)	951	2,607	281	272	**4,111**

Source: Rutgers University, Center for Urban Policy Research, 2014.
*GDP=Gross Domestic Product; In-state wealth = GDP less federal indirect business taxes.
Note: Totals may differ from indicated subtotals because of rounding.
[†]Excludes Main Street and Museum impacts already tallied in Historic Rehabilitation and Heritage Tourism.
[††]Combines $741 million annual average private sector historic rehabilitation outlays and $31 million annual average public capital improvements to Texas Courthouses.

Table E.2
Summary of Select <u>Cumulative</u> Economic Impacts of Historic Preservation Programs in Texas
(Federal Historic Tax Credit, Main Street, and Historic Courthouses)

		I *Historic Rehabilitation Federal Tax Credit*	II *Main Street Program*	III *Historic Courthouses*
TEXAS DIRECT EFFECTS		**$1.78 billion** of tax credit-related construction expenses since 1978 to 2013 resulted in:	**$5.29 billion** of construction and added retail payroll since 1981 to 2013 resulted in:	**$447 million** contribution expenditures since 2001 to 2015
↓		**National Total (Direct and Multiplier) Impacts**		
	Jobs (person-years)	46,358	162,831	12,443
NATIONAL	Income ($ million)	2,418	7,672	646
TOTAL	GDP* ($ million)	3,213	10,084	831
IMPACTS	Taxes ($ million)	706	2,712	192
(DIRECT AND	*Federal ($ million)*	484	1,833	*128*
MULTIPLIER)	*Local/State ($ million)*	222	879	*64*
↓		**In-State Texas Total (Direct and Multiplier) Impacts**		
	Jobs (person-years)	35,746	126,719	9,607
TEXAS	Income ($ million)	1,896	5,763	501
PORTION OF	GDP* ($ million)	2,401	7,362	615
NATIONAL	Taxes ($ million)	535	1,827	140
TOTAL	*Federal ($ million)*	395	1,264	*104*
IMPACTS	*Local/State ($ million)*	140	563	*36*
	In-state wealth* ($ million)	2,195	6,675	561

Source: Rutgers University, Center for Urban Policy Research, 2014.
*GDP=Gross Domestic Product; In-state wealth = GDP less federal indirect federal business taxes.
Note: Totals may differ from indicated subtotals because of rounding.

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All of these preservation initiatives are interrelated. Historic preservation in Texas is fostered through a multi-faceted collaboration of the public and private sectors. Main Street improvements are aided by rehabilitation incentives; together with courthouse restorations they create the settings that the heritage destination use to attract tourists, who shop and dine on Main Streets and stay in rehabilitated historic hotels. Texas's strong and varied historic preservation programs are one underpinning of the state's economic success.

This technical report summary now details on a section by section basis the magnitude and profile of the direct spending of the different components of historic preservation spending in Texas and their respective total economic impacts. It considers:

1. Historic Rehabilitation
2. Heritage Tourism
3. Main Street Program
4. History Museums
5. Historic Courthouse Preservation
6. Historic Tax Credits (Federal and State)
7. Texas Preservation Trust Fund
8. Historic Designation's Impact on Property Value (Literature Synthesis)

HISTORIC REHABILITATION
(Full details at Chapter Two and Appendix A)

- An estimated total $10 billion was spent annually by the private sector on building rehabilitation in Texas in the 2009-2013 period: $1.9 billion on residential properties and $8.1 billion on nonresidential properties (Table E.3).

- Of the $10 billion spent on rehabilitation, an estimated $740.8 million, or about 7.0 percent of the total, was spent on privately-owned historic properties (properties officially designated on national, state, and/or local registers of historic sites). This estimate of historic rehabilitation volume is quite conservative since it does not include construction occurring in properties eligible for, but not yet on, a register. Public entities add $31 million[9], for a total annual historic rehabilitation investment in Texas of approximately $772 (The economic impacts of the $31 million in public sector courthouse investment are examined shortly).

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[9] Additional public investment, aside from the $31 million spent in historic courthouses, exist in the rehabilitation of historic buildings exists in Texas; however, this figure is unable to be quantified within the scope of the current investigation.

TABLE E.3
Estimated Annual Historic Building Rehabilitation in Texas (2009–2013)

Property Type	Estimated Total Rehabilitation ($ million)	Estimated Historic Rehabilitation ($ million)	Historic Rehabilitation as % of Total Rehabilitation
Private			
Residential	$1,878.8	$168.6	9.0%
Nonresidential	$8,118.8	$572.2	7.0%
Total private	$9,997.6	$740.8	7.4%

- The total nationwide economic impacts from the $741 million spent on Texas private sector historic rehabilitation included: 30,764 new jobs, $1.02 billion in income, and $2.24 billion in gross domestic product. Texas garnered about half of these economic benefits in terms of jobs (14,799) and GDP ($1 billion), and as a result, captured $913 million in in-state wealth. The other effects were distributed outside Texas.

TABLE E.4
Total Economic Impacts of the Annual
Texas Historic Rehabilitation Spending ($741 Million)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	14,799	15,965	30,764
Income ($000)	$795,097	$221,872	$1,016,969
GDP ($000)*	$1,000,219	$1,235,298	$2,235,517
In-State Wealth ($000)**	$913,263	------	------

*GDP =Gross Domestic Product
**In-State Wealth = GDP minus Federal Indirect Business Taxes

- Nationwide, the $741 million in direct spending from Texas historic rehabilitation generates a total of $365 million in total taxes (federal, state[10], and local) from both business and households. Texas captures 62 percent ($225 million) of the total amount generated nationwide, including a total of $59 million in combined state and local taxes.

TABLE E.5
Economic Impacts of the Annual Texas Historic Rehabilitation Spending ($741 Million):
Total Tax Contributions

	In Texas	Outside Texas	Total (U.S.)
Total Taxes ($000)	$225,078	$139,717	$364,794
Federal ($000)	$166,466	$73,167	$239,633
State ($000)	$13,716	$43,702	$57,418
Local ($000)	$44,896	$22,848	$67,744

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[10] Here and elsewhere, such as with heritage tourism, the state taxes generated outside Texas are typically greater than Texas- alone state taxes because other states impose a greater array of state taxes, and/or have higher state tax rates.

HERITAGE TOURISM

(Full details at Chapter Three)

- The travel industry is one of the most important businesses in the United States, and heritage travel is a high-value[11] and fast growing[12] segment of the travel industry.

- Direct travel spending in Texas was $58,382 million in 2013 (note that this is net of spending on Texas-based air transportation operations and travel agents).

- Direct expenditures by Texas heritage day-trippers and overnight visitors amounted $7,298 million in 2013, accounting for approximately 12.5 percent of total $58,382 million direct travel spending in Texas.

TABLE E.6
Summary of Texas Traveler Spending (2013)

	Total Traveler Spending ($ millions)	Total Spending By Heritage Travelers ($ millions)	Heritage Spending as % of Total Traveler Spending
Day trip	$7,861	$707	9.0%
Overnight	$50,521	$6,591	13.0%
All	*$58,382*	*$7,298*	*12.5%*

- The distributions of heritage travel spending are shown as below in Table E.7. Noticeably, transportation ($1.9 billion) accounted for approximately 26 percent of direct heritage travel spending, and lodging ($1.6 billion) accounted for approximately 22 percent.

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[11] Mandala Research, LLC "The 2013 Cultural and Heritage Traveler Report." Mandalaresearch.com/index.php/purchase-reports

[12] Ariana Cela, Sam Lankford and Jill Knowles- Lankford "Visitor Spending and Economic Impacts of Heritage Tourism." *Journal of Heritage Tourism* Vol 4, No. 3 August 2009, pp 245-256. See also Jascha Zeitlin and Stephen Burr "A Heritage Tourism Overview." Utah State University Institute for Outdoor Recreation and Tourism May 2011 No. IORT/021.

TABLE E.7
Distribution of Texas Heritage Travel Direct Spending (2013)

Spending	$ Million			%		
	Total	Day	Overnight	Total	Day	Overnight
Transportation	$1,868	$167	$1,714	25.6%	23.6%	26.0%
Food and Bev	$1,533	$186	$1,305	21.0%	26.3%	19.8%
Shopping	$1,109	$187	$844	15.2%	26.5%	12.8%
Entertainment	$890	$112	$751	12.2%	15.8%	11.4%
Lodging	$1,598	$0	$1,753	21.9%	0.0%	26.6%
Other	$307	$55	$224	4.2 %	7.8%	3.4%
Total	*$7,298*	*$707*	*$6,591*	*100.0%*	*100.0%*	*100.0%*

- Texas heritage travel amounted to 10.5 percent of the 500 million person-days spent on Texas travel in 2013 (Table E.8). While travelers who visited a historic site represent only 10.5 percent of all Texas travel, heritage travel outlays accounted for 12.5 percent share of the total Texas traveler expenditures. Heritage day trips were 5.2 percent of all day trips to Texas, while heritage overnight trips amounted to 11.5 percent of all overnight trips to Texas.

TABLE E.8
Magnitude of Texas Travel in Trips (2013)

Travel Type	All Travel (in millions)	Heritage[*] Travel (in millions)	Heritage as % of All Travel
Day trip (person-days)	80.3	4.2	5.2
Overnight (person-days)	421.0	48.5	11.5
Total Person-Days of Travel	*501.3*	*52.7*	*10.5*

[*]Defined as a business or leisure traveler indicating "visit historic site" as one (of up to four) "primary activity."

- Texas heritage traveler attributes include:
    - Higher average education level than non-heritage travelers.
    - Higher share of females and retirees than non-heritage travelers.
    - Higher daily spending than non-heritage travelers.

- For the purposes of this study, only the Texas business or leisure travelers who cited "visit a historic site" as primary activities in the survey were flagged as "heritage travelers". Thus, the estimated $7,298 million in direct heritage-attributed spending is *conservatively* adjusted downward to include only the share of overall travel expenditures focused directly on heritage activity. For example, rather than counting the entire trip expenditures of a Texas business traveler to San Antonio who visited the Alamo, we only count the outlays from the Alamo portion of the trip. The adjusted (heritage-attributed) expenditures are tabulated in Table E.9 and amount to a total annual outlay of $2,255 million for 2013.

TABLE E.9
Adjusted Texas Traveler Spending (2013)

	Total Traveler Spending ($ millions)	Total Spending By Heritage Travelers ($ millions)	Total Heritage-Attributed Spending ($ millions)
Day trip	$7,861	$707	$193
Overnight	$50,521	$6,591	$2,062
All	*$58,382*	*$7,298*	*$2,255*

- The total annual economic impacts from the $2.25 billion in spending by Texas heritage travelers (encompassing both direct and multiplier effects) are presented in Table E.10. The impacts at the national level include: 70,166 jobs, $2.82 billion in income, and $4.21 billion in gross domestic product. Texas received over two-thirds of these gains (54,204 jobs, $2.03 billion in income, and $2.98 billion in GDP) and realized annual in-state wealth creation of about $2.6 billion (see Table E.10).

TABLE E.10
Total Economic Impacts of the Annual
Texas Heritage-Attributed Traveler Spending ($2.25 Billion)

	In Texas	*Outside Texas*	*Total (U.S.)*
Jobs (person-years)	54,204	15,962	70,166
Income ($000)	$2,029,480	$789,849	$2,819,329
GDP ($000)*	$2,976,402	$1,235,072	$4,211,474
In-State Wealth ($000)**	$2,607,451	------	------

*GDP =Gross Domestic Product
**In-State Wealth = GDP minus Federal Indirect Business Taxes

- Nationwide, the $2.25 billion in direct spending from Texas heritage tourism generates a total of $1.03 billion in total taxes (federal, state, and local) from both business and households (Table E.11). Texas captures 74 percent ($763 million) of total taxes.

- Statewide, the $2.25 billion in direct spending from Texas heritage tourism generates a total of $191.5 million in state taxes ($61.7 million) and local taxes ($129.8 million), for an aggregate 63 percent of the total $304 million in state and local taxes generated nationally.

TABLE E.11
Economic Impacts of the Annual Texas Heritage-Attributed Traveler Spending
($2.25 Billion): Total Tax Contributions

	In Texas	*Outside Texas*	*Total (U.S.)*
Total Taxes ($000)	$763,357	$266,452	$1,029,809
Federal ($000)	$571,899	$153,742	$725,641
State ($000)	$61,687	$66,347	$128,034
Local ($000)	$129,771	$46,363	$176,134

MAIN STREET

(Full details at Chapter Four)

- In 1980, the National Trust for Historic Preservation (the National Trust) established "The National Trust Main Street Center®" (NMSC). The NMSC was created to revitalize declining downtown centers through a "preservation-based strategy" to restore the economic activity that was on the decline in downtown retail centers. Today, the National Main Street program consists of a coast-to-coast network of more than 1,200 state, regional, and local coordinating programs

- With a total of 87 active programs at the time of the study, the State of Texas has one of the most extensive and successful Main Street programs in the United States.

- Since the Texas Main Street Program began in 1981, the program's investments have accumulated to a total of:

TABLE E.12
Cumulative Investment by the Texas Main Street Program, 1981-2013*
(Constant Million 2013 $)

Component	Total	Percent
Rehabilitation	$ 1,533.0	29.4%
New Construction	$ 977.4	18.8%
Buildings Sold	$ 1,355.0	25.9%
Joint Ventures	$ 419.5	8.1%
Public Projects	$925.1	17.8%
TOTAL	$ 5,210.0	100.0%

*Data for 1998 not available

- In terms of jobs, business starts, and volunteer hours, the recent annual average of the Texas Main Street Program since 2010 amounts to the following:

TABLE E.13
Annual Average Jobs, Starts & Volunteer Hours
by Texas Main Street Program since 2010

Component	Total
Volunteer Hours	95,991
Net Starts	284
Net Gain in Jobs Created	1,327

- The annual average of the Texas Main Street Program total investment since its start is $157.9 million. Moreover, nearly 950 jobs were created each year, along with significant volunteer hours.

TABLE E.14
Annual Average Investment by Texas Main Street Program, 1981-2013
(Constant Million 2013 $)

Component	Total*	Percent
Rehabilitation	$ 46.6	29.4%
New Construction	$ 29.6	18.8%
Buildings Sold	$ 41.0	25.9%
Joint Ventures	$ 12.7	8.1%
Public Projects	$ 28.0	17.8%
TOTAL	$ 157.9	100.0%

- More recently (over the last four reporting years), the Texas Main Street Program has invested the following, on average:

TABLE E.15
Recent (2010-2013) Annual Investment by the Texas Main Street Program
(Constant Million 2013 $)

Component	Total	Percent
Rehabilitation	$38.4	22.1%
New Construction	$30.5	14.5%
Buildings Sold	$20.3	11.6%
Joint Ventures	$13.1	8.1%
Public Projects	$72.1	41.3%
Total	$174.4	100.0%

Clearly, more has been invested in Main Street recently (about $158 million annual average over the full 1981-2013 period as against about $174 million yearly average over 2010-2013) and the apportionment of the Main street investment has changed as well in recent years (e,g., the buildings sold category is smaller while the public projects category, which can include infrastructure, is larger).

- In terms of volunteer hours accumulated, and net jobs and business started created, the recent annual average of the Texas Main Street Program amounts to:

TABLE E.16
Annual Average Jobs, Starts & Volunteer Hours
by Texas Main Street Program since 2010

Component	Total
Volunteer Hours	95,991
Net Starts	284
Net Gain in Jobs Created	1,327

- The cumulative direct economic impacts of the Texas Main Street program, for the years 1981 to 2013, totaled $5.29 billion. The total investment amount was calculated by, first, adding the investments on rehabilitation, new construction, joint ventures, and public projects (see Table E.12); these values add up to $3.855 billion. Note that we excluded the amount reported for buildings sold from the calculation, because this activity does not have a multiplier effect. The second part of the calculation involved quantifying (in monetary value) the 31,268 jobs created in Texas since the program initiated in 1981[13]; this calculation yields a result of $1.435 billion. When we add the $3.855 billion in investments to this $1.435 billion from the long-run retail-type jobs created, the result yields the $5.29 billion in cumulative direct effects for the Texas Main Street program.

- The total economic impacts, including both direct and multiplier effects, from the $5.29 billion of *cumulative* Texas Main Street investment included of 126,719 jobs in Texas (out of 162,831 jobs created nationwide), leading to $7.36 billion in GDP (of about $10.08 billion in national GDP), $5.76 billion in labor income (of about $7.67 billion nationally) and $6.67 billion in added in-state wealth (see Table E.17).

TABLE E.17
Economic Impacts of the Cumulative (1981-2013)
Texas Main Street Investment ($5.29 billion)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	126,719	36,112	162,831
Income ($000)	$5,762,710	$1,909,362	$7,672,072
GDP ($000)*	$7,362,222	$2,721,413	$10,083,635
In-State Wealth ($000)**	$6,674,821	------	------

   *GDP =Gross Domestic Product
   **In-State Wealth = GDP minus Federal Indirect Business Taxes

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[13] See Chapter 4, Table 4.2 for more details.

- Nationwide, the $5.29 billion in cumulative Texas Main Street Program investment generated a total of $2.7 billion in taxes (federal, state, and local) from both business and households (see Table E.18); Texas captures 68 percent ($1.83 billion) of that total. Statewide, the Texas Main Street Program investment generates a total of $563 million in state and local taxes ($235 million and $328 million, respectively)—this is equivalent to 72 percent of the total $879 million in state and local taxes generated nationally.

TABLE E.18
Economic Impacts of the Cumulative (1981-2013)
Texas Main Street Investment ($5.29 billion):
Total Tax Contributions

	In Texas	Outside Texas	Total (U.S.)
Total Taxes ($000)	$1,827,151	$884,426	$2,711,577
Federal ($000)	$1,263,672	$568,915	$1,832,587
State ($000)	$235,166	$188,797	$423,963
Local ($000)	$328,313	$126,714	$455,027

- Following the same procedures used to calculate the *cumulative* direct economic impacts of the Texas Main Street program, we calculated the Texas Main Street Program average annual investment. The annual investment totaled $238 million, and was calculated from the average investment/jobs created between 2010 and 2013. Furthermore, we modified the aforementioned $238 million annual investment by discounting funds that overlapped with historic rehabilitation and heritage tourism funds; the net annual Texas Main Street Program investment amounted to $224 million. This figure is net of outlays for capital purposes and visitor-supported revenues. The capital outlays and visitor revenues are netted out because these spending components have already been included in the historic rehabilitation (Chapter 2) and the heritage tourism (Chapter 3).

- The economic impacts of the *net* annual investment of $224 million included the creation of over 5,385 jobs in Texas (out of 6,901 jobs created nationwide), leading to $310 million in GDP (of about $428 million in national GDP), $240 million in labor income (of about $323 million nationally), and $281 million in added in-state wealth.

TABLE E.19
Economic Impacts of the Annual (2010-2013 Average)
Net* Texas Main Street Investment ($224 million)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	5,385	1,516	6,901
Income ($000)	$240,303	$83,508	$323,811
GDP ($000)**	$309,959	$118,049	$428,008
In-State Wealth ($000)***	$281,066	------	------

*Net = $238 million total annual outlays minus spending related to Heritage Tourism and Rehabilitation (outlays already tallied in Chapters 2 and 3).
**GDP =Gross Domestic Product
***In-State Wealth = GDP minus Federal Indirect Business Taxes

- Nationwide, the $224 million in direct spending from the Texas Main Street Program generates a total of $109 million in taxes (federal, state, and local) from both business and households (Table E.20). Texas captures 71 percent ($77 million) of total taxes. Statewide, the $224 million in direct spending from the Texas Main Street Program generates a total of $24 million in state and local taxes ($10 million and $14 million, respectively), for an aggregate 67 percent of the total $36 million in state and local taxes generated nationally.

TABLE E.20
Economic Impacts of the Annual (2010-2013 Average)
Net Texas Main Street Investment ($224 million):
Total Tax Contributions

	In Texas	Outside Texas	Total (U.S.)
Total Taxes ($000)	$77,175	$32,058	$109,233
Federal ($000)	$52,923	$20,307	$73,230
State ($000)	$10,473	$7,118	$17,591
Local ($000)	$13,779	$4,633	$18,412

HISTORY MUSEUMS
(Full details at Chapter Five)

- Statewide in 2013, history museums attracted about 8.3 million visitors annually, spent $123 million in operating expenditures, and employed a total of 2,970 workers in full-time paid positions.

- The annual *net* spending by the Texas history museums amounted to $93.5 million. This figure is net of outlays for capital purposes and visitor-supported revenues. The capital outlays and visitor revenues are netted out because these spending components have already been included in the historic rehabilitation and the heritage tourism economic calculations, respectively (thus, the $123 million in annual operating expenditures is reduced to $93.5 million).

- Equally important, 24 percent of the museum revenues came from entry fees and goods purchased by visitors— further, 24 percent of the visitors came from outside of Texas. This latter value represents tourist dollars that are added to the state's economy, typically with the above-average characteristics attributed to heritage tourism expenditures.

- The *nationwide* economic impacts, including both direct and multiplier effects, from the $93.5 million in annual net spending by the Texas history museums included a gain in 2013 of 5,598 jobs, $232 million in income, and $385 million in gross domestic product. Texas retained 79 percent of the jobs generated from history museum spending (4,432 jobs), leading to $296 million in statewide GDP, $163 million in labor income, and $272 million in added in-state wealth (see Table E.21).

TABLE E.21
Economic Impacts of the Annual
Net* Spending by Texas History Museums ($93.5 Million)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	4,432	1,166	5,598
Income ($000)	$162,755	$69,088	$231,844
GDP ($000)**	$295,882	$89,391	$385,273
In-State Wealth ($000)***	$271,651	------	------

  *Net = $123 million total annual outlays minus spending related to Heritage Tourism and Rehabilitation
  **GDP =Gross Domestic Product
  ***In-State Wealth = GDP minus Federal Indirect Business Taxes

- *Nationwide,* the $93.5 million in annual net spending by the Texas history museums generates a total of $80 million in total taxes (federal, state, and local) from both business and households (see Table E.22); Texas captures 68 percent ($54 million) of that total. *Statewide,* the Texas historic museum spending generates a total of $14 million in state taxes ($3 million) and local taxes ($11 million)—this is equivalent to 61 percent of the total $23 million in state and local taxes generated nationally.

TABLE E.22
Economic Impacts of the Annual
Net* Spending by Texas History Museums ($93.5 Million):
Total Tax Contributions

	In Texas	Outside Texas	Total (U.S.)
Total Taxes ($000)	$54,362	$25,228	$79,591
Federal ($000)	$40,507	$16,372	$56,879
State ($000)	$2,640	$5,288	$7,928
Local ($000)	$11,215	$3,568	$14,784

*Net = $123 million total annual outlays minus spending related to Heritage Tourism and Rehabilitation

HISTORIC COURTHOUSE PRESERVATION
(Full details at Chapter Six)

- Historic courthouses are focal points for Texas' heritage tourism: Texas has more county courthouses than any other state (more than historic 240 courthouses) and 136 of those courthouses are listed in the National Register of Historic Places.

- The Texas Historic Courthouse Preservation Program (THCPP) was established in 1999 and the following year began awarding matching grants to Texas counties for the restoration of their historic courthouses. The first restoration project was completed in 2001.

- To date, 91 counties have received THCPP funding for their courthouse restoration projects. In 2013, the amount spent on restoration projects that year added up to $21.6 million.

- The cumulative amount spent in courthouse restoration projects adds up to $447 million (this number includes the costs of the projects anticipated to be completed in the fiscal year 2014 or 2015).

- The *annual average* amount spent in courthouse restoration projects from 2001 to 2013 is about $31 million.

- The economic impacts from the *cumulative* $447 million spent on courthouse restoration projects amounted to 9,607 jobs in Texas (of 12,443 nationally), leading to $615 million in GDP, $501 million in labor income, and $561 million in added in-state wealth.

TABLE E.23
Cumulative (2001-2015) Economic Impact of
Historic Courthouse Preservation ($447 Million)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	9,607	2,836	12,443
Income ($000)	$501,148	$145,069	$646,217
GDP ($000)*	$614,956	$216,339	$831,295
In-State Wealth ($000)**	$561,138	------	------

*GDP =Gross Domestic Product
**In-State Wealth = GDP minus Federal Indirect Business Taxes

- Nationwide, the $447 million spent on courthouse restoration projects in Texas generates a total of $192 million in taxes from both business and households; Texas captures 73 percent of that ($140 million). Statewide, the $447 million in direct spending from Texas courthouse restoration projects generates a total of $36 million in state and local taxes (57 percent of the total $64 million generated nationally).

TABLE E.24
Cumulative (2001-2015) Economic Impact of Historic Courthouse Preservation
Expenditures ($447 Million): Total Tax Contributions

	In Texas	Outside Texas	Total (U.S.)
Total Taxes ($000)	$140,251	$51,615	$191,866
Federal ($000)	$103,933	$23,664	$127,597
State ($000)	$8,454	$16,435	$24,889
Local ($000)	$27,864	$11,516	$39,380

- The $31 million *annual average* spending on historic courthouse preservation projects generated 693 jobs in the U.S. and Texas retained 86 percent of those jobs (599). The in-state economic impacts also include an additional $41 million in GDP, $32 million in labor income, and $38 million in added in-state wealth.

TABLE E.25
Economic Impacts of the Annual Average Spending on Historic Courthouse
Preservation ($31 million, 2001-2013 average)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	599	94	693
Income ($000)	$32,018	$9,424	$41,442
GDP ($000)*	$41,121	$5,870	$46,991
In-State Wealth ($000)**	$37,620	------	------

*GDP Gross Domestic Product
**In-State Wealth = GDP minus Federal Indirect Business Taxes

- Nationwide, the $31 million *annual average* spending on historic courthouse preservation projects generates a total of $12 million in taxes from both business and households. Texas captures 75 percent of that ($9 million). Additionally, statewide, the $31 million in direct spending generates a total of $2.4 million in state and local taxes (71 percent of the total $3.4 million generated nationally).

TABLE E.26

Economic Impacts of the Annual Average Spending on Historic Courthouse Preservation ($31 million; 2001-2013 average): Total Tax Contributions

	In Texas	Outside Texas	Total (U.S.)
Total Taxes ($000)	$9,110	$3,064	$12,174
Federal ($000)	$6,704	$2,063	$8,766
State ($000)	$562	$578	$1,140
Local ($000)	$1,844	$424	$2,268

HISTORIC TAX CREDITS
(Full details at Chapter Seven)

- The federal Historic Tax Credit (HTC) program for income-producing properties has been an exemplary strategy for neighborhood and historic revitalization in both the nation and Texas. Under its current provisions, the federal HTC provides a 20 percent credit (it originally was 25 percent), so a $1 million rehabilitation of an historic property will realize a $200,000 reduction in the owner's federal income tax liability.

- Since the program's inception in the late 1970s (1978) to date (2013), an estimated $109 billion of rehabilitation (in inflation- adjusted 2013 dollars) has been effected nationally under the federal HTC auspices, an annual average of about $3.0 billion[14].

- Inflation-adjusted terms (2013 dollars) the *cumulative* 1978- 2013 total rehabilitation investment in Texas that secured the federal HTC amounted to $1.777 billion, while the recent (2009- 2013) *annual* federal HTC rehabilitation in this state (average over 2009-2013) was $75 million.

- The economic impacts from the *cumulative* $1.777 billion of federal HTC- aided rehabilitation in Texas amounted to 35,746 jobs in Texas (of about 46,358 nationally), leading statewide to $2.40 billion in GDP, $1.90 billion in labor income, and $2.2 billion in added in-state wealth (Table E.27).

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[14] National studies have shown that the federal HTC yields a net benefit to the U.S. Treasury, generating more dollars in federal tax receipts compared to the federal cost of the credits allocated. See, for example, National Park Service "Annual Report on the Economic Impact of the Federal Historic Tax Credit for FY 2012" p.5.

TABLE E.27
Cumulative (1978-2013) Economic Impact of Texas Construction Projects
Supported by the Federal Historic Rehabilitation Investment Tax Credit
($1.777 billion)

	In Texas	*Outside Texas*	*Total (U.S.)*
Jobs (person-years)	35,746	10,612	46,358
Income ($000)	$1,896,139	$521,469	$2,417,608
GDP ($000)*	$2,401,555	$811,707	$3,213,262
In-State Wealth ($000)**	$2,195,595	------	------

*GDP =Gross Domestic Product
**In-State Wealth = GDP minus Federal Indirect Business Taxes

- Nationwide, the $1.777 billion of federal HTC- aided rehabilitation invested in Texas generates a total of $706 million in total taxes (federal, state and local) from both business and households; Texas captures 76 percent ($535 million) of that total (Table E.28). Statewide, the $1.777 billion of federal HTC- aided rehabilitation in Texas generates a total of $143 million in state and local taxes ($32 million and $107 million, respectively), for an aggregate 64 percent of the total $222 million in state and local taxes generated nationally.

TABLE E.28
Cumulative (1978-2013) Economic Impact of Texas Construction Projects
Supported by the Federal Historic Rehabilitation Investment Tax Credit
($1.777 billion): Total Tax Contributions

	In Texas	*Outside Texas*	*Total (U.S.)*
Total Taxes ($000)	$535,266	$171,059	$706,325
Federal ($000)	$395,574	$88,720	$484,294
State ($000)	$32,453	$49,482	$81,934
Local ($000)	$107,239	$32,858	$140,096

- The economic impacts of the *annual 2009-2013* average federal HTC activity in Texas of $75 million amounted to the creation of over 1,509 in-state jobs (of about 1,957 nationally), leading statewide to $101 million in GDP, $80 million in labor income, and $93 million in added in-state wealth.

TABLE E.29
Annual (2009-2013) Economic Impact of Texas Construction Projects Supported by the Federal Historic Rehabilitation Investment Tax Credit ($75 million)

	In Texas	Outside Texas	Total (U.S.)
Total Taxes ($000)	$22,591	$7,220	$29,811
Federal ($000)	$16,696	$3,745	$20,440
State ($000)	$1,370	$2,088	$3,458
Local ($000)	$4,526	$1,387	$5,913

*GDP =Gross Domestic Product
**In-State Wealth = GDP minus Federal Indirect Business Taxes

- Nationwide, the annual $75 million federal HTC- aided rehabilitation investment in Texas generates a total of $30 million in total taxes (federal, state and local) from both business and households; Texas captures 76 percent ($23 million) of that amount.   Statewide, the $75 million investment generates a total of $6 million in combined state and local taxes (63 percent of the total $9 million in state and local taxes generated nationally)

TABLE E.30
Annual (2009-2013) Economic Impact of Texas Construction Projects Supported by the Federal Historic Rehabilitation Investment Tax Credit ($75 million): Total Tax Contributions

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	1,509	448	1,957
Income ($000)	$80,028	$22,009	$102,038
GDP ($000)*	$101,360	$34,259	$135,619
In-State Wealth ($000)**	$92,667	------	------

- To encourage heightened investment in the historic stock, about 35 states have enacted state HTCs. These supplemented the current 20 percent federal program and offer an additional credit (usually 20 to 25 percent) against state tax obligations. Reflecting creative federalism, the state HTCs have various provisions regarding the credit percentage offered (the range is from 5 to 50 percent), property applicability, minimum investment and many other features.

- Texas has adopted a Texas Historic Preservation Credit (THTC) which went into effect January 2015. The THTC offers a 25 percent credit for the certified rehabilitation of certified income-producing historic structures. The THTC resembles the HTCs offered in many other states. As in other states[15], the THTC can be expected to increase investment in historic rehabilitation in Texas.

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[15] It is not possible to accurately predict the impacts of the Texas HTC on rehabilitation and economic activity, as the program is just being launched. But an illustrative comparison is the Kansas state Historic Tax Credit, as examined by a Rutgers University study in 2010. The Kansas HTC has markedly increased

- The Texas HTC legislation took advantage of lessons from other states to include features that should maximize its effectiveness. For example, unlike the federal ITC, the Texas credit can be transferred by simple sale rather than cumbersome syndication. The Texas state credit will likely expand use of the federal ITC, which stimulates preservation, and the Texas economy, by reducing the amount that leaves the state in federal taxes.

TEXAS PRESERVATION TRUST FUND GRANT PROGRAM
(Full details at Chapter Eight)

- Initiated in 1989, the Texas Preservation Trust Fund (TPTF) is an interest-earning resource of public and private money that provides matching grants for the acquisition, survey, restoration, preservation or for the planning and educational activities leading to the preservation of historic architectural and archeological properties and associated collections of the State of Texas. Competitive grants were awarded on a one-to-one match basis and were paid as reimbursement of eligible expenses incurred during the project.
- As a result of the Texas 82nd legislature's budget reductions in 2011, the TPTF grant program was suspended. In 2013, the 83rd Texas Legislature reinstated the grant program. The THC is in the process of awarding grants during the current fiscal year 2015. The THC anticipates grant awards to be in the $10,000 - $50,000 range.
- From 1997 through 2011, a cumulative total of $4.6 million ($4,620,652) was spent in nominal dollars and $6.6 million ($6,607,567) in real (inflation-adjusted 2013) dollars. (All dollar figures are henceforth adjusted for inflation).
- The annual average grant funds spent over the decade and half (1997-2011) was $440,050. Cumulatively from 1997-2011, the TPTF program has aided about 350 recipients. The average grant fund spent per recipient is therefore a modest $19,000 ($6.6 million/350).
- Most grant funds spent have been for *development* (e.g. activities to stabilize, preserve, restore or rehabilitate historic resources) -- about $3.5 million -- and *planning* (e.g. resource plans/surveys, preservation plans and maintenance studies – about $2.0 million. Thus, development and planning activities combined amount to $5.5 million of the total $6.6 million TPTF grant funds spent over 1997 through 2011, or slightly more than $8 of every $10 spent.
- The dollars described above focus on the *state* amounts spent as part of the TPTF program. As the TPTF grants require at least a one-to-one match. Cumulatively to date over 1997 through 2011, the total dollar value associated with the TPTF is about $13.2 million ($6.6 million X 2). The development activity aided by the

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federal HTC investment in the state. In 21 years before its enactment (FY 1978-2001), a total of $114 million (inflation-adjusted 2009 dollars) was expended on federal HTC-assisted projects in Kansas, an average of about $5.4 million per year. In eight years after its enactment (FY 2002-2009), there was $271 million in projects (both state-alone and state-and-federal-combined); annual average volume rose six-fold to $33.9 million. Other states adopting a state HTC have similarly witnessed an increase in historic rehabilitation. Delaware experienced over four times as much annual historic preservation activity in the eight years (2001-2008) after adopting its state credit, compared to the eight years (1993-2000) prior to its passage.

TPTF represents cumulatively over about $7 million in value ($3.5 million X 2), the planning is about $4 million ($2.0 million X 2).

- TPTF recipients are from communities large and small, urban and rural throughout Texas.
- The research team has reviewed many TPTF projects to date and observe the following:
    1. While the TPTF recipients have to match the TPTF grant by at least a one-to-one basis, the match (which can be in-kind) is often greater.
    2. The planning-directed grants (recall these comprised $2 million or 30 percent of the total $6.6 million TPTF public monies awarded to date) are often the prelude to future rehabilitation and other preservation construction projects.
- Working throughout the state in urban and rural areas, the fund is typically crucial to grass roots preservation efforts. The Texas Preservation Trust Fund is often nearly the first major donor into a proposed project and the agency's commitment and promised oversight lends valuable credibility to the preservation efforts and allows organizers to leverage additional funds.
- The TPTF is particularly important for cultural heritage preservation such as aiding historic theaters, schools, churches, and courthouses.
- The TPTF is frequently called upon to assist with preservation and maintenance of historic buildings that serve the needs of non-profit partners, freeing their limited funds to be utilized for operations and services.
- Finally, it should be noted that grants are made only from the interest earned by the fund. Therefore, monetary additions to the fund pay dividends year after year to Texas landmarks.

COMPONENTS OF THE BENEFITS OF HISTORIC PRESERVATION

- Of the annual benefits from historic preservation noted earlier and summarized in Table E.1, the largest contribution is from heritage tourism, followed more distantly by historic rehabilitation, the Main Street Program, and finally the historic museum investment. The main reason for the differences in their total contributions is the varying orders of magnitude of the direct effects of the respective activities. Heritage tourism leads, with $2.25 billion in annual spending, followed by the $772 million in historic rehabilitation, $224 annually million for the Main Street program, and $93 million for history museums.

- The respective component contributions must be viewed holistically, however. Vibrant and restored historic sites throughout the state are essential to a healthy heritage tourism industry in Texas. In fact, the multiplier effects from the historic rehabilitation compare quite favorably with those of the heritage tourism, as is shown in Table E.31. In a parallel vein is the economic "bang" per million dollars of directly invested "buck" for the different historic preservation activities, also shown in Table E.31. Construction generates a relatively high number of jobs per $1 million invested, but so do other components of historic preservation, including heritage tourism, Main Street, and history museum (job generation is high in the

last three aforementioned sectors, reflecting their modest wages per job). While ascribing effects to various separate components of historic preservation is useful on one level, it is also an artificial construct, as the various elements interact with one another to create the "heritage economy."

Table E.31
Economic Effects by Component of Historic Preservation Activity in Texas

Economic Sector	Historic Rehabilitation	Heritage Tourism	Main Street Program	History museums
Effects Per Million Dollars of Initial Expenditure				
National				
Employment (jobs)	41.5	31.1	30.8	59.9
Income	$1,372,798	$1,250,257	$1,446,288	$2,480,141
GDP	$3,017,706	$1,867,616	$1,911,678	$4,121,453
State				
Employment (jobs)	20.0	24.0	24.1	47.4
Income	$1,073,295	$889,991	$1,073,305	$1,741,072
GDP	$1,350,188	$1,319,912	$1,384,420	$3,165,194
Ratio of Total to Direct Effects (Multiplier)				
National				
Employment	5.43	2.61	2.66	4.50
Income	2.51	3.24	2.70	5.35
GDP	5.29	3.41	3.17	2.97
State				
Employment	2.61	2.12	2.08	3.56
Income	1.97	2.45	2.01	3.76
GDP	2.37	2.53	2.30	2.28

Source: Rutgers University, Center for Urban Policy Research, 2015.
Notes: GDP = Gross Domestic Product

RELATIVE ECONOMIC EFFECTS OF HISTORIC PRESERVATION

- Table E.32 shows, in side-by-side fashion, the relative economic effects of the historic rehabilitation vis-à-vis new construction of different types of buildings (single-family, multifamily, commercial, and educational). The economic impacts include total (direct and indirect/induced) jobs, income, and GDP consequences per standard increment of investment ($1 million) at the state of Texas level.

- The side-by-side comparisons in Table E.32 reveal that across all building and investment types, historic preservation, in the form of historic rehabilitation, is a reasonably comparable economic pump-primer vis-à-vis new construction. Historic rehabilitation generates more jobs per $1 million of investment in educational structures, though fewer jobs than for the construction of new single-family, multifamily, or commercial structures. The income and GDP impacts of historic rehabilitation per $1 million of investment is on par with the income and GDP consequences from the construction of new housing (single and multifamily) and less than the income and GDP impacts from commercial construction. The income and GDP impacts from historic rehabilitation exceed that of comparable investment in new educational buildings, the income per job generated from historic rehabilitation *exceeds* that of almost all new construction categories examined here.

Table E.32
Relative Economic Effects of Historic Rehabilitation versus New Construction per Million Dollars Spent

Geographic Level/ Economic Effect	Construction Activity				
	Historic Rehabilitation	New Construction			
	Various Types	Single-Family	Multifamily	Commercial	Educational
	Effects Per Million Dollars of Initial Expenditure				
In-State (Texas)					
Employment (jobs)	20.0	27.9	22.5	27.4	16.0
Income ($000)	$1,073	$1,119	$1,093	$1,352	$890
GDP ($000)	$1,350	$1,334	$1,354	$1,479	$1,222

Source: Rutgers University, Center for Urban Policy Research, 2015.
Notes: GDP = Gross Domestic Product

- One other consideration of what constitutes a "good investment" is the relative comparison of historic preservation investment (historic rehabilitation, heritage tourism, Main Street, and history museums) versus investment in such important sectors of the Texas economy as cattle, oil/gas, and manufacturing (e.g., machine shops and semi-conductor industries). On this basis, historic preservation typically is on par with or has economic advantages, as illustrated below (see Table E.33 for details).

Table E.33
Economic Impacts per Million Dollars of Initial Expenditure in Texas

Economic Effect	Historic Rehabilitation	Heritage Tourism	Main Street	History museums
State				
Employment (jobs)	20.0	24.0	24.0	51.2
Income ($000)	$1,073	$890	$1,089	$1,941
GDP	$1,350	$1,320	$1,391	$3,418

Economic Effect	Cattle	Oil/Gas Extraction	Petroleum Refineries	Machine Shops	Semi-Conductor Manufacturing
State					
Employment (jobs)	14.3	4.7	17.7	34.0	16.1
Income ($000)	$423	$428	$1,460	$957	$946
GDP	$970	$1,012	$1,535	$1,292	$1,359

- Others who wish to estimate the economic benefits of historic preservation can readily use the data and systems developed in this study. For instance, assume that a local historic commission wanted to project the economic benefits of $10 million of historic rehabilitation occurring in a historic district; or a county historic museum with a $2 million budget wanted to present to the county council the economic effects of its operations. These projections could easily be made by referring to the base data contained in this study. Table E.31 shows the employment, income, and GDP effects per $1 million of investment in historic rehabilitation. By a tenfold scaling up of the figures shown in this exhibit, the local historic commission could easily calculate that the $10 million in historic rehabilitation would generate in Texas 200 jobs, $10.7 million in income, and $13.5 million in GDP (all Texas' level impacts). The historic county museum could reference Table E.31 and, by extrapolation, report Texas economic benefits of 95 jobs, $3.5 million in income, and $6.3 million in GDP.

- The point of providing these data, which can readily be produced, is to inform the public and government officials that preservation makes an economic contribution. Besides improving the quality of life, preservation contributes to economic well-being. This information can allow historic preservation to be viewed not as an economic "consumer" (e.g., in the form of local property tax exemption), but as an economic "producer."

HISTORIC DESIGNATION IMPACT ON PROPERTY VALUE
(Full details at Appendix C)

- In theory, historic designation can exert various effects on property value. Value may be enhanced; value may be diminished; or there may be a neutral effect. To illustrate, property values may be enhanced because of various influences:
  - *Prestige.* Historical designation accords prestige due to the official recognition that a building or area has special qualities. This prestige is recognized by the real estate market; real estate salespersons often stress this point in selling a historic property, and at least some buyers are willing to pay a premium for this designation.
  - *Protection.* Designation by listing in the National Register of Historic Places adds some protection to a historic property or area as federal undertaking must take into consideration their impact on historic properties (section 106 review). Under a local landmark ordinance, exterior work on a historic property can be reviewed for its historic compatibility. New construction in a historic district may also be regulated for scale and appearance. In short, designation increases the likelihood that the features one finds attractive in a building or an area today will be there tomorrow.
  - *Financial incentives*. Federal and state tax credits and other financial incentives are often afforded to historic properties. As a result, property values are enhanced.
  - *Other factors.* Partially as a result of a historic property's prestige, protection and incentives, designation often includes further interrelated positive consequences. These include encouraging property rehabilitation, preserving neighborhoods, strengthening an area's retail health and tourist trade, and catalyzing formation of community organizations and activity.
- Property value may be dampened, however, because of certain designation consequences:
  - *Regulatory costs.* For locally designated landmarks, alteration or demolition of the property accorded historic status may have to be approved by a local landmarks commission. Owners of historic properties can incur additional expenses as a result of these regulatory requirements, both directly in the form of outlays, and indirectly from the administrative procedures.
  - *Development constraints*. Local designation may impede the realization of a designated property's "highest value and best economic use," as opposed to retaining, the designated property may be reviewed to keep its "current use.[16]"

- The above are the theoretical impacts. What are the actual empirically observing "facts on the ground" effects?

- Rutgers has conducted an extensive search on the empirical studies on this subject (Appendix C). While a few investigations find a negative impact on property value, the overwhelming number of studies document that historic designation has a positive effect

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[16] Current use is the existing utilization of a property; highest value and best use is the most profitable use incorporating those uses that are legally permissible, physically possible, and financially or economically feasible.

on property value, especially with respect to single-family homes (there is less evidence available about commercial properties). Illustrative such studies follow:

A late-1990s study by Donovan Rypkema found that local historic districts in Indiana not only provided valuable protection for each community's historical resources but protected and enhanced individuals' financial resources as well. In five Indiana communities residential and commercial properties in historic districts appreciated at no less than the city-wide rate, and in four of the five appreciated at a greater rate than the rest of the city. A 2010 University of Florida study reviewed more than 20,000 parcels in 18 historic districts and a similar number in 25 comparison neighborhoods. The Florida researchers found that over a ten-year period historic designation and protection did not depress property values and, in 15 of the 18 cases, property in the historic district appreciated greater than comparable non-designated areas.

- o An extensive statistical analysis on the property value impact of historic designation was conducted in 2001 by Ed Coulson and Robin Leichenko in nine Texas cities: Abilene, Dallas, Fort Worth, Grapevine, Laredo, Lubbock, Nacogdoches, San Antonio and San Marcos. The results showed that:
    - Historic designation was associated with higher residential property values in all of the Texas cities. The higher values were statistically significant in seven of the nine cities: Abilene, Dallas, Fort Worth, Grapevine, Lubbock, Nacogdoches and San Antonio.
    - Among the cities where historic designation had a statistically significant effect on property values, historic designation was associated with average property value increases ranging between 5 and 20 percent.

- To summarize, the preponderance of empirical literature indicates that historic district designation and regulation supports and enhances single-family residential property values. There is less evidence about commercial properties, but the few studies on this category show that higher commercial property values also tend to be associated with proximity to historic landmarks and districts. On balance historic preservation is a good deal for local jurisdictions and for property owners.

CHAPTER ONE

BACKGROUND ON ECONOMICS OF HISTORIC PRESERVATION

THE NEED FOR INFORMATION ON HISTORIC PRESERVATION ECONOMICS

Until almost the mid-twentieth century, the idea of historic preservation was alien to the American reverence for the new. There were but a handful of exceptions. Independence Hall, slated for demolition, was purchased by the City of Philadelphia in 1816, and Mount Vernon was saved by a valiant private women's group in the 1850s. The State of Texas purchased the Alamo in 1883 for the purposes of protection and preservation. Private philanthropy from the Rockefeller family helped restore Colonial Williamsburg in the mid-1920s while the San Antonio Conservation Society was formed in 1924 to save that city's cherished, and not so cherished, landmarks. In the mid-1930s, there was some nascent public preservation action. The federal government, authorized by the 1935 Historic Sites Act, began identifying landmarks on the National Register of Historic Sites and Buildings. In the 1930s, a handful of communities, most notably Charleston, S.C., in 1931 and New Orleans in 1937, established local preservation commissions to identify and protect selected historic districts. In 1939 Congressman Maury Maverick who had championed the federal Historic Sites Act, became Mayor of San Antonio and led the city's successful efforts to preserve La Villita, one of its oldest neighborhoods.

These preservation activities, however, were the exceptions. More typical was destruction of even acknowledged landmarks. Pennsylvania Station in New York City is a prime example. Federal programs, ranging from urban renewal to the interstate highway systems, fueled the demolition of the nation's historic built environment. Partly in reaction to the widespread loss of historic properties, a system for preservation had developed by the 1960s. At the federal level, the National Historic Preservation Act (NHPA) of 1966 created a National Register of Historic Places and a review process, Section 106 of the NHPA, to evaluate federal undertakings that threatened National Register-eligible resources. With federal funds from NHPA, state historic preservation offices (SHPOs) were established to help identify sites and structures to be placed on the National Register. Many states further enacted their own procedures to evaluate state and local government actions that threatened historic properties.

Most significant was the establishment of local preservation commissions. These were created by ordinances to identify historic resources and then take appropriate action to designate these resources as landmarks. Once designated, the landmarks could not be demolished, nor could their facades be altered in a historically inaccurate fashion without review by the commission. At minimum, these actions would be advisory only.

In a short period of time, historic preservation has mushroomed in scope. There were about 1,000 entries on the National Register of Historic Places in 1968; today there are about 90,000. In the last decade, the National Trust for Historic Preservation's Main Street Program, designed to revitalize older downtowns, has grown from a handful to over 2,000 successful examples nationwide. Local historic commissions totaled only about 20 as of the mid-1950s. Civic spirit fueled by the Bicentennial increased that number to 100, and today there are almost 3,000 local commissions. Other barometers of historic preservation activity also show quantum increases; still, preservation remains the exception rather than the rule.

Preservation has accomplished much. Icons that have been saved, such as Grand Central Station in New York, are important to the perception of quality of life. Less dramatic, but equally as

important, is the preservation of properties of statewide and local significance throughout the United States. The aesthetic and quality-of-life benefits of preservation are generally acknowledged. However, doubts are often expressed about the quantifiable economic contribution of preservation. While proponents of investment in such areas as public infrastructure and new housing construction tout the job, income, and other financial benefits of their respective activities, historic preservationists are much less vocal about the economic benefits that accrue from their activities.

A dearth of information on the economic benefits of preservation has unfortunate consequences, especially in competing for public and other support. Take, for instance, the federal Historic Rehabilitation Tax Credit Program (HTC). Initiated in 1976, the federal HTC has generated about $109 billion dollars (in inflation-adjusted 2013 dollars) in investment in historic preservation, encompassing about 45,000 separate projects. The federal HTC is the most significant federal financial support for preservation, eclipsing the Historic Preservation Fund that supports grants to State Historic Preservation Offices (SHPOs). Despite its accomplishments, the federal HTC has been under assault from those working to reduce federal tax incentives. In 1986, the federal HTC tax credit was reduced from 25 to 20 percent, and there are periodic calls for further reductions of this incentive. Critics of the federal HTC cite its costs to the Federal Treasury. Preservationists, however, have only begun to document the federal HTC's full economic benefits. (Rutgers University has contributed to this effort by effecting HTC economic impact studies for the National Trust for Historic Preservation and the National Park Service). This late entry into documenting the HTC's economic impact has put preservationists at a competitive disadvantage compared with those arguing for federal tax breaks for other investments (e.g., roads and other infrastructure), who have for decades marshaled an arrays of statistics to support their respective causes.

Parallel developments exist at the state level. As the federal government has cut back and states have ascended as implementers and funders, state activity has become more significant in historic preservation. About 35 states provide state historic tax credits to supplement the federal HTC. As we shall see later in this study, Texas has authorized a state HTC as well and provides many other crucial supports to preserve its historic and cultural heritage. But there are many demands on the public purse, and preservation is in competition for state support for other investments ranging from infrastructure to education. It would be helpful if preservationists had documented current numbers on the economic benefits of preservation projects and investment. This study provides these economic impacts of historic preservation in Texas. It updates and expands upon a prior investigation in Texas conducted by the same research team (University of Texas - Austin and Rutgers) in 1999.

The Rutgers University researchers that have joined with the University of Texas - Austin faculty in the current study, have quantified the economic impacts of preservation in 12 states (Arkansas, Florida, Kansas, Massachusetts, Missouri, Nebraska, New Jersey, Ohio, Oklahoma, South Dakota, Tennessee and Texas). These Rutgers reports considered the direct and total (with multiplier) effects of different components of historic preservation in these states, including historic rehabilitation and other investments. The current analysis considers the total economic effects of many facets of historic preservation in Texas (e.g., rehabilitation, tourism, Main Street, and history museums).

CURRENT STUDY SCOPE AND APPROACH

The current investigation builds from the state of the art of conducting such analyses of historic preservation impacts. Some of the distinguishing characteristics of the current study are its

1. statewide scope
2. development of preservation-specific data
3. use of a state-of-the-art input-output model

Statewide Scope

The current investigation is statewide in scope. It estimates statewide figures on the amount of historic rehabilitation, heritage tourism, Main Street investment, operation of historic sites and museums, and other preservation spending throughout Texas. It is also careful not to double count spending. For example, in calculating the spending by Texas historic museums, we do not include their capital outlays because that has already been counted in our enumeration of historic rehabilitation in the state.

Development of Preservation-Specific Data

While ideally, preservation-specific information would be incorporated into the economic impact modelling, this is not always done. As an example, many studies to date use "canned programs" that have information on rehabilitation in general. But historic rehabilitation is not the same as general rehabilitation. To that end, the current study deconstructs in great detail the components of historic rehabilitation. (See Chapter 2 and Appendix B for details.) This detailed breakdown permits a much more precise estimate of the economic impacts of historic rehabilitation, which in turn is one of the most important components of historic preservation. The current study also uses preservation-specific parameters with regard to other components of preservation activity, such as the outlays by heritage travelers.

Use of a State-of-the-Art Input-Output Model

As other recent studies have done, the current investigation of historic preservation in Texas considers direct effects of preservation-related activities as well as secondary effects. See Appendix B for more information on the mathematical logistics of the input-output model utilized. The total or multiplier effect, often referred to as the ripple effect, has three segments:

1. A *direct effect* (the initial drop causing the ripple effects) is the change in purchases due to a change in economic activity.
2. An *indirect effect* is the change in the purchases of suppliers to the economic activity directly experiencing change.
3. An *induced effect* is the change in consumer spending that is generated by changes in labor income within the region as a result of the direct and indirect effects.

To illustrate briefly, the *direct effects* encompass the goods and services immediately involved in the economic activity analyzed, such as historic rehabilitation. For historic rehabilitation, this could include carpenters hired and construction materials purchased. *Indirect effects* encompass the value of goods and services needed to support the provision of the direct effects (e.g., materials

purchases by construction suppliers). *Induced effects* include the goods and services needed by households to provide the direct and indirect labor required to rehabilitate a historic structure (e.g., food purchases by the carpenters' or suppliers' households). The estimation of indirect and induced effects is accomplished by what is referred to as an input-output model.

In this study, the projection of the total or multiplier effects of historic preservation is accomplished by application of an input-output model developed by Rutgers. This model offers significant advantages in detailing the total economic effects of an activity (such as historic rehabilitation), including multiplier effects (see appendix B). The analysis in the subsequent chapters first presents the direct effects of different types of historic preservation spending (e.g., historic rehabilitation and heritage tourism)—and then applies the I-O model to derive the total economic effects.

CHAPTER TWO

PROFILE AND ECONOMIC IMPACTS OF TEXAS HISTORIC REHABILITATION

INTRODUCTION AND SUMMARY

This chapter begins with a description of the profile and magnitude of private sector historic rehabilitation in Texas for 2009 through 2013. It then examines how the direct Texas historic rehabilitation investment translates into total economic impacts, including multiplier effects. The results of the analysis are summarized below:

- An estimated total $10 billion was spent annually by the private sector on rehabilitation in Texas in the 2009-2013 period: $1.9 billion on residential properties and $8.1 billion on nonresidential properties (Table 2.1).

- Of the $10 billion spent on rehabilitation, an estimated $740.8 million, or about 7.0 percent of the total, was spent on historic private properties (properties designated on national, state, and/or local registers of historic sites). This estimate of historic rehabilitation volume is quite conservative since it does not include construction occurring in properties eligible for, but not yet on, a register. Public entities add $31 million, for a total annual historic rehabilitation investment in Texas of approximately $772 (for the economic impacts of the $31 million in public sector investment, see Chapter 6).

TABLE 2.1
Estimated Annual Historic Building Rehabilitation in Texas (2009–2013)

Property Type	Estimated Total Rehabilitation ($ million)	Estimated Historic Rehabilitation ($ million)	Historic Rehabilitation as % of Total Rehabilitation
Private			
Residential	$1,878.8	$168.6	9.0%
Nonresidential	$8,118.8	$572.2	7.0%
Total private	$9,997.6	$740.8	7.4%

- The direct effects of historic rehabilitation are translated into multiplier effects, which encompass such dimensions as *jobs* (employment by place of work), *income* (total wages, salaries, and proprietor's income), *gross domestic product* or GDP (total wealth accumulated), *taxes* (federal, state, and local), and *in-state wealth* (GDP less "leakage" in the form of federal taxes).

- The total nationwide economic impacts from the $741 million spent on Texas historic rehabilitation included: 30,764 new jobs, $1.02 billion in income, and $2.24 billion in gross domestic product. Texas garnered about half of these economic benefits in terms of jobs (14,799) and GDP ($1 billion), and as a result, captured $913 million in in-state wealth. The other effects were distributed outside Texas.

TABLE 2.2
Total Economic Impacts of the Annual
Texas Historic Rehabilitation Spending ($741 Million)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	14,799	15,965	30,764
Income ($000)	$795,097	$221,872	$1,016,969
GDP ($000)*	$1,000,219	$1,235,298	$2,235,517
In-State Wealth ($000)**	$913,263	------	------

*GDP =Gross Domestic Product
**In-State Wealth = GDP minus Federal Indirect Business Taxes

- Nationwide, the $741 million in direct spending from Texas historic rehabilitation generates a total of $365 million in total taxes (federal, state, and local) from both business and households. Texas captures 62 percent ($225 million) of the total amount generated nationwide, including a total of $59 million in combined state and local taxes.

TABLE 2.3
Economic Impacts of the Annual Texas Historic Rehabilitation Spending ($741 Million):
Total Tax Contributions

	In Texas	Outside Texas	Total (U.S.)
Total Taxes ($000)	$225,078	$139,717	$364,794
Federal ($000)	$166,466	$73,167	$239,633
State ($000)	$13,716	$43,702	$57,418
Local ($000)	$44,896	$22,848	$67,744

PRIVATE HISTORIC REHABILITATION IN TEXAS

Definition of Historic Rehabilitation

For the purposes of this study, historic rehabilitation includes all "rehabilitation" that is effected in "historic" properties. "Rehabilitation" is defined as encompassing all construction work that the Census classifies as alterations. All rehabilitation is included—not just work of a historic nature (e.g., facade restoration)—as long as the rehabilitation is effected in a historic property. "Historic" is defined as a property that is designated as a national, state, or local landmark or is located in a national, state or local historic register district. Rehabilitation in properties eligible for historic status, but not yet designated as such, is *not* counted as historic rehabilitation.

The definition of "rehabilitation" is straightforward (from the Census); however, the specification of "historic" as used in the present study bears further comment. Inclusion of landmarks listed by all levels of government—federal, state, and local—acknowledges that all of these listings are important. Including only entries on the National Register of Historic Places and omitting local landmarks would fail to incorporate the tremendous interest in preservation at the local level and the significance of local involvement, as evidenced by the numbers of landmark and historic district designations and the related rehabilitation of these resources.

Thus, our specification of historic includes only those properties already officially listed on registers, whether federal, state, or local, and *not* properties eligible for such listing. In the field of

preservation, eligibility for designation is in fact a recognized status. At the federal level, a Section 106 review is triggered when federal action threatens properties both on, and eligible for, the National Register.

There is a valid reason why eligibility for listing is recognized by historic preservationists; principally, the time gap between eligibility status and official listing should not thwart the ultimate goal of protecting legitimate historic resources. Nonetheless, the authors of this study tally only the rehabilitation effected on already listed properties—as opposed to register-eligible properties—because, especially on a statewide basis, there are no data on properties that are eligible for designation (this information frequently is not even specified for much more micro-geographical levels, such as a neighborhood or an individual community.) Statewide, there is only conjecture about the scale of properties eligible for landmarking; in fact, there is often scant statewide information on properties that are already listed, as is discussed below.

Scale of Historic Rehabilitation in Texas

At first glance, the task of determining the share of Texas rehabilitation work that is in historic stock seems as simple as adding all historic properties, the total amount of rehabilitation, and repair work that is performed. Unfortunately, there is no centralized data source for current building rehabilitation activity, nor is there one that lists all historic properties in the state at each level of jurisdiction. Data are responsibly kept on the designations (e.g., listings on the federal and state historic registers), but the most significant data gap is tracking the building rehabilitation taking place each year in these designated properties.

As recently as 1994, the Permits Division of the U.S. Bureau of Census collected data on rehabilitation by community; however, the series was ended. Currently, the only construction data collected at the community level pertain to private new residential construction permits. Further, the latest centralized data set with information on the age of structures in Texas is the 2012 American Community Survey 5-year Estimates, and that too relates only to residential properties. Thus, it was within these constraints that we calculated estimates of the statewide value of rehabilitation of historic structures. The process used to estimate the extent of historic rehabilitation of buildings effected in Texas in 2009-2013 is fully described in Appendix A and is outlined below.

1. First, **past** relationships between permits for new residential building and both new nonresidential and rehabilitation construction for each of 964 Texas communities (as tracked by the U.S. Bureau of the Census) were applied to **current** (2009-2013) data for new residential construction from the Census. Actual building rehabilitation permit values obtained from each of the nine Certified Local Governments (CLGs) participating in the 1997 historic preservation economic impact study (by Rutgers University and the University of Texas) — Abilene, Dallas, Ft. Worth, Grapevine, Laredo, Lubbock, Nacogdoches, San Antonio, and San Marcos—replaced the nine CLG estimates.

2. The nine CLGs supplied data for the years 1994-1997 on the total amount of building permits that they issued on historic properties by structure type (More current data than the 1994-1997 profile was not available in the current investigation.). Based on these data sets and the total rehabilitation values, *incidences of historic rehabilitation* for the nine CLGs were estimated. An incidence of historic rehabilitation estimate was calculated for each Texas community by calibrating a method using the known incidences of the nine CLGs and prior experience in New Jersey and other states (further discussed in Appendix A).

3. The community-level incidence ratios were applied to the respective estimates of rehabilitation activity to obtain final estimates of private historic preservation activity effected in privately-owned properties.

Table 2.4
Estimated Annual Historic Building Rehabilitation in Texas (2009-2013)

Component	Estimated Total New Construction (in $ millions)	Estimated Total Rehabilitation (in $ millions)	Estimated Historic Rehabilitation (in $ millions)	Historic Rehabilitation as % of Total Rehabilitation
Private				
Residential	$17,649.5	$1,878.8	$168.6	9.0%
Nonresidential	$9,101.4	$8,118.8	$572.2	7.0%
Private subtotal	$26,750.9	$9,997.6	$740.8	7.4%

Table 2.4 summarizes the following results:

- Between 2009 and 2013, permits valued at about $26.8 billion were issued for private new construction in Texas annually. Nearly 66 percent ($17.6 billion) of this was effected in housing units.

- In addition, about $10 billion was spent rehabilitating structures in Texas. Of this, $1.9 billion was spent on residential properties and $8.1 billion on nonresidential properties. Thus, the value of residential rehabilitation construction permits issued was about 11 percent of its new construction counterpart. For private nonresidential construction, the value of rehabilitation construction is about 89 percent of its new construction counterpart.[17]

- Of the $10 billion, about $740.8 million (7.4 percent) was spent on private historic properties. Most (nearly 77%) of the activity was on nonresidential properties.

- The estimated average incidence of rehabilitation that was historic was nearly 9 percent for residential structures and nearly 7 percent for nonresidential structures.

TRANSLATING THE ANNUAL TEXAS HISTORIC REHABILITATION INVESTMENT INTO TOTAL ECONOMIC IMPACTS

This section discusses how the *total economic impact* of the $10 billion spent annually on rehabilitation is derived. First, the typical purchases for each type of property on which historic rehabilitation is taking place—residential versus nonresidential—are detailed by industry. The lists of typical labor, material, and service purchases for each property type are then standardized. These estimated economic "recipes" for historic renovation are then multiplied by the annual amount of such activity for each property type. The resulting vectors of historic rehabilitation volume are then applied to input-output models that calculate total economic impacts (direct, indirect, and induced) for the state of Texas and the nation.

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[17] In many states, the rehabilitation dollar activity approaches if not exceeds the value of new construction.

"Recipes" for Historic Rehabilitation

Direct effects, or direct requirements, the first category of total economic impact, are readily identified once a project has been bid and once its costs have been calculated and summed. In theory, the best way to estimate a project's direct requirements would be to use bid sheets that apply cost elements (i.e., labor and materials) to items specified by the project's architects and engineers. Bid sheets would provide sufficient detail on project requirements to identify the industry that supplies the components, as well as the type of labor needed for the work. The quality of the estimates of a project's direct requirements, in turn, determines the quality of the estimates of other categories of economic impacts. Thus, estimates demand an unusual amount of thoroughness and care. In ideal circumstances, the thoroughness extends to identifying where the direct requirements come from, as well as a very detailed specification of the supplying industry.

Estimating Total Economic Impacts

Total economic impacts encompass both *direct* and *multiplier* effects. The latter incorporate *indirect* and *induced* impacts. The character of the direct impacts of historic preservation is derived from the recipes noted above. The process for estimating a given project's indirect and induced economic impacts is more roundabout. By definition, a project's first round of indirect impact includes the purchases of any supplies and/or services that are required to produce the direct effects. Subsequent purchases of supplies and services generate other rounds of indirect impacts. The induced impacts are the purchases that arise, in turn, from the increase in aggregate labor income of households. Aggregate labor income is defined as the sum of wages, salaries, and proprietors' income earned by workers. Both the indirect and induced economic impacts demonstrate how the demand for direct requirements reverberates through an economy.

Table 2.5 details the economic impacts of the rehabilitation of historic properties. The *direct impact* component consists of purchases made specifically for the construction project. Direct impacts on the local economy are composed only of purchases from local organizations.[18] The *indirect impact* component consists of spending on goods and services by industries that produce the items purchased by the contractors who are preserving the property. Among his many business relationships, for example, a contractor might purchase windows from "Jerry's Home Improvement Inc." (JHI), which makes custom windows. In order to produce windows, JHI must hire craftsmen as well as contract with firms that supply glass, adhesives, paints and coatings, glazing, and wood products. These purchases by JHI represent indirect impacts from the initial construction project. JHI also hopes to make a profit for its owners/shareholders.

In order to meet JHI's needs, its suppliers must also hire workers and obtain materials and specialized services. The same process is repeated for their suppliers, and so on. Thus, an extensive network of relationships is established based upon round after round after round of business transactions that emanate from a single preservation project. It is this network of transactions that describes the set of indirect impacts. Of course, a firm's net indirect contribution to the preservation activity largely depends on: (1) the total value of its transactions in the network; and (2) the proximity of its business relationship(s) to the preservation contractor within the project's business network. Similar to direct impacts, local indirect impacts are composed only of indirect business transactions that occur in the local economy.

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[18] Any material used in construction that does not derive from the area is discounted. The same holds for non-Texan retail goods sold to tourists when heritage impacts are examined.

Finally, *induced impacts* are a measure of household spending. They are a tally of the expenditures made by the households of the construction workers on a preservation project, as well as the households of employees of the supplying industries.

TABLE 2.5
Examples of Direct and Multiplier Effects
(Indirect and Induced Impacts) from Historic Preservation

DIRECT IMPACTS	MULTIPLIER EFFECTS	
	INDIRECT IMPACTS	INDUCED IMPACTS
Purchases for: • Architectural design • Site preparation • Construction labor • Building materials • Machinery & tools • Finance & insurance • Inspection fees	Purchases of: • Lumber & wood products • Machine components • Stone, clay, glass, & gravel • Fabricated metals • Paper products • Retail & wholesale services • Trucking & warehousing	Household spending on: • Food, clothing, day care, • Retail services, public transit, utilities, car(s), oil & gasoline, property & income taxes, medical services, and insurance

One means of estimating indirect and induced impacts would be to conduct a survey of the business transactions of the primary contractor. The business questionnaire for this survey would ask for the names and addresses of the contractor's suppliers; what and how much they supply; the names and addresses of the contractor's employees; and the annual payroll.

A related questionnaire would cover the household spending of the employees of the surveyed firms. It would request a characterization of each employee's household budget by detailed line items, including names and addresses of the firms or organizations from which each line item is purchased.

Both questionnaires subsequently could be used to measure indirect and induced impacts of the primary contractor's activity. The business questionnaire would be sent to the business addresses identified by the primary contractor; the household questionnaire, in turn, would be sent to the homes of the employees of those businesses that responded to the survey. This "snowball-type" sampling would continue until time or money was exhausted. In order to keep each organization's or household's contribution to the project in proper perspective, its total spending would be weighted by the size of its transaction with its customers who were included in the survey activity. The sum of the weighted transaction values obtained via the surveys would be the total economic impact of the project.

This survey-based approach to estimating indirect and induced impacts consumes a great deal of money and time, however. In addition, response rates by firms and households on surveys regarding financial matters are notoriously low. Hence, in the rare cases where survey work has been conducted to measure economic impacts, the results have tended to be not statistically representative of the targeted network of organizations and households. Consequently, relatively less expensive economic models based on Census data are typically used to measure economic impacts.

The economic model that has proven to estimate the indirect and induced economic effects of events most accurately is the input-output model. Its advantage stems from its level of industry detail and its depiction of inter-industry relations. As shown in Appendix B, a single calculation—

known as the Leontief inverse—simulates the many rounds of business and household surveys. Input-output tables are constructed from nationwide Census surveys of businesses and households. The most difficult part of regional impact analysis is modifying a national input-output model so that it can be used to estimate impacts at a subnational level. "Regionalization" of the model typically is undertaken by the model producer and requires a large volume of data on the economy being modeled. This study employs regional input-output models to estimate the extent of the indirect and induced economic effects of a direct investment in historic preservation activities. The economic effects of historic rehabilitation are studied in this chapter; the effects of heritage tourism, Main Street Program, and the operations of historic museums are studied in later chapters.

R/ECON's Input-Output Model

The regional input-output model used by this study to derive the total economic impacts is the R/ECON™ I-O Model. It produces very accurate estimates of the total regional impacts of an economic activity and employs detail for more than 380 industries in calculating the effects.

R/ECON™ I-O model's predecessor has proven to be the best of the non-survey-based regional input-output models at measuring a region's economic self-sufficiency. (See Appendix B) for more details on the relative higher quality of the R/ECON™ I-O model.)

The results of R/ECON™ I-O model include many fields of data. Among them, the most significant for the purposes of this study, are the total impacts with respect to:

- **Jobs:** *Employment, both part- and full-time, by place of work*, estimated using the typical job characteristics of each detailed industry. (Manufacturing jobs, for example, tend to be full-time; in retail trade and real estate, part-time jobs predominate.) All jobs generated at businesses in the region are included, even though the associated labor income of commuters may be spent outside of the region. In this study, all results are for activities occurring within the time frame of one year. Thus, the job figures should be read as job-years, i.e., several individuals might fill one job-year on any given project.

- **Income:** *"Earned" or "labor" income—specifically wages, salaries, and proprietors' income*. Income does not include nonwage compensation (i.e., benefits, pensions, or insurance), transfer payments, or dividends, interest, or rents.

- **Wealth**: *Value added—the equivalent at the subnational level of gross domestic product (GDP).* At the state level this is called gross state product (GDP). Value added is widely accepted by economists as the best measure of economic well-being. It is estimated from state-level data by industry. For a firm, value added is the difference between the value of goods and services produced and the value of goods and non-labor services purchased. For an industry, therefore, it is composed of labor income (net of taxes), taxes, nonwage labor compensation, profit (other than proprietors' income), capital consumption allowances, and net interest, dividends, and rents received.

- **Output**: *The value of shipments*, as reported in the Economic Census. (Note: Output is much less meaningful on economic impact, compared to jobs, income, and wealth. As such on the current report, the exhibits indicate the output value but our impact discussion focuses on jobs, income, and wealth).

- **Taxes**: *Tax revenues generated by the activity.* The tax revenues are detailed for the federal, state, and local levels of government.[19] Totals are calculated by industry.

   Federal tax revenues include corporate and personal income, social security, and excise taxes, estimated from the calculations of value added and income generated.

   State tax revenues include personal and corporate income, state property, excise, sales, and other state taxes, estimated using the calculations of value added and income generated (e.g., purchases by visitors).

   Local tax revenues include payments to sub-state governments mainly through property taxes on new worker households and businesses, but can also include revenues from local income, sales, and other taxes.

TOTAL ECONOMIC IMPACTS OF ANNUAL TEXAS HISTORIC REHABILITATION

This chapter previously estimated that historic rehabilitation in Texas generates $741 million annually. Of this amount, $169 million tends to be in residential historic properties (single- and multifamily) and $572 million in private nonresidential historic properties. Thus, the following questions arise: What is the total economic benefit of this activity? What proportion of these benefits accrues to Texas?

To answer these questions, the study team applied the direct requirements of $741 million in historic rehabilitation construction activity to economic models of Texas and the United States. This yielded total economic impacts for the country as a whole (national or U.S. effects) and for the state of Texas (in-state effects). For both the nation and state, the significant economic indicators were jobs created, resident income generated, resident wealth generated (gross domestic or state product), and taxes generated by level of government.

Besides the four above measures, CUPR estimated an additional gauge of activity termed **in-state wealth.** This measure consists of in-state generation of value added (or gross state product), less the amount that "leaks" out of the state's economy in the form of taxes paid by *businesses* to the federal government. Since taxes paid to the state and local governments remain in state, they cannot be said to "leak" and, thus, are considered part of the accumulated in-state wealth.

The R/ECON™ I-O model expresses the resulting jobs, income, and wealth impacts in various levels of industry detail. The most convenient application breaks the industry-level results at the one-digit standard industrial code (SIC) or division level. This level has fourteen industry divisions:

1. Agriculture, Forestry, Fishing, and Hunting
2. Mining
3. Utilities
4. Construction
5. Manufacturing
6. Wholesale Trade
7. Retail Trade

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[19] The state and local taxes examined are calibrated to the area (specific state and local governments) to which the PEIM is applied. For example, Texas does not have a state income tax. . Therefore, the PEIM applied in Texas does not include state income taxes generated by an economic activity while the PEIM applied in New Jersey would calculate state income tax effects.

8.   Transportation and Warehousing
9.   Information
10.   Finance, Insurance, Real Estate, Rental, and Leasing
11.   Professional and Business Services
12.   Educational Services, Health Care, and Social Assistance
13.   Arts, Entertainment, Recreation, and Hospitality
14.   Other Services (including Government Enterprise)

The model results, however, are only as good as the data that go into them. Thus, when the direct requirements are estimated, and the industry-level purchases are also estimated (as is the case in this study), care should be taken in interpreting model results, especially when they contain extreme categorical detail. Hence, the main body of this report focuses on the one-digit NAICS level results, but data on the three-digit NAICS results are made available in the appendices. The purpose of providing such detail is to enable a better idea of the quality of jobs that are likely to be created and of the types of industries that are most likely to be affected by historic rehabilitation activities.

The total economic impacts of the $741 million in historic rehabilitation spending are summarized below and detailed in Exhibits 2.1 through 2.4. Amongst these economic impacts are considerable taxes generated. Nationwide, the $741 million in direct spending from Texas historic rehabilitation generated a total of $365 million in total taxes (federal, state[20], and local) from both business and households. Texas captures 62 percent ($225 million) of the total amount generated nationwide, including a total of $59 million in combined state and local taxes.

TABLE 2.6
Total Economic Impacts of the Annual
Texas Historic Rehabilitation Spending ($741 Million)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	14,799	15,965	30,764
Income ($000)	$795,097	$221,872	$1,016,969
GDP ($000)*	$1,000,219	$1,235,298	$2,235,517
Total Taxes ($000)**	$225,078	$139,717	$364,794
Federal ($000)	$166,466	$73,167	$239,633
State ($000)	$13,716	$43,702	$57,418
Local ($000)	$44,896	$22,848	$67,744
In-State Wealth ($000)***	$913,263	——	——

*GDP =Gross Domestic Product
**Total Taxes = business plus household taxes
***In-State Wealth = GDP minus Federal Indirect Business Taxes

Nationwide Impacts

Item 1 of Section II in Exhibit 2.1 below, shows how the $741 million translates into direct economic effects nationwide: It creates 5,661 jobs (technically "job-years"), which produce $405 million in labor income and $422 million in GDP. The difference between the initial investment

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[20] Here and elsewhere, such as with heritage tourism, the state taxes generated outside Texas are generally greater than Texas-alone state taxes because other states impose a greater array of state taxes and/or have higher state tax rates.

($741 million) and the GDP it created directly ($422 million) implies that historic building rehabilitation requires significant amounts of imported materials.

The indirect and induced effects of historic preservation activity require 25,103 more jobs, and generate an additional $612 million in income and $1,813 million in GDP. As a consequence, the total economic impact—the sum of the direct and indirect and induced effects—of historic building rehabilitation is 30,764 jobs (5,661 + 25,103); $1,017 million in income ($405 million + $612 million); and $2,235 million in GDP ($422 million + $1,813 million). In other words, the multiplier effects are greater than the direct effects: the resulting multipliers are always substantially greater than 2.0.[21]

According to Exhibit 2.3, about 48 percent (14,799) of the 30,764 jobs generated annually are created within the state. Texas retains all of the 5,661 jobs (100 percent) created directly by state-based historic rehabilitation activity. However, the indirect/induced impacts of Texas historic rehabilitation activity tend to leak out of the state. Much of this leakage occurs through the demands of Texans for products manufactured elsewhere.

Most of the jobs created outside of the state are created indirectly in manufacturing industries to produce rehabilitation materials or to meet the demands of households. Texas maintains only 52 percent (1,556 of 2,986) of all the high-paying manufacturing jobs that support the rehabilitation activity. As a consequence, out-of-state household consumption of goods and services plus the activity of out-of-state manufacturers combine to induce the out-of-state share of jobs in the agricultural, professional/business services, and finance/insurance/real estate industries to extraordinarily high levels (75, 74, and 67 percent, respectively).

We can learn other interesting aspects of the impacts when we examine them by detailed industry (see Exhibit 2.2). In layman's terms, what type of companies and businesses are affected by the building rehabilitation? For example, nationwide, the construction industry is stimulated most by the preservation activity: it has generated 5,825 jobs and contributed to the total GDP increase by 19 percent. The second-largest benefited group is the manufacturing industry (2,986 new jobs and $271 million in GDP). To inspect more detail, we disaggregated the manufacturing industry by sub-industries to examine how they comprise the industry's GDP: chemical manufacturing (15.2%); food product manufacturing (13.0%); fabricated metal product manufacturing (9.0%); petroleum and coal products manufacturing (8.8%); computer and electronic product manufacturing (6.6%); printing and related support activities (5.3%); the remaining sub-industries represent less than 5 percent of manufacturing GDP. Following the construction and manufacturing industries, the third, fourth, and fifth most-benefited industries are: retail trade (2,806 jobs), real estate (2,603 jobs), and health care/social assistance (2,342 jobs).

State-Level Impacts

The distribution of in-state impacts across industries is analogous to the nation's; the most benefited industries rank in the same place at both the national and statewide level: construction, manufacturing, and retail trade, respectively (see Exhibit 2.4). In particular, preservation activities contribute relatively more at the state level than they do at the national level. For example, the construction industry has generated 39 percent new jobs (5,701 out of 14,799), 51 percent of earning ($407 million), and 43 percent of total GDP increase ($425 million) in Texas. As one might expect, historic rehabilitation activities involve, for the most part, maintenance and repairing

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[21] Multiplier impacts will vary by type of economic activity and the area in which the economic activity takes place.

of the historical buildings or landmarks-- the largest share of new employment comes from construction and manufacturing industries. Though the retail trade industries are one of the most benefited industries, generating 9 percent of total jobs, due to the average lower wages among these industries (mostly are part-time jobs), the sum of earning from the retail trade sector is relative lower than other industries and only contributed 6 percent of total earning in Texas.

If we simply divide the sum of total earning to the new employment generated from historic rehabilitation, the average annual income for the Texas jobs created by the investment is much higher than the nationwide average income—$53,727 versus $33,057. For further detail, the average annual income of direct jobs ($71,457) is surprisingly high, more than double of the average annual income for all nationwide jobs. Besides, the indirect or induced jobs earn less than those direct jobs, and in average, it is higher in Texas ($42,742) than outside of the state ($24,397). This income gap might occur because most value-added indirect or induced jobs are connected to local resources, such as lumber and wood products, or raw materials for construction (stone, clay, glass, gravel…etc.). In other words, Texas does well in retaining the wealth generated by historic preservation activity through the accumulation of in-state wealth (gross state product minus federal indirect business taxes).

In summary, the economic impacts estimated through R/ECON™ input-output models of the Texas and the U.S. economies reveal that the annual historic rehabilitation activity in Texas returns significantly more to the nation in terms of income and, hence, wealth than it costs to undertake. Nationwide, the $741 million invested creates 30,764 jobs, $1,017 million in additional income, and almost $2,236 million in total wealth.

Exhibit 2.1
National Economic and Tax Impacts of Annual
Texas Historic Building Rehabilitation ($741 Million Investment)

	Output	Employment	Earnings	GDP
	($1,000)	(jobs)	($1,000)	($1,000)
I. Total Effects (Direct + Indirect/Induced)				
1. Agriculture, Forestry, Fishing, and Hunting	97,561.4	1,397	13,713.7	46,343.5
2. Mining	58,706.5	135	9,093.6	38,340.8
3. Utilities	49,826.4	65	7,024.6	26,761.2
4. Construction	760,178.1	5,825	373,605.0	433,492.9
5. Manufacturing	806,729.5	2,986	104,012.7	271,372.9
6. Wholesale Trade	56,049.9	156	8,342.1	19,183.6
7. Retail Trade	233,036.5	2,806	66,775.1	157,561.3
8. Transportation and Warehousing	167,792.3	1,082	37,327.4	86,019.4
9. Information	168,627.4	541	20,616.6	97,660.0
10. Finance, Insurance, Real Estate, Rental, and Leasing	983,800.0	4,854	124,823.0	493,781.4
11. Professional and Business Services	377,817.2	3,331	96,731.2	236,993.3
12. Educational Services, Health Care, and Social Assistance	271,541.9	2,940	86,882.9	160,606.8
13. Arts, Entertainment, Recreation, and Hospitality	154,729.8	2,614	32,472.4	90,126.6
14. Other Services (including Government Enterprise)	127,967.4	2,031	35,548.5	77,272.9
Total Effects	4,314,364.3	30,764	1,016,968.8	2,235,516.7
II. Distribution of Effects and Multipliers				
1. Direct Effects	740,800.0	5,661	404,518.7	422,497.2
2. Indirect/Induced Effects	3,573,564.3	25,103	612,450.1	1,813,019.5
3. Total Effects	4,314,364.3	30,764	1,016,968.8	2,235,516.7
4. *Multipliers (= 3 / 1)*	*5.824*	*5.434*	*2.514*	*5.291*
III. Composition of GDP				
1. Compensation				813,272.0
2. Taxes				265,265
a. Local				53,509
b. State				52,253
c. Federal				159,503
3. Profits, Dividends, Rents, and Other				1,156,979.8
4. Total GDP (= 1 + 2 + 3)				2,235,516.7

IV. Tax Accounts	Business	Household	Total
1. Labor Income	813,272.0	813,272.0	----------------
2. Taxes	265,264.9	99,529.7	364,794.6
a. Local	53,508.9	14,234.9	67,743.8
b. State	52,252.7	5,165.4	57,418.1
c. Federal	159,503.3	80,129.4	239,632.8

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	41.5
Earnings	1,372,798.0
State Taxes	77,508.2
Local Taxes	91,446.8
GDP	3,017,706.1

Initial Expenditure (in Dollars)   **$740,800,000.0**

Exhibit 2.2
<u>National</u> Economic Impacts of Annual Texas Historic
Building Rehabilitation by 3-digit Industry classification

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**97561.4**	**1397**	**13713.7**	**46343.5**
111CA	Crop and animal production (Farms)	90472.0	1234	12003.9	41286.3
113FF	Forestry, fishing, and related activities	7089.4	163	1709.8	5057.2
	Mining	**58706.5**	**135**	**9093.6**	**38340.8**
211	Oil and gas extraction	31564.0	37	5033.3	22075.2
212	Mining, except oil and gas	25774.5	93	3758.6	15327.5
213	Support activities for mining	1367.9	5	301.7	938.1
22	**Utilities**	**49826.4**	**65**	**7024.6**	**26761.2**
23	**Construction**	**760178.1**	**5825**	**373605.0**	**433492.9**
	Manufacturing	**806729.5**	**2986**	**104012.7**	**271372.9**
311FT	Food product manufacturing	133610.8	405	8116.8	35199.0
313TT	Textile and textile product mills	19965.3	103	1826.6	6177.9
315AL	Apparel manufacturing	23064.6	217	4158.9	9358.2
321	Wood product manufacturing	26481.3	136	5665.2	7480.0
322	Paper manufacturing	34325.5	85	2963.3	10870.6
323	Printing and related support activities	31800.2	185	3072.0	14260.8
324	Petroleum and coal products manufacturing	87273.0	36	16040.6	23893.4
325	Chemical manufacturing	111852.2	129	9097.8	41306.8
326	Plastics and rubber products manufacturing	41430.5	127	5601.5	12968.0
327	Nonmetallic mineral product manufacturing	31509.0	115	6133.0	11994.8
331	Primary metal manufacturing	40893.9	480	3263.7	10096.9
332	Fabricated metal product manufacturing	62210.0	272	12058.3	24512.1
333	Machinery manufacturing	24312.4	88	3923.6	9240.2
334	Computer and electronic product manufacturing	35122.6	117	5735.1	17899.0
335	Electrical equipment and appliance manufacturing	22682.3	180	3502.7	8899.3
3361MV	Motor vehicle, body, trailer, and parts manufacturing	44875.0	113	5302.3	13221.1
3364OT	Other transportation equipment manufacturing	10283.8	28	1180.8	3412.8
337	Furniture and related product manufacturing	11142.6	94	2895.7	4152.0
339	Miscellaneous manufacturing	13894.6	75	3474.7	6430.3
42	**Wholesale trade**	**56049.9**	**156**	**8342.1**	**19183.6**
44RT	**Retail trade**	**233036.5**	**2806**	**66775.1**	**157561.3**
	Transportation and warehousing, excluding Postal Service	**167792.3**	**1082**	**37327.4**	**86019.4**
481	Air transportation	53085.5	216	16254.3	33813.9
482	Rail transportation	12374.7	29	1711.1	5455.4
483	Water transportation	14009.7	49	2632.9	7325.5
484	Truck transportation	13637.4	42	1473.3	4141.7
485	Transit and ground passenger transportation	38473.7	440	8562.3	16717.4
486	Pipeline transportation	3313.7	7	1064.7	1944.3
487OS	Other transportation and support activities	19715.1	188	3294.2	9820.8
493	Warehousing and storage	13182.6	111	2334.6	6800.5
	Information	**168627.4**	**541**	**20616.6**	**97660.0**
511	Publishing including software	45563.1	230	7718.7	25874.7
512	Motion picture and sound recording industries	19534.2	77	2074.8	11462.5
513	Broadcasting and telecommunications	18867.1	47	2872.7	10874.2
514	Information and data processing services	84663.0	187	7950.3	49448.6
	Finance and insurance	**541423.9**	**2251**	**90458.3**	**251466.8**
521CI	Federal Reserve banks, credit intermediation and related services	117743.2	629	16948.2	69662.5
523	Securities, commodity contracts, investments	150100.0	658	39340.2	69253.4
524	Insurance carriers and related activities	190192.4	952	26105.2	69896.2

525	Funds, trusts, and other financial vehicles	83388.2	12	8064.7	42654.7
	Real estate, rental, and leasing	**442376.1**	**2603**	**34364.7**	**242314.6**
531	Real estate	200180.2	2305	26617.4	71587.6
532RL	Rental and leasing services and lessors of intangible assets	242195.9	298	7747.3	170727.0
	Professional and technical services	**206836.9**	**1396**	**50027.3**	**127853.8**
5411	Legal services	28972.7	10	466.9	15120.2
5412OP	Other professional, scientific and technical services	142055.4	1161	39632.2	87483.1
5415	Computer systems design and related services	35550.2	223	9902.4	25125.0
55	Management of companies and enterprises	258.6	1	25.8	125.5
	Administrative and waste services	**170980.4**	**1935**	**46703.8**	**109139.5**
561	Administrative and support services	161172.8	1871	44727.5	104194.1
562	Waste management and remediation services	9807.6	64	1976.3	4945.4
61	**Educational services**	47726.2	598	12784.9	28441.5
	Health care and social assistance	**223815.8**	**2342**	**74098.0**	**132165.2**
621	Ambulatory health care services	100305.0	938	36491.5	61433.4
622HO	Hospitals and nursing and residential care facilities	105975.2	895	30469.6	59908.6
624	Social assistance	17535.5	509	7136.9	10823.2
	Arts, entertainment, and recreation	**55335.5**	**764**	**7936.3**	**33788.0**
711AS	Performing arts, museums, and related activities	26231.4	442	4272.3	15322.1
713	Amusements, gambling, and recreation	29104.0	322	3664.0	18466.0
	Accommodation and food services	**99394.3**	**1850**	**24536.2**	**56338.6**
721	Accommodation	11283.1	140	3651.5	6228.1
722	Food services and drinking places	88111.2	1710	20884.7	50110.5
81	**Other services, except government**	**105779.7**	**1887**	**30072.4**	**62949.8**
GOV	**Government enterprises and the Postal Service**	**22187.6**	**144**	**5476.1**	**14323.1**
HH	**Households**	**0.0**	**0**	**0.0**	**0.0**
	Total	**4,314,364.3**	**30,764**	**1,016,968.8**	**2,235,516.7**

Exhibit 2.3
In-State Economic and Tax Impacts of Annual
Texas Historic Building Rehabilitation ($741 Million Investment)

	Output	Employment	Earnings	GDP
	($1,000)	(jobs)	($1,000)	($1,000)
I. Total Effects (Direct + Indirect/Induced)				
1. Agriculture, Forestry, Fishing, and Hunting	16,145.5	348	6,356.9	8,037.9
2. Mining	29,428.4	77	7,399.0	19,281.5
3. Utilities	26,959.9	35	5,616.0	14,498.4
4. Construction	745,893.3	5,701	407,303.4	425,431.8
5. Manufacturing	324,738.1	1,556	68,258.1	111,015.9
6. Wholesale Trade	23,907.6	65	5,699.4	8,182.6
7. Retail Trade	105,811.6	1,281	47,944.3	71,511.4
8. Transportation and Warehousing	75,584.0	410	25,863.1	41,550.7
9. Information	48,483.5	174	11,276.0	28,244.2
10. Finance, Insurance, Real Estate, Rental, and Leasing	229,112.7	1,620	64,982.4	104,617.4
11. Professional and Business Services	98,982.6	856	50,189.7	62,483.2
12. Educational Services, Health Care, and Social Assistance	104,782.3	1,178	57,960.1	61,659.9
13. Arts, Entertainment, Recreation, and Hospitality	39,167.6	801	15,895.0	22,180.6
14. Other Services (including Government Enterprise)	589,414.8	698	20,353.4	21,523.6
Total Effects	2,458,412.0	14,799	795,096.7	1,000,219.1
II. Distribution of Effects and Multipliers				
1. Direct Effects	740,800.0	5,661	404,518.7	422,497.2
2. Indirect/Induced Effects	1,717,612.0	9,138	390,578.0	577,721.8
3. Total Effects	2,458,412.0	14,799	795,096.7	1,000,219.1
4. *Multipliers (= 3 / 1)*	*3.319*	*2.614*	*1.966*	*2.367*

III. Composition of GDP

1. Compensation		583,293.0
2. Taxes		131,357.1
a. Local		30,685.6
b. State		13,715.6
c. Federal		86,955.9
3. Profits, Dividends, Rents, and Other		285,568.9
4. Total GDP (= 1 + 2 + 3)		1,000,219.1

IV. Tax Accounts

	Business	Household	Total
1. Labor Income	583,293.0	795,096.7	----------------
2. Taxes	131,357.1	93,720.4	225,077.6
a. Local	30,685.6	14,210.8	44,896.3
b. State	13,715.6	0.0	13,715.6
c. Federal	86,955.9	79,509.7	166,465.6

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	20.0
Earnings	$1,073,294.7
State Taxes	$18,514.6
Local Taxes	$60,605.2
GDP	$1,350,187.7

Initial Expenditure (in Dollars) $740,800,000.0

Exhibit 2.4

In-State Economic Impacts of Annual Texas Historic
Building Rehabilitation by 3-digit Industry classification

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**16145.5**	**348**	**6356.9**	**8037.9**
111CA	Crop and animal production (Farms)	14730.5	307	5487.3	7035.9
113FF	Forestry, fishing, and related activities	1414.9	41	869.6	1002.0
	Mining	**29428.4**	**77**	**7399.0**	**19281.5**
211	Oil and gas extraction	15531.0	14	3700.2	10862.1
212	Mining, except oil and gas	13258.9	61	3482.5	7981.6
213	Support activities for mining	638.4	2	216.2	437.8
22	**Utilities**	**26959.9**	**35**	**5616.0**	**14498.4**
23	**Construction**	**745893.3**	**5701**	**407303.4**	**425431.8**
	Manufacturing	**324738.1**	**1556**	**68258.1**	**111015.9**
311FT	Food product manufacturing	32530.8	156	4728.5	9691.0
313TT	Textile and textile product mills	3327.2	19	729.3	983.1
315AL	Apparel manufacturing	6111.1	70	2190.3	2547.5
321	Wood product manufacturing	19125.0	99	4610.3	5372.6
322	Paper manufacturing	8368.6	26	1532.1	2593.9
323	Printing and related support activities	2272.2	15	714.1	991.3
324	Petroleum and coal products manufacturing	64917.8	48	12936.9	21768.7
325	Chemical manufacturing	37886.4	45	5307.1	13491.1
326	Plastics and rubber products manufacturing	18780.3	60	3591.1	5849.2
327	Nonmetallic mineral product manufacturing	24387.0	91	5335.5	9078.9
331	Primary metal manufacturing	15684.8	440	2013.3	3847.2
332	Fabricated metal product manufacturing	31849.3	147	8828.1	12228.8
333	Machinery manufacturing	12690.5	46	2818.1	4621.7
334	Computer and electronic product manufacturing	8588.6	30	2779.1	4388.6
335	Electrical equipment and appliance manufacturing	10142.8	139	2331.9	3928.8
3361MV	Motor vehicle, body, trailer, and parts manufacturing	14736.1	37	3031.1	4375.1
3364OT	Other transportation equipment manufacturing	2838.0	9	658.2	843.3
337	Furniture and related product manufacturing	5167.1	46	2052.6	1957.8
339	Miscellaneous manufacturing	5334.5	34	2070.6	2457.3
42	**Wholesale trade**	**23907.6**	**65**	**5699.4**	**8182.6**
44RT	**Retail trade**	**105811.6**	**1281**	**47944.3**	**71511.4**
	Transportation and warehousing, excluding Postal Service	**75584.0**	**410**	**25863.1**	**41550.7**
481	Air transportation	40813.0	164	14316.2	25996.7
482	Rail transportation	3961.4	9	1023.5	1746.4
483	Water transportation	5635.4	19	1755.5	2946.7
484	Truck transportation	5954.8	19	1072.9	1808.5
485	Transit and ground passenger transportation	10585.0	128	4412.2	4599.4
486	Pipeline transportation	815.6	1	605.9	478.5
487OS	Other transportation and support activities	4928.2	43	1530.8	2483.4
493	Warehousing and storage	2890.4	27	1146.3	1491.1
	Information	**48483.5**	**174**	**11276.0**	**28244.2**
511	Publishing including software	13374.4	77	4529.0	7677.8
512	Motion picture and sound recording industries	3190.5	22	841.1	1949.1
513	Broadcasting and telecommunications	3607.1	14	1170.5	2083.7
514	Information and data processing services	28311.4	60	4735.3	16533.7
	Finance and insurance	**112689.3**	**673**	**42141.9**	**50425.9**
521CI	Federal Reserve banks, credit intermediation and related services	35049.0	209	9706.9	20770.6
523	Securities, commodity contracts, investments	31080.8	202	18646.6	14270.0
524	Insurance carriers and related activities	46387.1	261	13725.4	15297.0
525	Funds, trusts, and other financial vehicles	172.4	1	63.0	88.2

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Real estate, rental, and leasing	**116423.4**	**947**	**22840.5**	**54191.5**
531	Real estate	81323.4	888	18506.1	29082.5
532RL	Rental and leasing services and lessors of intangible assets	35100.0	59	4334.4	25109.0
	Professional and technical services	**55891.5**	**351**	**24529.4**	**35047.0**
5411	Legal services	10045.4	4	295.7	5242.5
5412OP	Other professional, scientific and technical services	36633.4	290	18914.0	23052.9
5415	Computer systems design and related services	9190.9	57	5310.8	6741.0
55	Management of companies and enterprises	21.8	0	8.9	10.6
	Administrative and waste services	**43091.1**	**505**	**25660.2**	**27436.3**
561	Administrative and support services	40982.1	491	24686.4	26372.9
562	Waste management and remediation services	2109.0	14	973.9	1063.4
61	**Educational services**	**14836.3**	**195**	**7271.1**	**8625.5**
	Health care and social assistance	**89946.0**	**983**	**50689.0**	**53034.4**
621	Ambulatory health care services	38667.2	373	24268.2	23687.8
622HO	Hospitals and nursing and residential care facilities	44061.6	376	21428.0	24892.0
624	Social assistance	7217.2	233	4992.8	4454.5
	Arts, entertainment, and recreation	**8667.1**	**210**	**3337.9**	**4911.8**
711AS	Performing arts, museums, and related activities	5130.9	166	2554.6	3180.0
713	Amusements, gambling, and recreation	3536.3	43	783.4	1731.8
	Accommodation and food services	**30500.5**	**592**	**12557.1**	**17268.9**
721	Accommodation	1764.3	25	762.1	973.8
722	Food services and drinking places	28736.2	566	11794.9	16295.0
81	**Other services, except government**	**30768.1**	**624**	**17355.0**	**17320.0**
GOV	**Government enterprises and the Postal Service**	**6823.8**	**74**	**2998.4**	**4203.6**
HH	**Households**	**551822.8**	**0**	**0.0**	**0.0**
	Total	**2,458,412.0**	**14,799**	**795,033.7**	**1,000,130.9**

CHAPTER THREE

PROFILE AND ECONOMIC IMPACTS OF TEXAS HERITAGE TOURISM

INTRODUCTION

Heritage tourism uses historic places, structures and landscapes to attract and serve travelers. In this vein, it can be a possible economic revitalization strategy. Indeed, as we shall see, heritage tourism helps to make historic preservation efforts more viable. Interestingly, studies have consistently shown that heritage travelers stay longer and spend more money than most other types of travelers. Moreover, a strong heritage tourism effort improves the quality of life for residents as well. Overall, heritage tourism can effectively permit a locality to save their heritage, share it with visitors, and reap the economic benefits through tourist spending.

Giant and continuously growing, the U.S. travel and tourism industry has captured the attention of state and local governments eager to bolster local economies and enhance community amenities. As of 2013, U.S. travel and tourism accounted for 2.7 percent of America's gross domestic product[22]. Furthermore, the national travel industry generated 2.1 trillion dollars (directly and indirectly) and supported 14.9 million jobs—one of nine U.S. jobs depends on travel and tourism.

Heritage tourism has become increasingly important to travelers and the localities they visit, and offers significant benefits to the community. According to the National Trust for Historic Preservation, visiting historic sites and museums ranks as the third most popular travel activity, posterior to shopping and outdoor activities.[23] Such tourism can offset the costs of maintaining historic sites, help stimulate preservation efforts, and perpetuate the "sense of place" that lends communities their unique character and identity. As a result, communities throughout the U.S. have developed programs to link arts, humanity, history and tourism that attract visitors from all over the world. Thanks to the nature of heritage tourism, visitors gain unique experiences of their visiting destinations. Simultaneously, heritage tourism can produce important economic gains with respect to jobs, income, and tax revenues.

Texas is a national leader in the tourism industry and captures a significant share of heritage travel. Many of the state's heritage travel destinations, such as the Alamo, are world- famous. Texas' heritage tourism is important culturally and is a significant economic pump primer in its own right.

This chapter analyzes heritage tourism in the U.S. and in Texas. The analysis includes all heritage traveler spending in Texas, by both Texans and non-Texans and uses data from existing state of Texas- sponsored surveys of travel in the state by D.K. Shifflets. First, an overview of the U.S. heritage travel market sets out a perspective on the market's size, features, trends, and impacts. Next, the Texas travel market and data compiled on the features of Texas heritage tourism are closely reviewed. Finally, the economic impacts of Texas heritage travel are detailed.

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[22] U.S. Travel Association (2014). "U.S. Travel Answer Sheet". Retrieved from:
https://www.ustravel.org/sites/default/files/page/2009/09/US_Travel_AnswerSheet_June_2014.pdf
[23] Texas Historical Commission (2007). "Heritage Tourism". Retrieved from:
http://www.thc.state.tx.us/public/upload/publications/heritage-tourism-guide.pdf

SUMMARY OF FINDINGS

- The travel industry is one of the most important businesses in the United States, as well as internationally[24], and heritage travel is a high value[25] and fast growing[26] segment of the travel industry.

- Direct travel spending in Texas was $58,382 million in 2013 (note that this is net of spending on Texas-based air transportation operations and travel agents).

- Direct expenditures by Texas heritage day-trippers and overnight visitors amounted $7,298 million in 2013, accounting for approximately 12.5 percent of total direct travel spending in Texas, $58,382 million.

TABLE 3.1
Summary of Texas Traveler Spending (2013)

	Total Traveler Spending ($ millions)	Total Spending By Heritage Travelers ($ millions)	Heritage Spending as % of Total Texas Traveler Spending
Day trip	$7,861	$707	9.0%
Overnight	$50,521	$6,591	13.0%
All	*$58,382*	*$7,298*	*12.5%*

- The distributions of heritage travel spending are shown as below in Table 3.2. Noticeably, transportation ($1.9 billion) accounted for approximately 26 percent of direct heritage travel spending, and lodging ($1.6 billion) accounted for approximately 22 percent.

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[24] World Travel and Tourism Council "Travel and Tourism- Economic Impact World" www.wttc.org/-/r:/world2014.pdf

[25] Mandala Research, LLC "The 2013 Cultural and Heritage Traveler Report." Mandalaresearch.com/index.php/purchase-reports

[26] Ariana Cela, Sam Lankford and Jill Knowles- Lankford "Visitor Spending and Economic Impacts of Heritage Tourism." *Journal of Heritage Tourism* Vol 4, No. 3 August 2009, pp 245-256. See also Jascha Zeitlin and Stephen Burr "A Heritage Tourism Overview." Utah State University Institute for Outdoor Recreation and Tourism May 2011 No. IORT/021.

TABLE 3.2
Distribution of Texas Heritage Travel Direct Spending (2013)

Spending	$ Million			%		
	Total	**Day**	**Night**	**Total**	**Day**	**Night**
Transportation	$1,868	$167	$1,714	25.6%	23.6%	26.0%
Food and Bev	$1,533	$186	$1,305	21.0%	26.3%	19.8%
Shopping	$1,109	$187	$844	15.2%	26.5%	12.8%
Entertainment	$890	$112	$751	12.2%	15.8%	11.4%
Lodging	$1,598	$0	$1,753	21.9%	0.0%	26.6%
Other	$307	$55	$224	4.2 %	7.8%	3.4%
Total	*$7,298*	*$707*	*$6,591*	*100.0%*	*100.0%*	*100.0%*

- Texas heritage travel amounted to 10.5 percent of the 500 million person-days spent on Texas travel in 2013 (Table 3.3). While travelers who visited a historic site represent only 10.5 percent of all Texas travel, heritage travel outlays accounted for 12.5 percent share of the total Texas traveler expenditures. Heritage day trips were 5.2 percent of all day trips in Texas, while heritage overnight trips amounted to 11.5 percent of all overnight trips in Texas.

TABLE 3.3
Magnitude of Texas Travel in Trips (2013)

Travel Type	All Travel (in millions)	Heritage[*] Travel (in millions)	Heritage as % of All Travel
Day trip (person-days)	80.3	4.2	5.2
Overnight (person-days)	421.0	48.5	11.5
Total Person-Days of Travel	*501.3*	*52.7*	*10.5*

[*]Defined as a business or leisure traveler indicating "visit historic site" as one (of up to four) "primary activity."

- Texas heritage traveler attributes include:
  - Higher average education level than non-heritage travelers.
  - Higher share of females and retirees than non-heritage travelers.
  - Higher daily spending than non-heritage travelers.

- For the purposes of this study, only the Texas business or leisure travelers who cited "visit a historic site" as primary activities in the survey were flagged as "heritage travelers". Thus, the estimated $7,298 million in direct heritage-attributed spending is *conservatively* adjusted downward to include only the share of overall travel expenditures focused directly on heritage activity. For example, rather than counting the entire trip expenditures of a Texas business traveler to San Antonio who visited the Alamo, we only count the outlays from the Alamo portion of the trip. The adjusted (heritage-attributed) expenditures are tabulated in Table 3.4 and amount to a total annual outlay of $2,255 million for 2013. Note that the outlay of $2,255 million is on the low side, due to the following reasons: First, as mentioned above, based on the definition of heritage traveler, the actual amount of heritage travel to historic sites is underestimated. Secondly, the portion of spending that could

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reasonably credited to heritage purposes is scaled down by looking at the minimum that it plausibly could be.

TABLE 3.4
Adjusted Texas Traveler Spending (2013)

	Total Traveler Spending ($ millions)	Total Spending By Heritage Travelers ($ millions)	Total Heritage-Attributed Spending ($ millions)
Day trip	$7,861	$707	$193
Overnight	$50,521	$6,591	$2,062
All	*$58,382*	*$7,298*	*$2,255*

- The total annual economic impacts from the $2.25 billion in spending by Texas heritage travelers (encompassing both direct and multiplier effects) are presented in Table 3.5. The impacts at the national level include: 70,166 jobs, $2.82 billion in income, and $4.21 billion in gross domestic product. Texas received over two-thirds of these gains (54,204 jobs, $2.03 billion in income, and $2.98 billion in GDP) and realized annual in-state wealth creation of about $2.6 billion (see Table 3.5).

TABLE 3.5
Total Economic Impacts of the Annual
Texas Heritage-Attributed Traveler Spending ($2.25 Billion)

	In Texas	*Outside Texas*	*Total (U.S.)*
Jobs (person-years)	54,204	15,962	70,166
Income ($000)	$2,029,480	$789,849	$2,819,329
GDP ($000)*	$2,976,402	$1,235,072	$4,211,474
In-State Wealth ($000)**	$2,607,451	------	------

*GDP =Gross Domestic Product
**In-State Wealth = GDP minus Federal Indirect Business Taxes

- Nationwide, the $2.25 billion in direct spending from Texas heritage tourism generates a total of $1.03 billion in total taxes (federal, state, and local) from both business and households (Table 3.6). Texas captures 74 percent ($763 million) of total taxes.

- Statewide, the $2.25 billion in direct spending from Texas heritage tourism generates a total of $191.5 million in state taxes ($61.7 million) and local taxes ($129.8 million), for an aggregate 63 percent of the total $304 million in state and local taxes generated nationally.

TABLE 3.6
Economic Impacts of the Annual Texas Heritage-Attributed Traveler Spending
($2.25 Billion): Total Tax Contributions

	In Texas	*Outside Texas*	*Total (U.S.)*
Total Taxes ($000)	$763,357	$266,452	$1,029,809
Federal ($000)	$571,899	$153,742	$725,641
State ($000)	$61,687	$66,347	$128,034
Local ($000)	$129,771	$46,363	$176,134

HERITAGE TOURISM IN THE UNITED STATES

The travel industry in the United States is one of the nation's largest and fastest-growing businesses.[27] According to U.S. Travel Association, in 2013, $887.9 billion was spent directly by domestic and international travelers spurring an additional $1.2 trillion in other industries. Local, state and federal governments gained $133.9 billion tax revenue directly from the tourism industry.[28]

U.S. is a favored destination for international travelers, and their spending contributes significantly to the U.S. tourism economy. About 6.4 percent of all world travel trips are to the United States; moreover, those visitors spend about 11.3 percent of all traveler spending worldwide.[29] According to U.S. Department of Commerce, international visitors spent $15.4 billion on travel to, and tourism-related activities within, the United States in the month of March, 2014. When comparing that figure to the amount spent by U.S. residents abroad on the same time period, the U.S. set a surplus of $5.1 billion.[30] Spending by domestic and international visitors totaled $900 billion in 2013, an increase of 4.0 percent over 2012. [31]

Historic sites play a crucial role in fostering leisure travel, as they comprise a significant part of the U.S. travel experience. Travel expert Arthur Frommer (1993) explained, "[p]eople travel in massive numbers to commune with the past. We all gain solace, pleasure and inspiration from contact with our roots.... [Y]ou cannot deny that seeing the cultural achievements of the past, as enshrined in period buildings, is one of the major motivators for travel."[32] A study by Mandala Research (2013) shows that a lion's share of the leisure travelers (63 percent) seek travel experiences where the "destination, its buildings and surroundings have retained their historic

[27] Task Force on Travel and Competitiveness. 2012. "National Travel and Tourism Strategy" travel.trade.gov/…national-travel-and

[28] U.S. Travel Association (2014). "U.S. Travel Answer Sheet". Retrieved from: https://www.ustravel.org/sites/default/files/page/2009/09/US_Travel_AnswerSheet_June_2014.pdf

[29] Stark Tourism Associates (2013). "USA Tourism: Trends & Statistics". Retrieved from: http://www.slideshare.net/ssoman/usa-tourism-trends-statistics-2013

[30] International Trade Administration- U.S. Department of Commerce (2014). "International Visitors Spend $15.4 Billion in March 2014". Retrieved from: http://trade.gov/press/press-releases/2014/international-visitors-spend-15-billion-in-march-2014-050914.asp

[31] Stark Tourism Associates (2013). "USA Tourism: Trends & Statistics". Retrieved from: http://www.slideshare.net/ssoman/usa-tourism-trends-statistics-2013

[32] McLendon, T., et al. (2010). *Economic Impacts of Historic Preservation in Florida*. Rutgers University.

character."[33] It further reports that "76 percent of all U.S. leisure travelers participate in cultural and/or heritage activities while traveling" (Pg. 1).

Cultural heritage visitations from overseas have been one of the fastest growing genres of tourism in the United States. In 2013, 18 million people from overseas visited cultural heritage sites in the United States, increasing by 30 percent from 2006. Almost half of the visitors (48.8 percent) came from Europe, 21.3 percent from Asia, 17.0 percent from South America, and 9.1 percent from the other regions. In 2013, top 10 overseas spenders in the U.S. were Canada ($24 billion), Japan ($15 billion), UK ($12 billion), Mexico ($9 billion), Brazil ($9 billion), China ($8 billion), Germany ($6 billion), France ($5 billion) Australia ($5 billion), and India ($4 billion). [34]

The past is a valuable tourism commodity. In addition to the knowledge and pleasure heritage places bring to the travelers, heritage tourism also generates multiple economic benefits to communities. "Heritage conservation has been portrayed as the alternative to economic development, 'either we have historic preservation, or we have economic growth.' That is a false choice. In fact, heritage-based economic strategies can advance a wide range of public policy priorities" (Rypkema, 2005).[35]

The economic outcomes of conserving heritage in municipalities has been carefully examined and documented during the past 20 to 25 years. First of all, through tourism, heritage conservation generates additional income that helps preserve the heritage sites. Conservation is not cheap, so the spending of visitors creates additional revenue that can be used to meet conservation objectives. At the same time, it enables public awareness of the need to preserve the built environment, which leads to a virtuous circle of heritage conservation (Timothy, 2011).[36]

Second, evidence of heritage tourism's positive economic impacts has been accumulating rapidly throughout the nation. That is, it been widely recognized for its net positive economic benefits. States from Maine to Florida, from Louisiana to Oregon, and from California to Virginia have performed statewide studies of heritage tourism's net economic effects.[37]

Third, heritage tourism is a strong engine for job creation, given that it generates a significant amount of direct and indirect employment per dollar of investment. Meanwhile the conservation efforts themselves create well-paid jobs that require skilled labor, creative design skills, and marketing and promotional effort. Moreover, active, continuing preservation plans for historic rehabilitation ensures that these jobs will be secure for years to come.

Fourth, heritage tourism generates high levels of state and local tax revenues per unit of investment. Indeed, it generates all forms of taxes, including income, property, sales, and several other tourism-specific taxes such as car rental, lodging, and airport fees.

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[33] Mandala Research, LLC (2013). "The 2013 Cultural & Heritage Traveler Study". Retrieved from:
http://mandalaresearch.com/index.php/purchase-reports/view_document/1-the-2009-cultural-a-heritage-traveler-study
[34] Stark Tourism Associates (2013). "USA Tourism: Trends & Statistics". Retrieved from:
http://www.slideshare.net/ssoman/usa-tourism-trends-statistics-2013
[35] Rypkema, D. (2005). "Cultural Heritage and Sustainable Economic and Social Development". *Europa Nostra*.
[36] Timothy, D. J. (2011). *Cultural heritage and tourism*. Channel View Publications.
[37] CUPR (2008). "Economic Impacts of Historic Preservation in Oklahoma". Retrieved from:
http://www.okhistory.org/shpo/econimpact.pdf

TEXAS TRAVEL AND TOURISM MARKET OVERVIEW

- Total direct travel spending in Texas was $58,382 million in 2013 (note that this is net of spending on Texas-based air transportation operations and travel agents).

- Over 500 million person-days of travel were spent in Texas in 2013. Of this time, about 84 percent (421 million) was spent by overnight travelers, and 16 percent by day trippers.

- About 133 million (26.7 percent) person-days of travel were spent by business travelers. Leisure travel comprised the balance (73.3 percent or 367 million person-days).

- About 233.5 million domestic travelers visited Texas in 2013. Roughly 70 percent traveled for leisure versus 30 percent for business.

- In 2013, the average age of a Texas visitor is 47 years of age and has a slightly lower household income than in 2012. In addition, the percentage of those having children in their household is flat to down, mirroring that of the U.S. One important thing to note is that the count of families with younger children (5 years and younger) is decreasing after two years of growth.

- About 60 percent of all nonresident overnight leisure visitors to Texas come from ten states, with 29 percent coming from Louisiana (11 percent), California (8.5 percent) and Oklahoma (8.9 percent). Visiting Friends and Relatives represents half (56 percent) of all overnight leisure travel to the State. Getaway weekends make up about (8 percent), general vacation (14 percent), special events (11 percent), and other personal (6 percent).

- Nonresident leisure visitors to Texas stay approximately 3.4 nights, which is down from 2012. Daily per person spending is at $122.

- Domestic travelers spent $52.4 billion in Texas in 2013. This included visitors from Texas ($27.5 billion spending) and from other U.S. states ($24.9 billion spending).

- In 2013, 4.9 percent of overseas visitors who came to the U.S. visited Texas; that represents a 17 percent increase from 2012.[38] Three percent of all overseas leisure tourists visited Texas. Among all overseas business visitors, 9.8 percent visited Texas.[39] Houston's visitation totals increased by 22 percent from 2012, and visits to Dallas-Plano-Irving rose 8 percent. [40]

- International travelers to Texas spent about $6.6 billion statewide in 2013. Top origins were Mexico, Canada, the United Kingdom, Germany, Brazil, Australia, Japan, and China.

- In 2013, 4.5 percent of overseas heritage tourists to the United States visited Texas.

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[38] National Travel and Tourism Office- ITA (2013). "Overseas Visitation for U.S. States, Cities, and Census Regions". Retrieved from: http://travel.trade.gov/outreachpages/download_data_table/2013_States_and_Cities.pdf
[39] National Travel and Tourism Office- ITA (2013). "Profile of Overseas Traveler to the U.S.". Retrieved from: http://travel.trade.gov/outreachpages/download_data_table/2013_Overseas_Visitor_Profile.pdf
[40] National Travel and Tourism Office- ITA (2013). "Overseas Visitation for U.S. States, Cities, and Census Regions". Retrieved from: http://travel.trade.gov/outreachpages/download_data_table/2013_States_and_Cities.pdf

- In 2012, Houston ranked ninth in international visitor spending among cities in North America. According to MasterCard Worldwide Insights, international visitors spent $3.2 billion in Houston that year.[41]

- Dallas/Fort Worth International Airport was the eighth busiest airport worldwide in terms of passenger traffic. [42]

- The six most popular activities for non-resident overnight leisure visitors were visiting (1) Friends/Relatives, (2) Culinary/Dining, (3) Shopping, (4) Movies, (5) Museum/Art Exhibits, and (6) Historic Sites.

TEXAS HERITAGE TOURISM

To evaluate Texas heritage tourism, the Center for Urban Policy Research (CUPR) at Rutgers University analyzed travel information provided by the Office of the Governor, Economic Development and Tourism division This information is based on data compiled from a 2013 Texas survey of business and leisure travelers conducted by D.K. Shifflet & Associates Ltd.(DKSA). While the DKSA survey does not focus on heritage tourism per se, certain information can be extracted and assembled to provide useful data for heritage tourism analysis.

The DKSA survey asked households to indicate up to four of their primary trip activities. In the current analysis, those Texas business or leisure travelers who cited "visit a historic site" as a primary activity in the survey were flagged as "heritage travelers." Other primary activities in the DKSA survey include "visit museums," "visit festivals," and "touring." *Only* indication of visitation to a historic site, however, is applied by CUPR to flag a heritage traveler.

It must be emphasized, however, that this approach likely underestimates the actual full incidence of Texas heritage travelers because the fact that someone did not indicate "visit a historic site" as one of their four primary trip activities does not necessarily mean that they did not visit a historic site or participate in another form of heritage tourism on their trip. Similarly "visit museums" as a primary activity could have included a historic museum or other museums that present a historical component (such as art or natural history). Nonetheless, we shall adhere to the strict definition of a Texas heritage traveler noted above, namely indication of "visit a historic site" in the DKSA survey.

All Texas travelers *not* flagged as heritage travelers (as defined above) are referred to as "non-heritage travelers." Using the DKSA database, which encompasses both day-trip and overnight travel, CUPR identifies the following groups and subgroups of Texas travelers:

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[41] Stark Tourism Associates (2013). "USA Tourism: Trends & Statistics". Retrieved from:
http://www.slideshare.net/ssoman/usa-tourism-trends-statistics-2013
[42] Stark Tourism Associates (2013). "USA Tourism: Trends & Statistics". Retrieved from:
http://www.slideshare.net/ssoman/usa-tourism-trends-statistics-2013

All Texas Travel:

1. <u>Texas Travelers</u>: All Texas day and overnight travelers.

2. <u>Heritage Travelers</u>: Texas day and overnight travelers whose trip included visiting a historic site as one (of up to four) of their primary trip activities.

3. <u>Non-heritage Travelers</u>: Texas day and overnight travelers who did not include "visit a historic site" as a primary activity in the survey.

Daytrip Visitors:

1. <u>Texas Day-trippers</u>: All Texas day-trip travelers.

2. <u>Heritage Day-trippers</u>: Texas day-trip travelers whose trip included visiting a historic site as one (of up to four) of their primary trip activities.

3. <u>Non-heritage Day-trippers</u>: Texas day-trip travelers who did not include "visit a historic site" as a primary activity in the survey.

Overnight Visitors:

1. <u>Texas Overnighters</u>: All Texas overnight travelers.

2. <u>Heritage Overnighters</u>: Texas overnight travelers whose trip included visiting a historic site as one (of up to four) of their primary trip activities.

3. <u>Non-heritage Overnighters</u>: Texas overnight travelers who did not include "visit a historic site" as a primary activity in the survey.

STATEWIDE FINDINGS

Table 3.7
Texas Traveler Profile (2013)

	All TX Travelers	**Non-heritage TX Travelers**	**Heritage TX Travelers**
Gender			
–Female	51.3%	51.0%	53.3%
Age			
–55+ years	39.8%	39.3%	43.8%
Marital status			
–% married	70.7%	70.9%	69.7%
Education			
–College graduate	22.0%	21.8%	23.9%
–Postgraduate education	14.4%	14.1%	17.1%
Employment			
–Retired	14.6%	14.3%	17.3%
–Manager/professional	30.3%	30.4%	29.5%
Origin state			
–Texas	N/A	N/A	57.1%
Accommodation type			
–Hotel/B&B	N/A	N/A	53.5%
–Private home	N/A	N/A	33.2%
Spending			
–Average per day expenditure (day & overnight travelers)	$147.99	$144.77	$175.38

Source: D.K. Shifflets survey data as analyzed by CUPR.
N/A= Information non-available

Profile of Texas Heritage Travelers

The side-by-side detail (demographic profiles and trip characteristics) of Texas heritage travelers as they compare to all-Texas and Texas non-heritage travelers, respectively, is described below. A snapshot of these comparisons is shown in Table 3.7 and discussed below.

- Compared to non-heritage travelers, heritage travelers are more likely to be female, less likely to be married, more likely to being 55 years of age or older, and more likely to be retired.

- Heritage travelers tend to have completed more years of formal education than non-heritage travelers.

Compared to non-heritage travelers, heritage travelers tend to have engaged in more years of formal education, having an above-average share with "some college education", and, specifically, also more "postgraduate education".

1. Heritage travelers tend to have a higher household income than non-heritage travelers.

    A larger proportion of heritage travelers compared to non-heritage travelers earn incomes between $75,000 and $99,999 (29.0 percent vs. 15.3 percent). The same pattern was found in the income range $100,000-$124,999 (15.8 percent vs. 11.0 percent). It is even more

distinct when it comes to day-trippers alone. 18.3 percent of heritage day-trippers earn between $100,000 and $124,999, while it is 11.1 percent for non-heritage day-trippers.

- Heritage travelers tend to spend more per day on average than do non-heritage travelers. Heritage day-trippers spend the most per day (Table 3.8).

    Overall, heritage visitors tend to outspend non-heritage visitors. As shown in the table below, all heritage travelers spent an average of $175.38 per day, compared to $144.77 averaged by non-heritage visitors.

    It is worth noting that heritage day-trippers outspent non-heritage day-trippers by about $79 per day on average ($187.15 vs. $107.57).

TABLE 3.8
Texas Average Per-Person Per-Day Traveler Spending (2013)

	All Texas	**Non-heritage**	**Heritage**
Day trip	$ 111.85	$ 107.57	$ 187.15
Overnight	$ 154.54	$ 152.12	$ 173.06
Day & Overnight	$ 147.99	$ 144.77	$ 175.38

Heritage expenditures, relative to the total spending for all Texas travel, are shown in Table 3.9. It is important to note that while travelers who visited a historic site represent only 10.5 percent of all Texas visitors, their spending—the sum total of all outlays by heritage travelers—accounted for a 12.5 percent share of total expenditures. Moreover, heritage overnighters account for 13 percent of total overnight expenditures, in spite of comprising only 11.5 (Table 3.3) percent of all overnight visitors. These findings result from the aforementioned higher-than-average daily spending of heritage travelers.

TABLE 3.9
Texas Travel Spending (2013)

	Total Traveler Spending (millions)	**Total Spending by Heritage Travelers (millions)**	**Heritage Spending as % of Total Texas Traveler Spending**
Day trip	$7,861	$707	9.0% of Day trip Spending
Overnight	$50,521	$6,591	13.0% of Overnight Spending
Days & Overnight	$58,382	$7,298	12.5% of Total Spending

When it comes to individual spending categories (Tables 3.10 – 3.15), we find that day and overnight heritage travelers spent, on a daily basis, over twice as much as non-heritage travelers on entertainment and recreation activities ($21.31 vs. $9.19). A higher entertainment/recreation outlay is especially pronounced for heritage day-trippers ($29.58) versus the same outlay by their non-heritage counterparts ($10.77). Further, it is clear that heritage day-trippers like to shop:

shopping accounted for 26.5 percent of their daily spending and is on average ($49.56) over two times higher than that spent by non-heritage day-visitors ($22.62). Spending by the heritage travelers on food (Table 3.12) is also relatively high. Transportation expenses, however (Table 3.13), are similar for both non-heritage and heritage groups. Lodging expenditures are fractionally lower for the heritage traveler than the non-heritage counterpart (Table 3.14), but other outlays (all other expenditures not specified in Tables 3.10-3.14) are twice as high for heritage traveler compared to the non-heritage group (Table 3.15).

TABLE 3.10
Texas Average Per-Day ENTERTAINMENT/RECREATION
Expenditures (2013)

	All Texas	Non-heritage	Heritage
Day trip	$11.78	$10.77	$29.58
Overnight	$10.10	$8.88	$19.67
Day & Overnight	$10.47	$9.19	$21.31

TABLE 3.11
Texas Average Per-Day SHOPPING Expenditures (2013)

	All Texas	Non-heritage	Heritage
Day trip	$24.07	$22.62	$49.56
Overnight	$15.37	$14.52	$22.09
Day & Overnight	$16.99	$15.86	$26.62

TABLE 3.12
Texas Average Per-Day FOOD&BEVERAGE Expenditures (2013)

	All Texas	Non-heritage	Heritage
Day trip	$34.03	$29.07	$49.31
Overnight	$30.01	$29.47	$34.29
Day & Overnight	$30.18	$29.40	$36.76

TABLE 3.13
Texas Average Per-Day TRANSPORTATION Expenditures (2013)

	All Texas	Non-heritage	Heritage
Day trip	$40.87	$40.68	$44.15
Overnight	$47.98	$48.35	$45.00
Day & Overnight	$46.85	$47.09	$44.86

TABLE 3.14
Texas Average Per-Day LODGING Expenditures (2013)

	All Texas	Non-heritage	Heritage
Day trip	N/A	N/A	N/A
Overnight	$47.65	$47.89	$46.05
Day & Overnight	$39.82	$39.98	$38.45

TABLE 3.15
Texas Average Per-Day OTHER Expenditures (2013)

	All Texas	Non-heritage	Heritage
Day trip	$4.98	$4.43	$14.54
Overnight	$3.35	$3.02	$5.95
Day & Overnight	$3.68	$3.25	$7.37

DIRECT ECONOMIC IMPACTS OF TEXAS HERITAGE TOURISM: HERITAGE-ATTRIBUTED EXPENDITURES

This study estimates that Texas heritage day-trippers and heritage overnighters spent $7,298 million in 2013—about 12.5 percent of all Texas traveler expenditures ($58.38 billion). Recalling the definition of a heritage traveler—"visited a historic site" as one of four primary trip activities— it would be unfair to credit the *full* $7,298 million trip expenditure to heritage tourism. As an example, that would include all the spending of a Texas business traveler to San Antonio who also planned a short trip to the Alamo. We need a more heritage-focused expenditure tally; thus, CUPR estimated the share of total outlays by Texas heritage travelers that can realistically be credited to heritage purposes—referred to as "heritage-attributed expenditures." This specification involves a three-step-stratification scheme: First, stratifying heritage travelers by "purpose of trip," namely, business or leisure trip; second, a further stratification within "purpose of trip" into more specific business-type trips and leisure-type trips; third, a further stratification within those groups specified in the second stratification into two groups, designated as "Group A" and "Group B." Group A includes heritage travelers whose primary trip activities included "theme/amusement park," "play golf," "boat/sail," "hunt/fish," or "snow ski." Group B encompasses heritage travelers whose primary trip activities did *not* include those mentioned in Group A. The rationale for this

stratification scheme rests on the assumption that a Group A–type activity presumably takes up a significant portion of one's day. Thus, a business traveler for example, whose day trip involved attending a convention and playing golf is indexed as someone with a relatively *smaller* contribution to heritage-attributed spending even though this traveler included "visit a historic site" as a primary trip activity on the survey.

The adjusted (heritage-attributed) expenditures are tabulated in Table 3.16. This figure shows that heritage-attributed day-trip expenditures are estimated to be $193 million annually. The amount for heritage-attributed overnight spending is estimated at $2,062 million. Thus, all heritage-attributed expenditures amount to a total annual (2013) outlay of $2,255 million. While heritage overnighters account for just over 90 percent of all total heritage travelers, the daily average per-capita contribution to total heritage-attributed expenditures by heritage day-trippers ($187.15) is over 108 percent that of heritage overnighters ($173.06) (see Table 3.8).

It is important to note that the estimates for heritage-attributed expenditures are *conservative.* There are two main reasons for this. First, as mentioned earlier, based on the definition of heritage traveler, the actual amount of heritage travel to historic sites is underestimated. Secondly, a priori, the portion of spending that could reasonably credited to heritage purposes is scaled down by looking at the *minimum* that it plausibly could be. Thus the reader should interpret the heritage-attributed spending estimate made here as the *lower bound.* In other words, the total annual (2013) heritage-attributed outlay of $2,255 million is, if anything, on the low side.

The specific heritage-attributed outlay of $2,255 million annually represents about 4 percent of the Texas traveler spending. The progression of figures from all Texas spending (all spending by all Texas travelers) to all heritage spending (all spending by all Texas heritage travelers) to, finally, heritage-attributed spending (that portion of all Texas heritage traveler spending reasonably associated with the heritage portion of their trip) is summarized in Table 3.16.

TABLE 3.16
Summary of Texas Traveler Spending (2013)

	Total Traveler Spending ($ millions)	Total Spending By Heritage Travelers ($ millions)	Heritage Spending as % of Total Texas Traveler Spending	Total Heritage-Attributed Spending ($ millions)	Heritage-Attributed Spending as % of Total Texas Traveler Spending
Day trip	$7,861	$707	9.0%	$193	2.5%
Overnight	$50,521	$6,591	13.0%	$2,062	4.1%
All	*$58,382*	*$7,298*	*12.5%*	*$2,255*	*3.9%*

TOTAL ECONOMIC IMPACTS FROM HERITAGE TOURISM

The following section translates the $2,255 million ($2.25 billion) annual Texas heritage-attributed direct spending into total economic benefits by applying the R/ECON™ I–O Model. An overview of the results is contained in Table 3.17. It shows that the total annual national economic impacts of the $2.25 billion in average annual heritage-attributed spending in Texas includes 70,166 new jobs, $2.82 billion in income, and $4.21 billion in gross domestic product. As in the case of historic rehabilitation construction, Texas receives roughly two-thirds of these gains (54,204 jobs, $2.03 billion in income, and $2.98 billion in GDP). In-state wealth creation amounts to about $2.6 billion.

TABLE 3.17
Total Economic Impacts of the Annual
Texas Heritage Tourism Spending ($2.25 Billion)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person years)	54,204	15,962	70,166
Income ($000)	$2,029,480	$789,849	$2,819,329
GDP ($000)*	$2,976,402	$1,235,072	$4,211,474
Total Taxes ($000)**	$763,357	$266,452	$1,029,809
Federal ($000)	$571,899	$153,742	$725,641
State ($000)	$61,687	$66,347	$128,034
Local ($000)	$129,771	$46,363	$176,134
In-State Wealth ($000)***	$2,607,451	------	------

*GDP =Gross Domestic Product
**Total Taxes = business plus household taxes
***In-State Wealth = GDP minus Federal Indirect Business Taxes

Nationwide Impacts

The details of the economic effects of the $2.25 billion in direct heritage tourism spending are contained in Exhibits 3.1 to 3.4 (see end of chapter). Item 1 of Section II in Exhibit 3.1 shows, for instance, that the direct effects of heritage tourism spending to the nation translate into 26,911 new jobs, and an increase of $870 million in income and $1.23 billion in GDP. The GDP/investment ratio (1.9:1) reveals lower levels of importing in the support of heritage tourism than in the support of historic building rehabilitation (GDP/investment ratio = 3:1). Multiplier effects add 43,255 more jobs, $1.95 billion more income, and $2.98 billion more GDP. Therefore, the total national economic impacts of Texas heritage tourism—the sum of its direct and indirect and induced effects—are 70,166 jobs (26,911 + 43,255), $2.82 billion income ($870 million + $1.95 billion), and $4.21 billion in GDP ($1.23 billion + $2.98 billion).

In all instances, the indirect and induced effects exceed the direct effects (the traditional multipliers are greater than 2.0). Nevertheless, the multipliers at the national level tend to be lower for heritage tourism than for historic building rehabilitation. This difference is due to the relatively greater amount of imported goods required to support heritage tourism. An economy can generate only limited multiplier effects from imported goods and services.

A finer breakdown of national economic impacts by industry (Exhibit 3.2) indicates that of the total 70,166 jobs generated nationwide by Texas heritage tourism, more than a quarter are in the

accommodation and food service industries (18,741 jobs). Another quarter of jobs is divided into three major industries: retail trade (6,847 jobs), manufacturing (5,763 jobs), and other services (except government) (5,068 jobs). Of the total $2.82 billion in labor income generated, the accommodation and food service industries contributed the greatest portion ($468 million), followed by manufacturing ($367 million), finance and insurance ($325 million), and retail trade ($239 million). A simple division of the number of jobs into the amount of labor income generated shows that, nationwide, the average income per job for all jobs amounts to $40,181; however, average income differs significantly by industry. The average income per job supporting heritage tourism ranks highest in the utility industry ($157,285), followed by the mining industry ($135,479) and the wholesale trade industry ($86,643). The average contribution per job in the accommodation/food service industries ($24,954) and retail trade ($34,935) are comparatively below the average. These two industries are characterized for paying low wages and are composed of high-proportions of part-time jobs.

Due to Texas heritage tourism's emphasis in retail trade and services, the nation's average labor income per *direct* job is substantially lower than for *indirect* jobs. This dichotomy in job quality between jobs created indirectly and directly by Texas heritage tourism is displayed in Items 1 and 2 in Section II of Exhibit 3.1: indirectly created jobs pay on average $45,056, while jobs created directly pay on average $32,344—a difference of $12,712 per job. Low-paying jobs, in other words, indirectly create other high-paying jobs. Some, but not all, of the pay gap between direct and indirect jobs is due to the part-time nature of the direct jobs created in the retail trade and the accommodation /food service industries. Exhibit 3.2 shows that of the 18,741 jobs created in the accommodation/food services industries, over 60 percent (11,436 jobs) are in the food services and drinking places category. Furthermore, nearly 25 percent of the 5,763 manufacturing jobs created through Texas heritage tourism are in the food product manufacturing (1,433 jobs).

An evaluation of job productivity (GDP per job) reveals an even larger gap of $22,852 ($68,786 versus $45,934) between indirect and direct jobs supporting Texas heritage tourism. The difference between the two indirect-to-direct-job pay gaps (labor income/job and GDP/job) suggests that heritage tourism is far more profitable to firms indirectly affected by the industry. At any rate, the pay gap between the indirectly and directly created jobs in this category causes the traditional national multiplier for labor income to be higher for heritage tourism than for historic building rehabilitation. It also causes the national employment multiplier to be extraordinarily low.

Which helps the national economy more on average, $1 million in heritage tourism spending or $1 million in historic building rehabilitation? The last section of Exhibits 2.1 and 3.1 provide the answer. A comparison of these two sections reveals that historic building rehabilitation provides a substantially higher return for every measure. One can also readily infer that weak investment in historic building rehabilitation will eventually lead to lower annual spending on heritage tourism. Nonetheless, while historic building rehabilitation technically "helps" the national economy more than does heritage tourism, it may be difficult to get one without the other.

State-Level Impacts

Exhibits 3.3 and 3.4 present the total in-state economic effects of heritage tourism spending. Item 1 in Section II of Exhibit 3.3 shows that Texas retains about 25,631 or 95 percent, of the total direct jobs created in support of heritage tourism (26,911 jobs) — this percentage is analogous to the 100 percent job retention rate for historic building rehabilitation. Texas retains a lower

proportion of the indirect and induced heritage tourism employment impacts—only 66 percent (28,573 of 43,255 jobs).

In sum, through heritage tourism Texas gains 54,204 jobs (77 percent of the total 70,166 jobs generated nationally), $2.03 billion in income (72 percent of the $2.82 billion in income generated nationally), and $2.98 billion in GDP (71 percent of the $4.21 billion added to national GDP). Heritage tourism's state multiplier effects (measured by subtracting one from the multipliers and dividing the region's multiplier by the nation's) range between 74 and 82 percent of the nation's multiplier (Exhibits 3.1 and 3.3).

Thus, the economic benefits of heritage tourism that accrue to Texas are almost fairly contributed from both direct and indirect/induced effects. As we mentioned earlier, the jobs created paid relatively low wages. At $37,442, the average labor income per job in Texas generated through the tourism is below the equivalent national average labor income per job of $40,181. Even the jobs that Texas gets indirectly through heritage tourism have below-average salaries—$42,015 per job—compared to what the rest of the nation receives—$45,056 per job.

Finer-grained detail of state impacts by industry (Exhibit 3.4) reflects concentrations and patterns similar to those noted at the national level. Of the 54,204 total state-level jobs derived from heritage tourism, most are to be found in accommodation and food services industries (17,482 jobs), and the second to the fourth are in the retail trade (5,322 jobs), manufacturing (4,333 jobs), and other services (except government) (3,805 jobs). Of the total $2.03 billion generated in annual income, a similar pattern is found: the food services and drinking places industries garner $224 million, the accommodation industries garner $216 million, and the retail trade industries garner $184 million. The accommodation and food services industries also comprise $275 million and $319 million, respectively, of the total $2.98 billion increase in state gross domestic product (Exhibit 3.4).

Exhibit 3.1
National Economic and Tax Impacts of Annual Texas Heritage Tourism
($2.25 billion investment)

	Output	Employment	Earnings	GDP
	($1,000)	(jobs)	($1,000)	($1,000)
I. Total Effects (Direct + Indirect/Induced)				
1. Agriculture, Forestry, Fishing, and Hunting	199,531.4	4,129	86,221.2	100,977.9
2. Mining	71,738.9	117	15,851.1	47,295.2
3. Utilities	125,950.1	161	25,323.0	68,296.8
4. Construction	44,436.5	354	23,562.8	25,234.5
5. Manufacturing	1,443,774.0	5,763	366,692.6	518,009.4
6. Wholesale Trade	186,436.6	509	44,101.1	63,809.6
7. Retail Trade	521,926.2	6,847	239,200.8	347,946.3
8. Transportation and Warehousing	444,498.8	2,546	152,210.4	240,455.8
9. Information	307,219.2	1,083	77,959.1	178,033.3
10. Finance, Insurance, Real Estate, Rental, and Leasing	1,673,741.1	8,367	411,493.3	864,277.4
11. Professional and Business Services	746,415.2	6,590	384,164.7	471,990.4
12. Educational Services, Health Care, and Social Assistance	473,207.9	5,185	258,712.0	278,863.8
13. Arts, Entertainment, Recreation, and Hospitality	1,506,215.4	23,011	564,603.0	838,411.5
14. Other Services (including Government Enterprise)	1,863,257.4	5,504	169,233.6	167,871.3
Total Effects	9,608,348.6	70,166	2,819,328.6	4,211,473.5
II. Distribution of Effects and Multipliers				
1. Direct Effects	2,255,000.0	26,911	870,407.6	1,236,141.7
2. Indirect/Induced Effects	7,353,348.6	43,255	1,948,921.0	2,975,331.8
3. Total Effects	9,608,348.6	70,166	2,819,328.6	4,211,473.5
4. *Multipliers (= 3 / 1)*	*4.261*	*2.607*	*3.239*	*3.407*

	GDP
III. Composition of GDP	
1. Compensation	2,316,465.9
2. Taxes	730,609.2
a. Local	125,522.0
b. State	111,093.2
c. Federal	493,993.9
3. Profits, Dividends, Rents, and Other	1,164,398.4
4. Total GDP (= 1 + 2 + 3)	4,211,473.5

IV. Tax Accounts	Business	Household	Total
1. Labor Income	2,316,465.9	2,316,465.9	----------------
2. Taxes	730,609.2	299,199.7	1,029,808.9
a. Local	125,522.0	50,612.2	176,134.3
b. State	111,093.2	16,940.9	128,034.2
c. Federal	493,993.9	231,646.6	725,640.5

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	31.1
Earnings	$1,250,256.6
State Taxes	$56,777.9
Local Taxes	$78,108.3
GDP	$1,867,615.7

Initial Expenditure (in Dollars)	**$2,255,000,000.0**

Exhibit 3.2
National Economic Impacts of Annual Texas Heritage Tourism
by 3-Digit Industry Classification ($2.25 billion investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**199531.4**	**4129**	**86221.2**	**100977.9**
111CA	Crop and animal production (Farms)	179310.4	3610	75331.5	86826.4
113FF	Forestry, fishing, and related activities	20221.1	519	10889.8	14151.5
	Mining	**71738.9**	**117**	**15851.1**	**47295.2**
211	Oil and gas extraction	48064.2	52	11444.2	33615.1
212	Mining, except oil and gas	21942.2	59	3820.6	12492.1
213	Support activities for mining	1732.5	7	586.3	1188.0
22	**Utilities**	**125950.1**	**161**	**25323.0**	**68296.8**
23	**Construction**	**44436.5**	**354**	**23562.8**	**25234.5**
	Manufacturing	**1443774.0**	**5763**	**366692.6**	**518009.4**
311FT	Food product manufacturing	371581.5	1433	54992.1	102124.7
313TT	Textile and textile product mills	31073.9	166	7247.5	9580.4
315AL	Apparel manufacturing	34537.0	349	12250.4	14149.5
321	Wood product manufacturing	17555.4	88	4256.2	5055.2
322	Paper manufacturing	59089.2	155	10997.4	18619.7
323	Printing and related support activities	40984.9	247	13101.0	18262.7
324	Petroleum and coal products manufacturing	251058.9	350	117750.0	113306.5
325	Chemical manufacturing	171236.3	198	24869.3	62213.4
326	Plastics and rubber products manufacturing	55304.1	166	10337.0	17391.4
327	Nonmetallic mineral product manufacturing	20078.1	71	4985.3	8165.3
331	Primary metal manufacturing	55374.5	770	6663.8	13862.5
332	Fabricated metal product manufacturing	69407.1	336	19566.4	28222.5
333	Machinery manufacturing	25653.0	104	6791.2	10078.6
334	Computer and electronic product manufacturing	51798.8	173	16636.7	26474.4
335	Electrical equipment and appliance manufacturing	19875.1	327	4978.0	7858.0
3361MV	Motor vehicle, body, trailer, and parts manufacturing	67842.8	169	14058.6	20054.0
3364OT	Other transportation equipment manufacturing	14846.0	44	3281.4	4802.1
337	Furniture and related product manufacturing	17062.6	152	6491.3	6321.6
339	Miscellaneous manufacturing	69414.7	464	27439.1	31467.0
42	**Wholesale trade**	**186436.6**	**509**	**44101.1**	**63809.6**
44RT	**Retail trade**	**521926.2**	**6847**	**239200.8**	**347946.3**
	Transportation and warehousing, excluding Postal Service	**444498.8**	**2546**	**152210.4**	**240455.8**
481	Air transportation	194852.5	786	68349.2	124115.3
482	Rail transportation	21585.5	49	5584.2	9515.9
483	Water transportation	21192.3	73	6601.6	11081.2
484	Truck transportation	22952.2	72	4039.5	6970.7
485	Transit and ground passenger transportation	75980.9	895	31194.2	33014.9
486	Pipeline transportation	8543.8	15	6293.3	5013.0
487OS	Other transportation and support activities	77362.2	462	21639.8	39380.5
493	Warehousing and storage	22029.4	194	8508.5	11364.3
	Information	**307219.2**	**1083**	**77959.1**	**178033.3**
511	Publishing including software	91906.2	513	31401.8	52412.7
512	Motion picture and sound recording industries	26704.1	125	6658.1	15815.0
513	Broadcasting and telecommunications	36696.2	114	13476.3	21111.7
514	Information and data processing services	151912.7	332	26422.8	88693.9
	Finance and insurance	**804207.4**	**3811**	**325190.5**	**417010.7**
521CI	Federal Reserve banks, credit intermediation and related services	199814.2	1120	55968.8	118153.4
523	Securities, commodity contracts, investments	224125.4	1111	127669.8	103837.0
524	Insurance carriers and related activities	296436.5	1565	113208.9	152138.9
525	Funds, trusts, and other financial vehicles	83831.3	14	28343.0	42881.4

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Real estate, rental, and leasing	**869533.7**	**4571**	**114645.8**	**490148.1**
531	Real estate	351092.0	3953	78138.1	125556.1
532RL	Rental and leasing services and lessors of intangible assets	518441.7	618	36507.7	364592.0
	Professional and technical services	**380040.9**	**2412**	**171715.0**	**238667.0**
5411	Legal services	57229.6	20	1668.5	29866.8
5412OP	Other professional, scientific and technical services	255049.2	1965	130313.2	160206.0
5415	Computer systems design and related services	67329.2	425	39556.5	48384.2
55	Management of companies and enterprises	432.9	2	176.8	210.1
	Administrative and waste services	**366374.2**	**4178**	**212449.7**	**233323.4**
561	Administrative and support services	349863.3	4070	204957.5	224997.9
562	Waste management and remediation services	16510.9	108	7492.2	8325.5
61	**Educational services**	**78997.8**	**997**	**38721.1**	**46223.5**
	Health care and social assistance	**394210.0**	**4188**	**219990.9**	**232640.3**
621	Ambulatory health care services	175524.0	1654	109679.0	107441.0
622HO	Hospitals and nursing and residential care facilities	187770.9	1593	89387.7	106118.0
624	Social assistance	30915.2	941	20924.3	19081.3
	Arts, entertainment, and recreation	**377124.6**	**4270**	**96956.3**	**204843.2**
711AS	Performing arts, museums, and related activities	291841.9	3446	77778.1	159657.3
713	Amusements, gambling, and recreation	85282.7	824	19178.2	45185.9
	Accommodation and food services	**1129090.8**	**18741**	**467646.6**	**633568.4**
721	Accommodation	508618.3	7304	219623.3	280751.7
722	Food services and drinking places	620472.6	11436	248023.3	352816.6
81	**Other services, except government**	**246417.8**	**5068**	**147057.6**	**140031.5**
GOV	**Government enterprises and the Postal Service**	**42007.5**	**436**	**22176.0**	**27839.7**
HH	**Households**	**1574832.0**	**0**	**0.0**	**0.0**
	Total	**9,608,348.6**	**70,166**	**2,819,328.6**	**4,211,473.5**

Exhibit 3.3
<u>In-State</u> Economic and Tax Impacts of Annual Texas Heritage Tourism
($2.25 billion investment)

		Output ($1,000)	Employment (jobs)	Earnings ($1,000)	GDP ($1,000)
I. Total Effects (Direct + Indirect/Induced)					
1.	Agriculture, Forestry, Fishing, and Hunting	118,115.6	3,081	48,065.6	62,672.3
2.	Mining	42,460.8	60	9,949.8	28,235.9
3.	Utilities	103,083.6	131	21,540.4	56,034.0
4.	Construction	30,151.8	230	16,461.0	17,173.4
5.	Manufacturing	961,782.5	4,333	276,800.2	357,652.4
6.	Wholesale Trade	154,294.2	417	36,782.3	52,808.6
7.	Retail Trade	394,701.3	5,322	184,272.4	261,896.4
8.	Transportation and Warehousing	352,290.5	1,873	119,590.0	195,987.0
9.	Information	187,075.3	716	46,271.4	108,617.6
10.	Finance, Insurance, Real Estate, Rental, and Leasing	919,053.8	5,135	214,124.8	475,340.0
11.	Professional and Business Services	467,580.5	4,115	242,506.0	297,480.4
12.	Educational Services, Health Care, and Social Assistance	306,448.3	3,423	169,006.9	179,916.9
13.	Arts, Entertainment, Recreation, and Hospitality	1,390,653.2	21,198	521,242.5	770,465.5
14.	Other Services (including Government Enterprise)	1,772,882.0	4,171	122,866.4	112,122.0
	Total Effects	7,200,573.5	54,204	2,029,479.7	2,976,402.4
II. Distribution of Effects and Multipliers					
1.	Direct Effects	2,147,722.0	25,631	828,999.3	1,177,334.2
2.	Indirect/Induced Effects	5,052,851.5	28,573	1,200,480.4	1,799,068.2
3.	Total Effects	7,200,573.5	54,204	2,029,479.7	2,976,402.4
4.	*Multipliers (= 3 / 1)*	*3.353*	*2.115*	*2.448*	*2.528*

III. Composition of GDP

1.	Compensation				1,655,443.9
2.	Taxes				524,136.0
	a. Local				93,498.5
	b. State				61,686.7
	c. Federal				368,950.8
3.	Profits, Dividends, Rents, and Other				796,822.5
4.	Total GDP (= 1 + 2 + 3)				2,976,402.4

IV. Tax Accounts		Business	Household	Total
1.	Labor Income	1,655,443.9	2,029,479.7	----------------
2.	Taxes	524,136.0	239,220.9	763,356.9
	a. Local	93,498.5	36,272.9	129,771.4
	b. State	61,686.7	0.0	61,686.7
	c. Federal	368,950.8	202,948.0	571,898.8

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	24.0
Earnings	$899,991.0
State Taxes	$27,355.5
Local Taxes	$57,548.3
GDP	$1,319,912.4

Initial Expenditure (in Dollars)   **$2,255,000,000.0**

Exhibit 3.4
In-State Economic Impacts of Annual Texas
Heritage Tourism by 3-Digit Industry Classification ($2.25 billion investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**118115.6**	**3081**	**48065.6**	**62672.3**
111CA	Crop and animal production (Farms)	103568.9	2684	40667.5	52576.0
113FF	Forestry, fishing, and related activities	14546.6	397	7398.0	10096.3
	Mining	**42460.8**	**60**	**9949.8**	**28235.9**
211	Oil and gas extraction	32031.2	30	7631.3	22402.0
212	Mining, except oil and gas	9426.6	26	1978.8	5146.2
213	Support activities for mining	1002.9	4	339.6	687.7
22	**Utilities**	**103083.6**	**131**	**21540.4**	**56034.0**
23	**Construction**	**30151.8**	**230**	**16461.0**	**17173.4**
	Manufacturing	**961782.5**	**4333**	**276800.2**	**357652.4**
311FT	Food product manufacturing	270501.5	1184	42223.5	76616.7
313TT	Textile and textile product mills	14435.8	83	3251.7	4385.6
315AL	Apparel manufacturing	17583.5	202	6314.2	7338.8
321	Wood product manufacturing	10199.1	51	2475.5	2947.8
322	Paper manufacturing	33132.3	95	6144.7	10342.9
323	Printing and related support activities	11457.0	77	3595.3	4993.2
324	Petroleum and coal products manufacturing	228703.7	362	123078.8	111181.8
325	Chemical manufacturing	97270.5	114	13768.0	34397.6
326	Plastics and rubber products manufacturing	32654.0	99	5915.7	10272.6
327	Nonmetallic mineral product manufacturing	12956.1	46	3227.9	5249.4
331	Primary metal manufacturing	30165.4	730	3721.7	7612.8
332	Fabricated metal product manufacturing	39046.4	211	11216.4	15939.2
333	Machinery manufacturing	14031.1	61	3667.8	5460.1
334	Computer and electronic product manufacturing	25264.8	86	7942.0	12964.0
335	Electrical equipment and appliance manufacturing	7335.6	286	1860.3	2887.5
3361MV	Motor vehicle, body, trailer, and parts manufacturing	37703.9	93	7684.6	11208.1
3364OT	Other transportation equipment manufacturing	7400.2	25	1739.9	2232.6
337	Furniture and related product manufacturing	11087.2	103	4385.4	4127.4
339	Miscellaneous manufacturing	60854.6	423	24586.8	27494.0
42	**Wholesale trade**	**154294.2**	**417**	**36782.3**	**52808.6**
44RT	**Retail trade**	**394701.3**	**5322**	**184272.4**	**261896.4**
	Transportation and warehousing, excluding Postal Service	**352290.5**	**1873**	**119590.0**	**195987.0**
481	Air transportation	182580.1	734	64044.4	116298.1
482	Rail transportation	13172.2	29	3403.3	5807.0
483	Water transportation	12818.1	42	3993.0	6702.4
484	Truck transportation	15269.6	49	2751.2	4637.4
485	Transit and ground passenger transportation	48092.3	583	20046.3	20896.9
486	Pipeline transportation	6045.6	10	4491.1	3547.2
487OS	Other transportation and support activities	62575.3	317	16206.2	32043.1
493	Warehousing and storage	11737.2	111	4654.6	6054.9
	Information	**187075.3**	**716**	**46271.4**	**108617.6**
511	Publishing including software	59717.5	359	20820.3	34215.8
512	Motion picture and sound recording industries	10360.4	70	2710.2	6301.6
513	Broadcasting and telecommunications	21436.2	81	6608.6	12321.2
514	Information and data processing services	95561.2	205	16132.3	55779.0
	Finance and insurance	**375472.8**	**2221**	**138758.2**	**173315.0**
521CI	Federal Reserve banks, credit intermediation and related services	117120.0	700	32625.3	69261.6
523	Securities, commodity contracts, investments	105106.2	655	61543.4	48853.5
524	Insurance carriers and related activities	152631.1	863	44364.5	54885.0
525	Funds, trusts, and other financial vehicles	615.5	3	224.9	314.8

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Real estate, rental, and leasing	**543581.0**	**2914**	**75366.6**	**302025.0**
531	Real estate	232235.2	2535	52848.0	83051.0
532RL	Rental and leasing services and lessors of intangible assets	311345.8	379	22518.6	218974.0
	Professional and technical services	**229095.6**	**1367**	**101231.0**	**145860.2**
5411	Legal services	38302.3	13	1127.5	19989.1
5412OP	Other professional, scientific and technical services	149627.2	1094	75964.9	95775.8
5415	Computer systems design and related services	40969.9	259	24058.5	30000.2
55	Management of companies and enterprises	196.1	1	80.1	95.2
	Administrative and waste services	**238484.9**	**2747**	**141275.0**	**151620.2**
561	Administrative and support services	229672.6	2690	137205.8	147176.7
562	Waste management and remediation services	8812.3	57	4069.2	4443.5
61	**Educational services**	46108.0	594	21881.8	26407.5
	Health care and social assistance	**260340.3**	**2829**	**147125.1**	**153509.5**
621	Ambulatory health care services	113886.2	1090	71671.2	69695.4
622HO	Hospitals and nursing and residential care facilities	125857.3	1075	61205.1	71101.4
624	Social assistance	20596.8	664	14248.7	12712.7
	Arts, entertainment, and recreation	**330456.2**	**3716**	**81313.9**	**175966.9**
711AS	Performing arts, museums, and related activities	270741.3	3171	70723.4	147515.2
713	Amusements, gambling, and recreation	59714.9	545	10590.6	28451.7
	Accommodation and food services	**1060197.0**	**17482**	**439928.6**	**594498.6**
721	Accommodation	499099.5	7190	215602.8	275497.4
722	Food services and drinking places	561097.5	10292	224325.7	319001.2
81	**Other services, except government**	**171406.2**	**3805**	**108606.5**	**94401.7**
GOV	**Government enterprises and the Postal Service**	**26643.7**	**366**	**14259.9**	**17720.2**
HH	**Households**	**1574832.0**	**0**	**0.0**	**0.0**
	Total	**7,200,573.5**	**54,201**	**2,029,254.8**	**2,976,087.6**

CHAPTER FOUR

PROFILE AND ECONOMIC IMPACTS OF TEXAS MAIN STREET PROGRAM

INTRODUCTION AND SUMMARY

For decades, the downtown of many urban and rural centers thrived; downtown represented the "main street" of the community. These were the places where many worked and yet more shopped, ate, and played; however, times have changed. Many communities relied on their rail and road connections, and changes in transportation networks and logistical systems started to bypass them, placing them in precarious economic situations. As a consequence, the main streets of many communities throughout the United States have been superseded by suburban malls, restaurants, movie theatres, and the like-- many of which now are conveniently clustering just off freeway exit ramps. To counter this trend, the National Trust for Historic Preservation established the Main Street Program. Naturally, the National Trust is not solely interested in revitalizing the towns but also attempts to retain some of the historic character of the traditional downtown centers before they are entirely lost. This effort has grown nationally and, not surprisingly, numerous communities in Texas have opted to participate.

This chapter tells the national and Texas Main Street Program story and calculates the economic contribution to Main Street in Texas. It begins with national background to this initiative and highlights its cardinal themes and principles. Following this national overview, the Main Street program in Texas is described. Since the program serves as a backdrop to the communities in this state that have become Main Street participants, the chapter assembles the reinvestment statistics in the Texas Main Street communities. The reinvestment from these Texas Main Street communities has been considerable: the net[43] annual average of recent investment amounts to nearly $224 million, while the cumulative investment (the amount invested since the Main Street began in Texas in 1981) totals $5.29 billion[44]. The chapter concludes by entering the recent annual and cumulative Texas Main Street program investments in the R/ECON™ I-O Model. This procedure yields the direct and multiplier economic impacts of the Main Street program activity in Texas.

SUMMARY OF FINDINGS

- With a total of 87 active programs reflected in the 2013 data, the State of Texas has one of the most extensive and successful Main Street programs in the United States.

- Since the Texas Main Street Program began in 1981, the program's investments have accumulated to a total of $5.21 billion[45] (see Table 4.1).

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[43] This figure is net of outlays for capital purposes and visitor-supported revenues. The capital outlays and visitor revenues are netted out because these spending components have already been included in the historic rehabilitation and the heritage tourism economic calculations, respectively.

[44] All investment amounts have been adjusted for inflation, using 2013 dollars.

[45] This estimate includes all Main Street Program participants between 1981 and 2013.

TABLE 4.1
Cumulative Investment by the Texas Main Street Program, 1981-2013
(Constant Million 2013 $)

Component	Total*	Percent
Rehabilitation	$ 1,533.0	29.4%
New Construction	$ 977.4	18.8%
Buildings Sold	$ 1,355.0	25.9%
Joint Ventures	$ 419.5	8.1%
Public Projects	$925.1	17.8%
TOTAL	$ 5,210.0	100.0%

*Data for 1998 not included (not available)

- In terms of jobs, business starts, and volunteer hours, the Texas Main Street Program has accumulated the following since its inception:

TABLE 4.2
Cumulative Jobs, Business Starts, and Volunteer Hours
by Texas Main Street Program, 1981-2013

Component	Total*
Volunteer Hours	1,020,180
Net Starts	7,794
Jobs Created	31,268

*Data for 1998 not included (not available)

- The annual average of the Texas Main Street Program total investment since its start is $157.9 million. Moreover, nearly 950 jobs were created each year, along with about 83,000 volunteer hours.

TABLE 4.3
Annual Average Investment by Texas Main Street Program, 1981-2013
(Constant Million 2013 $)

Component	Total	Percent
Rehabilitation	$ 46.6	29.4%
New Construction	$ 29.6	18.8%
Buildings Sold	$ 41.0	25.9%
Joint Ventures	$ 12.7	8.1%
Public Projects	$ 28.0	17.8%
TOTAL	$ 157.9	100.0%

- More recently (over the last four reporting years), the Texas Main Street Program has invested $174.4 million annually, on average. Clearly, more has been invested in Main Street recently; however, due to hard economic times, public investment has replaced private investment.

TABLE 4.4
Recent (2010-2013) Annual Investment by the Texas Main Street Program
(Constant Million 2013 $)

Component	Total	Percent
Rehabilitation	$38.4	22.1%
New Construction	$30.5	14.5%
Buildings Sold	$20.3	11.6%
Joint Ventures	$13.1	8.1%
Public Projects	$72.1	41.3%
Total	$174.4	100.0%

- In terms of jobs, business starts, and volunteer hours, the recent annual average of the Texas Main Street Program amounts to:

TABLE 4.5
Annual Average Jobs, Starts & Volunteer Hours
by Texas Main Street Program since 2010

Component	Total
Volunteer Hours	95,991
Net Starts	284
Net Gain in Jobs Created	1,327

- The cumulative direct economic impacts of the Texas Main Street program, for the years 1981 to 2013, totaled $5.29 billion. The total investment amount was calculated by, first, adding the investments on rehabilitation, new construction, joint ventures, and public projects (see Table 4.1); these values add up to $3.855 billion. Note that we excluded the amount reported for buildings sold from the calculation, because this activity does not have a multiplier effect. The second part of the calculation involved quantifying (in monetary value) the 31,268 jobs created in Texas since the program initiated in 1981 (see Table 4.2); this calculation yields a result of $1.435 billion. When we add the $3.855 billion in investments to this $1.435 billion from the long-run retail-type jobs created, the result yields the $5.29 billion in cumulative direct effects for the Texas Main Street program.

- The total economic impacts, including both direct and multiplier effects, from the $5.29 billion of *cumulative* Texas Main Street investment included of 126,719 jobs in Texas (out of 138,724 jobs created nationwide), leading to $7.36 billion in GDP (of about $10.08 billion in national GDP), $5.76 billion in labor income (of about $7.67 billion nationally) and $6.67 billion in added in-state wealth (see table 4.6).

TABLE 4.6
Economic Impacts of the Cumulative (1981-2013)
Texas Main Street Investment ($5.29 billion)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	126,719	36,112	162,831
Income ($000)	$5,762,710	$1,909,362	$7,672,072
GDP ($000)*	$7,362,222	$2,721,413	$10,083,635
In-State Wealth ($000)**	$6,674,821	------	------

    *GDP =Gross Domestic Product
    **In-State Wealth = GDP minus Federal Indirect Business Taxes

- Nationwide, the $5.29 billion in cumulative Texas Main Street Program investment generated a total of $2.7 billion in taxes (federal, state, and local) from both business and households (see Table 4.7); Texas captures 68 percent ($1.83 billion) of that total. Statewide, the Texas Main Street Program investment generates a total of $563 million in state and local taxes ($235 million and $328 million, respectively)—this is equivalent to 72 percent of the total $879 million in state and local taxes generated nationally.

TABLE 4.7
Economic Impacts of the Cumulative (1981-2013)
Texas Main Street Investment ($5.29 billion):
Total Tax Contributions

	In Texas	Outside Texas	Total (U.S.)
Total Taxes ($000)	$1,827,151	$884,426	$2,711,577
Federal ($000)	$1,263,672	$568,915	$1,832,587
State ($000)	$235,166	$188,797	$423,963
Local ($000)	$328,313	$126,714	$455,027

- Following the same procedures used to calculate the *cumulative* direct economic impacts of the Texas Main Street program, we calculated the Texas Main Street Program average annual investment. The annual investment totaled $238 million, and was calculated from the average investment/jobs created between 2010 and 2013. Furthermore, we modified the aforementioned $238 million annual investment by discounting funds that overlapped with historic rehabilitation and heritage tourism funds; the net annual Texas Main Street Program investment amounted to $224 million. This figure is net of outlays for capital purposes and visitor-supported revenues. The capital outlays and visitor revenues are netted out because these spending components have already been included in the historic rehabilitation (Chapter 2) and the heritage tourism (Chapter 3).

- The economic impacts of the *net* annual investment of $224 million included the creation of over 5,385 jobs in Texas (out of 6,901 jobs created nationwide), leading to $310 million in

GDP (of about $428 million in national GDP), $240 million in labor income (of about $323 million nationally), and $281 million in added in-state wealth.

TABLE 4.8
Economic Impacts of the Annual (2010-2013 Average)
Net* Texas Main Street Investment ($224 million)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	5,385	1,516	6,901
Income ($000)	$240,303	$83,508	$323,811
GDP ($000)**	$309,959	$118,049	$428,008
In-State Wealth ($000)***	$281,066	------	------

*Net = $238 million total annual outlays minus spending related to Heritage Tourism and Rehabilitation (outlays already tallied in Chapters 2 and 3).
**GDP =Gross Domestic Product
***In-State Wealth = GDP minus Federal Indirect Business Taxes

- Nationwide, the $224 million in direct spending from the Texas Main Street Program generates a total of $109 million in taxes (federal, state, and local) from both business and households (Table 4.9). Texas captures 71 percent ($77 million) of total taxes. Statewide, the $224 million in direct spending from the Texas Main Street Program generates a total of $24 million in state and local taxes ($10 million and $14 million, respectively), for an aggregate 67 percent of the total $36 million in state and local taxes generated nationally.

TABLE 4.9
Economic Impacts of the Annual (2010-2013 Average)
Net Texas Main Street Investment ($224 million):
Total Tax Contributions

	In Texas	Outside Texas	Total (U.S.)
Total Taxes ($000)	$77,175	$32,058	$109,233
Federal ($000)	$52,923	$20,307	$73,230
State ($000)	$10,473	$7,118	$17,591
Local ($000)	$13,779	$4,633	$18,412

THE MAIN STREET CENTER

The national Main Street program follows decades of economic and physical decline in America's cities and downtowns. Nathaniel Baum-Snow (2007) documents that "the aggregate population of the 139 largest metropolitan areas in the United States declined by 17 percent between 1950 and 1990 while in aggregate all metropolitan areas population growth was 72 percent during this

period."[46] In addition, "central cities as defined by their geographies in 1960 were the origin and/or destination of only 38 percent of commutes made by metropolitan area residents in 2000, down from 66 percent in 1960."[47] As roadways were expanded and people moved farther away from city centers, downtown retail districts began to lose their customer base and employment centers to suburban areas. Subsequently, they experienced significant decline, leaving formerly vibrant and successful downtown districts in economic turmoil.

In 1980, the National Trust for Historic Preservation (the National Trust) established "The National Trust Main Street Center®" (NMSC). The NMSC was created to revitalize declining downtown centers through a "preservation-based strategy" to restore the economic activity that was on the decline in downtown retail centers. Since 1980, more than 2,000 affiliated Main Street programs have been launched in 43 states.

The NMSC is a community-driven, comprehensive approach to downtown revitalization that provides professional training, networking, technical assistance, and national resources and support for participating communities. The program operates through the Main Street Four-Point Approach® that corresponds to the NMSC-envisioned four forces of real estate value, which are social, political, physical and economic:[48]

The "Four-Point" Approach

Organization: Public- and private-sector collaboration to assign responsibilities and form consensus and cooperation among key community members with a vested interest in the downtown area. Main Street organizational structure includes a governing board, standing committees, a paid program director, and volunteers.

Promotion: Advertising the downtown through promotional retail activity, special events and marketing campaigns carried out by local volunteers aimed at consumers, investors, developers and new businesses. These activities aim to brand the Main Street District as a place where consumers want to live, work, shop, play, and invest.

Design: Enhancing the physical appearance of the downtown district by creating an inviting atmosphere. Some of the ways this is achieved include attractive window displays, parking area enhancements, building improvements, and streetscaping (i.e. landscaping, furniture upgrades, sidewalks, signage, and light and street enhancements). The Main Street district is revitalized by creating pedestrian-oriented streets, careful review of new construction applications for conformance with existing structures, and a sustainable, long-term planning approach. Throughout this process, special attention is paid to the maintenance of historic structures to protect and promote the character of the district.

Economic Restructuring: The main goal is to enhance the competitiveness of existing businesses and to diversify the area by bringing in new businesses, thereby increasing the consumer base of the downtown district. One of the fundamental aspects of this process is

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[46] Baum-Snow. "Changes in Transportation Infrastructure and Commuting Patterns in U.S. Metropolitan Areas, 1960-2000" Presented at the 2010 American Economic Association Meetings in Atlanta, GA, in the published session "Housing and Labor Markets" (2007).

[47] Ibid.

[48] Information obtained from the National Trust for Historic Preservation at http://www.preservationnation.org/

adaptive reuse of existing buildings and underutilized spaces to make them more profitable and contribute to the character and demands of the downtown district as it is being redefined and revitalized.

The implementation of the Main Street Four-Point Approach® is based on the following eight principles:[49]

The "Eight Principles"

1. **Comprehensive:** Implementing a sustainable, successful, long-term revitalization plan that includes activity in each of Main Street's Four Points.
2. **Incremental:** Taking realistic steps forward which begin with basic activities that will create public confidence in the Main Street district. The revitalization effort will then evolve and become more sophisticated as more ambitious projects and problems are addressed, leading to a longer-lasting and dramatic positive change in the Main Street district.
3. **Self-help:** Local leadership needs to mobilize local resources and talent to produce long-term success and confidence in the Main Street Program.
4. **Partnerships:** Both public and private sectors must take an active role in the revitalization efforts.
5. **Identifying and capitalizing on existing assets:** The district must capitalize on the unique qualities that make them distinct and should serve as the foundation for all aspects of the revitalization program.
6. **Quality:** Emphasis should be on quality, not quantity, in every aspect of the revitalization program.
7. **Change:** Gain public support to change negative attitudes about the Main Street district. Change also involves engaging in better business practices and improving the physical appearance in order to change public perceptions about the district.
8. **Implementation:** It is important to create confidence in the district by completing projects that serve as a reminder that a revitalization effort is under way and succeeding.

Recently, the Main Street Program has become an advocate for making Main Street a "cornerstone of every grassroots sustainability effort." In 2006, The National Trust partnered with several national organizations to work with the U.S. Green Building Council on ways to improve the Leadership in Energy and Environmental Design (LEED) rating system to "better reflect the importance of reusing buildings and community revitalization."[50] The National Trust is also in the process of launching several pilot programs across the nation, called "Preservation Green Lab," that will coordinate demonstration projects and provide technical assistance and model policies to encourage municipalities and states to consider historic preservation and the existing building stock when formulating climate change action plans[51] that will optimally provide a new tool for communities in the Main Street Program to utilize.

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[49] Ibid.

[50] Doug Loescher. "How Green is Your Main Street?" From *Main Street News,* April 2009.
http://www.preservationnation.org/main-street/main-street-news/2009/04/how-green-is-main.html

[51] Ibid.

DATA MAINTAINED BY THE NATIONAL MAIN STREET PROGRAM

The NMSC keeps a statistical database of all participating communities which includes the following data:[52]

Dollars reinvested (Total amount of reinvestment in physical improvements from public and private sources. This includes building rehabilitation, new construction and enhanced public infrastructure.)

Net gain in businesses (new less closed businesses)

Net gain in jobs (new less lost jobs)

Number of building rehabilitations

Reinvestment Ratio (The average number of dollars generated in each community for every dollar used to operate the local Main Street Program)

Statistics collected from more than 2,200 communities and tracked from 1980 to December 2013 reveal that the Main Street Program has been quite extensive. As detailed in Table 4.10, the cumulative (1980-2013) reinvestment of all Main Street programs in the United States includes $59.6 billion of reinvestment (total of physical improvements from public and private sources) with this activity involved the rehabilitation of about 250,000 buildings, a 500,000 net gain in jobs and 115,000 net gain in businesses.

Table 4.10: 2001-2013 National Main Street Cumulative Statistics (Tracked from 1980)

Year	Dollars Reinvested (billions)	Net Gain in # of Businesses	Net Gain in Jobs	Count of Building Rehabilitated	Reinvestment Ratio	Average Reinvested Per Community	Approximate Number of Participating Communities
2001	$16.1	56,300	226,900	88,700	40:1	$9,659,000	1,668
2002	$17.0	57,470	231,682	93,734	40:1	$9,512,151	1,787
2003	$18.3	60,577	244,545	96,283	35:1	$10,000,000	1,834
2004	$23.3	67,000	308,370	107,179	27:1	$12,431,287	1,800
2005	$31.5	72,387	331,417	178,727	28:1	$12,486,058	1,900
2006	$41.6	77,799	349,148	186,820	26:1	$11,083,273	2,050
2007	$44.9	82,909	370,514	199,519	25:1	$11,083,273	2,212
2008	$48.8	87,850	391,050	206,600	25:1	—	2,200
2009	$51.5	92,521	411,861	213,380	—	—	—
2010	$53.7	97,853	430,851	220,892	—	—	—
2011	$56.2	103,306	442,777	228,281	—	—	—
2012	$58.3	108,038	467,477	235,538	—	—	—
2013	$59.6	115,381	502,728	246,158	33:1	—	—

Source: The National Trust for Historic Preservation National Main Street Reinvestment Statistics

The net gain in jobs and businesses, as well as the number of building rehabilitations, has risen. There has been a recent decline in the reinvestment ratio, however, which may be linked to national

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[52] Main Street: The National Trust for Historic Preservation Economic Statistics 2013. Retrieved from: http://www.preservationnation.org/main-street/about-main-street/2013-yearly-reinvestment.html#.VVUoRo5Viko

economic trends, including the recent housing price crash, and the beginnings of the current economic recession. Although dollars reinvested into the program have consistently increased, the average reinvestment per community began to decline in 2006, which may be related to the fluctuating reinvestment ratio. Program participants currently stand at 2,200 communities, up from about 1,700 in 2001.

THE TEXAS MAIN STREET PROGRAM

The Texas Main Street Program (TMSP) started in 1981, only a year later after the creation of the National Main Street Center (NMSC). The program's mission is to "provide technical expertise, resources, and support for Texas communities in the preservation and revitalization of historic downtowns and commercial neighborhood districts." As such, TMSP follows the NMSC on the national four points approach described above: Organization, Promotion, Design, and Economic Restructuring. The Texas Main Street Program started with the cities of Eagle Pass, Hillsboro, Navasota, Plainview, and Seguin. Since then, it has designated and provided technical assistance to more than 160 official Texas Main Street cities. At the time of this study, TMSP counted 87 active participants, with which TMSP maintains daily communication and assistance.

TMSP chooses up to five cities every year from a pool of applications to officially designate them as part of the Main Street Program. Those cities can be entire Texas cities or Historic neighborhood commercial districts. Communities must hire a full-time Main Street Manager and provide funding for the local program. Urban programs can be established for cities with populations over 50,000. Such programs are typically managed by a public-private partnership between the city government and a nonprofit organization. This partnership must fund the local program and pay its own staff's expenses. In addition, cities are required to pay nominal fees to the Texas Historical Commission to help offset costs of assistance.

For much of the program's history, there were usually more applicant cities than available designations. Some undesignated cities implemented their own programs and were known by the TMSP as "self-initiated cities." These cities maintained the same approach and guidelines as designated cities. The main difference is the level of assistance that they receive from TMSP. Results in self-initiated cities are often as good and strong as those in designated cities.

TMSP provides initial start-up assistance and contributes extensive guidance in the second and third years. The program trains and supervises the local program manager and Main Street Board Members. It aids in design, planning, economic and community development, marketing, parking, and any areas in which the local community lacks expertise. It produces façade drawings, architectural assistance for building owners, visual merchandising techniques, a windows display consultation, and a heritage tourism consultation. At the time of the 2013 data research, 87 communities and 2.5 million Texans were affected by the reinvestments under the TMSP. This reinvestment in historic preservation has a clear impact in the economic development of those communities. This chapter analyzes such impact. First, however, we summarize the data regularly collected by the TMSP.

DATA MAINTAINED BY TEXAS MAIN STREET PROGRAM

Quarterly and monthly, communities participating in the Texas Main Street Program must compile a series of data items: a monthly report, and a project status information and reinvestment summary excel sheet. All of this feedback is submitted to the Texas Main Street Program office, which then disseminates the collected information to the State of Teas and the National Main Street Center (NMSC).

The monthly report is divided into five sections. The first section asks for feedback in the format known as the Main Street Four Point Approach, as designated by the NMSC; the community must report on the month's accomplishments in organization, promotion, quality design, and economic restructuring. The second section asks the community to discuss any obstacles that the program has encountered. Section three requests a list of the previous month's completed meetings and the following month's planned meetings. Section four focuses on goals and methodology –what does the community plan to accomplish next month? The last section asks if the community has any questions or needs that it would like addressed by the Texas Main Street Program staff.

The Project Status Information and reinvestment summary is a comprehensive excel sheet in which participant cities report on their reinvestment and the status of the projects for each year divided in quarters. Expenditures are typically reported on the forms at the time the project is completed. The sheets in excel are first divided by private-only projects, private and public joint ventures, and public-only projects. For each type of project participant cities have to report the name of each project, a description of it, the project manager name, and contact information (email, phone, and address). This information needs to be filed up for each year quarter, showing the status of the projects at each stage. Moreover, under each sheet participant cities report financial information regarding each of those projects reported before. Figure 4.1 shows the financial information required to submit for public-only projects.

Figure 4.1

Private Sector Reinvestment						
	Q1					
Project Name	Rehab - Number of Projects	Rehab - Expenditures	New Construction - Number of Buildings	New Construction - Expenditures	Number of Buildings/ Property Sold	Buildings/Property Sold - Expenditures

The first two cells refer to Rehabilitation Projects. Those are improvements to a private building, property or business by the owner/leaser. Typically, these types of improvements include repainting, new signage, a new roof, a new awning/canopy, or even a major rehabilitation to the overall building. The first section asks participant cities to introduce the "total number of individual projects (not buildings) that have had rehabilitation work completed in the specific quarter in the Main Street District." The second section requires cities to introduce "the dollar amount that has been spent on the rehabilitation of downtown buildings in the specific quarter in the Main Street District."

The second and third cells on Figure 4.1 refer to new building projects. "When someone builds a new building in the Main Street District, they are investing in the area. Opportunities for new construction exist in vacant lots between buildings and throughout the district." First, participant cities should introduce the number of new buildings built in the specific quarter, followed by "the dollar amount spent on new construction of buildings in the Main Street District in the last quarter."

Lastly, participant cities report on the number of buildings or properties sold under the TMSP. "When someone purchases property or buildings in the Main Street District, they are investing in the area. If that property or building is later resold, it continues to contribute to the district and should be counted again." In the first column of the section, cities introduce "the number of buildings sold in the Main Street District in the specific quarter." In the second column, cities are asked to report on "the dollar amount spent on purchasing the buildings sold."

Figure 4.2 shows the information required to submit to Texas Main Street Program on the private-public joint venture projects. "Sometimes a Main Street City will have projects that involve a broad base of support from both the public and private sector. These are usually large projects involving the rehabilitation of a building that is very important to the community. Often, the public and private sector team up to raise money for the renovation of the historic city hall, a historic theater, the downtown post office, fire station, or some other important building. These projects may take a few years to complete and the funding comes from many sources. These are the types of projects that fall into the public/private sector joint venture category." On this section, participant cities are required to submit the number of public/private joint ventures and the dollar amount spent on each project in Main Street District for the specific quarter.

Figure 4.2

Lastly, the third section requires participant cities to report on public-only reinvestment projects. This sections distinguishes between projects are the city, county, state and federal level. Figure 4.3 shows part of the excel form. "Public reinvestment includes public improvements in the downtown are that are funded through public sources, such as city, county, state or federal. These types of projects include street and sidewalk improvements, lighting improvements, public bathrooms, new signage, or a new city or county building." In each column, participant cities are required to provide the number of projects and the dollar amount spent on it in the Main Street District on each specific year quarter.

Figure 4.3

Public Projects		City	County	State	Federal	Other
				Q1		
Project Name	Number of projects	Total Expenditures	Total Expenditures	Total Expenditures	Total Expenditures	Total Expenditures

Moreover, as we can see in Figure 4.4, participant cities are also mandate to report, for each year quarter, on

Total Business starts, expansions and relocations: "the number of businesses that have opened/expanded in the Main Street District in the specific quarter."

Net gain in business starts, expansions and relocations: 'the quarterly net gain/loss in business starts, relocations and expansions the Main Street District."

Net gain in jobs: "quarterly net gain/loss of jobs created in the Main Street District. This figure is obtained by subtracting total number of jobs lost through business failures from the number of jobs created through business that have opened in the Main Street district."

Volunteer hours logged: "the quarterly amount of volunteer hours logged."

Number of downtown housing units: "the number of housing units added in the Main Street District in past quarter. (This number should be added to your cumulative total.) If any houses are destroyed or adapted to no longer be a housing unit, then subtract from your cumulative total."

Number of downtown residents: "the number of downtown residents added in the Main Street District in past quarter."

Figure 4.4

Other Data Required for Reinvestment Summary	Q1	Q2	Q3	Q4
Total business starts, expansions and relocations				
Net gain in business starts, expansions and relocations				
Net gain in jobs				
Volunteer hours logged				
Number of downtown housing units				
Number of downtown residents				

In sum, the main categories used for the study to recall on the economic impact of the Texas Main Street program are the following categories of data in the reinvestment summary:

A. Rehabilitation
B. New Constructions
C. Buildings Sold
D. Total Private Investment
E. Public/Private Joint Ventures
F. Public Projects
G. New Business Starts, Relocations, and Expansions
H. Net Gains in Jobs Created
I. Volunteer Hour

As shown in Table 4.11, on average, both current and former Main Street participants invested more in private projects (74.2 percent) than public (17.8 percent) or public-private join ventures (8.1 percent), during the 1981 to 2013 period. The total dollar amount spent in private projects adds up to $3.87 billion dollars, which significantly exceeds the $925 million invested in public projects, and $420 million invested in joint ventures over the past 32 years. This dollar amount invested in private projects was allocated towards rehabilitation, new constructions, and buildings sold, in support of a total of 16,456 projects under the Texas Main Street Program. The disparity between the investment allocated to private, public, and joint ventures is less sharp for cities that currently participate on the Texas Main Street Program. Current participants allocated on average 52.9 percent, about half amount of the grand total, on those private alone projects. Nearly 39.7 percent of the recent cumulative investment were spent on public projects, and 7.4 percent were funded for private-public joint ventures. The historical disparity between private and public sector reinvestment is partially attributed to the fact that public investments were not tracked during the early years of the state or national program.

Table 4.11 below presents the 1981-2013 Texas Main Street Program cumulative investment values. The Table is divided into the three main periods of the Texas Main Street Program: 1981-1997, 1998-2006, and 2007-2013, with a fourth column presenting the cumulative values for the entire 1981-2013 period. The 1981-1997 period reflects the initial timeframe evaluated in the prior edition of this study, while the 2007-2013 period was chosen to represent the most current data[53]. Horizontally, Table 4.11 is broken down into three different summary statistics. The first section shows the dollar amount of the cumulative investment values, all in constant 2013 dollars. The second section presents the cumulative reinvestment but presented as a percentage of the grand

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[53] The 1981-1997 period is gleaned from the prior 1997 Rutgers-University of Texas analysis of the economic impacts of historic preservation report. The later 2007-2013 period reflects more recent trends.

total of each period. Lastly, the third horizontal division presents the annual average investment for each period, in which the cumulative investments are broken down into the amount of years in the period.

Table 4.11: Period Cumulative and Annual Average Investment by Texas Main Street Program (Constant Million 2013 $)

	1981-1997	1998-2006*	2007-2013	1981-2013*
Component	**Cumulative Investment**			
Rehabilitation	$785.5	$461.9	$285.6	$1,533.0
New Construction	$478.2	$316.1	$183.1	$977.4
Buildings Sold	$716.0	$450.3	$188.7	$1,355.0
Total Private Reinvestment	**$1,979.7**	**$1,228.3**	**$657.4**	**$3,865.4**
Joint Ventures	$139.6	$188.5	$91.4	$419.5
Public Projects	NA	$431.5	$493.6	$925.1
Reinvestment Grand Total	**$2,119.3**	**$1,848.3**	**$1,242.4**	**$5,210.0**
Cumulative Investment as percent of Reinvestment Grand Total				
Rehabilitation	37.1%	25.0%	23.0%	29.4%
New Construction	22.6%	17.1%	14.7%	18.8%
Buildings Sold	33.8%	24.4%	15.2%	26.0%
Total Private Reinvestment	**93.4%**	**66.5%**	**52.9%**	**74.2%**
Joint Ventures	6.6%	10.2%	7.4%	8.1%
Public Projects	NA	23.3%	39.7%	17.8%
Reinvestment Grand Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Annual Average Investment				
Rehabilitation	$46.2	$57.7	$40.8	$48.0
New Construction	$28.1	$45.1	$30.5	$30.5
Buildings Sold	$42.1	$64.3	$31.5	$42.3
Total Private Reinvestment	**$116.4**	**$175.4**	**$109.6**	**$120.8**
Joint Ventures	$8.3	$27.0	$15.2	$13.1
Public Projects	NA	$61.6	$82.3	$28.9
Reinvestment Grand Total	**$124.7**	**$264.0**	**$207.1**	**$162.8**

*Includes estimates for 1998 data, which are otherwise missing.

Comparing investment over time, almost every category of investment fell from 1998-2006 to 2007-2013, except the public projects, there has been found an increase of $63 million during that period. Rehabilitation projects on account for $462 million in 1998-2006 period, and only $286 million in the next period. New constructions went from $316 million to $183 million, and building sold went from $450 million to $189 million. Out of the public projects, joint ventures cumulative investment also fell from $188 million to $91 million. This trend can be also observed as percentage of the total cumulative amount invested over each period.

As for percentage breakeven, from 1998-2006 to 2007-2013, all three categories of private investment became a smaller part of the total amount invested.[54] Rehabilitations went from representing 37 percent of the total in the earlier time period to 25 percent in the second time period and to 23 percent most recently. New constructions almost dropped by 8 percent, from representing 23 percent to 15 percent of the grand total. Buildings sold accounted for 34 percent of the grand total in 1981-1997 cumulative period, and went down to 24 percent on the next period, and 15 percent for the recent period. In sum, all three categories generally fell from representing 93 percent to 53 percent in 2007-2013 of grand total. The only category that had different tendency is the public-only projects. Although no investment data is available for the first period on this category, from 1998-2006 to 2007-2013 public project investment increased by $62 million dollars. Moreover, public projects experienced an increase in its share on the grand total investment of the periods. In 1998-2006 public projects represented only 23 percent of the total amount invested of the period, compared to nearly 40 percent on the next period. In terms of annual average investment, we still see a substantial increase in public-only project investment from the second to the third TMSP reinvestment period. On average, Texas Main Street Program cities invested $62 million dollars annually in public-only projects between 1998 and 2006, but that annual average became $82 million for each of the next seven years.

TOTAL ECONOMIC IMPACTS FROM THE TEXAS MAIN STREET PROGRAM
The total economic impacts of the Texas Main Street Program investment just noted are summarized below and detailed in Exhibits 4.1 through 4.8 at the conclusion of the chapter.

Cumulative Impacts

TABLE 4.12
Economic Impacts of the Cumulative (1981-2013)
Texas Main Street Investment ($5.29 billion)

	In Texas	*Outside Texas*	*Total (U.S.)*
Jobs (person years)	126,719	36,112	162,831
Income ($000)	$5,762,710	$1,909,362	$7,672,072
GDP ($000)	$7,362,222	$2,721,413	$10,083,635
Total taxes ($000)	$1,827,151	$884,426	$2,711,577
Federal ($000)	$1,263,672	$568,915	$1,832,587
State ($000)	$235,166	$188,797	$423,963
Local ($000)	$328,313	$126,714	$455,027
In-State wealth ($000)	$6,674,821	------	------

Item 1 of Section II in Exhibit 4.1 shows how the *cumulative* Texas Main Street output of $5.29 billion translates in to direct economic effects nationwide. It creates 59,767 jobs (technically "job-years"), which produce $2.89 billion in labor income and $3.18 billion in GDP.

Nationally, the indirect effects of Main Street investment included the creation of 103,064 additional job-years, and generated $4.78 billion in income and $6.90 billion more in GDP in their support. As a consequence, the total economic impact—the national sum of the direct and indirect and induced effects—of Main Street investment is 162,831 jobs (59,767+103,064); $7.67 billion

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[54] From 1981-1997, public investment was not recorded by the Texas Main Street Program.

in income ($2.89 billion +$4.78 billion); and $10.08 billion in GDP ($3.18 billion +$6.90 billion). Based on these values, we can observe that the multiplier effects are greater than the direct effects, given that the national multipliers are always substantially greater than 2.0.

We can learn other interesting aspects of the impacts of Main Street investment through examination by detailed industry (see Exhibit 4.2). For example, the largest number of new employment fostered by Main Street investment is, not surprisingly, the construction sector (37,124 of 162,831 jobs). Moreover, in terms of job creation, the second to fourth most-affected industries are retail trade (28,477 jobs) accommodation/food services (15,999 jobs), and manufacturing (13,866 jobs). Similar impacts are found in the contribution of income and GDP, except for the accommodation/food services industries.

Exhibit 4.3 presents the cumulative in-state effects (from 1981 to 2013) of the $5.29 billion Texas Main Street investment. In sum, it creates 126,719 jobs (91 percent of the total 138,724 jobs generated nationally), $5.76 billion in labor income (76 percent of the $7.62 billion in income generated nationally), and $7.36 billion in wealth (81 percent of the $9.04 billion added to national GDP). The state multiplier effects (measured by subtracting one from the multipliers) range between 61 and 85 percent of the national multipliers. Interestingly, Texas retains all of the 59,767 jobs created directly by state-based Main Street investments. However, over 36thousand of the indirect and induced jobs of Texas Main Street activity have leaked out of the state. This finding is not surprising, in light of Texas being only one state in the national economy.

The statewide distribution of impacts across industries is analogous to that observed for the entire nation, with one exception: the construction category is the most affected industry in Texas. Aside from the construction industry, the state experiences a substantial impact in retail trade, accommodation/food services, and manufacturing industries. Finer grained detail of state impacts by industry (Exhibit 4.4) reflect the similar pattern as found in the previous nationwide impacts, but have an even stronger concentration tendency: of the 126,719 jobs derived statewide via the investment of Texas Main Street program, 36,886 jobs (nearly 30 percent) are in the construction industry. Furthermore, $2.17 billion in labor income (38 percent of the total labor income) and $2.07 billion in GDP (28 percent of the total GDP) can also be attributed to the construction industry.

Annual Impacts

TABLE 4.13
Economic Impacts of the Annual (2010-2013 Average)
Net* Texas Main Street Investment ($224 million)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	5,385	1,516	6,901
Income ($000)	$240,303	$83,508	$323,811
GDP ($000)	$309,959	$118,049	$428,008
Total Taxes ($000)	$77,175	$32,058	$109,233
Federal ($000)	$52,923	$20,307	$73,230
State ($000)	$10,473	$7,118	$17,591
Local ($000)	$13,779	$4,633	$18,412
In-State Wealth ($000)	$281,066	------	------

Net Annual Impacts

The calculated *annual* average invested in the Texas Main Street Program for the period of 2010-2013 amounted to $238 million. (The 2010-2013 period was picked to cover post-recessionary spending. We picked more than a single year because capital investment varies substantially from year to year.) After calculating the economic impacts of the $238 million annual investment, the average amount invested by year was adjusted to avoid double counting funds that overlapped with historic rehabilitation and heritage tourism funds. This study calculated in Chapter 2 the average level of historic rehabilitation occurring in Texas, that is, the renovations taking place in properties on national, state, and/ or local registers. Some of the Texas Main Street rehabilitation is likely taking place in such designated properties; while we do not know this amount for certain, the Texas Main Street Program estimates that at the outside this would be 20 percent, that is, that 20 percent of the Texas Main Street Program-counted rehabilitation is effected in already designated properties. The *net* Main Street rehabilitation, that is, the amount over and above that tallied in the rehabilitation chapter, is therefore 80 percent of the annual average Texas Main Street rehabilitation.

We similarly have to adjust the net jobs credited to Main Street since these include employment associated with heritage tourism (e.g., a Texas heritage traveler visiting a Texas Main Street area and patronizing a store manned by an employee credited to the Texas Main Street Program). While we do not know the exact overlap between Texas Main Street jobs and jobs associated with Texas heritage tourism (the latter counted in Chapter Three), the Texas Main Street Program estimates this overlap at 10 percent. Therefore to avoid double counting, we will credit 90 percent of the Texas Main Street-generated jobs as net of the tourism-associated employment.

The calculated *net annual* average invested in the Texas Main Street Program for the period of 2010-2013 amounted to $224 million. Item 1 of Section II in Exhibit 4.5 shows how the *net annual* average Texas Main Street output of $224 million translates in to *direct* economic effects nationwide. It creates 2,590 jobs (technically "job-years"), which produce $119.8 million in labor income and $135 million in GDP. Nationally, the indirect effects of Main Street investment create an additional 4,311 jobs, and generate $203 million in income and $293 million more in GDP in their support. As a consequence, the total economic impact—the national sum of the direct and indirect and induced effects—of Main Street investment is 6,901 jobs (2,590 + 4,311); $323.8 million in income ($119.8 million + $204.0 million); and $428 million in GDP ($135 million + $293 million). Furthermore, we can observe that the multiplier effects for annual investment are greater than the direct effects (the national multipliers are always substantially greater than 2.0).

Adjusting the annual amount invested to avoid double-counting historic rehabilitation and heritage tourism funds, had a significant impact on the distribution of effect among industries. Exhibit 4.5 indicates that the most impacted industries are retail trade, finance/insurance/real estate, and arts/entertainment/hospitality— note that the construction industry is no longer ranked first in terms of job creation. The $224 million invested in the Texas Main Street Program had the greatest impact, in terms of job creation, on the following industries: construction (1,626 jobs), retail trade (1,262 jobs), finance/insurance/real estate (777 jobs), and arts/entertainment/hospitality (693 jobs). Interestingly, while the construction industry contributes the largest portion of total income as well ($85.8 million, which accounts for 26 percent of the total $323 million).

On the other hand, opposite effects are found in the retail trade and accommodation/food services industries (see Exhibit 4.6). Though these two categories have offered a significant number of new

jobs (18.3 percent and 8.3 percent), they only contribute a relative small portion of labor income and national wealth (12.9 percent and 4.1 percent of labor income, 14.0 percent and 4.7 percent of GDP, respectively). This may due to the average lower wage rate of mostly part-time employees in these industries and the large share of proprietors in these same industries.

Exhibit 4.7 presents the effects of the net annual $224 million Texas Main Street Investments for the state of Texas. In sum, it creates 5,385 jobs (96.9 percent of the total 5,558 jobs generated nationally), $240 million in labor income (75 percent of the $318 million in income generated nationally), and $310 million in wealth (85 percent of the $366 million added to national GDP). The state multiplier effects (measured by subtracting one from the multipliers) range between 61 and 94 percent of the national multipliers. From these values, we can observe that Texas retains all of the 2,590 direct jobs in annual impacts and only 174 of the indirect jobs leak out of the state.

The statewide distribution of impacts across industries is analogous to that observed for the entire nation; however, stronger effects are found in the construction category. Aside from the construction industry, the state experiences more of an impact in retail trade, manufacturing, and accommodation/food services industries. Finer grained detail of state impacts by industry (Exhibit 4.8) indicates the following: Of the 5,385 jobs derived statewide via the investment of Texas Main Street program, 1,616 jobs (30.0 percent) are in the construction industry, 1,044 jobs (19.4 percent) are in retail trade, and 418 jobs (7.8 percent) are in the manufacturing industry. Of the $240 million labor income derived statewide, $86 million (36.1 percent) is in the construction industry, $35 million (14.6 percent) is in retail trade, and $18 million (7.8 percent) is in the manufacturing industry. Of the $310 million wealth derived statewide, $82 million (26.6 percent) is in the construction industries, $49 million (15.7 percent) is in retail trade, and $30 million (9.7 percent) is in the manufacturing industries.

EXHIBIT 4.1

National Economic and Tax Impacts of the Cumulative Texas Main Street Investment
1981-2013 ($5.29 billion investment)

	Output	Employment	Earnings	GDP
	($1,000)	(jobs)	($1,000)	($1,000)
I. Total Effects (Direct + Indirect/Induced)				
1. Agriculture, Forestry, Fishing, and Hunting	128,893.6	2,363	85,997.3	63,596.3
2. Mining	218,417.6	533	58,342.4	141,997.4
3. Utilities	678,667.5	1,832	147,362.0	412,505.9
4. Construction	3,603,365.7	37,124	2,111,755.6	2,083,908.7
5. Manufacturing	3,285,085.4	13,866	719,341.2	1,145,740.9
6. Wholesale Trade	268,386.3	739	63,115.9	91,857.7
7. Retail Trade	2,075,957.0	28,477	950,962.1	1,367,517.4
8. Transportation and Warehousing	601,970.9	3,938	218,164.1	302,227.3
9. Information	694,280.9	2,657	189,140.8	403,905.3
10. Finance, Insurance, Real Estate, Rental, and Leasing	3,154,959.6	18,569	956,837.2	1,488,089.2
11. Professional and Business Services	1,459,536.3	12,589	797,102.2	914,288.0
12. Educational Services, Health Care, and Social Assistance	1,206,213.7	13,190	662,111.1	710,964.6
13. Arts, Entertainment, Recreation, and Hospitality	1,106,980.8	18,808	428,467.9	666,923.9
14. Other Services (including Government Enterprise)	494,348.9	8,146	283,372.4	290,112.7
Total Effects	18,977,064.1	162,831	7,672,072.2	10,083,635.3
II. Distribution of Effects and Multipliers				
1. Direct Effects	5,289,886.6	59,767	2,886,487.5	3,179,550.6
2. Indirect/Induced Effects	13,687,177.5	103,064	4,785,584.7	6,904,084.7
3. Total Effects	18,977,064.1	162,831	7,672,072.2	10,083,635.3
4. *Multipliers (= 3 / 1)*	*3.587*	*2.724*	*2.658*	*3.171*
III. Composition of GDP				
1. Compensation				6,173,172.7
2. Taxes				1,771,885.9
a. Local				320,175.9
b. State				386,330.3
c. Federal				1,065,379.8
3. Profits, Dividends, Rents, and Other				2,138,576.6
4. Total GDP (= 1 + 2 + 3)				10,083,635.3

	Business	Household	Total
IV. Tax Accounts			
1. Labor Income	6,173,172.7	7,672,072.2	----------------
2. Taxes	1,771,885.9	939,690.8	2,711,576.7
a. Local	320,175.9	134,850.6	455,026.5
b. State	386,330.3	37,633.0	423,963.2
c. Federal	1,065,379.8	767,207.2	1,832,587.0

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	30.8
Earnings	$1,450,328.3
State Taxes	$80,146.0
Local Taxes	$86,018.2
GDP	$1,906,210.1

Initial Expenditure (in Dollars)	**$5,289,886,607.7**

EXHIBIT 4.2

National Economic Impacts of Cumulative Texas Main Street Investment
by 3-digit Industry Classification- 1981-2013 ($5.29 billion investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**128893.6**	**2363**	**85997.3**	**63596.3**
111CA	Crop and animal production (Farms)	113023.7	1950	74657.7	52321.4
113FF	Forestry, fishing, and related activities	15870.0	414	11339.6	11274.9
	Mining	**218417.6**	**533**	**58342.4**	**141997.4**
211	Oil and gas extraction	113386.6	112	33741.3	79300.3
212	Mining, except oil and gas	99293.8	400	22641.1	58762.6
213	Support activities for mining	5737.2	22	1960.0	3934.4
22	**Utilities**	**678667.5**	**1832**	**147362.0**	**412505.9**
23	**Construction**	**3603365.7**	**37124**	**2111755.6**	**2083908.7**
	Manufacturing	**3285085.4**	**13866**	**719341.2**	**1145740.9**
311FT	Food product manufacturing	437345.6	1722	62457.7	123142.0
313TT	Textile and textile product mills	60006.1	317	14145.4	18259.0
315AL	Apparel manufacturing	86960.7	893	32238.1	35790.8
321	Wood product manufacturing	94846.7	484	23234.8	26998.1
322	Paper manufacturing	112978.9	303	22022.4	35628.3
323	Printing and related support activities	78355.9	470	25667.9	34969.1
324	Petroleum and coal products manufacturing	543723.6	448	117917.9	189571.5
325	Chemical manufacturing	389714.2	464	63368.0	144152.6
326	Plastics and rubber products manufacturing	156775.2	480	30107.4	49106.6
327	Nonmetallic mineral product manufacturing	194758.2	733	45224.7	74793.9
331	Primary metal manufacturing	166604.6	2912	20473.3	40978.8
332	Fabricated metal product manufacturing	315584.0	1448	86607.0	120616.4
333	Machinery manufacturing	94401.0	347	22795.2	35809.2
334	Computer and electronic product manufacturing	129174.8	433	41970.9	65652.3
335	Electrical equipment and appliance manufacturing	81658.5	991	19459.1	32039.0
3361MV	Motor vehicle, body, trailer, and parts manufacturing	180608.8	454	38210.1	53383.3
3364OT	Other transportation equipment manufacturing	39322.9	116	8689.5	12698.7
337	Furniture and related product manufacturing	46829.4	409	17203.0	17452.6
339	Miscellaneous manufacturing	75436.2	442	27548.9	34698.8
42	**Wholesale trade**	**268386.3**	**739**	**63115.9**	**91857.7**
44RT	**Retail trade**	**2075957.0**	**28477**	**950962.1**	**1367517.4**
	Transportation and warehousing, excluding Postal Service	**601970.9**	**3938**	**218164.1**	**302227.3**
481	Air transportation	158815.9	646	55708.5	101161.0
482	Rail transportation	48965.1	111	12762.9	21586.2
483	Water transportation	57123.5	196	17794.6	29869.2
484	Truck transportation	58974.5	185	10962.1	17910.8
485	Transit and ground passenger transportation	137624.2	1615	65813.2	59799.9
486	Pipeline transportation	8345.9	14	8075.3	4896.9
487OS	Other transportation and support activities	78546.1	702	26916.7	39365.3
493	Warehousing and storage	53575.7	469	20130.9	27638.0
	Information	**694280.9**	**2657**	**189140.8**	**403905.3**
511	Publishing including software	241622.9	1471	87008.3	139189.0
512	Motion picture and sound recording industries	63948.4	302	16012.0	37960.8
513	Broadcasting and telecommunications	44399.2	159	25655.2	25641.0
514	Information and data processing services	344310.4	726	60465.2	201114.5
	Finance and insurance	**1796346.8**	**8584**	**694477.3**	**815164.7**
521CI	Federal Reserve banks, credit intermediation and related services	433711.0	2454	130662.2	256041.6
523	Securities, commodity contracts, investments	485962.5	2488	300181.8	223468.4
524	Insurance carriers and related activities	692063.7	3611	201254.9	241223.2
525	Funds, trusts, and other financial vehicles	184609.6	31	62378.4	94431.5

	Real estate, rental, and leasing	**1358612.9**	**9984**	**262359.9**	**672924.5**
531	Real estate	825379.5	9227	202980.5	295168.8
532RL	Rental and leasing services and lessors of intangible assets	533233.4	758	59379.5	377755.6
	Professional and technical services	**787442.2**	**5151**	**387249.4**	**488276.0**
5411	Legal services	119001.4	42	3639.2	62104.1
5412OP	Other professional, scientific and technical services	541145.9	4324	305979.8	334595.9
5415	Computer systems design and related services	126803.5	783	77429.8	91337.6
55	Management of companies and enterprises	491.3	2	200.6	238.4
	Administrative and waste services	**672094.1**	**7437**	**409852.8**	**426012.1**
561	Administrative and support services	638933.5	7221	394659.6	409291.1
562	Waste management and remediation services	33160.6	216	15193.2	16720.9
61	**Educational services**	193617.3	2474	97238.4	114445.0
	Health care and social assistance	**1012596.4**	**10716**	**564872.7**	**596519.6**
621	Ambulatory health care services	423836.0	4030	278119.3	259636.8
622HO	Hospitals and nursing and residential care facilities	508867.6	4251	232333.7	287571.8
624	Social assistance	79892.8	2436	54419.6	49311.0
	Arts, entertainment, and recreation	**158429.0**	**2809**	**61659.8**	**96502.8**
711AS	Performing arts, museums, and related activities	65714.9	1760	33521.8	40147.7
713	Amusements, gambling, and recreation	92714.2	1049	28138.1	56355.0
	Accommodation and food services	**948551.8**	**15999**	**366808.1**	**570421.1**
721	Accommodation	64301.6	806	27987.0	35493.8
722	Food services and drinking places	884250.1	15193	338821.1	534927.3
81	**Other services, except government**	**396185.2**	**7231**	**234112.7**	**226318.8**
GOV	**Government enterprises and the Postal Service**	**98163.6**	**915**	**49259.7**	**63793.9**
HH	**Households**	**0.0**	**0**	**0.0**	**0.0**
	Total	**18,977,064.1**	**162,831**	**7,672,072.2**	**10,083,635.3**

EXHIBIT 4.3

<u>In-State</u> Economic and Tax Impacts of the Cumulative Texas Main Street Investment
1981-2013 ($5.29 billion investment)

		Output ($1,000)	Employment (jobs)	Earnings ($1,000)	GDP ($1,000)
I. Total Effects (Direct + Indirect/Induced)					
1.	Agriculture, Forestry, Fishing, and Hunting	99,827.2	1,991	35,433.0	48,686.2
2.	Mining	181,541.2	453	45,446.0	118,952.5
3.	Utilities	566,668.1	1,691	161,108.0	351,989.7
4.	Construction	3,576,798.5	36,886	2,170,428.0	2,068,816.2
5.	Manufacturing	2,088,370.4	10,217	453,936.8	724,889.8
6.	Wholesale Trade	177,835.5	481	42,394.3	60,865.8
7.	Retail Trade	1,669,647.4	23,403	788,847.8	1,095,947.2
8.	Transportation and Warehousing	386,533.8	2,418	131,644.9	196,820.4
9.	Information	427,749.6	1,790	111,037.8	249,686.1
10.	Finance, Insurance, Real Estate, Rental, and Leasing	1,743,047.8	12,222	489,377.5	799,290.4
11.	Professional and Business Services	852,941.2	7,244	437,275.0	537,104.5
12.	Educational Services, Health Care, and Social Assistance	786,476.6	8,838	435,147.9	462,863.4
13.	Arts, Entertainment, Recreation, and Hospitality	779,552.9	13,577	296,534.0	473,763.5
14.	Other Services (including Government Enterprise)	4,445,457.6	5,508	164,099.2	172,546.0
	Total Effects	17,782,448.0	126,719	5,762,710.3	7,362,221.7
II. Distribution of Effects and Multipliers					
1.	Direct Effects	5,289,886.6	59,767	2,886,487.5	3,179,550.6
2.	Indirect/Induced Effects	12,492,561.4	66,952	2,876,222.8	4,182,671.2
3.	Total Effects	17,782,448.0	126,719	5,762,710.3	7,362,221.7
4.	*Multipliers (= 3 / 1)*	*3.362*	*2.120*	*1.996*	*2.315*
III. Composition of GDP					
1.	Compensation				4,355,624.4
2.	Taxes				1,147,882.7
	a. Local				225,315.9
	b. State				235,166.2
	c. Federal				687,400.6
3.	Profits, Dividends, Rents, and Other				1,858,714.7
4.	Total GDP (= 1 + 2 + 3)				7,362,221.7

IV. Tax Accounts		Business	Household	Total
1.	Labor Income	4,355,624.4	5,762,710.3	----------------
2.	Taxes	1,147,882.7	679,267.9	1,827,150.6
	a. Local	225,315.9	102,996.9	328,312.8
	b. State	235,166.2	0.0	235,166.2
	c. Federal	687,400.6	576,271.0	1,263,671.6

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	24.0
Earnings	$1,089,382.6
State Taxes	$44,455.8
Local Taxes	$62,064.2
GDP	$1,391,754.2

Initial Expenditure (in Dollars)   **$5,289,886,607.7**

EXHIBIT 4.4

<u>In-State</u> Economic Impacts of Cumulative Texas Main Street Investment by 3-digit Industry Classification- 1981-2013 ($5.29 billion investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**99827.2**	**1991**	**35433.0**	**48686.2**
111CA	Crop and animal production (Farms)	90527.3	1725	30048.3	42144.4
113FF	Forestry, fishing, and related activities	9300.0	266	5384.7	6541.8
	Mining	**181541.2**	**453**	**45446.0**	**118952.5**
211	Oil and gas extraction	99777.5	93	23771.6	69782.4
212	Mining, except oil and gas	77807.7	346	20334.4	46457.1
213	Support activities for mining	3956.1	15	1340.0	2713.0
22	**Utilities**	**566668.1**	**1691**	**161108.0**	**351989.7**
23	**Construction**	**3576798.5**	**36886**	**2170428.0**	**2068816.2**
	Manufacturing	**2088370.4**	**10217**	**453936.8**	**724889.8**
311FT	Food product manufacturing	249346.9	1189	36056.5	73885.9
313TT	Textile and textile product mills	25177.2	145	5567.7	7504.5
315AL	Apparel manufacturing	46992.1	541	16897.2	19629.5
321	Wood product manufacturing	72473.3	368	17514.9	20564.0
322	Paper manufacturing	59325.9	180	10986.8	18572.1
323	Printing and related support activities	19419.9	132	6143.7	8507.6
324	Petroleum and coal products manufacturing	415506.3	334	92666.3	143592.1
325	Chemical manufacturing	243447.2	295	35574.5	89200.7
326	Plastics and rubber products manufacturing	95237.7	298	17974.9	29812.5
327	Nonmetallic mineral product manufacturing	167743.9	642	39008.5	63596.6
331	Primary metal manufacturing	95210.6	2798	12031.8	23379.4
332	Fabricated metal product manufacturing	231758.4	1105	64194.6	86712.6
333	Machinery manufacturing	61431.9	231	14235.0	22803.9
334	Computer and electronic product manufacturing	60746.1	206	19406.1	30787.9
335	Electrical equipment and appliance manufacturing	47865.1	882	11324.7	18629.1
3361MV	Motor vehicle, body, trailer, and parts manufacturing	104203.6	260	21337.2	30961.9
3364OT	Other transportation equipment manufacturing	20060.2	68	4706.9	6036.7
337	Furniture and related product manufacturing	29695.6	270	11685.9	11131.6
339	Miscellaneous manufacturing	42728.6	274	16623.6	19581.2
42	**Wholesale trade**	**177835.5**	**481**	**42394.3**	**60865.8**
44RT	**Retail trade**	**1669647.4**	**23403**	**788847.8**	**1095947.2**
	Transportation and warehousing, excluding Postal Service	**386533.8**	**2418**	**131644.9**	**196820.4**
481	Air transportation	125278.4	504	43944.4	79798.7
482	Rail transportation	28870.4	63	7459.2	12727.5
483	Water transportation	36430.2	120	11348.4	19048.9
484	Truck transportation	43385.0	138	7816.9	13176.2
485	Transit and ground passenger transportation	80605.2	977	33598.6	35024.2
486	Pipeline transportation	6095.2	10	4527.9	3576.3
487OS	Other transportation and support activities	39647.8	359	12550.7	19941.8
493	Warehousing and storage	26221.7	247	10398.7	13526.9
	Information	**427749.6**	**1790**	**111037.8**	**249686.1**
511	Publishing including software	156519.4	1036	58107.3	90757.7
512	Motion picture and sound recording industries	24371.6	168	6415.6	14876.1
513	Broadcasting and telecommunications	34247.6	137	11093.8	19779.9
514	Information and data processing services	212611.1	450	35421.1	124272.3
	Finance and insurance	**856299.6**	**5108**	**319125.4**	**384532.8**
521CI	Federal Reserve banks, credit intermediation and related services	267038.5	1594	74043.4	158213.4
523	Securities, commodity contracts, investments	234086.6	1513	140143.6	107591.0

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Code	Industry				
524	Insurance carriers and related activities	353858.8	1994	104457.7	118055.3
525	Funds, trusts, and other financial vehicles	1315.7	7	480.8	673.0
	Real estate, rental, and leasing	**886748.3**	**7114**	**170252.1**	**414757.7**
531	Real estate	611104.3	6671	139064.3	218540.6
532RL	Rental and leasing services and lessors of intangible assets	275644.0	443	31187.8	196217.1
	Professional and technical services	**448707.2**	**2771**	**196901.9**	**281827.7**
5411	Legal services	78146.0	28	2300.5	40782.6
5412OP	Other professional, scientific and technical services	299579.7	2302	153526.1	189065.4
5415	Computer systems design and related services	70813.3	441	41006.7	51898.1
55	Management of companies and enterprises	168.2	1	68.7	81.6
	Administrative and waste services	**404234.0**	**4473**	**240373.1**	**255276.8**
561	Administrative and support services	388109.4	4368	232927.4	247146.1
562	Waste management and remediation services	16124.6	105	7445.8	8130.7
61	**Educational services**	110791.1	1456	54387.6	64462.9
	Health care and social assistance	**675685.5**	**7382**	**380760.3**	**398400.5**
621	Ambulatory health care services	290369.3	2804	182230.8	177886.2
622HO	Hospitals and nursing and residential care facilities	331085.6	2829	161013.2	187042.4
624	Social assistance	54230.6	1749	37516.3	33471.9
	Arts, entertainment, and recreation	**66847.3**	**1633**	**25910.8**	**37987.1**
711AS	Performing arts, museums, and related activities	40246.6	1306	20013.9	24954.3
713	Amusements, gambling, and recreation	26600.7	327	5896.9	13032.8
	Accommodation and food services	**712705.6**	**11944**	**270623.2**	**435776.4**
721	Accommodation	13357.6	192	5770.3	7373.3
722	Food services and drinking places	699348.0	11752	264852.9	428403.1
81	**Other services, except government**	**239880.1**	**4771**	**134954.1**	**134503.5**
GOV	**Government enterprises and the Postal Service**	**59110.8**	**738**	**29145.1**	**38042.5**
HH	**Households**	**4146466.7**	**0**	**0.0**	**0.0**
	Total	**17,782,448.0**	**126,712**	**5,762,229.5**	**7,361,548.7**

EXHIBIT 4.5
<u>National</u> Economic and Tax Impacts of the Annual Net Texas Main Street Investment
2010-2013 ($224 million average investment)

	Output ($1,000)	Employment (jobs)	Earnings ($1,000)	GDP ($1,000)
I. Total Effects (Direct + Indirect/Induced)				
1. Agriculture, Forestry, Fishing, and Hunting	5,212.9	96	3,500.7	2,567.4
2. Mining	9,557.5	24	2,553.4	6,208.5
3. Utilities	39,058.4	120	8,948.7	24,417.8
4. Construction	144,721.8	1,626	85,790.2	83,060.4
5. Manufacturing	136,023.0	569	29,734.6	47,517.5
6. Wholesale Trade	11,232.8	31	2,641.7	3,844.5
7. Retail Trade	91,412.5	1,262	41,917.1	60,134.3
8. Transportation and Warehousing	24,499.5	163	8,892.6	12,169.4
9. Information	29,206.1	114	8,021.2	17,000.4
10. Finance, Insurance, Real Estate, Rental, and Leasing	132,163.1	777	42,634.2	66,380.3
11. Professional and Business Services	61,895.4	534	33,880.6	38,780.2
12. Educational Services, Health Care, and Social Assistance	50,337.4	550	27,641.1	29,672.8
13. Arts, Entertainment, Recreation, and Hospitality	40,259.0	693	15,758.5	24,074.3
14. Other Services (including Government Enterprise)	20,710.3	341	11,896.3	12,180.0
Total Effects	796,289.5	6,901	323,810.8	428,007.8
II. Distribution of Effects and Multipliers				
1. Direct Effects	223,890.9	2,590	119,831.8	134,847.0
2. Indirect/Induced Effects	572,398.5	4,311	203,979.0	293,160.8
3. Total Effects	796,289.5	6,901	323,810.8	428,007.8
4. *Multipliers (= 3 / 1)*	*3.557*	*2.664*	*2.702*	*3.174*

	GDP
III. Composition of GDP	
1. Compensation	257,939.4
2. Taxes	69,641.1
a. Local	12,780.0
b. State	16,012.0
c. Federal	40,849.2
3. Profits, Dividends, Rents, and Other	100,427.3
4. Total GDP (= 1 + 2 + 3)	428,007.8

	Business	Household	Total
IV. Tax Accounts			
1. Labor Income	257,939.4	323,810.8	----------------
2. Taxes	69,641.1	39,591.8	109,232.9
a. Local	12,780.0	5,631.6	18,411.5
b. State	16,012.0	1,579.1	17,591.1
c. Federal	40,849.2	32,381.1	73,230.3

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	30.8
Earnings	$1,446,288.2
State Taxes	$78,569.9
Local Taxes	$82,234.3
GDP	$1,911,679.9

Initial Expenditure (in Dollars)   **$223,890,932.3**

EXHIBIT 4.6

<u>National</u> Economic Impacts of Annual Net Texas Main Street Investment
by 3-digit Industry Classification- 2010-2013 ($224 million average investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**5212.9**	**96**	**3500.7**	**2567.4**
111CA	Crop and animal production (Farms)	4567.9	79	3039.9	2109.3
113FF	Forestry, fishing, and related activities	645.0	17	460.8	458.0
	Mining	**9557.5**	**24**	**2553.4**	**6208.5**
211	Oil and gas extraction	4886.5	5	1447.4	3417.5
212	Mining, except oil and gas	4422.5	18	1021.1	2620.6
213	Support activities for mining	248.4	1	84.9	170.4
22	**Utilities**	**39058.4**	**120**	**8948.7**	**24417.8**
23	**Construction**	**144721.8**	**1626**	**85790.2**	**83060.4**
	Manufacturing	**136023.0**	**569**	**29734.6**	**47517.5**
311FT	Food product manufacturing	18128.7	71	2586.4	5107.0
313TT	Textile and textile product mills	2471.4	13	582.0	751.2
315AL	Apparel manufacturing	3633.7	37	1347.5	1495.9
321	Wood product manufacturing	3399.6	17	836.2	976.7
322	Paper manufacturing	4569.8	12	890.5	1439.3
323	Printing and related support activities	3212.7	19	1052.3	1433.6
324	Petroleum and coal products manufacturing	23333.7	19	4988.3	8111.6
325	Chemical manufacturing	16106.2	19	2625.1	5962.4
326	Plastics and rubber products manufacturing	6097.2	19	1169.7	1910.7
327	Nonmetallic mineral product manufacturing	8823.4	33	2040.0	3379.1
331	Primary metal manufacturing	6737.2	119	826.7	1659.1
332	Fabricated metal product manufacturing	13232.7	61	3621.7	5046.8
333	Machinery manufacturing	3574.3	13	882.5	1367.6
334	Computer and electronic product manufacturing	5456.6	18	1767.7	2770.1
335	Electrical equipment and appliance manufacturing	3096.3	39	745.4	1219.7
3361MV	Motor vehicle, body, trailer, and parts manufacturing	7504.2	19	1587.3	2218.0
3364OT	Other transportation equipment manufacturing	1657.9	5	366.7	535.4
337	Furniture and related product manufacturing	1802.1	15	654.8	669.2
339	Miscellaneous manufacturing	3185.2	19	1163.7	1464.0
42	**Wholesale trade**	**11232.8**	**31**	**2641.7**	**3844.5**
44RT	**Retail trade**	**91412.5**	**1262**	**41917.1**	**60134.3**
	Transportation and warehousing, excluding Postal Service	**24499.5**	**163**	**8892.6**	**12169.4**
481	Air transportation	5749.3	23	2016.7	3662.1
482	Rail transportation	2025.9	5	528.1	893.1
483	Water transportation	2408.9	8	750.4	1259.6
484	Truck transportation	2494.8	8	463.4	757.7
485	Transit and ground passenger transportation	5855.0	69	2797.5	2544.1
486	Pipeline transportation	345.7	1	335.4	202.9
487OS	Other transportation and support activities	3343.4	30	1145.9	1675.6
493	Warehousing and storage	2276.5	20	855.4	1174.4
	Information	**29206.1**	**114**	**8021.2**	**17000.4**
511	Publishing including software	10412.0	64	3785.6	6007.3
512	Motion picture and sound recording industries	2666.7	13	668.0	1583.4
513	Broadcasting and telecommunications	1810.6	6	1053.9	1046.0
514	Information and data processing services	14316.9	30	2513.7	8363.8
	Finance and insurance	**75104.9**	**360**	**31637.0**	**38038.8**
521CI	Federal Reserve banks, credit intermediation and related services	18211.8	103	5486.0	10751.8
523	Securities, commodity contracts, investments	20284.9	104	12533.5	9327.4
524	Insurance carriers and related activities	28891.7	152	11010.2	14012.4
525	Funds, trusts, and other financial vehicles	7716.5	1	2607.3	3947.1

	Real estate, rental, and leasing	**57058.2**	**417**	**10997.2**	**28341.5**
531	Real estate	34449.3	385	8476.5	12319.6
532RL	Rental and leasing services and lessors of intangible assets	22608.9	32	2520.7	16021.9
	Professional and technical services	**33496.1**	**221**	**16558.0**	**20779.9**
5411	Legal services	4981.9	2	152.4	2599.9
5412OP	Other professional, scientific and technical services	23110.2	186	13115.6	14291.2
5415	Computer systems design and related services	5383.6	33	3281.7	3878.8
55	Management of companies and enterprises	20.4	0	8.3	9.9
	Administrative and waste services	**28399.3**	**314**	**17322.6**	**18000.4**
561	Administrative and support services	27009.6	305	16685.9	17299.6
562	Waste management and remediation services	1389.7	9	636.7	700.7
61	**Educational services**	**8058.2**	**103**	**4052.8**	**4766.2**
	Health care and social assistance	**42279.1**	**447**	**23588.3**	**24906.5**
621	Ambulatory health care services	17694.3	168	11613.5	10839.3
622HO	Hospitals and nursing and residential care facilities	21249.2	177	9702.2	12008.4
624	Social assistance	3335.7	102	2272.6	2058.8
	Arts, entertainment, and recreation	**6602.4**	**117**	**2568.6**	**4020.9**
711AS	Performing arts, museums, and related activities	2736.8	73	1395.8	1671.8
713	Amusements, gambling, and recreation	3865.6	44	1172.8	2349.1
	Accommodation and food services	**33656.5**	**576**	**13189.9**	**20053.4**
721	Accommodation	2676.5	34	1164.9	1477.4
722	Food services and drinking places	30980.1	542	12024.9	18576.0
81	**Other services, except government**	**16635.7**	**303**	**9854.6**	**9533.4**
GOV	**Government enterprises and the Postal Service**	**4074.6**	**38**	**2041.7**	**2646.5**
HH	**Households**	**0.0**	**0**	**0.0**	**0.0**
	Total	**796,289.5**	**6,900**	**321,203.5**	**424,060.7**

EXHIBIT 4.7

<u>In-State</u> Economic and Tax Impacts of the Annual Net Texas Main Street Investment 2010-2013 ($224 million average investment)

	Output ($1,000)	Employment (jobs)	Earnings ($1,000)	GDP ($1,000)
I. Total Effects (Direct + Indirect/Induced)				
1. Agriculture, Forestry, Fishing, and Hunting	4,013.4	81	1,414.9	1,952.9
2. Mining	8,015.0	20	2,018.0	5,244.1
3. Utilities	34,368.1	114	10,277.6	21,883.1
4. Construction	143,581.7	1,616	86,649.8	82,412.5
5. Manufacturing	86,341.5	418	18,701.9	30,015.2
6. Wholesale Trade	7,437.1	20	1,772.9	2,545.4
7. Retail Trade	74,063.7	1,044	35,056.9	48,548.2
8. Transportation and Warehousing	15,472.3	99	5,262.6	7,760.4
9. Information	18,017.7	77	4,742.5	10,525.2
10. Finance, Insurance, Real Estate, Rental, and Leasing	72,992.8	510	20,453.9	33,551.4
11. Professional and Business Services	36,260.0	308	18,656.5	22,853.5
12. Educational Services, Health Care, and Social Assistance	32,754.8	368	18,128.7	19,279.8
13. Arts, Entertainment, Recreation, and Hospitality	26,810.3	478	10,286.0	16,151.5
14. Other Services (including Government Enterprise)	185,322.3	230	6,880.7	7,235.9
Total Effects	745,450.8	5,385	240,303.3	309,959.1
II. Distribution of Effects and Multipliers				
1. Direct Effects	223,890.9	2,590	119,831.8	134,847.0
2. Indirect/Induced Effects	521,559.8	2,794	120,471.5	175,112.1
3. Total Effects	745,450.8	5,385	240,303.3	309,959.1
4. *Multipliers (= 3 / 1)*	*3.330*	*2.079*	*2.005*	*2.299*
III. Composition of GDP				
1. Compensation				181,673.2
2. Taxes				48,849.7
a. Local				9,483.8
b. State				10,473.2
c. Federal				28,892.6
3. Profits, Dividends, Rents, and Other				79,436.2
4. Total GDP (= 1 + 2 + 3)				309,959.1

IV. Tax Accounts	Business	Household	Total
1. Labor Income	181,673.2	240,303.3	----------------
2. Taxes	48,849.7	28,325.3	77,175.0
a. Local	9,483.8	4,294.9	13,778.8
b. State	10,473.2	0.0	10,473.2
c. Federal	28,892.6	24,030.3	52,923.0

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	24.1
Earnings	$1,073,305.3
State Taxes	$46,778.2
Local Taxes	$61,542.4
GDP	$1,384,420.2

Initial Expenditure (in Dollars)	**$223,890,932.3**

EXHIBIT 4.8
<u>In-State</u> Economic Impacts of Annual Net Texas Main Street Investment
by 3-digit Industry Classification- 2010-2013 ($224 million average investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**4013.4**	**81**	**1414.9**	**1952.9**
111CA	Crop and animal production (Farms)	3638.2	70	1199.2	1689.2
113FF	Forestry, fishing, and related activities	375.2	11	215.7	263.7
	Mining	**8015.0**	**20**	**2018.0**	**5244.1**
211	Oil and gas extraction	4313.5	4	1027.7	3016.7
212	Mining, except oil and gas	3528.3	16	931.7	2108.6
213	Support activities for mining	173.3	1	58.7	118.8
22	**Utilities**	**34368.1**	**114**	**10277.6**	**21883.1**
23	**Construction**	**143581.7**	**1616**	**86649.8**	**82412.5**
	Manufacturing	**86341.5**	**418**	**18701.9**	**30015.2**
311FT	Food product manufacturing	10289.9	49	1485.2	3051.8
313TT	Textile and textile product mills	1028.7	6	227.2	306.2
315AL	Apparel manufacturing	1961.0	23	705.5	819.4
321	Wood product manufacturing	2523.6	13	612.8	723.8
322	Paper manufacturing	2359.5	7	436.4	737.0
323	Printing and related support activities	787.5	5	248.9	344.8
324	Petroleum and coal products manufacturing	17898.0	14	3914.7	6158.6
325	Chemical manufacturing	10047.7	12	1471.2	3682.1
326	Plastics and rubber products manufacturing	3611.4	11	679.8	1130.7
327	Nonmetallic mineral product manufacturing	7654.4	29	1773.2	2894.8
331	Primary metal manufacturing	3823.0	114	481.0	939.7
332	Fabricated metal product manufacturing	9775.3	47	2698.0	3647.8
333	Machinery manufacturing	2213.8	8	521.7	829.2
334	Computer and electronic product manufacturing	2553.7	9	811.0	1291.0
335	Electrical equipment and appliance manufacturing	1712.8	35	411.7	671.3
3361MV	Motor vehicle, body, trailer, and parts manufacturing	4316.6	11	883.5	1282.5
3364OT	Other transportation equipment manufacturing	849.7	3	199.5	255.9
337	Furniture and related product manufacturing	1119.2	10	433.3	417.9
339	Miscellaneous manufacturing	1815.6	12	707.1	830.8
42	**Wholesale trade**	**7437.1**	**20**	**1772.9**	**2545.4**
44RT	**Retail trade**	**74063.7**	**1044**	**35056.9**	**48548.2**
	Transportation and warehousing, excluding Postal Service	**15472.3**	**99**	**5262.6**	**7760.4**
481	Air transportation	4389.3	18	1539.7	2795.9
482	Rail transportation	1185.3	3	306.3	522.5
483	Water transportation	1545.2	5	481.3	808.0
484	Truck transportation	1840.7	6	331.6	559.0
485	Transit and ground passenger transportation	3442.2	42	1434.8	1495.7
486	Pipeline transportation	251.5	0	186.9	147.6
487OS	Other transportation and support activities	1697.9	15	537.8	853.9
493	Warehousing and storage	1120.1	11	444.2	577.8
	Information	**18017.7**	**77**	**4742.5**	**10525.2**
511	Publishing including software	6812.0	46	2557.9	3957.0
512	Motion picture and sound recording industries	1014.2	7	267.1	619.3
513	Broadcasting and telecommunications	1387.1	6	451.1	801.5
514	Information and data processing services	8804.4	19	1466.4	5147.4
	Finance and insurance	**35772.8**	**213**	**13323.5**	**16074.1**
521CI	Federal Reserve banks, credit intermediation and related services	11223.5	67	3111.1	6649.9
523	Securities, commodity contracts, investments	9752.9	63	5839.9	4482.2

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524	Insurance carriers and related activities	14741.4	83	4352.4	4913.8
525	Funds, trusts, and other financial vehicles	54.9	0	20.1	28.1
	Real estate, rental, and leasing	**37220.1**	**297**	**7130.4**	**17477.3**
531	Real estate	25470.1	278	5796.0	9108.5
532RL	Rental and leasing services and lessors of intangible assets	11749.9	19	1334.3	8368.7
	Professional and technical services	**19104.3**	**119**	**8451.1**	**12020.8**
5411	Legal services	3270.8	1	96.3	1706.9
5412OP	Other professional, scientific and technical services	12797.9	99	6599.6	8090.4
5415	Computer systems design and related services	3028.7	19	1752.3	2220.2
55	Management of companies and enterprises	7.0	0	2.8	3.4
	Administrative and waste services	**17155.7**	**189**	**10205.5**	**10832.7**
561	Administrative and support services	16479.9	185	9893.4	10491.9
562	Waste management and remediation services	675.8	4	312.1	340.8
61	**Educational services**	**4594.0**	**60**	**2259.7**	**2675.5**
	Health care and social assistance	**28160.8**	**308**	**15869.0**	**16604.3**
621	Ambulatory health care services	12101.3	117	7594.5	7413.5
622HO	Hospitals and nursing and residential care facilities	13799.2	118	6710.8	7795.7
624	Social assistance	2260.3	73	1563.6	1395.1
	Arts, entertainment, and recreation	**2780.4**	**68**	**1076.1**	**1579.5**
711AS	Performing arts, museums, and related activities	1672.1	54	830.4	1036.6
713	Amusements, gambling, and recreation	1108.4	14	245.7	543.0
	Accommodation and food services	**24029.9**	**410**	**9210.0**	**14572.0**
721	Accommodation	554.1	8	239.4	305.9
722	Food services and drinking places	23475.8	402	8970.6	14266.1
81	**Other services, except government**	**10064.0**	**200**	**5681.6**	**5667.9**
GOV	**Government enterprises and the Postal Service**	**2439.0**	**30**	**1199.2**	**1568.0**
HH	**Households**	**172819.3**	**0**	**0.0**	**0.0**
	Total	**745,450.8**	**5,384**	**240,283.3**	**309,931.0**

CHAPTER FIVE

PROFILE AND ECONOMIC IMPACTS OF TEXAS HISTORY MUSEUMS

INTRODUCTION AND SUMMARY

History museums deserve separate consideration when evaluating the impact of economic activity related to Texas' heritage. Texas history museums are vital to preserving and communicating the state's historical legacy. In Texas statewide in 2013 history museums attracted about 8.3 million visitors annually. These museums not only contribute to the expansion of heritage tourism, but their own expenditures—around $93.5 million net[55] in 2013—have significant economic benefits for the state.

The THC's Museum Services Program staff consults with history museums throughout the state on how to achieve national museum standards in all areas of operations. This assists local communities with educating Texans about our state's history as well as increasing tourism opportunities. Services available to the hundreds of history museums throughout the state include email updates; email, telephone and in-person consultations; dissemination of educational and reference materials; and workshops and webinars dealing with such topics as financial management, strategic planning, museum education, public programing, and exhibit development.

To generate economic impact estimates, the University of Texas at Austin and Rutgers University sent a web-based survey to the 354 history museums identified by the Texas Historical Commission (THC); such survey consisted of twenty-three questions regarding the organizational structure, attendance, budget, and staffing patterns of the institution. A total of 87 responses were collected, constituting a sample of one-eighth of the state's history museums.

SUMMARY OF FINDINGS

- Statewide, history museums attracted about 8.3 million visitors annually, spent $123 million in operating expenditures, and employed a total of 2,970 workers in full-time paid positions.

- The annual *net* spending by the Texas history museums amounted to $93.5 million. This figure is net of outlays for capital purposes and visitor-supported revenues. The capital outlays and visitor revenues are netted out because these spending components have already been included in the historic rehabilitation (Chapter 2) and the heritage tourism (Chapter 3) economic calculations, respectively (thus, the $123 million in annual operating expenditures is reduced to $93.5 million).

- Equally important, 24 percent of the museum revenues came from entry fees and goods purchased by visitors— further, 24 percent of the visitors came from outside of Texas. This latter value represents tourist dollars that are added to the state's economy, typically with the positive characteristics attributed to heritage tourism expenditures.

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[55] The $93.5 million net expenditure excludes museum capital outlays and revenues they receive from visitors since these have already been counted in the economic impacts of historic rehabilitation and heritage tourism, respectively. Without these exclusions, the Texas history museum spending in 2013 amounted to $123 million.

- The *nationwide* economic impacts, including both direct and multiplier effects, from the $93.5 million in annual net spending by the Texas history museums included a gain in 2013 of 5,598 jobs, $232 million in income, and $385 million in gross domestic product. Texas retained 79 percent of the jobs generated from history museum spending (4,432 jobs), leading to $296 million in statewide GDP, $163 million in labor income, and $272 million in added in-state wealth (see Table 5.1).

TABLE 5.1
Economic Impacts of the Annual
Net* Spending by Texas History Museums ($93.5 Million)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	4,432	1,166	5,598
Income ($000)	$162,755	$69,088	$231,844
GDP ($000)**	$295,882	$89,391	$385,273
In-State Wealth ($000)***	$271,651	------	------

*Net = $123 million total annual outlays minus spending related to Heritage Tourism and Rehabilitation (outlays already tallied in Chapters 2 and 3).
**GDP =Gross Domestic Product
***In-State Wealth = GDP minus Federal Indirect Business Taxes

- *Nationwide,* the $93.5 million in annual net spending by the Texas history museums generates a total of $80 million in total taxes (federal, state, and local) from both business and households (see Table 5.2); Texas captures 68 percent ($54 million) of that total. *Statewide,* the Texas history museum spending generates a total of $14 million in state taxes ($3 million) and local taxes ($11 million)—this is equivalent to 61 percent of the total $23 million in state and local taxes generated nationally.

TABLE 5.2
Economic Impacts of the Annual
Net* Spending by Texas History Museums ($93.5 Million):
Total Tax Contributions

	In Texas	Outside Texas	Total (U.S.)
Total Taxes ($000)	$54,362	$25,228	$79,591
Federal ($000)	$40,507	$16,372	$56,879
State ($000)	$2,640	$5,288	$7,928
Local ($000)	$11,215	$3,568	$14,784

TEXAS HISTORY MUSEUMS SURVEY RESULTS

According to the Texas Historical Commission (THC) Atlas, 707 history museums operate in Texas. We used the THC Atlas to gather the history museums' contact information and sent a web-based survey via e-mail to the 354 museums that had an e-mail address listed on file. The survey contained 23 questions organized into four sections: organization details, visitation, budget, and staffing. Although 87 out of the 354 museums contacted responded the survey, the response rate varied greatly by question; 80 organizations answered over 50 percent of the questions on the survey. Based on the responses by this representative sample of museums, we calculated statewide estimates. Prominent results are located and discussed below (Note that totals may differ from indicated subtotals because of rounding).

Tables 5.3 and 5.4 offer a profile of history museums in Texas. The majority (60 percent) of respondents were privately-held non-profits, generally those owned and operated as a business enterprise. The remainder of the respondents is composed of either directly or indirectly public sector actors, with 13 percent being publicly-held non-profits and 27 percent directly controlled by various levels of government. With regard to the age of the institutions, the data show an even distribution among respondents which can be deemed unremarkable (see Table 5.4). It is worth noting a great jump in the number of museums founded in the second half of the 20th century and beyond (89 percent), compared to the first 50 years (11 percent).

TABLE 5.3
Ownership Shares of Texas History Museums (85 Respondents)

Type of Entity	Share of Museums
a. Private, non-profit	60%
b. Public, non-profit	13%
c. Government	27%
(i) Federal	*2%*
(ii) State	*11%*
(iii) Local	*5%*
(iv) Municipal	*9%*

TABLE 5.4
Age of Texas History Museums (84 Respondents)

Year Founded	Share of Museums
a. Before 1900	1%
b. 1900-1949	10%
c. 1950-1965	11%
d. 1966-1975	20%
e. 1976-1985	20%
f. 1986-1995	15%
g. After 1995	23%
	100%

Tables 5.5 through 5.6 detail the scope of the population that contributes to history museums' positive economic impact. The core, naturally, is membership (Table 5.5). While only 50 museums reported their number of memberships, over half of these museums have 275 active members--most of which pay dues to support the budget of the facility. The distribution of memberships is highly skewed by a number of very large institutions, as indicated by the average membership number being radically higher than the median (658 versus 275). Overall, the 50 museums that reported membership values have an aggregate total of 32,891 members.

TABLE 5.5
Membership of Texas History Museums (50 Respondents)

Active Members	Share of Museums
a. 1-49	8%
b. 50-99	10%
c. 100-199	22%
d. 200-299	10%
e. 300-499	32%
f. 500 or more	18%
	100%
Survey Average	658
Survey Median	275
Survey Total	32,891

Tables 5.6 through 5.8 develop a profile of the history museums visitors in Texas. While a significant share (38%) of history museums attract relatively few visitors (under 3,000), almost two-thirds (62%) of survey respondents reported annual visitation figures of more than 3,000 people. Over 1.8 million people visited the 87 museums that responded to the survey, translating to a projected statewide tally of roughly 8.3 million people. Since the sample was dominated by five locations with annual visitation totals of 100,000 people or more, the distribution is positively skewed; this skewed distribution of Texas history museum visitation is embodied in the fact that the mean attendance figure was almost 21,000, while the median was 5,000. In order to calculate all the statewide estimates, we removed the outliers and added them back once the estimates were developed.

TABLE 5.6
Visitor Counts at Texas History Museums (87 Respondents)

Annual Visitors	Share of Museums
a. 0-299	11%
b. 300-499	6%
c. 500-999	6%
d. 1,000-2,999	15%
e. 3,000-9,999	29%
f. 10,000 or more	<u>33%</u>
	100%
Survey Average	20,758
Survey Median	5,000
Survey Total	1,805,927
Est. State Total	8,327,292

TABLE 5.7
Visitor Profile by Age at Texas History Museums (81 Respondents)

Visitor Age	Share of Visitors
a. Preschool Children (4 years and under)	7%
b. School-Aged Children (5-18 years)	25%
c. Adults (19-64 years)	41%
d. Seniors (65 years and over)	<u>27%</u>
	100%

In terms of the visitor profile by age (Table 5.7), the majority (68%) of those who visit history museums are adults and senior citizens. The remainder was encompassed by children and adolescents (who typically visit the sites as part of school trips).

Table 5.8 presents the visitor profile by place of residence, which is crucial because out-of-state and foreign visitors inject money into the Texas economy. Based on the responses of 80 museums, 24 percent of visitors came from outside the Texas (including visitors coming from outside the US.). Despite this, many individuals stayed close to home, with 42 percent of visitors coming from within the county in which the site is located.

TABLE 5.8
Visitor Profile by Place of Residence at Texas History Museums (80 Respondents)

Place of Residence	Share of Visitors
a. Texas, same county	42%
b. Texas, other counties	34%
c. Outside of Texas	18%
d. Foreign (Outside of U.S.A.)	6%
	100%

Tables 5.9 through 5.11 detail the financial profile of history museums and organizations in the state. The surveyed museums reported that they spent a considerable $28.6 million annually, which can be extrapolated to a statewide total of approximately $123 million. While a few locations (10%) reported that they spend a nominal sum of $9,999 or under, the majority of history museums (56%) reported that their annual budgets exceed $100,000. Overall, the mean budget is around $370,000, while the median of the survey set is $120,000, again indicating the skewed distribution with a few large museums dominating the state.

TABLE 5.9
Annual Budget Expenditures of at Texas History Museums (77 Respondents)

Annual Budget	Share of Museums
a. $0-$4,999	4%
b. $5,000-$9,999	6%
c. $10,000-$19,999	5%
d. $20,000-$49,999	13%
e. $50,000-$99,999	16%
f. $100,000-$199,999	22%
g. $200,000-$499,999	21%
h. $500,000 and more	13%
	100%
Survey Average	$370,934
Survey Median	$120,000
Survey Total	$28,600,000
Est. State Total	$122,954,110

While the overall totals are useful, a breakdown of expenses by category (Table 5.10) is much more instructive. In the survey, the research team asked for reported expenses to be divided between operating costs (labor and otherwise) and capital expenditures. Simply averaging the results without accounting for the size of the organization indicates that a majority of costs accrue to non-labor operating expenses (55.4 percent). A weighted average, however, indicates that labor entails the greatest expenditure in the aggregate, with a mean value of almost $197,000. Responses

on the breakdown of expenses were lower than for the question on the annual budget. Total spending on operations in Table 5.10 amounts to slightly over $20 million, as opposed to the $28.6 million reported in Table 5.9. This posed an issue in the end, as the weighted share of spending on labor did not comport well with that expressed in the model. According to the model, the estimated statewide budget of $123 million implies that Texas history museums spend about $57 million on labor costs and $66.0 million on other operating expenses. Ratios to operations spending further imply $22.5 million are allocated each year to capital expenditures. Thus, while the survey guided the break out of spending, the lack of response to it facilitated a degree of flexibility in working with parameters in the model.

TABLE 5.10
Spending by Category at Texas History Museums (59 Respondents)

Source of Spending	Simple Average (%)	Weighted Average (%)	Weighted Average ($	Total Sample Spending ($)	Total Spending ($)
a. Labor (operating)	44.5%	56.7%	$196,632	$11,600,000	$57,000,000
b. Non-labor operating	55.4%	43.3%	$150,170	$8,860,012	$66,000,000
Operating Budget			*$346,802*	*$20,460,012*	*$123,000,000*
c. Capital Expenditures			$77,771	$4,588,482	$22,500,000

Furthermore, the survey asked for a breakdown of revenue streams. Table 5.11 illustrates these results. Government is the largest source of revenue for heritage museums with *and* without accounting for the size of the organization; this means that in terms of total dollar value, government still provides the greatest amount of support, with an average of about $172,000 and a total of $10.1 million for the 58 museums that answered this survey question. The second greatest source of revenue, in total dollar value, comes from visitor spending; this includes entrance fees, tour fees and food/gift purchases. According to the total budget of about $25 million reported by 58 museums, $10.1 million was funded by the government, $3.4 million was funded by foundations, $709,500 was funded by endowments, $6 million was funded by visitor spending, and about $4.8 million was funded through other sources.

TABLE 5.11
Funding Sources for Texas History museums (58 Respondents)

Source of Funding	Simple Average (%)	Weighted Average (%)	Weighted Average ($)	Total Sample Funding ($)
a. Government	35%	40%	$171,607	$10,100,000
b. Foundations	19%	14%	$57,385	$3,385,714
c. Endowment	7%	3%	$12,026	$709,530
d. Visitor Spending	18%	24%	$102,370	$6,039,829
e. All other sources	21%	19%	$81,185	$4,789,889
	100%	*100%*		*$25,024,962*

Lastly, Tables 5.12 and 5.13 provide a profile of the workers employed at history museums in Texas. The vast majority of history museums rely upon unpaid volunteer labor, with over half of the sites having ten or more volunteers (see Table 5.12). Surveyed organizations reported a total of 615 paid positions (315 full-time and 300 part-time) and 1,643 volunteer; statewide, these values translate to 3,895 paid positions (2,045 full-time and 1,850 part-time) and 11,967 volunteer workers in all of Texas history museums. For the purpose of quantifying the economic impacts from the history museums, paid employment has to be calculated in a full-time basis; thus, we assumed that two part-time workers are equivalent to one full-time worker. Based on this assumption, we estimated that, overall, Texas has 2,970 full-time equivalent workers employed at history museums.

Table 5.13 indicates that income earned by workers at Texas history museums is largely retained within the community in which the site is located. Eighty-eight percent of those who work for historical sites and organizations reside in the same county as the site. Less than one percent of museums reported having paid workers who live outside Texas, so any "leakages" to surrounding states would be extremely small.

TABLE 5.12
Staff Profile for Texas History Museums (80 Respondents)

Type of Worker	Survey Mean	Survey Median	Survey Range	Survey Total	Est. State Total
a. Full-time paid staff	4	1	0-50	315	2,045
b. Part-time paid staff	4	1	0-100	300	1,850
c. Unpaid Volunteers	21	10	0-200	1,643	11,967

TABLE 5.13
Share of Paid Staff by Location for Texas History Museums (80 Respondents)

Place of Residence	Share of Workers
a. Texas, same county	88%
b. Texas, other counties	12%
c. Outside of Texas	0%
	100%

THE DIRECT NET SPENDING OF TEXAS HISTORY MUSEUMS

The direct spending and revenues have just been detailed; we now want to ascertain the economic impact added by the history museums over and above the economic contributions of historic preservation already detailed in this study. In considering the added economic effects from history museums, we must therefore exclude: 1) moneys the history museums expend for rehabilitation; and 2) revenues they receive from visitors, since these have already been counted in the historic rehabilitation and heritage tourism projections, respectively. This is accomplished as follows:

1. In tallying the expenditures of the history museums, capital outlays are excluded since these have already been tallied as historic rehabilitation outlays.

2. In addition, visitor revenues are excluded from the budgets of the history museums, since these are included in the calculation of total spending by heritage tourists.

These two subtractions leave the net spending of historic sites and organizations. The calculation proceeds as follows:

1. The total annual noncapital spending of the Texas history museums is $123 million.

2. Total noncapital spending by Texas historic museum, minus visitor contributions ($29.5), amounts to $93.5 million.

The result of this calculation, $93.5 million, represents the net direct spending by Texas's history museums. This direct outlay must then be translated into the larger total economic consequences, encompassing multipliers or ripple effects. The following section translates the $93.5 million annual net Texas museum-attributed direct spending into total economic benefits by applying the R/ECON™ I–O Model.

TOTAL ECONOMIC IMPACTS FROM THE OPERATIONS OF TEXAS HISTORY MUSEUMS

We applied the R/ECON™ I–O Model to quantify the economic impact of the $123 million total annual spending of the Texas history museums and the $93.5 million annual net spending. The results are show in Exhibits 5.1 through 5.8.

Total Annual Texas History Museums Noncapital Spending ($123 Million)

> Exhibits 5.1 and 5.2 – Impacts on the nation
> Exhibits 5.3 and 5.4 – Impacts on Texas

Annual Net Texas History Museums Spending ($93.5 Million)
　　　Exhibits 5.5 and 5.6– Impacts on the nation
　　　Exhibits 5.7 and 5.8 – Impacts on Texas

This following section will focus on the economic impacts of the annual net spending by Texas' history museums, given that those values avoid double counting funds that overlapped with historic rehabilitation and heritage tourism funds. However, the larger impacts of the state's history museum non-capital expenditures remain valuable when examining history museums as a discrete segment, viewed apart from rehabilitation and tourism.

TABLE 5.14
Total Economic Impacts of the Annual
Net Spending by Texas History Museums ($93.5 Million)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	4,432	1,166	5,598
Income ($000)	$162,755	$69,088	$231,844
GDP ($000)*	$295,882	$89,391	$385,273
Total Taxes ($000)**	$54,362	$25,228	$79,591
Federal ($000)	$40,507	$16,372	$56,879
State ($000)	$2,640	$5,288	$7,928
Local ($000)	$11,215	$3,568	$14,784
In-State Wealth ($000)***	$271,651	------	------

*GDP =Gross Domestic Product
**Total Taxes = business plus household taxes
***In-State Wealth = GDP minus Federal Indirect Business Taxes

Nationwide Impacts

At the national level, Item 1 of Section II in Exhibit 5.5 shows that 1,245 jobs are generated *directly* by history museums, creating $43 million in labor income, and producing $130 million in wealth (GDP). The number of direct jobs estimated from the I-O model (1,245) is notably smaller than the 2,970 jobs estimated from the museum survey; this discrepancy results from the limited survey sample size.　The multiplier effects of the operations of history museums add 4,353 more jobs nationwide, $189 million more in income, and $255 million more in GDP. Therefore, the total nationwide economic impacts of Texas history museums—the sum of its direct and indirect and induced effects—are 5,598 jobs (1,245 + 4,353), $232 million in income ($43 million + $189 million), and $385 million in GDP ($130 million + $255 million). In all instances, the indirect and induced effects exceed the direct effects (the traditional multipliers are greater than 2.0).

Interestingly, the multipliers are lowest for GDP (2.970), relatively high for jobs (4.495), and even higher for labor income (5.352). The reason of the lowest multiplier for GDP might because history museums tend to be nonprofit operations and they produce small amounts of measurable GDP compared to other industries. In addition, Exhibit 5.5 further reveals that the indirect average

income per labor ($43,319) is much higher than the average earning from direct jobs ($34,795)—an average gap of $8,524 per job. Examining these values in more detail, the indirect earning has roughly comprised of 81 percent of total earning. This is due to the relatively low pay of workers at history museums, most are unpaid volunteers or seasonal workers. The jobs that the museums indirectly generate offer better monetary value than their own wages; hence, the income multiplier is seemingly higher than the multiplier for jobs.

About 39 percent of all of the jobs created are in the arts, entertainment, and recreation industries. Most of these are direct jobs, as revealed by the finer breakdown of national economic impacts by industry in Exhibit 5.6. This exhibit shows that 2,201 are jobs created in the arts, entertainment, and recreation industry. A different perspective of the national economic effects from the operations of history museums is presented at the bottom of Exhibit 5.5. Here, the effects per one million dollars of initial expenditure (by the history museums) are detailed. This exhibit shows that every one million dollars in spending results in an additional 60 jobs, $2.48 million in income, and $4.12 million in GDP.

State-Level Impacts

Exhibits 5.7 through 5.8 present the effects of the $93.5 million in net spending by Texas's history museums on the state itself. In sum, through its history museums Texas gains 4,432 jobs (79 percent of the total 5,598 jobs generated nationally), $163 million in income (70 percent of the $232 million in income generated nationally), and $296 million in wealth (77 percent of the $385 million added to national GDP).

Finer grained detail of state impacts by industry (Table 5.8) reflect a highly concentration tendency. Of the 4,432 jobs derived statewide via the operation of Texas's history museums, 2,152 jobs (nearly 50 percent) are in the arts, entertainment, and recreation industries. Of these 2,152 art/entertainment related jobs, 99 percent (2,141 jobs) are from the museums, performing arts, and related activities industries. In addition, the administrative and waste services industries (312 jobs), retail trade industries (250 jobs), and health care and social assistance industries (240 jobs) offer another approximate 20 percent of new employments for Texas's history museums. Similar impacts are found in the contribution of GDP and income.

EXHIBIT 5.1
<u>National</u> Economic and Tax Impacts of Annual Texas History Museums Noncapital Spending ($123 million investment)

		Output ($1,000)	Employment (jobs)	Earnings ($1,000)	GDP ($1,000)
I. Total Effects (Direct + Indirect/Induced)					
1.	Agriculture, Forestry, Fishing, and Hunting	9,521.9	149	3,754.0	4,501.4
2.	Mining	6,155.2	11	1,401.2	4,056.4
3.	Utilities	12,059.2	16	2,384.8	6,549.2
4.	Construction	24,096.9	189	13,212.6	13,961.5
5.	Manufacturing	122,447.8	517	28,386.2	43,890.8
6.	Wholesale Trade	12,479.9	34	2,929.3	4,271.4
7.	Retail Trade	43,085.6	559	19,566.4	29,035.4
8.	Transportation and Warehousing	28,047.7	172	10,156.7	14,312.9
9.	Information	47,292.7	146	11,157.9	27,135.6
10.	Finance, Insurance, Real Estate, Rental, and Leasing	177,053.3	986	51,684.2	92,236.1
11.	Professional and Business Services	114,084.8	1,016	61,928.5	74,054.2
12.	Educational Services, Health Care, and Social Assistance	57,172.8	625	31,492.6	33,772.2
13.	Arts, Entertainment, Recreation, and Hospitality	200,978.7	3,349	87,715.6	213,882.3
14.	Other Services (including Government Enterprise)	310,188.8	447	13,773.1	15,099.4
	Total Effects	1,164,665.2	8,216	339,543.2	576,758.9
II. Distribution of Effects and Multipliers					
1.	Direct Effects	123,000.0	1,638	57,000.0	170,671.8
2.	Indirect/Induced Effects	1,041,665.2	6,578	282,543.2	406,087.0
3.	Total Effects	1,164,665.2	8,216	339,543.2	576,758.9
4.	*Multipliers (= 3 / 1)*	*9.469*	*5.015*	*5.957*	*3.379*
III. Composition of GDP					
1.	Compensation				285,441.2
2.	Taxes				128,547.0
	a. Local				38,446.8
	b. State				40,659.2
	c. Federal				49,441.1
3.	Profits, Dividends, Rents, and Other				162,770.6
4.	Total GDP (= 1 + 2 + 3)				576,758.9

IV. Tax Accounts		Business	Household	Total
1.	Labor Income	285,441.2	285,441.2	---------------
2.	Taxes	128,547.0	70,528.3	199,075.3
	a. Local	38,446.8	20,844.7	59,291.5
	b. State	40,659.2	21,139.4	61,798.6
	c. Federal	49,441.1	28,544.1	77,985.2

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	66.8
Earnings	$2,760,513.8
State Taxes	$502,427.7
Local Taxes	$482,044.5
GDP	$4,689,096.7

Initial Expenditure (in Dollars) — **$123,000,000.0**

EXHIBIT 5.2
<u>National</u> Economic Impacts of Annual Texas Historical Museum Noncapital Spending by 3-digit industry classification ($123 Million investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**9521.9**	**149**	**3754.0**	**4501.4**
111CA	Crop and animal production (Farms)	8681.0	128	3266.3	3907.1
113FF	Forestry, fishing, and related activities	840.9	20	487.7	594.3
	Mining	**6155.2**	**11**	**1401.2**	**4056.4**
211	Oil and gas extraction	4091.5	5	974.0	2861.5
212	Mining, except oil and gas	1909.4	6	375.0	1089.1
213	Support activities for mining	154.3	1	52.2	105.8
22	**Utilities**	**12059.2**	**16**	**2384.8**	**6549.2**
23	**Construction**	**24096.9**	**189**	**13212.6**	**13961.5**
	Manufacturing	**122447.8**	**517**	**28386.2**	**43890.8**
311FT	Food product manufacturing	20797.6	80	2900.7	5929.3
313TT	Textile and textile product mills	2710.6	14	624.6	822.3
315AL	Apparel manufacturing	4122.4	42	1462.2	1688.9
321	Wood product manufacturing	2125.3	11	509.0	600.7
322	Paper manufacturing	5084.3	14	941.1	1606.3
323	Printing and related support activities	5740.8	35	1853.3	2574.3
324	Petroleum and coal products manufacturing	16002.1	16	4777.9	6084.4
325	Chemical manufacturing	17395.8	22	2722.1	6678.4
326	Plastics and rubber products manufacturing	5279.1	16	1002.1	1657.7
327	Nonmetallic mineral product manufacturing	2361.2	8	573.2	942.0
331	Primary metal manufacturing	5234.3	72	633.9	1300.2
332	Fabricated metal product manufacturing	6638.3	31	1858.2	2683.5
333	Machinery manufacturing	2431.3	9	622.6	940.3
334	Computer and electronic product manufacturing	5927.8	20	1907.3	3016.3
335	Electrical equipment and appliance manufacturing	2288.3	32	569.9	909.1
3361MV	Motor vehicle, body, trailer, and parts manufacturing	8089.5	20	1672.7	2391.7
3364OT	Other transportation equipment manufacturing	1598.6	5	353.1	524.4
337	Furniture and related product manufacturing	5158.7	51	2114.5	1949.2
339	Miscellaneous manufacturing	3461.6	20	1287.9	1591.9
42	**Wholesale trade**	**12479.9**	**34**	**2929.3**	**4271.4**
44RT	**Retail trade**	**43085.6**	**559**	**19566.4**	**29035.4**
	Transportation and warehousing, excluding Postal Service	**28047.7**	**172**	**10156.7**	**14312.9**
481	Air transportation	7545.8	31	2646.9	4806.5
482	Rail transportation	2494.0	6	645.2	1099.5
483	Water transportation	1976.3	7	615.6	1033.4
484	Truck transportation	2625.5	8	462.0	797.4
485	Transit and ground passenger transportation	5185.0	60	2111.6	2253.0
486	Pipeline transportation	1966.3	4	1442.9	1153.7
487OS	Other transportation and support activities	3663.4	34	1231.3	1832.8
493	Warehousing and storage	2591.3	23	1001.2	1336.8
	Information	**47292.7**	**146**	**11157.9**	**27135.6**
511	Publishing including software	10835.6	55	3525.6	6130.9
512	Motion picture and sound recording industries	3552.1	17	884.3	2101.9
513	Broadcasting and telecommunications	11697.3	27	2999.6	6548.4
514	Information and data processing services	21207.7	47	3748.4	12354.5
	Finance and insurance	**96282.5**	**456**	**38999.5**	**50119.5**
521CI	Federal Reserve banks, credit intermediation and related services	23838.0	134	6710.7	14079.2
523	Securities, commodity contracts, investments	25880.6	129	14868.2	11933.0
524	Insurance carriers and related activities	36046.3	191	13864.7	18727.3

525	Funds, trusts, and other financial vehicles	10517.6	2	3555.9	5380.0
	Real estate, rental, and leasing	**80770.7**	**531**	**12684.6**	**42116.6**
531	Real estate	42567.6	479	9476.5	15222.8
532RL	Rental and leasing services and lessors of intangible assets	38203.2	52	3208.2	26893.8
	Professional and technical services	**64849.6**	**419**	**32275.9**	**41921.3**
5411	Legal services	6618.1	2	192.6	3453.9
5412OP	Other professional, scientific and technical services	45897.2	341	25013.9	29516.1
5415	Computer systems design and related services	12311.4	76	7060.1	8940.3
55	Management of companies and enterprises	22.8	0	9.3	11.1
	Administrative and waste services	**49235.2**	**597**	**29652.7**	**32132.9**
561	Administrative and support services	47277.8	584	28766.0	31145.9
562	Waste management and remediation services	1957.4	13	886.6	987.0
61	**Educational services**	8878.0	114	4484.4	5271.1
	Health care and social assistance	**48294.7**	**511**	**27008.2**	**28501.1**
621	Ambulatory health care services	21755.0	204	13617.7	13307.2
622HO	Hospitals and nursing and residential care facilities	22791.9	193	10853.2	12880.7
624	Social assistance	3747.9	114	2537.4	2313.3
	Arts, entertainment, and recreation	**178835.6**	**2941**	**78692.7**	**201353.3**
711AS	Performing arts, museums, and related activities	174520.6	2892	77383.7	198731.3
713	Amusements, gambling, and recreation	4314.9	49	1309.0	2622.0
	Accommodation and food services	**22143.1**	**408**	**9022.9**	**12529.0**
721	Accommodation	3153.7	39	1338.1	1740.8
722	Food services and drinking places	18989.5	369	7684.8	10788.2
81	**Other services, except government**	**20789.8**	**405**	**11532.4**	**12181.2**
GOV	**Government enterprises and the Postal Service**	**4510.2**	**42**	**2240.7**	**2918.2**
HH	**Households**	**284888.8**	**0**	**0.0**	**0.0**
	Total	**1,164,665.2**	**8,214**	**335,987.3**	**571,378.9**

EXHIBIT 5.3
In-State Economic and Tax Impacts of Annual Investment on Texas History Museums
Noncapital Spending ($123 million investment)

	Output ($1,000)	Employment (jobs)	Earnings ($1,000)	GDP ($1,000)
I. Total Effects (Direct + Indirect/Induced)				
1. Agriculture, Forestry, Fishing, and Hunting	4,156.2	86	1,452.7	2,016.8
2. Mining	3,409.2	6	813.7	2,255.3
3. Utilities	8,617.5	11	1,817.2	4,693.2
4. Construction	24,656.0	196	13,494.8	14,312.9
5. Manufacturing	66,485.8	345	16,280.7	24,019.4
6. Wholesale Trade	8,194.3	22	1,953.4	2,804.6
7. Retail Trade	27,536.1	368	12,803.3	18,550.3
8. Transportation and Warehousing	16,896.8	96	6,068.9	8,845.1
9. Information	30,578.8	98	6,791.3	17,534.2
10. Finance, Insurance, Real Estate, Rental, and Leasing	88,340.0	599	24,388.8	41,582.1
11. Professional and Business Services	81,228.1	724	45,334.0	53,491.6
12. Educational Services, Health Care, and Social Assistance	36,829.8	412	20,497.9	21,700.1
13. Arts, Entertainment, Recreation, and Hospitality	174,915.6	3,053	78,864.8	200,131.0
14. Other Services (including Government Enterprise)	206,698.8	278	8,132.3	8,466.0
Total Effects	778,542.9	6,294	238,693.9	420,402.6
II. Distribution of Effects and Multipliers				
1. Direct Effects	123,000.0	1,638	57,000.0	170,671.8
2. Indirect/Induced Effects	655,542.9	4,656	181,693.9	249,730.8
3. Total Effects	778,542.9	6,294	238,693.9	420,402.6
4. *Multipliers (= 3 / 1)*	*6.330*	*3.842*	*4.188*	*2.463*
III. Composition of GDP				
1. Compensation				199,307.1
2. Taxes				50,321.6
a. Local				11,878.7
b. State				3,893.9
c. Federal				34,549.1
3. Profits, Dividends, Rents, and Other				170,773.9
4. Total GDP (= 1 + 2 + 3)				420,402.6

IV. Tax Accounts	Business	Household	Total
1. Labor Income	199,307.1	238,693.9	----------------
2. Taxes	50,321.6	28,135.6	78,457.2
a. Local	11,878.7	4,266.2	16,144.8
b. State	3,893.9	0.0	3,893.9
c. Federal	34,549.1	23,869.4	58,418.5

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	51.2
Earnings	$1,940,600.6
State Taxes	$31,657.7
Local Taxes	$131,258.8
GDP	$3,417,907.4

Initial Expenditure (in Dollars) | | **$123,000,000.0**

EXHIBIT 5.4
EXHIBIT 5.4
In-State Economic Impacts of Annual Texas History Museum Noncapital Spending by 3-digit industry classification ($123 Million investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**4156.2**	**86**	**1452.7**	**2016.8**
111CA	Crop and animal production (Farms)	3767.2	75	1232.6	1743.9
113FF	Forestry, fishing, and related activities	389.0	11	220.1	272.9
	Mining	**3409.2**	**6**	**813.7**	**2255.3**
211	Oil and gas extraction	2340.7	2	557.7	1637.0
212	Mining, except oil and gas	987.3	3	228.5	562.6
213	Support activities for mining	81.2	0	27.5	55.7
22	**Utilities**	**8617.5**	**11**	**1817.2**	**4693.2**
23	**Construction**	**24656.0**	**196**	**13494.8**	**14312.9**
	Manufacturing	**66485.8**	**345**	**16280.7**	**24019.4**
311FT	Food product manufacturing	11459.3	54	1661.0	3400.9
313TT	Textile and textile product mills	1073.2	6	236.9	317.8
315AL	Apparel manufacturing	2096.7	24	752.9	875.1
321	Wood product manufacturing	1274.9	6	303.9	358.5
322	Paper manufacturing	2245.5	7	413.0	702.0
323	Printing and related support activities	1603.0	11	518.7	712.5
324	Petroleum and coal products manufacturing	10659.0	12	3649.7	4214.8
325	Chemical manufacturing	9281.2	12	1458.7	3581.9
326	Plastics and rubber products manufacturing	2767.7	9	513.8	868.5
327	Nonmetallic mineral product manufacturing	1549.2	5	373.0	608.9
331	Primary metal manufacturing	2506.3	68	313.3	624.1
332	Fabricated metal product manufacturing	3407.1	18	968.7	1368.7
333	Machinery manufacturing	1220.9	5	299.2	461.8
334	Computer and electronic product manufacturing	2756.6	9	867.4	1400.7
335	Electrical equipment and appliance manufacturing	918.3	27	231.5	364.0
3361MV	Motor vehicle, body, trailer, and parts manufacturing	4519.9	11	919.5	1344.1
3364OT	Other transportation equipment manufacturing	739.6	3	176.2	226.6
337	Furniture and related product manufacturing	4420.5	45	1853.3	1678.1
339	Miscellaneous manufacturing	1987.0	13	769.9	910.4
42	**Wholesale trade**	**8194.3**	**22**	**1953.4**	**2804.6**
44RT	**Retail trade**	**27536.1**	**368**	**12803.3**	**18550.3**
	Transportation and warehousing, excluding Postal Service	**16896.8**	**96**	**6068.9**	**8845.1**
481	Air transportation	6034.5	24	2116.7	3843.8
482	Rail transportation	1478.4	3	382.0	651.8
483	Water transportation	1098.9	4	342.3	574.6
484	Truck transportation	1740.5	6	313.6	528.6
485	Transit and ground passenger transportation	2278.2	28	949.6	989.9
486	Pipeline transportation	1138.6	2	845.8	668.1
487OS	Other transportation and support activities	1731.7	17	565.2	868.3
493	Warehousing and storage	1396.0	13	553.6	720.1
	Information	**30578.8**	**98**	**6791.3**	**17534.2**
511	Publishing including software	6908.2	37	2254.7	3918.0
512	Motion picture and sound recording industries	1435.0	10	374.5	871.7
513	Broadcasting and telecommunications	8060.8	20	1724.9	4498.5
514	Information and data processing services	14174.8	31	2437.2	8246.0
	Finance and insurance	**44331.6**	**264**	**16288.1**	**20399.3**
521CI	Federal Reserve banks, credit intermediation and related services	13900.2	84	3904.6	8205.4
523	Securities, commodity contracts, investments	11669.6	74	6933.6	5384.4
524	Insurance carriers and related activities	18686.4	106	5422.3	6770.9

525	Funds, trusts, and other financial vehicles	75.5	0	27.6	38.6
	Real estate, rental, and leasing	**44008.4**	**335**	**8100.6**	**21182.8**
531	Real estate	28342.0	309	6449.6	10135.6
532RL	Rental and leasing services and lessors of intangible assets	15666.4	25	1651.1	11047.3
	Professional and technical services	**47124.3**	**299**	**24150.0**	**31027.1**
5411	Legal services	4065.7	1	119.7	2121.8
5412OP	Other professional, scientific and technical services	33764.3	241	18809.7	22041.3
5415	Computer systems design and related services	9286.6	56	5217.5	6860.2
55	Management of companies and enterprises	7.7	0	3.2	3.8
	Administrative and waste services	**34103.7**	**425**	**21184.0**	**22464.5**
561	Administrative and support services	33152.2	419	20744.6	21984.7
562	Waste management and remediation services	951.6	6	439.4	479.8
61	**Educational services**	4935.0	66	2462.2	2893.4
	Health care and social assistance	**31894.8**	**346**	**18035.8**	**18806.7**
621	Ambulatory health care services	14006.0	134	8820.0	8569.2
622HO	Hospitals and nursing and residential care facilities	15375.1	131	7476.8	8686.0
624	Social assistance	2513.8	81	1739.0	1551.5
	Arts, entertainment, and recreation	**163817.4**	**2837**	**74294.7**	**193849.1**
711AS	Performing arts, museums, and related activities	162585.1	2822	74021.6	193245.5
713	Amusements, gambling, and recreation	1232.3	15	273.1	603.6
	Accommodation and food services	**11098.2**	**215**	**4570.1**	**6281.9**
721	Accommodation	636.3	9	274.9	351.2
722	Food services and drinking places	10461.9	206	4295.3	5930.6
81	**Other services, except government**	**11776.8**	**244**	**6802.8**	**6722.1**
GOV	**Government enterprises and the Postal Service**	**2718.5**	**34**	**1329.5**	**1743.9**
HH	**Households**	**192203.4**	**0**	**0.0**	**0.0**
	Total	**778,542.9**	**6,294**	**238,666.3**	**420,364.0**

EXHIBIT 5.5
National Economic and Tax Impacts of Net Annual Texas History Museums
($93.5 million investment)

	Output ($1,000)	Employment (jobs)	Earnings ($1,000)	GDP ($1,000)
I. Total Effects (Direct + Indirect/Induced)				
1. Agriculture, Forestry, Fishing, and Hunting	3,717.7	70	2,560.8	1,822.7
2. Mining	2,925.0	5	846.2	1,902.2
3. Utilities	9,520.9	12	1,648.3	5,178.9
4. Construction	2,054.7	17	1,205.5	1,169.4
5. Manufacturing	79,461.9	342	19,143.8	28,680.8
6. Wholesale Trade	8,631.0	24	2,030.9	2,954.0
7. Retail Trade	28,818.4	378	13,318.0	19,415.9
8. Transportation and Warehousing	17,790.5	108	6,883.4	9,084.7
9. Information	31,415.7	99	8,000.4	18,032.8
10. Finance, Insurance, Real Estate, Rental, and Leasing	113,236.9	636	33,664.4	54,775.4
11. Professional and Business Services	80,249.2	714	44,821.3	52,330.9
12. Educational Services, Health Care, and Social Assistance	39,616.8	430	21,906.8	23,366.9
13. Arts, Entertainment, Recreation, and Hospitality	276,961.4	2,477	66,178.8	156,791.7
14. Other Services (including Government Enterprise)	16,521.6	285	9,634.7	9,767.0
Total Effects	710,921.6	5,598	231,843.5	385,273.4
II. Distribution of Effects and Multipliers				
1. Direct Effects	93,480.0	1,245	43,320.0	129,710.6
2. Indirect/Induced Effects	617,441.6	4,352	188,523.5	255,562.8
3. Total Effects	710,921.6	5,598	231,843.5	385,273.4
4. *Multipliers (= 3 / 1)*	*7.605*	*4.495*	*5.352*	*2.970*

III. Composition of GDP

				GDP ($1,000)
1. Compensation				197,920.9
2. Taxes				51,198.9
a. Local				10,821.1
b. State				6,683.6
c. Federal				33,694.2
3. Profits, Dividends, Rents, and Other				136,153.6
4. Total GDP (= 1 + 2 + 3)				385,273.4

IV. Tax Accounts

	Business	Household	Total
1. Labor Income	197,920.9	231,843.5	----------------
2. Taxes	51,198.9	28,391.7	79,590.6
a. Local	10,821.1	3,962.5	14,783.6
b. State	6,683.6	1,244.8	7,928.4
c. Federal	33,694.2	23,184.4	56,878.6

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	59.9
Earnings	$2,480,140.6
State Taxes	$84,813.4
Local Taxes	$158,147.5
GDP	$4,121,453.0

Initial Expenditure (in Dollars) $93,480,000.0

EXHIBIT 5.6
National Economic Impacts of Net Annual Texas
History Museum by 3-digit industry classification ($93.5 Million investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**3717.7**	**70**	**2560.8**	**1822.7**
111CA	Crop and animal production (Farms)	3252.3	58	2228.6	1492.7
113FF	Forestry, fishing, and related activities	465.4	12	332.2	330.0
	Mining	**2925.0**	**5**	**846.2**	**1902.2**
211	Oil and gas extraction	1797.9	2	621.0	1257.4
212	Mining, except oil and gas	1032.7	3	192.7	580.1
213	Support activities for mining	94.4	0	32.4	64.7
22	**Utilities**	**9520.9**	**12**	**1648.3**	**5178.9**
23	**Construction**	**2054.7**	**17**	**1205.5**	**1169.4**
	Manufacturing	**79461.9**	**342**	**19143.8**	**28680.8**
311FT	Food product manufacturing	14071.4	55	2014.5	3966.9
313TT	Textile and textile product mills	1834.1	10	432.2	555.8
315AL	Apparel manufacturing	2735.7	28	1014.2	1125.4
321	Wood product manufacturing	1052.2	5	257.6	299.1
322	Paper manufacturing	3311.7	9	645.8	1047.5
323	Printing and related support activities	4057.6	25	1337.3	1819.8
324	Petroleum and coal products manufacturing	10035.7	11	3252.6	3952.2
325	Chemical manufacturing	10684.3	13	1856.3	4132.8
326	Plastics and rubber products manufacturing	3318.9	10	630.4	1043.4
327	Nonmetallic mineral product manufacturing	1181.7	4	299.6	483.4
331	Primary metal manufacturing	3281.4	44	401.5	817.0
332	Fabricated metal product manufacturing	3912.6	19	1116.5	1599.2
333	Machinery manufacturing	1459.5	6	383.4	570.2
334	Computer and electronic product manufacturing	4097.2	14	1316.3	2084.2
335	Electrical equipment and appliance manufacturing	1392.0	20	350.6	557.2
3361MV	Motor vehicle, body, trailer, and parts manufacturing	5459.7	13	1147.6	1614.5
3364OT	Other transportation equipment manufacturing	1088.0	3	240.6	357.6
337	Furniture and related product manufacturing	4021.5	39	1548.7	1521.0
339	Miscellaneous manufacturing	2466.7	14	898.2	1133.6
42	**Wholesale trade**	**8631.0**	**24**	**2030.9**	**2954.0**
44RT	**Retail trade**	**28818.4**	**378**	**13318.0**	**19415.9**
	Transportation and warehousing, excluding Postal Service	**17790.5**	**108**	**6883.4**	**9084.7**
481	Air transportation	4755.5	19	1668.1	3029.1
482	Rail transportation	1726.4	4	450.0	761.1
483	Water transportation	1302.6	5	405.8	681.1
484	Truck transportation	1681.7	5	316.4	510.8
485	Transit and ground passenger transportation	2864.4	33	1406.1	1244.6
486	Pipeline transportation	1128.1	2	1071.5	661.9
487OS	Other transportation and support activities	2450.5	23	858.9	1225.6
493	Warehousing and storage	1881.3	17	706.7	970.5
	Information	**31415.7**	**99**	**8000.4**	**18032.8**
511	Publishing including software	7698.3	39	2500.1	4353.0
512	Motion picture and sound recording industries	2506.6	12	623.7	1482.8
513	Broadcasting and telecommunications	6455.7	16	2212.5	3607.9
514	Information and data processing services	14755.0	32	2664.1	8589.1
	Finance and insurance	**65160.4**	**308**	**24831.1**	**30171.3**
521CI	Federal Reserve banks, credit intermediation and related services	15587.0	89	4704.5	9176.2
523	Securities, commodity contracts, investments	16912.0	86	10386.2	7800.7
524	Insurance carriers and related activities	25219.7	132	7225.8	9387.7

525	Funds, trusts, and other financial vehicles	7441.8	1	2514.5	3806.6
	Real estate, rental, and leasing	**48076.5**	**328**	**8833.3**	**24604.1**
531	Real estate	26693.1	299	6580.6	9545.9
532RL	Rental and leasing services and lessors of intangible assets	21383.4	30	2252.7	15058.2
	Professional and technical services	**45679.8**	**293**	**23371.8**	**29730.7**
5411	Legal services	4422.9	2	135.5	2308.2
5412OP	Other professional, scientific and technical services	32085.3	236	18095.2	20737.0
5415	Computer systems design and related services	9155.8	56	5134.6	6677.8
55	Management of companies and enterprises	15.8	0	6.5	7.7
	Administrative and waste services	**34569.4**	**421**	**21449.5**	**22600.2**
561	Administrative and support services	33197.9	412	20821.3	21908.7
562	Waste management and remediation services	1371.5	9	628.2	691.6
61	**Educational services**	6136.2	79	3110.8	3642.5
	Health care and social assistance	**33480.6**	**351**	**18796.1**	**19724.4**
621	Ambulatory health care services	14389.9	135	9497.4	8801.2
622HO	Hospitals and nursing and residential care facilities	16506.3	138	7536.9	9328.0
624	Social assistance	2584.5	79	1761.8	1595.2
	Arts, entertainment, and recreation	**261998.3**	**2201**	**59895.8**	**148326.5**
711AS	Performing arts, museums, and related activities	259001.2	2167	58986.4	146505.2
713	Amusements, gambling, and recreation	2997.1	34	909.3	1821.3
	Accommodation and food services	**14963.1**	**276**	**6283.0**	**8465.1**
721	Accommodation	2140.4	27	931.7	1181.5
722	Food services and drinking places	12822.6	249	5351.4	7283.6
81	**Other services, except government**	**13363.4**	**256**	**8059.0**	**7719.3**
GOV	**Government enterprises and the Postal Service**	**3158.2**	**29**	**1575.7**	**2047.7**
HH	**Households**	**0.0**	**0**	**0.0**	**0.0**
	Total	**710,921.6**	**5,598**	**231,843.5**	**385,273.4**

EXHIBIT 5.7
<u>In-State</u> Economic and Tax Impacts of Net Annual Texas History Museums
($93.5 million investment)

		Output	Employment	Earnings	GDP
		($1,000)	(jobs)	($1,000)	($1,000)
I. Total Effects (Direct + Indirect/Induced)					
1.	Agriculture, Forestry, Fishing, and Hunting	2,806.5	58	972.5	1,358.1
2.	Mining	1,877.6	3	439.0	1,246.7
3.	Utilities	5,917.6	8	1,249.5	3,227.1
4.	Construction	1,138.7	9	622.0	651.3
5.	Manufacturing	42,870.6	225	10,771.9	15,641.6
6.	Wholesale Trade	5,665.7	15	1,350.6	1,939.1
7.	Retail Trade	18,464.4	250	8,616.1	12,435.1
8.	Transportation and Warehousing	11,169.1	64	4,041.5	5,812.0
9.	Information	22,112.3	71	4,899.2	12,669.2
10.	Finance, Insurance, Real Estate, Rental, and Leasing	61,764.5	417	17,014.1	29,142.1
11.	Professional and Business Services	59,433.0	531	33,288.5	39,201.6
12.	Educational Services, Health Care, and Social Assistance	25,543.1	285	14,223.6	15,051.3
13.	Arts, Entertainment, Recreation, and Hospitality	132,016.1	2,301	59,563.9	151,578.6
14.	Other Services (including Government Enterprise)	143,298.4	195	5,703.1	5,928.7
	Total Effects	534,077.5	4,432	162,755.4	295,882.4
II. Distribution of Effects and Multipliers					
1.	Direct Effects	93,480.0	1,245	43,320.0	129,710.6
2.	Indirect/Induced Effects	440,597.5	3,187	119,435.4	166,171.8
3.	Total Effects	534,077.5	4,432	162,755.4	295,882.4
4.	*Multipliers (= 3 / 1)*	*5.713*	*3.559*	*3.757*	*2.281*
III. Composition of GDP					
1.	Compensation				137,802.8
2.	Taxes				35,177.7
	a. Local				8,306.3
	b. State				2,640.1
	c. Federal				24,231.3
3.	Profits, Dividends, Rents, and Other				122,901.9
4.	Total GDP (= 1 + 2 + 3)				295,882.4

IV. Tax Accounts		Business	Household	Total
1.	Labor Income	137,802.8	162,755.4	----------------
2.	Taxes	35,177.7	19,184.5	54,362.2
	a. Local	8,306.3	2,908.9	11,215.2
	b. State	2,640.1	0.0	2,640.1
	c. Federal	24,231.3	16,275.5	40,506.9

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	47.4
Earnings	$1,741,071.8
State Taxes	$28,242.7
Local Taxes	$119,974.2
GDP	$3,165,194.2
Initial Expenditure (in Dollars)	**$93,480,000.0**

EXHIBIT 5.8
In-State National Economic Impacts of Net Annual Texas
History Museum by 3-digit industry classification ($93.5 Million investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**2806.5**	**58**	**972.5**	**1358.1**
111CA	Crop and animal production (Farms)	2542.7	51	824.5	1173.2
113FF	Forestry, fishing, and related activities	263.8	7	148.0	185.0
	Mining	**1877.6**	**3**	**439.0**	**1246.7**
211	Oil and gas extraction	1409.3	1	335.8	985.7
212	Mining, except oil and gas	421.9	1	87.6	229.3
213	Support activities for mining	46.3	0	15.7	31.8
22	**Utilities**	**5917.6**	**8**	**1249.5**	**3227.1**
23	**Construction**	**1138.7**	**9**	**622.0**	**651.3**
	Manufacturing	**42870.6**	**225**	**10771.9**	**15641.6**
311FT	Food product manufacturing	7946.3	37	1151.3	2357.3
313TT	Textile and textile product mills	738.2	4	163.0	218.6
315AL	Apparel manufacturing	1450.4	17	520.9	605.4
321	Wood product manufacturing	528.6	3	125.6	149.5
322	Paper manufacturing	1510.5	5	277.8	473.1
323	Printing and related support activities	1165.7	8	377.7	518.6
324	Petroleum and coal products manufacturing	6550.0	8	2467.8	2683.9
325	Chemical manufacturing	6168.8	8	984.4	2405.4
326	Plastics and rubber products manufacturing	1646.2	5	303.9	517.4
327	Nonmetallic mineral product manufacturing	642.3	2	166.0	262.7
331	Primary metal manufacturing	1510.8	41	187.6	377.6
332	Fabricated metal product manufacturing	1793.7	10	516.2	736.7
333	Machinery manufacturing	640.5	3	163.1	246.1
334	Computer and electronic product manufacturing	1895.2	6	594.7	962.6
335	Electrical equipment and appliance manufacturing	452.6	17	120.0	182.9
3361MV	Motor vehicle, body, trailer, and parts manufacturing	3091.4	8	628.1	919.5
3364OT	Other transportation equipment manufacturing	495.3	2	118.4	152.4
337	Furniture and related product manufacturing	3257.4	33	1368.2	1236.8
339	Miscellaneous manufacturing	1386.6	9	537.1	635.0
42	**Wholesale trade**	**5665.7**	**15**	**1350.6**	**1939.1**
44RT	**Retail trade**	**18464.4**	**250**	**8616.1**	**12435.1**
	Transportation and warehousing, excluding Postal Service	**11169.1**	**64**	**4041.5**	**5812.0**
481	Air transportation	3730.4	15	1308.5	2376.1
482	Rail transportation	1029.1	2	265.9	453.7
483	Water transportation	701.6	2	218.5	366.8
484	Truck transportation	1181.8	4	212.9	358.9
485	Transit and ground passenger transportation	1485.9	18	619.4	645.7
486	Pipeline transportation	845.9	1	628.4	496.3
487OS	Other transportation and support activities	1200.6	12	393.8	601.7
493	Warehousing and storage	993.9	9	394.1	512.7
	Information	**22112.3**	**71**	**4899.2**	**12669.2**
511	Publishing including software	4938.9	27	1608.3	2799.0
512	Motion picture and sound recording industries	1016.1	7	265.0	616.9
513	Broadcasting and telecommunications	6041.6	15	1283.5	3370.0
514	Information and data processing services	10115.8	22	1742.4	5883.2
	Finance and insurance	**31062.5**	**185**	**11397.1**	**14326.7**
521CI	Federal Reserve banks, credit intermediation and related services	9743.6	59	2740.5	5749.7
523	Securities, commodity contracts, investments	8147.6	52	4836.9	3760.9

524	Insurance carriers and related activities	13118.0	74	3800.2	4788.8
525	Funds, trusts, and other financial vehicles	53.4	0	19.5	27.3
	Real estate, rental, and leasing	**30702.0**	**232**	**5617.0**	**14815.4**
531	Real estate	19637.3	214	4468.7	7022.6
532RL	Rental and leasing services and lessors of intangible assets	11064.7	18	1148.3	7792.7
	Professional and technical services	**34517.4**	**219**	**17785.8**	**22767.1**
5411	Legal services	2856.2	1	84.1	1490.6
5412OP	Other professional, scientific and technical services	24813.1	177	13858.5	16217.9
5415	Computer systems design and related services	6842.7	41	3841.0	5056.0
55	Management of companies and enterprises	5.4	0	2.2	2.6
	Administrative and waste services	**24915.6**	**312**	**15502.6**	**16434.5**
561	Administrative and support services	24241.0	307	15191.1	16094.3
562	Waste management and remediation services	674.6	4	311.5	340.2
61	**Educational services**	3407.3	45	1702.3	1999.0
	Health care and social assistance	**22135.8**	**240**	**12521.4**	**13052.4**
621	Ambulatory health care services	9740.0	93	6135.5	5958.4
622HO	Hospitals and nursing and residential care facilities	10654.2	91	5181.0	6019.0
624	Social assistance	1741.6	56	1204.8	1075.0
	Arts, entertainment, and recreation	**259238.3**	**2152**	**56385.7**	**147210.2**
711AS	Performing arts, museums, and related activities	258384.5	2141	56196.5	146792.0
713	Amusements, gambling, and recreation	853.8	10	189.2	418.2
	Accommodation and food services	**7717.8**	**150**	**3178.2**	**4368.4**
721	Accommodation	442.3	6	191.1	244.1
722	Food services and drinking places	7275.6	143	2987.2	4124.3
81	**Other services, except government**	**8226.5**	**171**	**4762.3**	**4700.9**
GOV	**Government enterprises and the Postal Service**	**1907.6**	**24**	**940.7**	**1227.7**
HH	**Households**	**133164.3**	**0**	**0.0**	**0.0**
	Total	**669,017.6**	**4,432**	**162,735.9**	**295,855.1**

CHAPTER SIX

PROFILE AND ECONOMIC IMPACTS OF TEXAS HISTORIC COUTHOUSE PRESERVATION PROGRAM

INTRODUCTION AND SUMMARY

Historic courthouses are focal points for Texas' heritage tourism: Texas has more county courthouses than any other state (more than 240 historic courthouses) and 136 of those courthouses are listed in the National Register of Historic Places.[56]The Texas Historic Courthouse Preservation Program (THCPP) was established in 1999 and the following year began awarding matching grants to Texas counties for the restoration of their historic courthouses. The first THCPP grant project was begun in 2000 and completed in 2001.[57] To date, 91 counties have received THCPP funding for their courthouse restoration projects. Note that there are additional historic courthouse projects undertaken separately from THCPP funding which are excluded from the current analysis, unless otherwise noted.

- The cumulative amount, of both state grant funding and local matching contributions, spent on THCPP courthouse restoration projects adds up to $447 million (this number reflects project costs up to and including those anticipated for projects completed in the fiscal year 2014 or 2015).

- The *annual average* amount spent in THCPP courthouse projects completed from 2001 to 2013 is about $31 million. In 2013, the amount spent that year on THCPP projects added up to $21.6 million.

- This research methodology estimates that the economic impact for Texas from the *cumulative* $447 million spent on courthouse restoration projects associated with the THCPP amounted to 9,607 jobs in Texas (of 12,443 nationally), leading to $501 million in labor income, $615 million in GDP, and $561 million in added in-state wealth.

TABLE 6.1
Cumulative (2001-2015) Economic Impact of
Historic Courthouse Preservation ($447 Million)[58]

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	9,607	2,836	12,443
Income ($000)	$501,148	$145,069	$646,217
GDP ($000)*	$614,956	$216,339	$831,295
In-State Wealth ($000)**	$561,138	------	------

*GDP =Gross Domestic Product
**In-State Wealth = GDP minus Federal Indirect Business Taxes

- The $447 million spent on courthouse projects in Texas generates a total of $192 million in taxes from both business and households for the whole nation; Texas captures 73 percent of that amount ($140 million). More specifically, the $447 million in direct spending

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[56] Texas Historical Commission (2014). "THCPP Factsheet". Retrieved from:
http://www.thc.state.tx.us/public/upload/publications/thcpp-factsheet-2014.pdf
[57] ibid
[58] The cumulative calculation is based on the year of completion (or anticipated year of completion); thus, since the first projects were completed in 2001, the cumulative estimates commence on that year.

generated $64 million in state and local taxes: $28 million were collected outside Texas, and $36 million were collected in Texas (Table 6.2).

TABLE 6.2
Cumulative (2001-2015) Economic Impact of Historic Courthouse Preservation Expenditures ($447 Million): Total Tax Contributions

	In Texas	Outside Texas	Total (U.S.)
Total Taxes ($000)	$140,251	$51,615	$191,866
Federal ($000)	$103,933	$23,664	$127,597
State ($000)	$8,454	$16,435	$24,889
Local ($000)	$27,864	$11,516	$39,380

- The $31 million *annual average* spending on historic courthouse preservation projects generated 693 jobs in the U.S. and Texas retained 86 percent of those jobs (599). The in-state economic impacts also include an additional $41 million in GDP, $32 million in labor income, and $38 million in added in-state wealth.

TABLE 6.3
Economic Impacts of the Annual Average Spending on Historic Courthouse Preservation ($31 million, 2001-2013 average)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	599	94	693
Income ($000)	$32,018	$9,424	$41,442
GDP ($000)*	$41,121	$5,870	$46,991
In-State Wealth ($000)**	$37,620	------	------

*GDP Gross Domestic Product
**In-State Wealth = GDP minus Federal Indirect Business Taxes

- Nationwide, the $31 million *annual average* spending on historic courthouse preservation projects generates an annual total of $12 million in taxes from both business and households. Texas captures 75 percent of that ($9 million). Additionally, statewide, each year the $31 million in direct spending generates a total of $2.4 million in state and local taxes (71 percent of the total $3.4 million generated nationally).

TABLE 6.4
Economic Impacts of the Annual Average Spending on Historic Courthouse Preservation ($31 million 2001-2013 average): Total Tax Contributions

	In Texas	Outside Texas	Total (U.S.)
Total Taxes ($000)	$9,110	$3,064	$12,174
Federal ($000)	$6,704	$2,063	$8,766
State ($000)	$562	$578	$1,140
Local ($000)	$1,844	$424	$2,268

PROFILE OF THE TEXAS HISTORIC COURTHOUSE PRESERVATION PROGRAM

Texas is the state with the greatest number of historic county courthouses. With more than 240 historic courthouses located throughout the state, these sites are also focal points for heritage tourism. About 80 of the courthouses were built before the turn of the 20th century, and the remaining are at least 50 years old.[59] Given the important role that historic courthouses play in the state's heritage tourism, the Texas Legislature and Governor George W. Bush established in 1999 the Texas Historic Courthouse Preservation Program (THCPP). This program, administered by the Texas Historical Commission and aimed at preserving the architectural integrity while improving the physical condition of the courthouses, has been providing partial matching grants to Texas counties for the restoration of their historic county courthouses since 2000. The program began with a $50 million appropriation for the construction and planning grants, which were awarded in two rounds: Round I in 2000 for construction grants and Round II in 2001 for planning grants.

The Texas Historic Courthouse Preservation Program has not only proved to be beneficial for the preservation of these historic buildings, but it has also been the catalyst for a revitalization of historic downtowns across the state. The program's success and positive economic impact has led to the continued funding from the Texas Legislature. As of 2014, there have been seven rounds of construction, planning, and emergency grants. Round VII, which accounted for the 2012-2013 biennium, received $20 million in bond funding from the Texas Legislature.

ATTRIBUTED EXPENDITURES OF THE TEXAS HISTORIC COURTHOUSE PRESERVATION PROGRAM

In order to quantify the total economic impacts of the Texas Historic Courthouse Preservation Program, the direct expenditures deriving from project costs per year have to be determined. Table 6.5 presents the amount spent on all Round I through Round VII THCPP courthouse projects by their year of completion.

To date, 91 counties have received funding for their courthouse preservation projects. During 2013, the amount spent that year on projects added up to $21.6 million. The total amount spent in these grant projects, which include full restoration, planning, and emergency projects, is about $447 million since the beginning of the program. Note that the total project costs include the expenditures of the projects through Round VII, anticipated to be completed in the fiscal year 2014 or 2015. Excluding the anticipated projects, from fiscal year 2001 to 2013, the amount spent in the preservation projects totaled $403.3 million (this estimates are based on the project costs by year of completion). The average amount spent per fiscal year on courthouse projects is about $31 million. While these values indicate the direct expenditures from the investments on courthouse preservation, these projects have also generated millions more in indirect expenses.

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[59] Texas Historical Commission (2014). "THCPP Factsheet". Retrieved from:
http://www.thc.state.tx.us/public/upload/publications/thcpp-factsheet-2014.pdf

Table 6.5

Round I-Round VII THCPP Courthouse
Project Expenditures by Year of Completion

Year of Completion	Project Costs*
2001	$2,190,244
2002	$25,744,073
2003	$32,845,157
2004	$40,985,672
2005	$3,151,812
2006	$36,787,711
2007	$17,913,602
2008	$17,772,918
2009	$26,186,101
2010	$8,362,375
2011	$113,776,000
2012	$55,993,192
2013	$21,611,743
Anticipated 2014-2015	$43,664,495
Total	*$446,985,095*

*Adjusted for inflation in 2013 dollars

ECONOMIC IMPACT OF COURTHOUSE PRESERVATION PROJECTS IN TEXAS

TABLE 6.6
Cumulative (2001-2015) Economic Impact of
Texas Courthouse Preservation Project Spending ($477 million)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	9,607	2,836	12,443
Income ($000)	$501,148	$145,069	$646,217
GDP ($000)*	$614,956	$216,339	$831,295
Total Taxes ($000)**	$140,251	$51,615	$191,866
Federal ($000)	$103,933	$23,664	$127,597
State ($000)	$8,454	$16,435	$24,889
Local ($000)	$27,864	$11,516	$39,380
In-State Wealth ($000)***	$561,138	------	------

*GDP =Gross Domestic Product

**Total Taxes = business plus household taxes

***In-State Wealth = GDP minus Federal Indirect Business Taxes

The following section applies the R/ECON™ I–O Model to both cumulative direct spending ($447 million) and annual average expenditure ($31 million). The R/ECON™ I–O Model calculates total economic impacts (direct, indirect, and induced) for the state of Texas and the nation.

Cumulative Impacts

Nationwide effects

Item 1 of Section II in Exhibit 6.1 shows how the $477 million spent on historic courthouse preservation projects from 2001 to 2015 translates into *direct* economic effects nationwide. Directly, the expenditures create 3,970 jobs (technically "job-years"), which produce, again only directly, $262 million in labor income and $263 million in GDP. The indirect and induced effects of historic preservation activity yield 8,473 additional jobs, and generate $384 million additional in income and $568 million additional in GDP in their support. As a consequence, the total economic impact—the sum of the direct and indirect and induced effects—amounts to 12,443 jobs (3,970 + 8,473); $646 million in labor income ($262 million + $384 million); and $831 million in GDP ($263 million + $568 million). In other words, the multiplier effects are greater than the direct effects: the national multipliers are always substantially greater than 2.0.

Finer grained detail of national impacts by industry is shown in Exhibit 6.2. Of the 12,443 jobs derived nationwide via historic courthouse preservation projects in Texas, over 32 percent of jobs are in the construction industry (4,031). The second most-benefited sector is the finance/insurance/real estate industry, which added 1,523 jobs (12 percent) into the labor market. The manufacturing sector ranks as the third most-benefited industry, with an addition of 1,308 new jobs. Of these 1,308 manufacturing related jobs, 307 jobs come from the primary metal manufacturing sector and 141 jobs come from the food-product manufacturing sector. Similar impacts are found in the contribution of income and GDP: The construction, finance/insurance/real estate, and manufacturing industries contribute 38 percent, 12 percent, and 10 percent, respectively, of the total generated earnings. In terms of GDP, the construction, manufacturing, and retail trade industries contribute 32 percent, 14 percent, and 13 percent, respectively, of the total $831 million generated.

Statewide effects

Exhibit 6.3 presents the *statewide* cumulative economic impacts (from 2001 to 2015) of the $477 million spent on historic courthouse restoration projects within Texas. In sum, it creates 9,607 jobs (77 percent of the total 12,443 jobs generated nationally), $501 million in labor income (78 percent of the $646 million in income generated nationally), and $615 million in wealth (74 percent of the $831 million added to national GDP). The state multiplier effects (measured by subtracting one from the multipliers) range between 62 and 93 percent of the national multipliers. Interestingly, Texas retains all of the 3,970 jobs created *directly* by state-based historic courthouse preservation activity; however, the indirect/induced impacts of Texas historic courthouse activity tends to leak out of the state.

The distribution of in-state impacts across industries is similar to that for the entire nation. As it might be expected, the state experiences substantial gains in the construction, finance/insurance/real estate, and manufacturing industries. Finer grained detail of state impacts by industry (Exhibit 6.4) reflect the same pattern as found in the previous nationwide impacts, but have an even stronger concentration tendency: of the 9,607 jobs derived statewide via the historic courthouse restoration projects, 3,994 jobs (nearly 42 percent) are in the construction industries. Furthermore, $263 million (53 percent of $501 million) of total labor income and $265 million (43 percent of $615 million) of wealth are also coming from this sector.

Annual Impacts

TABLE 6.7
Economic Impacts of the Annual Average Spending on Historic Courthouse Preservation
($31 million, 2001-2013 average)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	599	94	693
Income ($000)	$32,018	$9,424	$41,442
GDP ($000)*	$41,121	$5,870	$46,991
Total Taxes ($000)**	$9,110	$3,064	$12,174
Federal ($000)	$6,704	$2,063	$8,766
State ($000)	$562	$578	$1,140
Local ($000)	$1,844	$424	$2,268
In-State Wealth ($000)***	$37,620	------	------

*GDP =Gross Domestic Product

**Total Taxes = business plus household taxes

***In-State Wealth = GDP minus Federal Indirect Business Taxes

Nationwide Impacts

The details of the economic effects of the annual average $31 million in direct historic courthouse preservation spending are contained in Exhibits 6.5 to 6.6 (see end of chapter). Item 1 of Section II in Exhibit 6.5 shows, for instance, that the *direct* effects of historic courthouse preservation spending to the nation translate annually into 225 new jobs, and an increase of $16 million in income and $17.5 million in GDP.

Multiplier effects add 468 more jobs, $25 million more income, and $29.5 million more GDP each year. Therefore, the total national, annual economic impacts of Texas' historic courthouse preservation—the sum of its direct and indirect and induced effects—are 693 jobs (225 + 468), $41 million income ($16 million + $25 million), and $47 million in GDP ($17.5 million + 29.5 million). In all instances, the indirect and induced effects exceed the direct effects (the traditional multipliers are greater than 2.0).

A finer breakdown of national economic impacts by industry (Exhibit 6.6) indicates that of the total 693 jobs generated nationwide by courthouse preservation spending, one-third is in the construction industry (226 jobs). The finance/insurance/real estate industries ranked as the second most-benefited sectors: 77 new employments arise from those industries and 44 of those jobs are concentrated in the real estate (including rentals and leasing) industry. The third most-benefited industry, in terms of jobs, is manufacturing (75 added jobs). Of these new manufacturing related jobs, 28 percent come from the primary metal manufacturing sub-sector.

Similar impacts are found in the contribution of income and GDP: The construction, finance/insurance/real estate, and manufacturing industries contribute 36 percent, 13 percent, and 11 percent, respectively, of the total generated earnings. In terms of GPD, the construction, finance/insurance/real estate, and manufacturing industries contribute 38 percent, 12 percent, and 12 percent, respectively, of the total generated GDP.

State-Level Impacts

Exhibits 6.7 and 6.8 present the total in-state economic effects of the annual average $31 million in direct historic courthouse preservation spending. Item 1 in Section II of Exhibit 6.7 shows that Texas retains 100 percent of the total direct jobs created in support of historic courthouse

preservation (225 jobs). Texas retains a lower proportion of the indirect and induced historic courthouse preservation employment impacts— about 80 percent (374 of 468 jobs).

In sum, each year through its historic courthouse preservation, Texas gains 599 jobs (86 percent of the total 693 jobs generated nationally), $32 million in income (77 percent of the $41 million in income generated nationally), and $41 million in GDP (88 percent of the $47 million added to national GDP).

Finer-grained detail of state impacts by industry (Exhibit 6.8) reflects concentrations and patterns similar to those noted at the national level. Texas retains *all* construction jobs generated from the historic courthouse preservation spending: 226 jobs. Similarly, of the 75 jobs generated annually in the manufacturing sector, 92 percent remain in-state. In comparison to the construction and manufacturing industries, the finance/insurance/real estate sectors' activities tend to leak out of the state: Texas retains 85 percent of the jobs created in those sectors (65). Of the total $32 million generated in annual income, over one-half of that amount ($16.2 million) is generated through in the construction industry. Moreover, the manufacturing sector remains beings the second most-benefited industry, garnering $3 million in earnings. The construction and manufacturing industries also comprise $18 million and $5 million, respectively, of the total $47 million increase in state gross domestic product.

EXHIBIT 6.1
<u>National</u> Economic and Tax Impacts of the Cumulative Spending on Historic Courthouse Preservation Program- 2001-2015 ($447 million investment)

	Output	Employment	Earnings	GDP
	($1,000)	(jobs)	($1,000)	($1,000)
I. Total Effects (Direct + Indirect/Induced)				
1. Agriculture, Forestry, Fishing, and Hunting	11,970.4	214	7,786.4	5,992.6
2. Mining	20,167.1	50	5,316.8	13,119.3
3. Utilities	25,485.5	33	4,356.2	13,718.3
4. Construction	453,999.7	4,031	248,533.4	266,775.4
5. Manufacturing	303,605.0	1,308	65,271.9	104,805.4
6. Wholesale Trade	22,347.3	61	5,250.2	7,648.6
7. Retail Trade	92,443.3	1,115	41,432.6	62,394.8
8. Transportation and Warehousing	57,698.5	347	20,703.0	30,165.8
9. Information	50,321.5	170	12,725.4	29,231.6
10. Finance, Insurance, Real Estate, Rental, and Leasing	254,601.2	1,523	78,022.6	119,085.0
11. Professional and Business Services	109,069.0	951	59,591.9	68,269.1
12. Educational Services, Health Care, and Social Assistance	99,552.1	1,090	54,645.5	58,700.2
13. Arts, Entertainment, Recreation, and Hospitality	49,639.8	905	20,423.1	28,637.6
14. Other Services (including Government Enterprise)	39,008.5	646	22,158.3	22,751.4
Total Effects	1,589,908.9	12,443	646,217.0	831,295.1
II. Distribution of Effects and Multipliers				
1. Direct Effects	446,985.1	3,970	261,723.2	262,739.5
2. Indirect/Induced Effects	1,142,923.9	8,473	384,493.8	568,555.7
3. Total Effects	1,589,908.9	12,443	646,217.0	831,295.1
4. *Multipliers (= 3 / 1)*	*3.557*	*3.135*	*2.469*	*3.164*

				GDP ($1,000)
III. Composition of GDP				
1. Compensation				511,495.5
2. Taxes				120,201.1
a. Local				25,124.1
b. State				18,629.5
c. Federal				76,447.5
3. Profits, Dividends, Rents, and Other				199,598.5
4. Total GDP (= 1 + 2 + 3)				831,295.1

IV. Tax Accounts	Business	Household	Total
1. Labor Income	511,495.5	511,495.5	---------------
2. Taxes	120,201.1	71,665.0	191,866.1
a. Local	25,124.1	14,255.6	39,379.7
b. State	18,629.5	6,259.9	24,889.4
c. Federal	76,447.5	51,149.6	127,597.1

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	27.8
Earnings	$1,445,723.9
State Taxes	$55,682.8
Local Taxes	$88,100.6
GDP	$1,859,782.6
Initial Expenditure (in Dollars)	**$446,985,095.0**

EXHIBIT 6.2
National Economic Impacts of Cumulative Spending on Historic Courthouse Preservation Program by 3-digit Industry Classification- 2001-2015 ($447 million investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**11970.4**	**214**	**7786.4**	**5992.6**
111CA	Crop and animal production (Farms)	10524.1	176	6731.5	4961.3
113FF	Forestry, fishing, and related activities	1446.3	38	1054.9	1031.3
	Mining	**20167.1**	**50**	**5316.8**	**13119.3**
211	Oil and gas extraction	10310.5	10	3021.2	7210.9
212	Mining, except oil and gas	9334.2	38	2117.1	5550.1
213	Support activities for mining	522.5	2	178.4	358.3
22	**Utilities**	**25485.5**	**33**	**4356.2**	**13718.3**
23	**Construction**	**453999.7**	**4031**	**248533.4**	**266775.4**
	Manufacturing	**303605.0**	**1308**	**65271.9**	**104805.4**
311FT	Food product manufacturing	35610.6	141	5104.6	10067.4
313TT	Textile and textile product mills	4887.1	26	1143.7	1476.9
315AL	Apparel manufacturing	7064.7	72	2614.8	2903.8
321	Wood product manufacturing	13356.3	68	3249.8	3757.4
322	Paper manufacturing	9325.9	25	1806.3	2915.3
323	Printing and related support activities	5772.2	34	1887.8	2572.7
324	Petroleum and coal products manufacturing	49173.7	39	9922.6	16808.9
325	Chemical manufacturing	35390.0	41	5590.5	12868.5
326	Plastics and rubber products manufacturing	17188.8	53	3312.7	5372.6
327	Nonmetallic mineral product manufacturing	17209.2	65	3934.5	6638.7
331	Primary metal manufacturing	17357.5	307	2136.9	4250.6
332	Fabricated metal product manufacturing	30757.6	137	8411.7	11821.6
333	Machinery manufacturing	10647.9	38	2473.9	3973.1
334	Computer and electronic product manufacturing	10927.0	37	3571.4	5573.5
335	Electrical equipment and appliance manufacturing	9404.2	98	2172.4	3634.8
3361MV	Motor vehicle, body, trailer, and parts manufacturing	15552.8	39	3300.2	4595.4
3364OT	Other transportation equipment manufacturing	3390.7	10	746.6	1086.9
337	Furniture and related product manufacturing	4630.6	41	1713.2	1738.1
339	Miscellaneous manufacturing	5958.1	35	2178.2	2749.0
42	**Wholesale trade**	**22347.3**	**61**	**5250.2**	**7648.6**
44RT	**Retail trade**	**92443.3**	**1115**	**41432.6**	**62394.8**
	Transportation and warehousing, excluding Postal Service	**57698.5**	**347**	**20703.0**	**30165.8**
481	Air transportation	21928.4	89	7691.9	13967.8
482	Rail transportation	4121.2	9	1074.0	1816.8
483	Water transportation	5173.5	18	1611.6	2705.2
484	Truck transportation	4940.2	16	915.5	1500.4
485	Transit and ground passenger transportation	11042.0	130	5280.4	4797.9
486	Pipeline transportation	695.3	1	668.4	408.0
487OS	Other transportation and support activities	5978.8	52	2025.9	2999.7
493	Warehousing and storage	3819.0	33	1435.3	1970.1
	Information	**50321.5**	**170**	**12725.4**	**29231.6**
511	Publishing including software	14238.9	76	4749.9	8130.8
512	Motion picture and sound recording industries	5169.4	25	1295.8	3070.6
513	Broadcasting and telecommunications	2983.8	10	1770.6	1722.9
514	Information and data processing services	27929.5	59	4909.1	16307.3

	Finance and insurance	**145784.3**	**698**	**56483.0**	**65911.3**
521CI	Federal Reserve banks, credit intermediation and related services	35045.9	198	10547.4	20698.6
523	Securities, commodity contracts, investments	39621.1	204	24514.9	18197.2
524	Insurance carriers and related activities	56177.5	293	16372.7	19373.4
525	Funds, trusts, and other financial vehicles	14939.9	3	5048.1	7642.0
	Real estate, rental, and leasing	**108816.9**	**824**	**21539.6**	**53173.7**
531	Real estate	68431.0	764	16762.3	24472.0
532RL	Rental and leasing services and lessors of intangible assets	40385.9	60	4777.2	28701.7
	Professional and technical services	**61883.0**	**412**	**30668.5**	**38206.4**
5411	Legal services	9455.7	3	289.4	4934.7
5412OP	Other professional, scientific and technical services	42407.4	346	24274.8	26059.5
5415	Computer systems design and related services	9980.2	62	6088.1	7192.8
55	Management of companies and enterprises	39.8	0	16.2	19.3
	Administrative and waste services	**47186.0**	**540**	**28923.4**	**30062.7**
561	Administrative and support services	44523.7	522	27703.5	28720.3
562	Waste management and remediation services	2662.3	17	1219.9	1342.4
61	**Educational services**	15828.3	203	7985.5	9377.3
	Health care and social assistance	**83723.7**	**887**	**46660.0**	**49322.9**
621	Ambulatory health care services	35072.2	334	22976.1	21484.7
622HO	Hospitals and nursing and residential care facilities	42043.9	351	19189.2	23759.9
624	Social assistance	6607.6	202	4494.7	4078.3
	Arts, entertainment, and recreation	**12853.7**	**227**	**4985.7**	**7824.6**
711AS	Performing arts, museums, and related activities	5241.0	140	2678.3	3201.6
713	Amusements, gambling, and recreation	7612.7	86	2307.4	4623.0
	Accommodation and food services	**36786.1**	**678**	**15437.4**	**20812.9**
721	Accommodation	5278.1	66	2297.1	2913.5
722	Food services and drinking places	31508.0	612	13140.3	17899.5
81	**Other services, except government**	**31766.8**	**587**	**18776.8**	**18172.9**
GOV	**Government enterprises and the Postal Service**	**7241.8**	**59**	**3381.5**	**4578.6**
HH	**Households**	**0.0**	**0**	**0.0**	**0.0**
	Total	**1,589,908.9**	**12,443**	**646,217.0**	**831,295.1**

EXHIBIT 6.3

<u>In-State</u> Economic and Tax Impacts of the Cumulative Spending on Historic Courthouse Preservation- 2001-2015 ($447 million investment)

		Output ($1,000)	Employment (jobs)	Earnings ($1,000)	GDP ($1,000)
I. Total Effects (Direct + Indirect/Induced)					
1.	Agriculture, Forestry, Fishing, and Hunting	9,197.3	181	3,412.3	4,552.9
2.	Mining	16,896.4	43	4,218.8	11,080.1
3.	Utilities	16,586.0	22	3,457.4	8,922.8
4.	Construction	450,051.5	3,994	263,399.8	264,506.3
5.	Manufacturing	201,038.5	997	42,872.6	69,002.1
6.	Wholesale Trade	15,041.9	41	3,585.9	5,148.2
7.	Retail Trade	65,208.4	788	29,525.9	44,022.7
8.	Transportation and Warehousing	39,989.3	225	13,625.9	21,426.6
9.	Information	29,727.3	106	6,885.5	17,320.4
10.	Finance, Insurance, Real Estate, Rental, and Leasing	142,533.6	1,013	40,493.1	64,822.3
11.	Professional and Business Services	60,496.5	522	30,625.7	38,152.3
12.	Educational Services, Health Care, and Social Assistance	65,736.7	739	36,414.1	38,706.8
13.	Arts, Entertainment, Recreation, and Hospitality	24,619.2	504	9,991.1	13,941.2
14.	Other Services (including Government Enterprise)	370,709.9	434	12,639.7	13,351.4
	Total Effects	1,507,832.4	9,607	501,147.8	614,956.1
II. Distribution of Effects and Multipliers					
1.	Direct Effects	446,985.1	3,970	261,723.2	262,739.5
2.	Indirect/Induced Effects	1,060,847.3	5,638	239,424.6	352,216.6
3.	Total Effects	1,507,832.4	9,607	501,147.8	614,956.1
4.	*Multipliers (= 3 / 1)*	*3.373*	*2.420*	*1.915*	*2.341*
III. Composition of GDP					
1.	Compensation				366,463.0
2.	Taxes				81,178.9
	a. Local				18,907.2
	b. State				8,453.8
	c. Federal				53,817.9
3.	Profits, Dividends, Rents, and Other				167,314.2
4.	Total GDP (= 1 + 2 + 3)				614,956.1

IV. Tax Accounts		Business	Household	Total
1.	Labor Income	366,463.0	501,147.8	----------------
2.	Taxes	81,178.9	59,071.8	140,250.7
	a. Local	18,907.2	8,957.0	27,864.2
	b. State	8,453.8	0.0	8,453.8
	c. Federal	53,817.9	50,114.8	103,932.7

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	21.5
Earnings	$1,121,173.4
State Taxes	$18,912.9
Local Taxes	$62,338.2
GDP	$1,375,786.6

Initial Expenditure (in Dollars)	**$446,985,095.0**

EXHIBIT 6.4

**<u>In-State</u> Economic Impacts of the Cumulative Spending on Historic Courthouse
Preservation by 3-digit Industry Classification- State Fiscal 2001-2015
($447 million investment)**

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**9197.3**	**181**	**3412.3**	**4552.9**
111CA	Crop and animal production (Farms)	8362.9	157	2909.4	3963.3
113FF	Forestry, fishing, and related activities	834.4	24	502.9	589.5
	Mining	**16896.4**	**43**	**4218.8**	**11080.1**
211	Oil and gas extraction	9167.2	9	2184.0	6411.4
212	Mining, except oil and gas	7360.1	33	1909.7	4415.6
213	Support activities for mining	369.1	1	125.0	253.1
22	**Utilities**	**16586.0**	**22**	**3457.4**	**8922.8**
23	**Construction**	**450051.5**	**3994**	**263399.8**	**264506.3**
	Manufacturing	**201038.5**	**997**	**42872.6**	**69002.1**
311FT	Food product manufacturing	20442.3	98	2970.4	6091.0
313TT	Textile and textile product mills	2080.0	12	455.6	614.0
315AL	Apparel manufacturing	3840.4	44	1376.6	1601.1
321	Wood product manufacturing	10897.0	56	2616.7	3054.4
322	Paper manufacturing	4995.1	15	918.2	1542.7
323	Printing and related support activities	1378.9	9	432.9	601.1
324	Petroleum and coal products manufacturing	38443.9	29	7952.3	13007.2
325	Chemical manufacturing	22786.2	27	3228.5	8192.5
326	Plastics and rubber products manufacturing	11282.3	35	2143.8	3525.6
327	Nonmetallic mineral product manufacturing	14852.8	57	3399.0	5662.2
331	Primary metal manufacturing	10446.6	296	1331.2	2556.4
332	Fabricated metal product manufacturing	22898.8	105	6336.8	8648.7
333	Machinery manufacturing	7677.7	28	1721.0	2810.3
334	Computer and electronic product manufacturing	5319.9	18	1720.6	2714.2
335	Electrical equipment and appliance manufacturing	6365.7	88	1458.1	2439.7
3361MV	Motor vehicle, body, trailer, and parts manufacturing	9143.4	23	1879.3	2714.9
3364OT	Other transportation equipment manufacturing	1787.3	6	415.8	532.7
337	Furniture and related product manufacturing	3062.5	28	1217.1	1156.1
339	Miscellaneous manufacturing	3337.4	21	1298.6	1537.2
42	**Wholesale trade**	**15041.9**	**41**	**3585.9**	**5148.2**
44RT	**Retail trade**	**65208.4**	**788**	**29525.9**	**44022.7**
	Transportation and warehousing, excluding Postal Service	**39989.3**	**225**	**13625.9**	**21426.6**
481	Air transportation	18705.2	75	6561.3	11914.7
482	Rail transportation	2486.2	5	642.3	1096.0
483	Water transportation	3396.7	11	1058.1	1776.1
484	Truck transportation	3674.0	12	662.0	1115.8
485	Transit and ground passenger transportation	6467.2	78	2695.7	2810.1
486	Pipeline transportation	512.6	1	380.8	300.8
487OS	Other transportation and support activities	2993.8	26	930.3	1508.6
493	Warehousing and storage	1753.6	17	695.4	904.6
	Information	**29727.3**	**106**	**6885.5**	**17320.4**
511	Publishing including software	8165.9	47	2751.9	4686.8
512	Motion picture and sound recording industries	1985.2	14	523.4	1212.8
513	Broadcasting and telecommunications	2204.4	9	713.2	1273.0
514	Information and data processing services	17371.8	37	2897.0	10147.8
	Finance and insurance	**70069.3**	**418**	**26189.0**	**31291.3**

Code	Description				
521CI	Federal Reserve banks, credit intermediation and related services	21696.9	129	6002.6	12863.5
523	Securities, commodity contracts, investments	19231.8	125	11552.0	8824.3
524	Insurance carriers and related activities	29032.8	164	8595.0	9548.4
525	Funds, trusts, and other financial vehicles	107.7	1	39.4	55.1
	Real estate, rental, and leasing	**72464.3**	**595**	**14304.1**	**33531.0**
531	Real estate	51186.7	559	11648.2	18305.2
532RL	Rental and leasing services and lessors of intangible assets	21277.7	36	2655.9	15225.9
	Professional and technical services	**33972.5**	**213**	**14841.4**	**21277.6**
5411	Legal services	6177.4	2	181.9	3223.9
5412OP	Other professional, scientific and technical services	22221.0	176	11437.3	13969.9
5415	Computer systems design and related services	5560.4	35	3216.6	4077.1
55	Management of companies and enterprises	13.7	0	5.6	6.6
	Administrative and waste services	**26523.9**	**309**	**15784.3**	**16874.7**
561	Administrative and support services	25234.6	301	15189.0	16224.5
562	Waste management and remediation services	1289.4	8	595.4	650.1
61	**Educational services**	9128.4	121	4513.4	5329.2
	Health care and social assistance	**56608.3**	**618**	**31900.7**	**33377.6**
621	Ambulatory health care services	24331.3	235	15270.3	14905.7
622HO	Hospitals and nursing and residential care facilities	27734.2	237	13487.7	15668.1
624	Social assistance	4542.8	146	3142.7	2803.9
	Arts, entertainment, and recreation	**5432.9**	**131**	**2091.6**	**3077.9**
711AS	Performing arts, museums, and related activities	3207.0	104	1598.5	1987.9
713	Amusements, gambling, and recreation	2225.9	27	493.1	1090.0
	Accommodation and food services	**19186.3**	**372**	**7899.5**	**10863.3**
721	Accommodation	1109.0	16	479.1	612.1
722	Food services and drinking places	18077.3	356	7420.4	10251.1
81	**Other services, except government**	**19184.2**	**388**	**10808.9**	**10777.2**
GOV	**Government enterprises and the Postal Service**	**4184.6**	**45**	**1830.8**	**2574.1**
HH	**Households**	**347341.1**	**0**	**0.0**	**0.0**
	Total	**1,507,832.4**	**9,607**	**501,108.4**	**614,901.0**

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EXHIBIT 6.5

<u>National</u> Economic and Tax Impacts of the Annual Average Spending on Historic Courthouse Preservation ($31 million average investment)

		Output ($1,000)	Employment (jobs)	Earnings ($1,000)	GDP ($1,000)
I. Total Effects (Direct + Indirect/Induced)					
1.	Agriculture, Forestry, Fishing, and Hunting	914.9	18	520.5	477.6
2.	Mining	1,251.7	3	366.4	821.0
3.	Utilities	1,161.6	2	287.3	625.1
4.	Construction	31,231.3	226	14,816.5	17,630.2
5.	Manufacturing	15,490.4	75	4,445.7	5,391.1
6.	Wholesale Trade	1,074.0	3	338.1	367.6
7.	Retail Trade	5,178.8	62	2,757.9	3,497.8
8.	Transportation and Warehousing	3,262.4	19	1,424.9	1,733.2
9.	Information	2,338.2	9	836.1	1,362.3
10.	Finance, Insurance, Real Estate, Rental, and Leasing	11,709.1	77	5,390.5	5,524.7
11.	Professional and Business Services	5,977.0	54	3,971.9	3,777.1
12.	Educational Services, Health Care, and Social Assistance	5,403.4	61	3,517.2	3,195.5
13.	Arts, Entertainment, Recreation, and Hospitality	2,269.7	45	1,322.3	1,301.2
14.	Other Services (including Government Enterprise)	34,597.0	40	1,446.7	1,286.9
	Total Effects	121,859.5	693	41,441.9	46,991.2
II. Distribution of Effects and Multipliers					
1.	Direct Effects	31,000.0	225	16,036.5	17,497.9
2.	Indirect/Induced Effects	90,859.5	468	25,405.4	29,493.3
3.	Total Effects	121,859.5	693	41,441.9	46,991.2
4.	*Multipliers (= 3 / 1)*	*3.931*	*3.087*	*2.584*	*2.686*

		GDP ($1,000)
III. Composition of GDP		
1.	Compensation	32,953.3
2.	Taxes	7,098.0
	a. Local	1,530.8
	b. State	945.0
	c. Federal	4,622.1
3.	Profits, Dividends, Rents, and Other	6,939.9
4.	Total GDP (= 1 + 2 + 3)	46,991.2

IV. Tax Accounts		Business	Household	Total
1.	Labor Income	32,953.3	41,441.9	---------------
2.	Taxes	7,098.0	5,075.8	12,173.8
	a. Local	1,530.8	737.0	2,267.8
	b. State	945.0	194.6	1,139.7
	c. Federal	4,622.1	4,144.2	8,766.3

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	22.4
Earnings	$1,336,837.0
State Taxes	$36,763.3
Local Taxes	$73,155.7
GDP	$1,515,843.7

Initial Expenditure (in Dollars)	**$31,000,000.0**

EXHIBIT 6.6

<u>National</u> Economic Impacts of the Annual Average Spending on Historic Courthouse Preservation by 3-digit Industry Classification ($31 million average investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**914.9**	**18**	**520.5**	**477.6**
111CA	Crop and animal production (Farms)	824.1	16	451.6	412.8
113FF	Forestry, fishing, and related activities	90.8	2	68.9	64.7
	Mining	**1251.7**	**3**	**366.4**	**821.0**
211	Oil and gas extraction	687.5	1	205.5	480.8
212	Mining, except oil and gas	534.9	2	148.6	320.0
213	Support activities for mining	29.3	0	12.3	20.1
22	**Utilities**	**1161.6**	**2**	**287.3**	**625.1**
23	**Construction**	**31231.3**	**226**	**14816.5**	**17630.2**
	Manufacturing	**15490.4**	**75**	**4445.7**	**5391.1**
311FT	Food product manufacturing	1453.3	7	329.5	431.9
313TT	Textile and textile product mills	179.1	1	74.1	53.8
315AL	Apparel manufacturing	326.7	4	168.4	135.2
321	Wood product manufacturing	968.2	5	268.3	272.2
322	Paper manufacturing	408.8	1	122.8	126.2
323	Printing and related support activities	186.9	1	124.2	82.8
324	Petroleum and coal products manufacturing	2759.2	2	649.4	950.1
325	Chemical manufacturing	1704.9	2	369.0	618.4
326	Plastics and rubber products manufacturing	884.5	3	233.2	277.1
327	Nonmetallic mineral product manufacturing	1200.6	5	303.5	457.9
331	Primary metal manufacturing	772.7	21	145.8	190.7
332	Fabricated metal product manufacturing	1738.8	8	581.0	667.1
333	Machinery manufacturing	592.9	2	170.6	219.2
334	Computer and electronic product manufacturing	493.5	2	243.8	254.0
335	Electrical equipment and appliance manufacturing	506.7	6	155.7	200.9
3361MV	Motor vehicle, body, trailer, and parts manufacturing	696.9	2	218.0	207.6
3364OT	Other transportation equipment manufacturing	141.0	0	49.2	42.9
337	Furniture and related product manufacturing	204.9	2	99.2	77.0
339	Miscellaneous manufacturing	270.9	2	140.1	126.1
42	**Wholesale trade**	**1074.0**	**3**	**338.1**	**367.6**
44RT	**Retail trade**	**5178.8**	**62**	**2757.9**	**3497.8**
	Transportation and warehousing, excluding Postal Service	**3262.4**	**19**	**1424.9**	**1733.2**
481	Air transportation	1398.4	6	537.8	890.8
482	Rail transportation	196.4	0	71.7	86.6
483	Water transportation	276.5	1	111.3	144.6
484	Truck transportation	256.5	1	59.6	77.9
485	Transit and ground passenger transportation	638.8	8	368.8	277.6
486	Pipeline transportation	52.8	0	44.1	31.0
487OS	Other transportation and support activities	275.1	2	135.6	138.2
493	Warehousing and storage	167.8	2	96.1	86.6
	Information	**2338.2**	**9**	**836.1**	**1362.3**
511	Publishing including software	670.3	4	312.6	384.0
512	Motion picture and sound recording industries	179.3	1	84.2	108.8
513	Broadcasting and telecommunications	217.2	1	117.5	125.7
514	Information and data processing services	1271.4	3	321.7	743.8
	Finance and insurance	**6527.0**	**35**	**3994.6**	**3111.0**
521CI	Federal Reserve banks, credit intermediation and related services	1721.9	10	690.3	1019.2

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523	Securities, commodity contracts, investments	2094.0	11	1592.7	958.7
524	Insurance carriers and related activities	2379.9	13	1384.9	963.7
525	Funds, trusts, and other financial vehicles	331.2	0	326.8	169.4
	Real estate, rental, and leasing	**5182.1**	**43**	**1395.9**	**2413.8**
531	Real estate	3613.1	40	1078.0	1292.1
532RL	Rental and leasing services and lessors of intangible assets	1568.9	3	317.8	1121.6
	Professional and technical services	**3333.6**	**23**	**2049.3**	**2080.5**
5411	Legal services	414.8	0	19.0	216.5
5412OP	Other professional, scientific and technical services	2349.6	19	1622.1	1454.9
5415	Computer systems design and related services	567.6	4	407.2	408.3
55	Management of companies and enterprises	1.6	0	1.0	0.8
	Administrative and waste services	**2643.5**	**31**	**1922.5**	**1696.6**
561	Administrative and support services	2516.8	30	1842.0	1632.7
562	Waste management and remediation services	126.7	1	80.5	63.9
61	**Educational services**	818.3	11	516.3	486.4
	Health care and social assistance	**4585.0**	**50**	**3000.9**	**2709.1**
621	Ambulatory health care services	2058.7	20	1477.7	1260.7
622HO	Hospitals and nursing and residential care facilities	2147.5	18	1234.1	1213.5
624	Social assistance	378.8	12	289.1	234.8
	Arts, entertainment, and recreation	**538.1**	**12**	**322.2**	**322.8**
711AS	Performing arts, museums, and related activities	278.6	9	173.8	174.3
713	Amusements, gambling, and recreation	259.5	3	148.4	148.5
	Accommodation and food services	**1731.6**	**33**	**1000.0**	**978.4**
721	Accommodation	188.6	2	148.1	104.1
722	Food services and drinking places	1543.0	30	851.9	874.3
81	**Other services, except government**	**1766.5**	**37**	**1222.9**	**1039.5**
GOV	**Government enterprises and the Postal Service**	**377.1**	**4**	**223.9**	**247.4**
HH	**Households**	**32453.4**	**0**	**0.0**	**0.0**
	Total	**121,859.5**	**693**	**41,115.2**	**46,821.8**

EXHIBIT 6.7
In-State Economic and Tax Impacts of the Annual Average Spending on Historic Courthouse Preservation ($31 million average investment)

	Output ($1,000)	Employment (jobs)	Earnings ($1,000)	GDP ($1,000)
I. Total Effects (Direct + Indirect/Induced)				
1. Agriculture, Forestry, Fishing, and Hunting	632.1	12	237.7	314.7
2. Mining	1,180.9	3	295.6	773.6
3. Utilities	1,104.1	1	229.7	593.2
4. Construction	31,208.3	226	16,150.4	17,617.9
5. Manufacturing	14,015.4	69	2,970.7	4,799.6
6. Wholesale Trade	966.3	3	230.4	330.7
7. Retail Trade	4,407.5	52	1,986.6	2,976.8
8. Transportation and Warehousing	2,792.4	16	954.9	1,501.5
9. Information	1,957.5	7	455.4	1,140.2
10. Finance, Insurance, Real Estate, Rental, and Leasing	9,272.9	65	2,630.1	4,240.6
11. Professional and Business Services	4,071.1	35	2,066.0	2,570.3
12. Educational Services, Health Care, and Social Assistance	4,223.6	47	2,337.4	2,485.9
13. Arts, Entertainment, Recreation, and Hospitality	1,594.5	33	647.1	903.2
14. Other Services (including Government Enterprise)	23,792.1	28	825.7	872.8
Total Effects	101,218.8	599	32,017.7	41,121.3
II. Distribution of Effects and Multipliers				
1. Direct Effects	31,000.0	225	16,036.5	17,497.9
2. Indirect/Induced Effects	70,218.8	374	15,981.2	23,623.4
3. Total Effects	101,218.8	599	32,017.7	41,121.3
4. *Multipliers (= 3 / 1)*	*3.265*	*2.667*	*1.997*	*2.350*
III. Composition of GDP				
1. Compensation				23,553.4
2. Taxes				5,335.6
a. Local				1,271.8
b. State				562.0
c. Federal				3,501.8
3. Profits, Dividends, Rents, and Other				12,232.3
4. Total GDP (= 1 + 2 + 3)				41,121.3

IV. Tax Accounts	Business	Household	Total
1. Labor Income	23,553.4	32,017.7	----------------
2. Taxes	5,335.6	3,774.0	9,109.6
a. Local	1,271.8	572.3	1,844.1
b. State	562.0	0.0	562.0
c. Federal	3,501.8	3,201.8	6,703.5

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	19.3
Earnings	$1,032,830.2
State Taxes	$18,128.2
Local Taxes	$59,485.6
GDP	$1,326,492.4

Initial Expenditure (in Dollars)	**$31,000,000.0**

EXHIBIT 6.8

In-State Economic Impacts of the Annual Average Spending on Historic Courthouse Preservation by 3-digit Industry Classification ($31 million average investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**632.1**	**12**	**237.7**	**314.7**
111CA	Crop and animal production (Farms)	575.2	10	202.8	274.5
113FF	Forestry, fishing, and related activities	56.9	2	34.9	40.3
	Mining	**1180.9**	**3**	**295.6**	**773.6**
211	Oil and gas extraction	632.7	1	150.7	442.5
212	Mining, except oil and gas	522.4	2	136.1	313.4
213	Support activities for mining	25.8	0	8.7	17.7
22	**Utilities**	**1104.1**	**1**	**229.7**	**593.2**
23	**Construction**	**31208.3**	**226**	**16150.4**	**17617.9**
	Manufacturing	**14015.4**	**69**	**2970.7**	**4799.6**
311FT	Food product manufacturing	1315.2	6	191.3	391.8
313TT	Textile and textile product mills	134.5	1	29.5	39.7
315AL	Apparel manufacturing	246.7	3	88.4	102.8
321	Wood product manufacturing	921.6	5	221.7	258.5
322	Paper manufacturing	350.5	1	64.5	107.9
323	Printing and related support activities	91.4	1	28.7	39.9
324	Petroleum and coal products manufacturing	2631.1	2	521.3	880.0
325	Chemical manufacturing	1551.1	2	215.1	549.5
326	Plastics and rubber products manufacturing	805.2	3	153.9	252.1
327	Nonmetallic mineral product manufacturing	1163.4	4	266.3	442.3
331	Primary metal manufacturing	718.9	21	92.0	176.1
332	Fabricated metal product manufacturing	1600.5	7	442.6	609.2
333	Machinery manufacturing	544.8	2	122.5	199.6
334	Computer and electronic product manufacturing	370.6	1	121.0	190.1
335	Electrical equipment and appliance manufacturing	459.6	6	108.7	181.6
3361MV	Motor vehicle, body, trailer, and parts manufacturing	603.1	2	124.2	178.9
3364OT	Other transportation equipment manufacturing	119.4	0	27.6	35.4
337	Furniture and related product manufacturing	174.0	2	68.3	65.5
339	Miscellaneous manufacturing	213.9	1	83.1	98.6
42	**Wholesale trade**	**966.3**	**3**	**230.4**	**330.7**
44RT	**Retail trade**	**4407.5**	**52**	**1986.6**	**2976.8**
	Transportation and warehousing, excluding Postal Service	**2792.4**	**16**	**954.9**	**1501.5**
481	Air transportation	1325.7	5	465.0	844.4
482	Rail transportation	168.1	0	43.4	74.1
483	Water transportation	240.0	1	74.8	125.5
484	Truck transportation	240.1	1	43.3	72.9
485	Transit and ground passenger transportation	463.0	6	193.0	201.2
486	Pipeline transportation	34.1	0	25.3	20.0
487OS	Other transportation and support activities	202.5	2	63.0	102.0
493	Warehousing and storage	118.8	1	47.1	61.3
	Information	**1957.5**	**7**	**455.4**	**1140.2**
511	Publishing including software	540.2	3	182.6	310.0
512	Motion picture and sound recording industries	129.1	1	34.1	78.9
513	Broadcasting and telecommunications	147.7	1	48.0	85.3
514	Information and data processing services	1140.4	2	190.8	666.0
	Finance and insurance	**4560.1**	**27**	**1703.5**	**2042.4**
521CI	Federal Reserve banks, credit intermediation and related services	1426.7	9	395.0	845.5
523	Securities, commodity contracts, investments	1253.0	8	751.6	575.3

524	Insurance carriers and related activities	1873.5	11	554.3	618.0
525	Funds, trusts, and other financial vehicles	7.0	0	2.5	3.6
	Real estate, rental, and leasing	**4712.8**	**38**	**926.6**	**2198.3**
531	Real estate	3281.9	36	746.8	1173.7
532RL	Rental and leasing services and lessors of intangible assets	1430.8	2	179.8	1024.6
	Professional and technical services	**2289.0**	**14**	**1004.7**	**1435.9**
5411	Legal services	407.8	0	12.0	212.8
5412OP	Other professional, scientific and technical services	1500.4	12	772.9	944.1
5415	Computer systems design and related services	379.8	2	219.4	278.6
55	Management of companies and enterprises	0.9	0	0.4	0.4
	Administrative and waste services	**1782.2**	**21**	**1061.3**	**1134.4**
561	Administrative and support services	1696.5	20	1021.7	1091.2
562	Waste management and remediation services	85.7	1	39.6	43.2
61	**Educational services**	594.0	8	292.0	345.8
	Health care and social assistance	**3629.6**	**40**	**2045.4**	**2140.1**
621	Ambulatory health care services	1560.2	15	979.2	955.8
622HO	Hospitals and nursing and residential care facilities	1778.2	15	864.8	1004.6
624	Social assistance	291.3	9	201.5	179.8
	Arts, entertainment, and recreation	**351.3**	**9**	**135.4**	**199.2**
711AS	Performing arts, museums, and related activities	208.6	7	103.8	129.3
713	Amusements, gambling, and recreation	142.7	2	31.6	69.9
	Accommodation and food services	**1243.2**	**24**	**511.7**	**704.0**
721	Accommodation	71.4	1	30.8	39.4
722	Food services and drinking places	1171.9	23	480.8	664.7
81	**Other services, except government**	**1247.0**	**25**	**703.4**	**702.5**
GOV	**Government enterprises and the Postal Service**	**275.5**	**3**	**122.3**	**170.3**
HH	**Households**	**22269.6**	**0**	**0.0**	**0.0**
	Total	**101,218.8**	**599**	**32,015.2**	**41,117.7**

CHAPTER SEVEN

PROFILE AND ECONOMIC IMPACTS OF HISTORIC TAX CREDITS

INTRODUCTION

While many historic properties are well maintained and have benefited from rehabilitation, other historic properties are in dire need of such investment. A shortfall of resources, however, may discourage or disallow such investment. To bridge the financial gap, various subsidies have been made available; the most significant subsidy is the federal investment tax credit for dollars spent on historic properties. This chapter considers federal and state tax credits for such purposes. It explores what is available nationally, what states have done in this regard, and what is the situation in Texas. Our discussion proceeds as follows:

1. The Federal Historic Tax Credit – Evolution, Provisions, National Utilization

2. Economic Impacts of the National Federal Historic Tax Credit

3. Federal Historic Tax Credit Utilization in Texas

4. Economic Impacts of the Federal Historic Tax Credit in Texas

5. State Historic Preservation Tax Credits– National and Texas Perspectives

SUMMARY OF FINDINGS

- The federal Historic Tax Credit (HTC) program for income-producing properties has been an exemplary strategy for neighborhood and historic revitalization in both the nation and Texas. Under its current provisions, the federal HTC provides a 20 percent credit (it originally was 25 percent), so a $1 million rehabilitation of an historic property will realize a $200,000 reduction in the federal income tax liability.

- Since the program's inception in the late 1970s (1978) to date (2013), an estimated $109 billion of rehabilitation (in inflation- adjusted 2013 dollars) has been effected nationally under the federal HTC auspices, an annual average of about $3.0 billion. (Not adjusted for inflation, the cumulative nominal HTC rehabilitation investment over 1978- 2013 has amounted to $65 billion, or $1.8 billion on average annually). In 2013, about $3.8 billion of rehabilitation nationally utilized the federal HTC.

- There are significant national economic benefits from investment in HTC- related historic rehabilitation. The $109 billion of national cumulative activity for the life of the program has created 2,415,000 jobs, $92 billion in income, and $124 billion in gross domestic product.

- What about the use of the federal HTC in Texas? From 1978 through 2013, the cumulative total rehabilitation investment in Texas associated with the federal HTC (this includes all the construction expenses on projects using the federal HTC) amounted to $1.777 billion (in inflation-adjusted 2013 dollars), or an average of $49 million annually over its 36-year span. In nominal terms (not adjusted for inflation), the cumulative total rehabilitation in

Texas that secured the federal HTC from 1978 through 2013 amounted to $1.246 billion, or an average of about $35 million per year.

- As elsewhere in the United States, usage of the federal HTC in Texas fluctuates considerably from year to year. For example, over the past 5 years, total rehabilitation investment in Texas that secured the federal HTC ranged from $184 million in 2009 to $25 million in 2011 (in inflation-adjusted 2013 dollars). Recognizing such fluctuations, it is sensible to average the HTC activity over a few years. The annual federal HTC investment in Texas from 2009 through 2013 averaged $75 million in inflation-adjusted 2013 dollars and averaged $71 million yearly in nominal dollars.

- In summary, using inflation-adjusted terms (2013 dollars) the *cumulative* 1978- 2013 total rehabilitation investment in Texas that secured the federal HTC amounted to $1.777 billion, while the recent (2009- 2013) *annual* federal HTC rehabilitation in this state (average over 2009-2013) was $75 million.

- The economic impacts from the *cumulative* $1.777 billion of federal HTC- aided rehabilitation in Texas amounted to 35,746 jobs in Texas (of about 46,358 nationally), leading statewide to $2.40 billion in GDP, $1.90 billion in labor income, and $2.2 billion in added in-state wealth (Table 7.1).

TABLE 7.1
Cumulative (1978-2013) Economic Impact of Texas Construction Projects Supported by the Federal Historic Rehabilitation Investment Tax Credit ($1.777 billion)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	35,746	10,612	46,358
Income ($000)	$1,896,139	$521,469	$2,417,608
GDP ($000)*	$2,401,555	$811,707	$3,213,262
In-State Wealth ($000)**	$2,195,595	------	------

*GDP =Gross Domestic Product
**In-State Wealth = GDP minus Federal Indirect Business Taxes

- Nationwide, the $1.777 billion of federal HTC- aided rehabilitation invested in Texas generates a total of $706 million in total taxes (federal, state and local) from both business and households; Texas captures 76 percent ($535 million) of that total (Table 7.2). For the state of Texas, the $1.777 billion of federal HTC- aided rehabilitation in Texas generates a total of $143 million in state and local taxes ($32 million and $107 million, respectively), for an aggregate 64 percent of the total $222 million in state and local taxes generated nationally.

TABLE 7.2
Cumulative (1978-2013) Economic Impact of Texas Construction Projects Supported by the Federal Historic Rehabilitation Investment Tax Credit ($1.777 billion): Total Tax Contributions

	In Texas	*Outside Texas*	*Total (U.S.)*
Total Taxes ($000)	$535,266	$171,059	$706,325
Federal ($000)	$395,574	$88,720	$484,294
State ($000)	$32,453	$49,482	$81,934
Local ($000)	$107,239	$32,858	$140,096

- The economic impacts of the *annual 2009-2013* average federal HTC activity in Texas of $75 million amounted to the creation of over 1,509 in-state jobs (of about 1,957 nationally), leading statewide to $101 million in GDP, $80 million in labor income, and $93 million in added in-state wealth each year.

TABLE 7.3
Annual (2009-2013) Economic Impact of Texas Construction Projects Supported by the Federal Historic Rehabilitation Investment Tax Credit ($75 million)

	In Texas	*Outside Texas*	*Total (U.S.)*
Jobs (person-years)	1,509	448	1,957
Income ($000)	$80,028	$22,009	$102,038
GDP ($000)*	$101,360	$34,259	$135,619
In-State Wealth ($000)**	$92,667	------	------

*GDP =Gross Domestic Product
**In-State Wealth = GDP minus Federal Indirect Business Taxes

- Nationwide, the annual $75 million federal HTC- aided rehabilitation investment in Texas generates a total of $30 million in total taxes (federal, state and local) from both business and households; Texas captures 76 percent ($23 million) of that amount. Statewide, the $75 million investment generates a total of $6 million in combined state and local taxes (63 percent of the total $9 million in state and local taxes generated nationally).

TABLE 7.4

Annual (2009-2013) Economic Impact of Texas Construction Projects Supported by the Federal Historic Rehabilitation Investment Tax Credit ($75 million):

Total Tax Contributions

	In Texas	Outside Texas	Total (U.S.)
Total Taxes ($000)	$22,591	$7,220	$29,811
Federal ($000)	$16,696	$3,745	$20,440
State ($000)	$1,370	$2,088	$3,458
Local ($000)	$4,526	$1,387	$5,913

- To encourage heightened investment in the historic stock, about 35 states have enacted state HTCs. These supplemented the current 20 percent federal program and offer an additional credit (usually 20 to 25 percent) against state tax obligations. Reflecting creative federalism, the state HTCs have various provisions regarding the credit percentage offered (the range is from 5 to 50 percent), property applicability, minimum investment and many other features.

- Texas has recently adopted a Texas Historic Preservation Credit (THPTC) effective January 2015. The THPTC offers a 25 percent credit for the certified rehabilitation of certified income-producing historic structures. The THPTC resembles the HTCs offered in many other states.

THE FEDERAL HISTORIC TAX CREDIT: EVOLUTION, PROVISIONS, AND NATIONAL UTILIZATION

Until 1976, the federal tax code in the United States favored new construction. The fastest depreciation schedule—a 200 percent declining balance (DB) write-off—was available only for new construction, whereas existing buildings were limited to a 125 percent declining balance schedule. The 1976 Tax Act equalized the declining balance issues and introduced some historic preservation–supportive measures, such as counting preservation easements as charitable donations. Much more significant was the Economic Recovery Tax Act (ERTA) of 1981, which clarified the benefits for income-producing properties. ERTA introduced a three-tiered investment tax credit (ITC). A 15 percent ITC was allowed for the rehab of non-historic, nonresidential income-producing properties at least 30 years old; a 20 percent ITC could be taken for the renovation of non-historic income-producing nonresidential properties at least 40 years old; and a 25 percent ITC was available for the rehab of historic, income-producing properties, both residential and nonresidential. These ITCs could be applied against wage and investment income, and syndications targeted at affluent investors were common. This packaging and sale would usually be done by financially astute syndicators who would work closely with the developer-builders of the preservation projects. For example, a $1 million rehab of a historic apartment building could qualify for a $250,000 ITC, which investors could deduct dollar-for-dollar against

their federal income tax liability according to their pro rata ownership of the historic renovation project sold by the syndicators

The 1981 historic preservation ITC was a powerful lure. The value of Federal historic tax credit (HTC) investment applications ("Part 2") [60] grew, in inflation-adjusted 2013 dollars, from $2.2 billion in FY 1981 to $3.2 billion in FY 1982, to a high of $6.8 billion by FY 1985 (Figure 7.1). There was a spectacular increase in the number of HTC projects as well from about 1,400 in FY 1981 to about 3,200 by the mid-1980s (Exhibit 7.1).

The 1986 Tax Reform Act (TRA) dramatically changed the provisions governing the ITCs. Instead of a 15 or 20 percent ITC for non-historic income-producing nonresidential properties 30 to 40 years old, respectively, the 1986 Act reduced the non-historic ITC to 10 percent and applied it only to nonresidential buildings built prior to 1936. In addition, the 25 percent ITC for rehab of historic, income-producing properties was reduced to 20 percent. In other words, a $1 million rehab of an historic apartment building would now only qualify for a $200,000 credit (instead of $250,000) that investors could deduct dollar for dollar against their federal income tax liability according to their pro rata ownership of the historic rehab project sold by the syndicators. While lower, this benefit is still clearly quite valuable.

To qualify for the 20 percent federal HTC, the rehabilitated property must be a "certified historic structure," that is, a building individually listed on the National Register of Historic Places, or located in, and contributing to, the historic significance of a registered historic district;[61] the rehab has to be "substantial,"[62] and the rehabilitation has to be certified. To be certified, the rehab must be approved by the National Park Service (NPS) as being consistent with the historic character of the property and, where applicable, the district in which it is located, using the Secretary of the Interior's Standards for Rehabilitation as a guide. The same three provisions were in place under the 1981 ERTA historic rehab ITC, however, the 1986 Tax Reform Act capped the historic ITC at 20 percent and restricted application of the ITC against earned income. (This limiting provision does not apply to corporations.)

The 1986 Tax Reform Act changes caused investment to plummet. From a high of "Part 2" federal HTC investment (in inflation-adjusted 2013 dollars) of $6.8 billion in FY 1985, HTC activity dropped to a low of $1.1 billion in FY 1993. The number of "Part 2" HTC projects fell in tandem from about 3,100 in FY 1985 to about 550 in FY 1993 (Exhibit 7.1 and Figure 7.1). The federal HTC has subsequently rebounded, especially with respect to the HTC dollar investment (less so with respect to the number of projects; see Figure 7.1) The "Part 2" annual dollar investment (in inflation-adjusted 2013 dollars) approached $5 billion by FY 2000, approached $6 billion by FY 2008, and approached $7 billion by FY 2013. In FY 2013, the Part 3" dollar investment amounted

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[60] The HTC has a multi-step application process encompassing "Part 1" (evaluation of the historic significance of the property), "Part 2" (description of the rehabilitation work), and "Part 3" (request of certification of completed work). Both "Part 2" and "Part 3" rehabilitations statistics include only what are termed "eligible" or "qualified" items (or Qualified Rehabilitation Expenditures – QRE) for the tax credit as opposed to what are called "ineligible" or "non-qualified" costs. See also Exhibit 7.2.

[61] A registered historic district includes both those districts listed on the National Register and any state or local historic districts in which the district and enabling statue are certified by the Secretary of the Interior.

[62] This is $5,000 *or* the adjusted basis of the renovated property, whichever was *greater*.

to a lower $3.4 billion and the total rehabilitation outlay associated with the federal HTC in that year was about $3.8 billion.[63]

From FY 1978 through FY 2013, there has been a cumulative total in inflation-adjusted 2013 dollars of $131.6 billion "Part 2" HTC activity (in 44,100 total projects) and $98.1 billion in "Part 3" HTC activity (Exhibit 7.2). An estimated $109.0 billion of rehabilitation has occurred over the full span of the HTC program at a federal cost of an estimated $21.0 billion – proving it one of the most effective tools for historic rehabilitation (See Exhibit 7.2 for full details.)

Since its inception, the federal HTC has been available for both income-producing housing and nonresidential projects. One of the features distinguishing the HTC from the non-historic ITC is that the former can be used for housing while the latter cannot. In practice, the HTC has often involved housing or mixed-use investment. Although data are not readily available on the dollar distribution of HTC investment by type, the type of projects are recorded. The distribution indicates that about half of the HTC projects were exclusively housing and another 20 to 30 percent were in the mixed-use/other category. The remainder was commercial/office renovations.

Exhibit 7.3 illustrates the number of housing units produced under the auspices of the federal HTC. From 1978 through 2013, a total of 491,167 units have been completed with federal HTC aid. Of that total, 252,973 or 52 percent, were existing housing units that were rehabilitated, and 238,194 or 48 percent were "newly" created housing units resulting from the adaptive reuse of once-commercial space. Of the 491,167 total housing units completed under federal historic preservation tax incentive auspices since the late 1970s, 135,017 or 27 percent, were affordable to low- and/or moderate-income (LMI) families. In FY 2013, 7,097 LMI units were produced under the federal HTC. The federal HTC's influence on housing, largely invisible to the general public, deserves much greater attention, given its production of housing in general and LMI housing units in particular.

ECONOMIC IMPACTS FROM THE NATIONAL UTILIZATION OF THE FEDERAL HISTORIC TAX CREDIT

This section examines the economic impacts of the federal HTC) by analyzing the economic consequences of the projects it supports. This analysis focuses on the economic effects of these projects during construction, quantifying the total economic impacts (i.e., direct as well as multiplier, or secondary, economic consequences) for the fiscal year ending September 30, 2013, and for the period since the program's inception. The study utilizes the R/ECON™ I–O Model, a comprehensive economic model developed by Rutgers University for the National Park Service.

The current analysis applies the R/ECON™ I–O Model to both cumulative (FY 1978 through FY 2013) HTC-related historic rehabilitation investment (about $109.0 billion in inflation-adjusted 2013 dollars) and single-year (FY 2013) HTC-related rehabilitation investment (about $3.8 billion).

The results of the R/ECON™ I–O Model include many fields of data as follows:

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[63] See note 1 for explanations of "Part 2" versus "Part 3." Also, the "Part 3" certified investment is lower than the total rehabilitation outlay associated with the HTC as is noted in footnote 1 and explained more detail in Exhibit 7.2.

- JOBS: Employment, both part- and full-time, by place of work, estimated using the typical job characteristics of each industry.
- INCOME: "Earned" or labor income; specifically, wages, salaries, and proprietor income.
- WEALTH: Value-added—the sub-national equivalent of gross domestic product (GDP).
- OUTPUT: The value of shipments, as reported in the Economic Census.
- TAXES: Tax revenues generated by the activity, which include taxes to the federal government and to state and local governments.

Exhibit 7.4 summarizes the impacts of HTC for each of these economic measures for cumulative period FY 1978-2013 and FY 2013.

The benefits of investment in HTC-related historic rehabilitation projects are extensive, increasing payrolls and production in nearly all sectors of the nation's economy. The detailed cumulative effects for the period of FY 1978 through FY 2013 are shown in Exhibit 7.5. During that period, $109.0 billion in HTC-related rehabilitation investment created 2,415,000 jobs and $124.4 billion in GDP, nearly 30 percent of which (711,000 jobs and $35.2 billion in GDP) was in the construction sector. Other major beneficiaries were the service sector (430,000 jobs, $16.4 billion in GDP), the manufacturing sector (492,000 jobs, $32.0 billion in GDP), and the retail trade sector (354,000 jobs, $9.3 billion in GDP). As a result of both direct and multiplier effects, and due to the interconnectedness of the national economy, sectors not immediately associated with historic rehabilitation, such as agriculture, mining, transportation, and public utilities, benefit as well (Exhibit 7.5).

The recent economic benefits of the federal HTC are also most impressive. In FY 2013, HTC-related investments generated approximately 63,000 jobs, including 22,000 in construction and 14,000 in manufacturing, and were responsible for $3.6 billion in GDP, including $1.2 billion in construction and $1.0 billion in manufacturing. HTC-related activity in FY 2013 generated $2.7 billion in income, with construction ($1.0 billion) and manufacturing ($625 million) reaping major shares. (See Exhibit 7.6 for more details.) These benefits were especially welcome in 2013, as the nation continued its recovery from a severe economic recession.

FEDERAL HTC UTILIZATION IN TEXAS

The research team has worked to compile data on the utilization of the federal HTC (FHTC) in Texas. Our estimate is shown in Exhibit 7.7. The federal HTC data are for 1978-2013. Dollars are shown in both nominal and real (inflation adjusted), with the real dollars in 2013 values.

The "Certified Expense" is the Part 3 of the federal HTC (the dollar amount to which the credit applies). The "Full Rehabilitation (Rehab) Expense" is the estimated entire rehabilitation expenditure associated with the Part 3 dollar amount. The "Certified Expense" is less than the full rehabilitation outlay because the federal HTC only applies to the "Qualified Rehabilitation Expenditure (QRE)." Examples of "qualified" expenditures that comprise the QRE are outlays for renovation (walls, floors, and ceilings, etc.) construction-period interest and taxes, and architect-fees; examples of "non-qualified" costs include landscaping, financing, and leasing fees, and various other outlays (e.g. for fencing, paving, sidewalks, and parking lots). While the "non-qualified" expenses do not count for tax credit purposes, they are for practicality a component of the total rehabilitation investment borne by the HTC-oriented developer and in fact, the total

rehabilitation investment (including "non-qualified" costs) help pump-prime the economy. So in determining economic impact, it makes sense to consider the Full Rehabilitation Expense (encompassing "qualified" as well as "non-qualified costs). But how can the Full Rehabilitation Expense be quantified? From our national work, we estimate that the QRE is equal to about 90% of the Full Rehabilitation Expense in the FHTC. Hence, we divide the Part 3 Certified Expense by .9 to estimate the total rehabilitation outlay (QRE and all other non-qualified expenses). For the I–O Model, to derive economic impacts, we enter the "Full Rehabilitation Expense" because that in fact is the construction investment associated with the FHTC.

Where did the "Part 3" data for Texas come from?

The 1997 through 2013 information came from Rutgers contacts at the National Park Service. For 1978-1996, we ESTIMATED this data as best we could from the individual project-by-project federal HTC file available from the Texas Historic Commission. We focused on the "Rehab Cost" and" NPS determination dates" in the project by project file, but that was not always nicely available for the full 1978-1998 period.

Note also, the 1997 through 2013 data is by fiscal year. We did not differentiate between calendar and fiscal year in the 1978-1996 period. In short, the 1997-2013 portion of the data is a "stronger" data file than the earlier 1978-1996 period.

With this data we analyzed the economic impacts of:

1—the CUMULATIVE FEDERAL HTC investment in Texas over 1978-2013. While there are data limitations to this cumulative period, especially in the 1978-1996 timeframe, we estimated the overall magnitude of federal HTC dollar investment in this time span. In real/2013 dollars, the investment amounts to about $1.6 billion of Certified Part 3 Expense and about $1.8 billion ($1.777 billion) in "Full Rehabilitation Expense."

2—the ANNUAL recent average federal HTC in Texas (the average over the past 5 years, 2009—2013). It makes sense to use an average because of the significant range of federal HTC activity in Texas over this 5 year period—from $165 million Part 3 Certified Part 3 expense in 2009 to $22 million Certified Part 3 expense in 2011—all in real/2013 dollars. The "Full Rehabilitation Expense" ranged from $184 million in 2009 to $25 million in 2011 (again, in 2013 dollars). There is nothing "sacred" about the 5 year average, but it makes sense. The annual rehabilitation investment ("Full Rehabilitation Expense") that used the federal HTC in Texas over the five years from 2009 through 2013 averaged $75 million in inflation adjusted 2013 dollars and averaged $71 million in nominal dollars.

ECONOMIC IMPACT OF THE TEXAS UTILIZATION OF THE FEDERAL HTC

As in earlier chapters, we utilize the R/ECON™ I–O Model to quantify the economic impact of the cumulative (1978-2013) and annual average (2009-2013) federal HTC application in Texas. The results are show in Exhibits 7.8 through 7.15.

Cumulative federal HTC in Texas ($1.777 billion)
 Exhibits 7.8 and 7.9 – Impacts on the nation
 Exhibits 7.10 and 7.11 – Impacts on Texas

Annual Average federal HTC in Texas ($75 million)
        Exhibits 7.12 and 7.13– Impacts on the nation
        Exhibits 7.14 and 7.15 – Impacts on Texas

The total economic impacts of the $1.777 billion cumulative federal HTC investment in Texas and the $75 million annual federal HTC recent average activity are summarized below.

Cumulative Impacts

TABLE 7.5
Cumulative (1978-2013) Economic Impact of Texas Construction Projects Supported by the Federal Historic Rehabilitation Investment Tax Credit ($1.777 billion)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	35,746	10,612	46,358
Income ($000)	$1,896,139	$521,469	$2,417,608
GDP ($000)*	$2,401,555	$811,707	$3,213,262
Total Taxes ($000)**	$535,266	$171,059	$706,325
Federal ($000)	$395,574	$88,720	$484,294
State ($000)	$32,453	$49,482	$81,934
Local ($000)	$107,239	$32,858	$140,096
In-State Wealth ($000)***	$2,195,595	------	------

*GDP =Gross Domestic Product
**Total Taxes = business plus household taxes
***In-State Wealth = GDP minus Federal Indirect Business Taxes

Nationwide effects

Item 1 of Section II in Exhibit 7.8 shows how the $ 1.777 billion translates into *direct* economic effects nationwide from 1978 to 2013. It creates 14,171 jobs (technically "job-years"), which produce $973 million in labor income and $1.03 billion in GDP. The difference between the initial investment ($1.777 billion) and the GDP subsequently created by it ($1.03 billion) implies that the federal investment tax credit for dollars spent on older and historic properties requires significant amounts of initial expenditure.

The indirect and induced effects of historic preservation activity require 32,187 additional jobs, and generate $1.44 billion additional income and $2.18 billion additional GDP in their support. As a consequence, the total economic impact—the sum of the direct and indirect and induced effects—of federal HTC create 46,358 jobs (14,171 + 32,187); $2.42 billion in labor income ($0.97 billion + $1.44 billion); and $3.21 billion in GDP ($1.03 billion + $2.18 billion). In other words, the multiplier effects are greater than the direct effects: the national multipliers are always substantially greater than 2.0.

Finer grained detail of national impacts by industry is shown in Exhibit 7.9. Of the 46,358 jobs derived nationwide via the state's use of the Federal HTC, about 14,333 jobs (nearly 31 percent) are in the construction industries; the second most-impacted sector is the manufacturing industry, which added 4,921 jobs (10.6 percent) for new employment. Of these 4,921 manufacturing related

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jobs, 1,150 jobs come from the primary metal manufacturing sector and 535 jobs come from the food-product manufacturing sector. The third most-benefitted category is retail trade, with 4,244 jobs (9 percent) added to that industry. Similar impacts are found in the contribution of income and GDP: The construction, manufacturing, and retail trade industries contribute 37 percent, 10 percent, and 7 percent, respectively, of the total generated earnings. In terms of GDP, the construction, manufacturing, and retail trade industries contribute 32 percent, 12 percent, and 7 percent, respectively, of the total generated GDP.

Statewide effects

Exhibit 7.10 presents the cumulative economic impacts for Texas (from 1978 to 2013) of the $1.777 billion HTC usage within Texas. In sum, it creates 35,746 jobs (77 percent of the total 46,358 jobs generated nationally), $1.90 billion in labor income (78 percent of the $2.42 billion in income generated nationally), and $2.40 billion in wealth (75 percent of the $3.21 billion added to national GDP). The state multiplier effects (measured by subtracting one from the multipliers) range between 75 and 95 percent of the national multipliers. Interestingly, Texas retains all of the 14,171 jobs created *directly* by Texas-based federal HTC historic rehabilitation activity; however, the indirect/induced impacts of Texas historic federal HTC rehabilitation activity tend to leak out of the state.

The distribution of in-state impacts across industries is similar to that for the entire nation. As might be expected, the state experiences more of an impact in the construction, manufacturing, and retail trade industries. Finer grained detail of state impacts by industry (Exhibit 7.11) reflect the same pattern as found in the previous nationwide impacts, but have an even stronger concentration tendency: of the 35,746 jobs derived statewide via the operation of state HTC, 14,266 jobs (nearly 40 percent) are in the construction industries. Furthermore, $979 million (52 percent of $1,896 million) of total labor income and $1.04 billion (43 percent of $2.40 billion) of wealth are also coming from this sector.

Annual Impacts

TABLE 7.6
Annual (2009-2013) Economic Impact of Texas Construction Projects Supported by the Federal Historic Rehabilitation Investment Tax Credit ($75 million)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	1,509	448	1,957
Income ($000)	$80,028	$22,009	$102,038
GDP ($000)*	$101,360	$34,259	$135,619
Total Taxes ($000)**	$22,591	$7,220	$29,811
Federal ($000)	$16,696	$3,745	$20,440
State ($000)	$1,370	$2,088	$3,458
Local ($000)	$4,526	$1,387	$5,913
In-State Wealth ($000)***	$92,667	------	------

*GDP =Gross Domestic Product
**Total Taxes = business plus household taxes
***In-State Wealth = GDP minus Federal Indirect Business Taxes

Nationwide effects

Exhibit 7.12 displays the nationwide impacts of the state's average annual federal HTC investments from 2009 to 2013. The results indicate that the $75 million average annual investment translates into the following direct economic effects: It creates 598 jobs (technically "job-years"), which produces $41 million in labor income and $44 million in GDP. The difference between the initial investment ($75 million) and the GDP subsequently created by it ($44 million) implies that the federal investment tax credit for dollars spent on older and historic properties requires significant amounts of initial expenditure.

The indirect and induced effects of historic preservation activity require 1,359 additional jobs, and generate $61 million additional income and $92 million additional GDP. As a consequence, the total economic impact—the sum of the direct and indirect and induced effects—of the state's usage of federal HTC create 1,957 jobs (598 + 1,359); $102 million in income ($41 million + $61 million); and $136 million in GDP ($44 million + $92 million). In other words, the multiplier effects are greater than the direct effects: the national multipliers are always substantially greater than 2.0.

A finer grained detail of national impacts by industry is shown in Exhibit 7.13. To examine further detail by industry, the same pattern found in the cumulative impacts apply for the annual impacts: the three most affected industries are construction, manufacturing, and retail trade. Of the 1,957 jobs derived nationwide via the Federal HTC, about 605 jobs (nearly 31 percent) are in the construction industries; the second most-impacted sector is the manufacturing industry, which added 208 jobs (11 percent) for new hiring. In addition, similar impacts are found in the contribution of income and GDP: Construction, manufacturing, and retail trade industries contribute 37 percent, 10 percent, and 7 percent, respectively, of earning ($38 million, $10 million, and $7 million of the total $102 million). In terms of GDP, the construction, manufacturing, and retail trade industries contribute 32 percent, 12 percent, and 7 percent, respectively.

Statewide effects

Exhibit 7.14 presents the annual impacts for Texas (from 2009 to 2013) of the $75 million HTC usage within Texas. In sum, it creates 1,509 jobs (77 percent of the total 1,957 jobs generated nationally), $80 million in labor income (78 percent of the $102 million in income generated nationally), and $101 million in wealth (75 percent of the $136 million added to national GDP). The state multiplier effects (measured by subtracting one from the multipliers) range between 75 and 95 percent of the national multipliers. As the same consequence of cumulative impacts, Texas retains all of the 598 jobs created *directly* by state-based federal HTC historic rehabilitation activity. However, the indirect and induced impacts of Texas HTC tend to leak out of the state.

The distribution of nationwide impacts across industries is similar to that for Texas. As might be expected, the state experiences more of an impact in the construction, manufacturing, and retail trade sectors. Finer grained detail of state impacts by industry (Exhibit 7.5) reflect the same pattern identified in the nationwide impacts, and also have a stronger concentration tendency as cumulative state impacts: of the 1,509 jobs derived statewide via the operation of state HTC, 602

jobs (nearly 40 percent) are in the construction industries; 158 jobs (11 percent) are in the manufacturing industries; 127 jobs (8 percent) are in the retail trade industries. Furthermore, similar impacts are found in the contribution of income and state wealth, as the construction, manufacturing and retail trade industries respectively contribute 52 percent, 9 percent, and 6 percent for labor earning statewide ($41 million, $7 million, and $5 million of the total $80 million). In terms of GDP, the construction, manufacturing, and retail trade industries contribute 43 percent, 11 percent, and 7 percent, respectively ($44 million, $11 million, and $7 million of the total $101 million in GDP).

In summary, the economic impacts estimated through R/ECON™ I–O Models of the Texas and the U.S. economies reveal that both federal and state HTC in Texas generates significant economic impacts within and outside of the state.

STATE HISTORIC TAX CREDITS: NATIONAL AND TEXAS PERSPECTIVES

Need for State Historic Tax Credits

The federal HTC has been crucial to preserving to historic and older stock in the United States. Yet challenges still remain even with this aid. Illustrative is the situation described by individuals and companies knowledgeable about historic preservation in Ohio that were surveyed by Rutgers University in 2003 about their work and hurdles--even with federal credits. This group was facile with the federal HTC but felt more was needed, for at the time Ohio did not have a state HTC. The following are illustrative comments:

> A state tax credit would have been very useful in order or to bolster a high-risk investment in a deteriorated downtown area. We were in the position of pioneering in an area without others. A state tax credit would have changed that situation and more investors would have been attracted to the downtown.

> A state tax credit would provide additional equity in the project and that is extremely important since additional equity would lower the cost of capital. That would markedly increase the potential for the success of rehabilitation.

> A state tax credit could have funded the gap for unforeseen engineering changes.

> A tax credit would have allowed for additional finishes, which would have benefited the rental units.

> A state tax credit would have helped shorten the four-year timeframe it took for us to secure financing for our project.

Ohio ultimately adopted a state HTC. Many other states (about 35) do as well as described below.

State Historic Tax Credits Availability Nationally

Even before the 1986 Tax Reform Act, some states had enacted state investment tax credits of their own for historic rehabilitation. After all, if the federal tax credits were successful, why not replicate the same model at the state level. With the changes wrought by the 1986 Reform Act which reduced the benefits of the federal tax credits, even more states stepped into the breach and

adopted investment tax credits of their own to encourage rehabilitation, especially historic rehabilitation. As of 2014 about 35 states in America had enacted state tax credits for historic rehabilitation. States with such programs are indicated in Figure 7.2 and their major provisions are described below. *Tax Credit Level*

The percentage of the rehabilitation investment against which a credit is given for state tax purposes (e.g., individual income or corporate) ranges from 5 percent (Montana) to 50 percent (New Mexico). Many states mirror the current federal provisions and allow a 20 to 25 percent credit for income-producing properties (e.g. Colorado, Delaware, Indiana, Maryland, New York and Oklahoma). Other states allow a 25 percent credit – equal to the pre-ERTA federal incentive. State with a 25 percent state preservation HTC include as examples Connecticut, Georgia, Iowa, Kansas, Louisiana, Missouri and Ohio. Some states provide different credits depending on the type of historic property. For instance, Delaware and North Carolina extend a 20 percent state tax credit for income-producing historic properties and a higher 30 percent state tax credit for homeowner-occupied historic buildings. Property location may also influence the credit. For example, Georgia allows an additional 5 percent credit (30 rather than 25 percent) for properties located in a HUD target area.

Applicability

This varies tremendously. The state historic tax credit (or state HTC) is often available to income-producing properties (as the federal HTCs), may be available to homeowner occupants (going beyond the current federal HTC), and may have further targeting, such as to farm building (Indiana and Iowa), downtown development districts (Louisiana), and archaeological sites (New Mexico).

Investment Requirements & Limitations

Reflecting dynamic federalism, investment requirements for state HTCs are quite disparate. States may require a minimum dollar investment (e.g., $5,000 in Indiana, Kansas, Maryland, and Maine; and $25,000 in Connecticut and North Carolina), may have no minimum dollar investment (e.g., Delaware, Georgia, Iowa, and Louisiana), may adhere to the federal HTC minimum investment (i.e., the greater of $5,000 or the adjusted basis), or may revise the federal blue print (e.g., the Rhode Island minimum investment is 50 percent of the adjusted basis or $2,000). While the federal HTC has no cap or maximum once its requirements are met, the less "deep pocketed" states often cap their state historic HTC. Caps may be imposed per project (e.g. $50,000 per property in Colorado and $30,000 per dwelling unit in Connecticut) and/or statewide (e.g., $2.4 million in Iowa, $3 million in Delaware, and $15 million in Maryland). States that allow a high credit percent understandably more often impose caps. For example, while New Mexico allows the nation's highest state HTC (50 percent), that high percentage can be applied to a maximum project investment of $25,000 (outside arts and cultural districts) to $50,000 (inside arts and cultural districts).

State Historic Tax Credit in Texas

The Texas Historic Preservation Tax Credit (THPTC) Program establishes a state 25 percent tax credit for the certified rehabilitation of income-producing certified historic structures which adhere

to the Secretary of the Interior's Standards for Rehabilitation[64]. The program became effective January 1, 2015 and can be applied retroactively to projects that have were placed in service after September 1, 2013. The program is jointly implemented by the Texas Historical Commission and the Texas Comptroller of Public Accounts. Texas became the 34th State to institute a state historic tax credit program of some form that would incentivize investment into the preservation and rehabilitation of historic structures. As of April 2014, thirty five states offered a form of historic preservation tax credit program.

Tax Credit Structure
The THPTC credit is worth 25% of the eligible rehabilitation costs for a project with a minimum $5,000 of investment. This credit is applied against a business's state franchise tax liability. Currently, the tax credit can be applied against franchise tax liabilities for partnerships (general, limited and limited liability), corporations, LLCs, business trusts, professional associations, business associations, joint ventures, incorporated political committees and other legal entities. [65] Credits can be applied up to five years after a building has been placed in service starting from September 1, 2013. The tax credits are transferable and can be transferred or sold between entities with Franchise Tax liabilities in Texas. They can also be transferred to other partners with interests within a qualifying rehabilitation project.

In order to qualify, a project must meet a threshold of $5,000 (five thousand) of Qualified Rehabilitation Expenditures. An applicant is eligible to claim a credit of up to 25% of such expenditures. The THPTC can be used separately or in conjunction with the federal HTC. When the federal HTC and THPTC are combined, this results in a maximum 45% tax credit against qualifying rehabilitation expenses. The THPTC program does not include a recapture period whereby certain actions or events following a claim of the tax credit would allow the State to recapture a portion of the issued project credits.

Compliance with the Texas Historic Preservation Tax Credit Program requires three main submissions: Applicants are required to submit an Evaluation of Significance (Part A) to the Texas Historical Commission in order to confirm the historic designation or to confirm that the building is eligible as a certified historic structure. Qualifying historic structures include buildings listed on the National Register of Historic Places, Recorded Texas Historic Landmarks or State Antiquities Landmarks, and property that can successfully be certified as historic structures prior to claiming the credit. The application must also include a Description of the Rehabilitation (Part B) to demonstrate that rehabilitation activities comply with the Standards for Rehabilitation. When a project is simultaneously utilizing Federal Historic Tax Credits, rehabilitation works must adhere to the Secretary of the Interior's Standards for Rehabilitation established through the National Park Service. In the absence of federal credits being utilized, the Texas Historical Commission will determine whether or not the standards have been met. [66] Following completion of the

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[64] Texas Historical Commission "About Preservation Tax Incentives." http://www.thc.state.tx.us/preserve/projects-and-programs/preservation-tax-incentives/about-preservation-tax-incentives#State
65 Texas Historical Commission "Texas Historic Preservation Tax Credit Program" http://www.thc.state.tx.us/public/upload/Tax%20Credit-Ch13%20Rule.pdf
[66] The federal standards are utilized for both federal and state credits. In the absence of federal credits, the Texas Historical Commission will determine whether or not the standards have been met.

rehabilitation project, a Certification of Completed Work (Part C) must be provided to the Commission for review.[67]

Qualifying Structures

In order to be eligible for the Texas Historic Preservation Tax Credit, a property must be income-producing. Owner-occupied residences, including residential condominiums, do not qualify for the program. Restoration of a structure to a historic state is not required to qualify. Rehabilitations that include alterations in order to accommodate modern uses are allowed so long as they adhere to the established Standards for Rehabilitation or any future elaborations by the Texas Historical Commission.

Buildings meeting federal qualification standards, including those listed on the National Register of Historic Places and contributing structures located within a recognized National Register Historic District, qualify for the state tax credit program. Additionally, buildings that are listed as Recorded Texas Historic Landmarks and State Antiquities Landmarks may also apply for the state program. Designations may not be pending at the time of claiming tax credits (as opposed to Federal program which grants a 30 month window as of the date of claiming credits for designation to be granted on a building for inclusion on the National Register).

Eligible Qualified Rehabilitation Expenditures mirror the federal requirements and include most interventions on the physical structure within a building's historic footprint. Most rehabilitation work occurring outside of the building footprint will generally be ineligible for consideration as Qualified Rehabilitation Expenditures. Additionally, structure or land acquisition costs, movable furnishings, and on-site landscaping or parking improvements will not be counted towards eligible expenditures.

Comparison of the Texas HTC to the Federal HTC and HTC in Other States

There are numerous similarities between the Texas Historic Preservation Tax Credit and the federal HTC. Both are applied to income-producing historic buildings, as opposed to owner-occupied historic homes. Both require that the rehabilitation respect the historic fabric and apply the same standards for evaluation. Both target the HTC to designated historic properties and utilize the same definitions of Qualified Rehabilitation Expenditures.

While there are similarities between the federal and Texas HTCs, there are differences as well. A major difference is the credit's magnitude, 20 percent for the federal HTC and 25 percent for Texas HTC. There are other differences as well as summarized below.

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[67] Texas Historical Commission "Rules: Texas Historic Preservation Tax Credit Program http://www.thc.state.tx.us/public/upload/Tax%20Credit-Ch13%20Rule.pdf

TABLE 7.7

FEDERAL HTC	STATE TEXAS HPTC
20% Credit	25% Credit
Minimum investment – greater of $5000 OR the adjusted basis of the building value without the land	Minimum Investment - $5000
5-year recapture period during which ownership and the building must be maintained	No recapture period
Credit can be carried forward up to 20 years	5-year period to utilize the credit
Complicated for Non-profit owners	Non-profits can transfer the credits
National Park Service certification with THC recommendations regarding The Secretary of the Interior's Standards	THC certification regarding The Secretary of the Interior's Standards

There are many similarities between the Texas HPTC and the HTCs in other states. There is the similarity of underlying policy, namely that Texas and 34 other states have decided that a state incentive should be added to the federal THC in order to encourage enhanced investment in historic buildings. The Texas program's credit of 25 percent, somewhat higher that the federal HTC, has similarly been adopted by many other states, though as noted earlier, there is a 5 percent to 50 percent range in the state HTCs. The Texas HPTC targeting to income-producing properties, mirroring the federal HTC, is followed as well in other state HTCs, though some have extended their program to owner-occupied properties as well. Other state HTCs have attempted to make their credit more flexible than the federal HTC and this is true as well with the Texas HPTC. For example, Texas makes it easier for any participants in the rehabilitation (non-profits and others) to transfer the credits as opposed to the federal more restrictive regulations in this regard.

State Historic Tax Credit Impact

An illustrative state, Kansas, shows the prowess of a state HTC.[68] Implemented in state fiscal year 2002, the Kansas Historic Tax Credit (KHTC) provides for a state income tax credit equal to 25 percent of qualified expenses on qualified historic structures used for either income-producing or

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[68] David Listokin, Michael Lahr, McCaela Daffern, David Stanek and Deb Sheals, *Economic Benefits and Impact of Historic Rehabilitation Tax Credits in Kansas*. Research conducted by the Rutgers University Center for Urban Policy Research for the Kansas Preservation Alliance. March 2010.

non-income producing purposes. As other state historic tax credits and reflecting the best of historic federalism, the KHTC is more flexible to use than the federal HTC. Examples of more flexible KHTC provisions include: an ability to apply the credit to historic residences (the federal HTC is restricted to income-producing properties only), a more realistic minimum investment requirement (the federal requirements in this regard disqualifies many worthwhile projects), the right to transfer the state tax credits so as to make these more attractive to investors (prohibited in the federal HTCs), and the ability for non-profit organizations to use the state HTC (severely limited with respect to the federal HTC).

The KHTC has markedly enhanced the federal HTC investment in Kansas, as examined by Rutgers in a 2010 study. In the 21-year pre-Kansas HTC period (FY1978-2001), a total of $114 million (inflation-adjusted 2009 dollars) was expended on federal HTC-assisted projects, or an average of about $5.4 million per year. In the 8-year span (FY 2002-2009) when the Kansas HTC has been in effect and was studied by Rutgers University, the there was almost a two and a half-fold increase in Kansas HTC projects (again both state-alone and state-and-federal-combined) to $271 million and the annual average project volume rose six-fold to $33.9 million (all inflation-adjusted to 2009 dollars).

Other states adopting a state HTC have similarly witnessed an increase in historic rehabilitation. The state of Missouri has one of the most extensive state tax credits for historic rehabilitation. The Missouri program (enacted 1998) allows Missouri taxpayers a 25 percent state tax credit for costs associated with the rehabilitation of certified historic structures located in this state. From 2000 through 2009, about $3 billion of historic rehabilitation had cumulatively been undertaken through the Missouri state historic tax credit (MHTC) auspices. As examined by Rutgers, completed MHTC projects are concentrated in the City of St. Louis and to a lesser extent Kansas City, Lexington, and Jefferson City. Projects outside of these cities are located in dozens of other towns, dispersed throughout the state. MHTC projects are concentrated in areas with higher population densities and lower household incomes. MHTC recipient areas tend to have an older housing stock, higher vacancy rates, and lower owner occupancy than the state of Missouri as a whole. Many MHTC locations are classified by the Missouri Department of Economic Development as "distressed." Credit-inspired historic preservation investment in these areas was thus quite welcome.

Other states report heightened rehabilitation investment after adoption of a state historic tax credit. Delaware has such a credit and it experienced over four times as much annual historic preservation activity in the eight years (2001-2008) after the adoption of this credit than in the eight years (1993-2000) prior to its passage (Place Economics January 2010). Collectively the $385 million in Ohio state historic tax credits are projected to leverage nearly $2.6 billion in private investment and federal tax credits (Ohio Development Services Organization 2014). With its state HTC soon (January 1, 2015) to become effective in Texas, this state has added to its arsenal of incentivizing historic rehabilitation and the magnitude of such activity should increase in Texas as well.

Figure 7.1
Federal Tax Incentives for Rehabilitating Historic Buildings
Fiscal Year 1978-2013
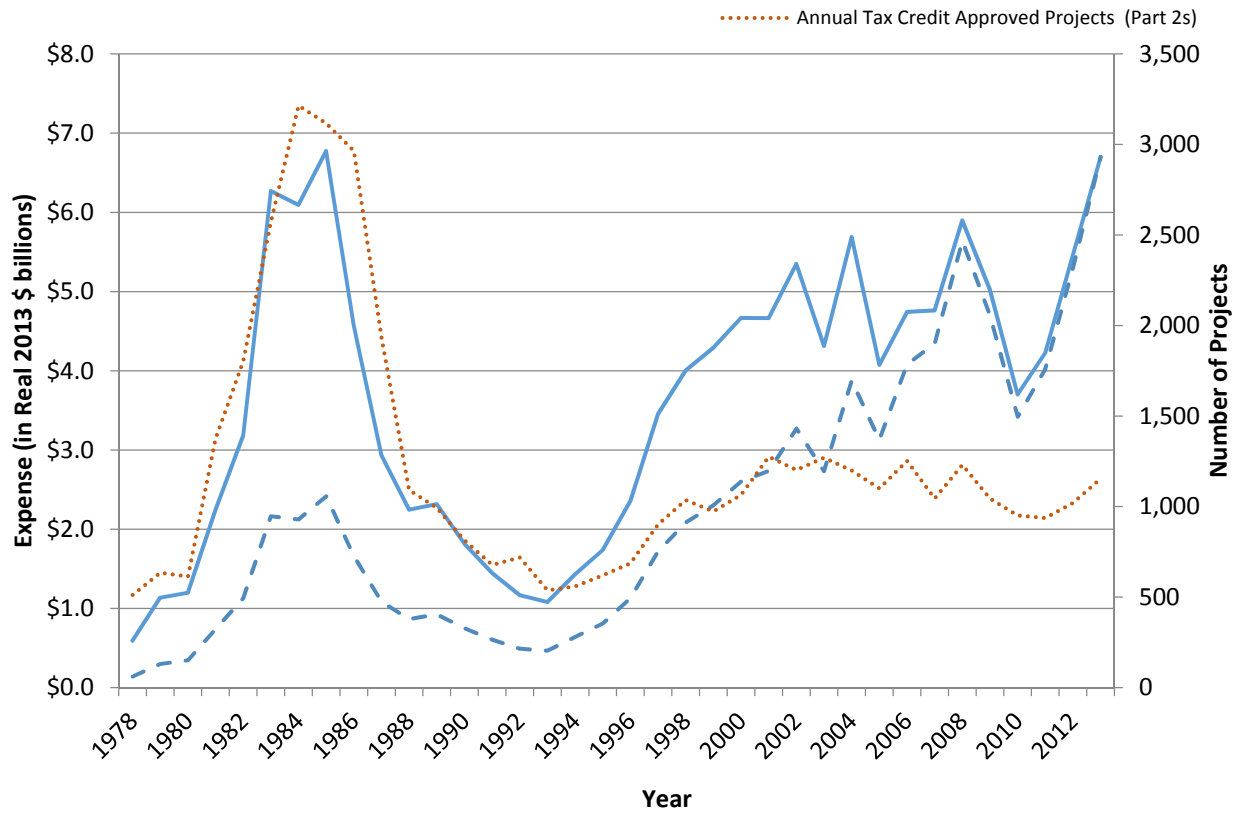
Legend:
- Investment - Parts 2s (Real 2013$)
- Investment - Parts 2s (Nominal $)
- Annual Tax Credit Approved Projects (Part 2s)

Sources: - Department of the Interior, National Park Service, Technical Preservation Services; National Council of State
Historic Preservation Offices; and calculations by Rutgers University

EXHIBIT 7.1

Federal Historic Tax Credits, Fiscal Years 1978-2013-Nationwide

Fiscal Year	Investment (Part 2s) (In $ᵃ millions)	Cumulative Investment (Parts 2s) (In $ᵃ millions)	Annual Tax Credit Approved Projects (Part 2s)	Cumulative Annual Tax Credit Approved Projects (Part 2s)
1978	$140	$140	512	512
1979	$300	$440	635	1,147
1980	$346	$786	614	1,761
1981	$738	$1,524	1,375	3,136
1982	$1,128	$2,652	1,802	4,938
1983	$2,165	$4,817	2,572	7,510
1984	$2,123	$6,940	3,214	10,724
1985	$2,416	$9,356	3,117	13,841
1986	$1,661	$11,017	2,964	16,805
1987	$1,083	$12,100	1,931	18,736
1988	$865	$12,965	1,092	19,828
1989	$927	$13,892	994	20,822
1990	$750	$14,642	814	21,636
1991	$608	$15,250	678	22,314
1992	$491	$15,741	719	23,033
1993	$468	$16,209	538	23,571
1994	$641	$16,850	560	24,131
1995	$812	$17,662	621	24,752
1996	$1,130	$18,792	687	25,439
1997	$1,720	$20,512	902	26,341
1998	$2,085	$22,597	1,036	27,377
1999	$2,303	$24,900	973	28,350
2000	$2,602	$27,502	1,065	29,415
2001	$2,737	$30,239	1,276	30,691
2002	$3,272	$33,511	1,202	31,893
2003	$2,733	$36,244	1,270	33,163
2004	$3,877	$40,121	1,200	34,363
2005	$3,127	$43,248	1,101	35,464
2006	$4,082	$47,330	1,253	36,717
2007	$4,346	$51,676	1,045	37,762
2008	$5,641	$57,317	1,231	38,993
2009	$4,697	$62,014	1,044	40,037
2010	$3,421	$65,435	951	40,988
2011	$4,023	$69,458	937	41,925
2012	$5,331	$74,789	1,020	42,945
2013	$6,726	$81,545	1,155	44,100

*These figures are in nominal indicated year terms that are NOT adjusted for inflation.

Sources: Department of the Interior, National Park Service, Technical Preservation Services; National Council of State Historic Preservation Offices; and calculations by Rutgers University

Figure 7.2: Historic Tax Credits, State Programs

= Indicates an Historic Tax Credit Program for that state.

= Legislation Introduced to create an HTC Program for that state.
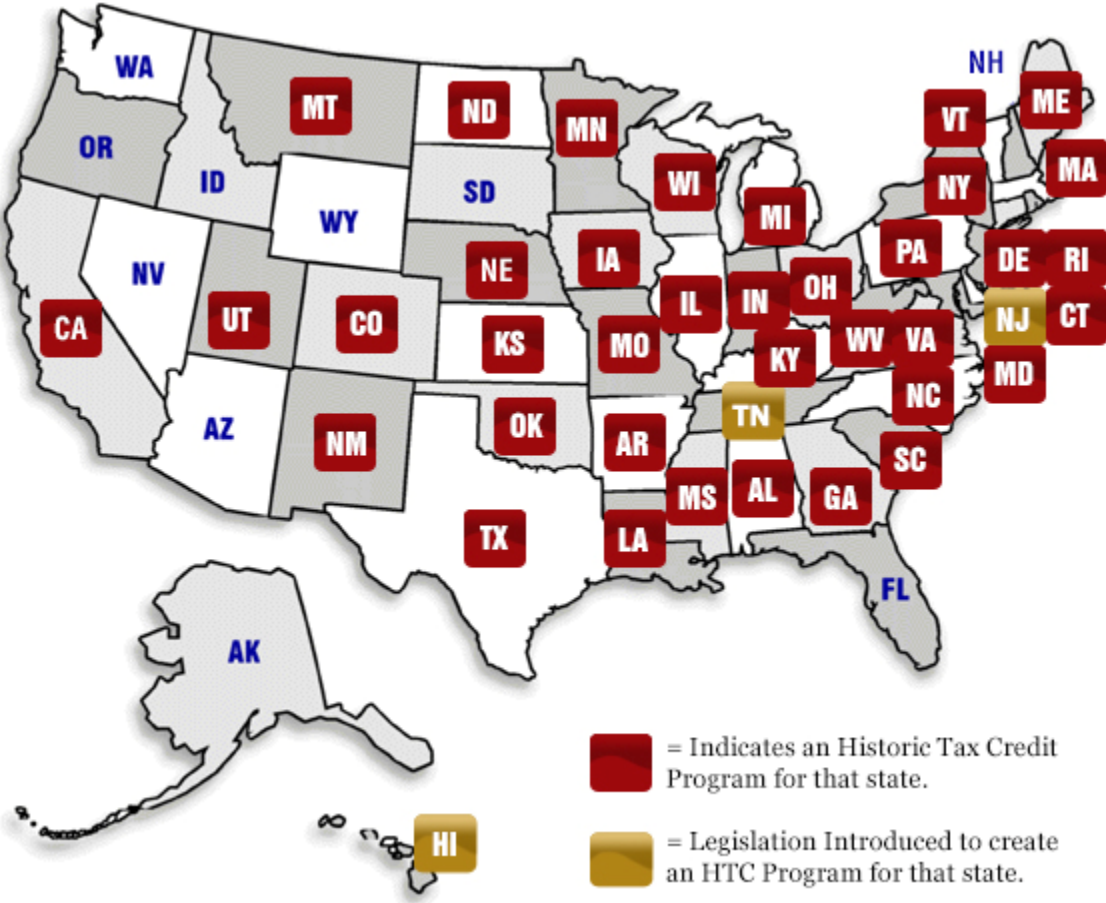
Source: http://www.novoco.com/historic/htc/state_programs.php

EXHIBIT 7.2

Summary of Federal Historic Tax Credit Statistics- Nationwide

--Dollar amounts are expressed in billions--

Investment/Tax Credit Component [a]	FY 1978 - 2013				FY 2013
	Nominal $ [d]		Real $ [e]		Real $ [e]
	Total	Annual Average	Total	Annual Average	Total
Approved proposed (for tax credit) rehabilitation ("Part 2")	$81.5	$2.3	$131.6	$3.7	$6.7
Certified (for tax credit) rehabilitation ("Part 3")	$58.9	$1.6	$98.1	$2.7	$3.4
Total rehabilitation cost [b]	$65.4	$1.8	$109.0	$3.0	$3.8
Federal tax credit [c]	$12.2	$0.3	$21.0	$0.6	$0.7

--Dollar amounts are expressed in billions--

Economic Impacts (See Summary Exhibits 7.2 through 7.4 for details.)	FY 1978 – 2013 [f]		FY 2013
	Total	Annual Average	Total
Jobs (in thousands)	2,415	67	63
Income	$91.5	$2.5	$2.7
Gross Domestic Product	$124.4	$3.5	$3.6
Output	$251.8	$7.0	$7.1
Taxes-All Government	$36.4	$1.0	$0.9
Taxes-Federal Government	$26.6	$0.7	$0.6
Taxes-State Government	$5.0	$0.1	$0.2
Taxes-Local Government	$4.9	$0.1	$0.2

Technical Background: The HTC has a multi-step application process encompassing "Part 1" (evaluation of the historic significance of the property), "Part 2" (description of the rehabilitation work), and "Part 3" (request of certification of completed work). With respect to the HTC's dollar magnitude, the most complete data is for the approved proposed (for tax credit) rehabilitation investment ("Part 2"). We do not have as good data on the year-by-year certified (for tax credit) rehabilitation ("Part 3) volume over the full FY 1978-2013 period. (Only a portion of the "Part 2" rehabilitation is ultimately certified as "Part 3.") Further, we do not have specific data on the total rehabilitation investment associated with the HTC. By way of background, both "Part 2" and "Part 3" rehabilitation statistics include only what are termed "eligible" or "qualified" items (or Qualified Rehabilitation Expenditures—QRE) for the tax credit as opposed to what are called "ineligible" or "non-qualified" costs. Examples of "eligible"/"qualified" items include outlays for renovation (walls, floors, and ceilings, etc.) construction-period interest and taxes, and architect fees; examples of "ineligible"/"non-qualified" costs include landscaping, financing and leasing fees, and various other outlays (e.g. , for fencing, paving, sidewalks and parking lots). While the "ineligible"/"non-qualified" expenses do not count for tax credit purposes, they are practically a component of the total rehabilitation investment borne by the HTC-oriented developer and in fact, the total rehabilitation investment (including "ineligible"/"non-qualified" costs) help pump-prime the economy. Based on the best published data and through additional case studies conducted specifically for the purposes of the current investigation, Rutgers University estimates some of the "missing information" noted above regarding the cumulative HTC investment over FY 1978-2013.

[a] Data estimated from best available information

[b] Equals all rehabilitation outlays—both "eligible"/"qualified" expenses and "ineligible"/"non-qualified" costs. The total rehabilitation cost is estimated by dividing the "Part 3" investment divided by .9. Case study investigation suggests that the "Part 3" amount is closer to 85 percent of the total rehabilitation cost, however we elected to apply the .9 factor to be conservative, that is to derive a lower rather than a higher estimate of the total rehabilitation expense.

[c] Assumes a 25 percent HTC in FY 1978 - FY 1986 and a 20 percent HTC in FY 1987 - FY 2013. These percentages are applied to the certified rehabilitation ("Part 3").

[d] In indicated year dollars--not adjusted for inflation.

[e] In inflation-adjusted 2013 dollars.

[f] In inflation adjusted 2013 dollars for monetary (not job) impacts

Sources: Department of the Interior, National Park Service, Technical Preservation Services; National Council of State Historic Preservation Offices; and calculations by Rutgers University

EXHIBIT 7.3
Nationwide Historic Rehabilitation Tax Credit Projects Involving Housing
Fiscal Year 1978 to Fiscal Year 2013

Fiscal Year	Total Number of Housing Units Completed	Number of Units Rehabilitated	Number of Units Created	Total Number of Low-/Moderate-Income Units	Percent of Total Units Completed that are Low-/Moderate-Income
1978	6,962	3,876	3,086	1,197	17%
1979	8,635	4,807	3,828	1,485	17%
1980	8,349	4,648	3,701	1,435	17%
1981	10,425	6,332	4,093	3,073	29%
1982	11,416	6,285	5,131	2,635	23%
1983	19,350	12,689	6,661	3,792	20%
1984	20,935	16,002	4,933	142	1%
1985	22,013	16,618	5,395	868	4%
1986	19,524	12,260	7,264	640	3%
1987	15,522	11,306	4,216	1,241	8%
1988	10,021	7,206	2,815	592	6%
1989	11,316	7,577	3,739	2,034	18%
1990	8,415	6,098	2,317	1,993	24%
1991	5,811	4,081	1,730	1,288	22%
1992	7,536	5,523	2,013	1,762	23%
1993	8,286	5,027	3,259	1,546	19%
1994	10,124	6,820	3,304	2,159	21%
1995	8,652	5,747	2,905	2,416	28%
1996	11,545	5,537	6,008	3,513	30%
1997	15,025	5,447	9,578	6,239	42%
1998	13,644	6,144	7,500	6,616	48%
1999	13,833	4,394	9,439	4,815	35%
2000	17,266	5,740	11,530	6,668	38%
2001	11,546	4,950	6,596	4,938	43%
2002	13,886	5,615	8,271	5,673	41%
2003	15,374	5,715	9,659	5,485	36%
2004	15,784	5,738	10,046	5,357	34%
2005	14,438	5,469	8,969	4,863	34%
2006	14,695	6,411	8,284	5,622	38%
2007	18,006	6,272	11,734	6,553	36%
2008	17,051	6,659	10,392	5,220	31%
2009	13,743	5,764	7,979	6,710	49%
2010	13,273	6,643	6,630	5,514	42%
2011	15,651	7,435	8,216	7,470	48%
2012	17,991	6,772	11,219	6,366	35%
2013	25,120	9,366	15,754	7,097	28%
Total	**491,167**	**252,973**	**238,194**	**135,017**	**27%**

Sources: - Department of the Interior, National Park Service, Technical Preservation Services; National Council of State Historic Preservation Offices; and calculations by Rutgers University

EXHIBIT 7.4
The Federal HTC's National Economic Impacts

	Federal HTC-assisted Rehabilitation	
	$109.0 billion CUMULATIVE (FY 1978-2013) historic rehabilitation expenditures results in:	$3.8 billion in ANNUAL FY 2013 historic expenditures results in:
National Total (direct and multiplier impacts)		
Jobs (person-years, in thousands)	2,415.0	62.9
Income ($ billion)	91.5	2.7
Output ($ billion)	251.8	7.1
GDP ($ billion)	124.4	3.6
Taxes ($ billion)	36.4	0.9
• Federal ($ billion)	26.6	0.6
• State ($ billion)	5.0	0.2
• Local ($ billion)	4.9	0.2

Sources: - Department of the Interior, National Park Service, Technical Preservation Services; National Council of State Historic Preservation Offices; and calculations by Rutgers University

EXHIBIT 7.5

Economic and Tax Impacts of Federal HTC Investment on the Nation Fiscal Year 1978-2013 ($109.0 Billion)	Economic Component			
	Output (000$)	Employment (jobs)	Income (000$)	Gross Domestic Prodcut (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*				
1. Agriculture	2,644,781.9	17,259	183,874.8	395,388.1
2. Agri. Serv., Forestry, & Fish	1,293,232.7	23,140	449,763.8	704,048.7
3. Mining	4,705,036.3	19,692	1,149,299.6	2,017,898.8
4. Construction	49,454,937.8	710,521	28,810,397.9	35,205,953.8
5. Manufacturing	89,379,335.8	492,393	20,771,676.2	31,957,519.5
6. Transport. & Public Utilities	17,160,540.2	94,633	4,289,034.1	7,186,698.9
7. Wholesale	10,330,454.0	81,130	4,200,903.6	4,390,047.3
8. Retail Trade	16,006,665.8	354,216	5,889,731.5	9,317,744.0
9. Finance, Ins., & Real Estate	23,881,867.3	181,563	9,336,056.4	16,205,911.9
10. Services	35,669,330.5	430,100	16,005,255.1	16,423,658.2
11. Government	1,280,937.8	10,403	388,239.3	607,551.9
Total Effects (Private and Public)	251,807,120.1	2,415,049	91,474,232.4	124,412,421.0
II. DISTRIBUTION OF EFFECTS/MULTIPLIER				
1. Direct Effects	109,014,581.3	1,143,370	48,412,209.6	59,050,574.8
2. Indirect and Induced Effects	142,792,538.8	1,271,678	43,062,022.8	65,361,846.2
3. Total Effects	251,807,120.1	2,415,048.8	91,474,232.4	124,412,421.0
4. Multipliers (3/1)	2.310	2.112	1.889	2.107
III. COMPOSITION OF GROSS STATE PRODUCT				
1. Wages--Net of Taxes				77,637,921.3
2. Taxes				18,123,608.5
a. Local				2,811,094.4
b. State				2,748,722.4
c. Federal				12,563,791.7
General				2,815,407.8
Social Security				9,748,383.9
3. Profits, dividends, rents, and other				28,650,891.2
4. Total Gross State Product (1+2+3)				124,412,421.0

IV. TAX ACCOUNTS		Business (000$)	Household (000$)	Total (000$)
1. Income --Net of Taxes		77,637,921.3	90,923,124.8	---------
2. Taxes		18,123,608.5	18,326,352.4	36,449,960.9
a. Local		2,811,094.4	2,074,942.0	4,886,036.4
b. State		2,748,722.4	2,237,510.9	4,986,233.3
c. Federal		12,563,791.7	14,013,899.5	26,577,691.2
General		2,815,407.8	14,013,899.5	16,829,307.3
Social Security		9,748,383.9	-	9,748,383.9

V. EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE				
Employment (Jobs)				22.2
Income				839,090.9
State Taxes				45,738.6
Local Taxes				44,819.5
Gross State Product				1,141,232.1
INITIAL EXPENDITURE IN DOLLARS				109,015,880,843.3

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects --the proportion of direct spending on goods and services produced in the specified region.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and sevices needed by households that provide the direct and indirect labor.

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EXHIBIT 7.6

Economic and Tax Impacts of Federal HTC Investment on the Nation Fiscal Year 2013 ($3.8 Billion)				
	Economic Component			
	Output (000$)	**Employment (jobs)**	**Income (000$)**	**Gross Domestic Prodcut (000$)**
I. TOTAL EFFECTS (Direct and Indirect/Induced)*				
1. Agriculture	49,086.1	154	3,579.6	10,224.9
2. Agri. Serv., Forestry, & Fish	33,732.1	291	11,451.0	21,651.4
3. Mining	112,611.4	547	29,933.3	53,265.0
4. Construction	1,666,599.3	21,553	980,804.0	1,177,750.3
5. Manufacturing	2,634,561.0	14,154	624,594.4	1,010,003.1
6. Transport. & Public Utilities	392,890.9	2,428	102,872.6	185,831.2
7. Wholesale	294,787.3	2,084	119,876.0	126,092.4
8. Retail Trade	388,884.0	7,379	143,167.6	225,268.4
9. Finance, Ins., & Real Estate	465,385.7	2,523	164,910.8	296,065.5
10. Services	1,061,932.5	11,585	481,163.2	481,652.7
11. Government	31,843.8	225	9,641.9	15,053.6
Total Effects (Private and Public)	7,132,314.0	62,923	2,671,994.4	3,602,858.4
II. DISTRIBUTION OF EFFECTS/MULTIPLIER				
1. Direct Effects	3,764,875.2	35,001	1,672,121.0	2,061,994.2
2. Indirect and Induced Effects	3,367,438.8	27,922	999,873.4	1,540,864.2
3. Total Effects	7,132,314.0	62,923	2,671,994.4	3,602,858.4
4. Multipliers (3/1)	1.894	1.798	1.598	1.747
III. COMPOSITION OF GROSS STATE PRODUCT				
1. Wages--Net of Taxes				2,248,788.7
2. Taxes				505,417.6
a. Local				107,211.9
b. State				90,667.5
c. Federal				307,538.2
General				80,145.9
Social Security				227,392.3
3. Profits, dividends, rents, and other				848,652.1
4. Total Gross State Product (1+2+3)				3,602,858.4
IV. TAX ACCOUNTS		**Business (000$)**	**Household (000$)**	**Total (000$)**
1. Income --Net of Taxes		2,248,788.7	2,120,886.8	---------
2. Taxes		505,417.6	435,105.2	940,522.8
a. Local		107,211.9	47,748.2	154,960.1
b. State		90,667.5	60,466.6	151,134.1
c. Federal		307,538.2	326,890.4	634,428.6
General		80,145.9	326,890.4	407,036.3
Social Security		227,392.3	-	227,392.3
V. EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE				
Employment (Jobs)				16.7
Income				709,471.7
State Taxes				40,129.3
Local Taxes				41,145.2
Gross State Product				956,636.0
INITIAL EXPENDITURE IN DOLLARS				3,766,174,712.0

Note: Detail may not sum to totals due to rounding.

*Terms:

    Direct Effects --the proportion of direct spending on goods and services produced in the specified region.

    Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

    Induced Effects--the value of goods and sevices needed by households that provide the direct and indirect labor.

EXHIBIT 7.7
FHTC Utilization in Texas

	Nominal ($)		Real ($)*	
	Certified Expense	**Full Rehab Expense**	**Certified Expense**	**Full Rehab Expense**
1978	$0	$0	$0	$0
1979	$107,000	$118,889	$214,973	$238,859
1980	$90,602	$100,669	$182,028	$202,253
1981	$9,416,443	$10,462,714	$18,918,517	$21,020,575
1982	$1,197,911	$1,331,012	$2,406,716	$2,674,128
1983	$8,666,058	$9,628,953	$17,410,924	$19,345,471
1984	$17,153,930	$19,059,922	$34,463,855	$38,293,172
1985	$13,820,303	$15,355,892	$27,766,285	$30,851,428
1986	$6,915,320	$7,683,689	$13,893,527	$15,437,252
1987	$32,342,225	$35,935,806	$64,978,564	$72,198,405
1988	$800,000	$888,889	$1,607,275	$1,785,861
1989	$3,027,814	$3,364,238	$6,083,162	$6,759,069
1990	$82,000	$91,111	$164,746	$183,051
1991	$80,814	$89,793	$162,363	$180,403
1992	$92,000	$102,222	$184,837	$205,374
1993	$1,083,500	$1,203,889	$2,176,853	$2,418,726
1994	$20,726	$23,029	$41,640	$46,267
1995	$2,142,150	$2,380,167	$4,303,780	$4,781,978
1996	$250,000	$277,778	$502,273	$558,082
1997	$7,240,363	$8,044,848	$14,546,569	$16,162,854
1998	$16,161,727	$17,957,474	$31,049,309	$34,499,232
1999	$89,622,748	$99,580,831	$167,021,514	$185,579,460
2000	$131,721,349	$146,357,054	$236,186,197	$262,429,108
2001	$18,462,038	$20,513,376	$31,454,474	$34,949,416
2002	$46,484,789	$51,649,765	$75,998,692	$84,442,992
2003	$62,027,994	$68,919,994	$97,864,276	$108,738,085
2004	$113,835,594	$126,483,993	$167,022,600	$185,580,667
2005	$31,725,367	$35,250,408	$41,342,419	$45,936,021
2006	$34,474,849	$38,305,388	$40,048,622	$44,498,469
2007	$60,342,111	$67,046,790	$66,096,926	$73,441,029
2008	$91,687,148	$101,874,609	$95,875,246	$106,528,051
2009	$154,701,686	$171,890,762	$165,422,513	$183,802,792
2010	$72,633,892	$80,704,324	$78,576,551	$87,307,279
2011	$21,124,993	$23,472,214	$22,200,884	$24,667,648
2012	$37,856,910	$42,063,233	$39,024,018	$43,360,019
2013	$33,802,168	$37,557,964	$33,802,168	$37,557,964
TOTAL	$1,121,194,522	$1,245,771,692	$1,598,995,295	$1,776,661,439

*2013 was used as a base year

Sources: - Department of the Interior, National Park Service, Technical Preservation Services; National Council of State Historic Preservation Offices; and calculations by Rutgers University

EXHIBIT 7.8
National Economic and Tax Impacts of the Cumulative Federal HTC Investment-1978-2013 ($1.777 billion investment)

		Output ($1,000)	Employment (jobs)	Earnings ($1,000)	GDP ($1,000)
I. Total Effects (Direct + Indirect/Induced)					
1.	Agriculture, Forestry, Fishing, and Hunting	45,146.4	822	29,705.8	22,594.6
2.	Mining	84,910.9	222	22,237.3	55,232.2
3.	Utilities	97,756.7	125	16,687.4	52,606.9
4.	Construction	1,796,692.5	14,333	898,264.1	1,043,887.9
5.	Manufacturing	1,165,033.1	4,921	247,001.5	400,454.1
6.	Wholesale Trade	84,547.4	233	19,858.4	28,937.1
7.	Retail Trade	352,516.6	4,244	157,813.7	237,966.2
8.	Transportation and Warehousing	237,434.7	1,398	84,953.6	125,872.5
9.	Information	192,284.4	651	48,752.1	111,686.4
10.	Finance, Insurance, Real Estate, Rental, and Leasing	969,578.7	5,769	296,139.5	455,339.7
11.	Professional and Business Services	417,890.4	3,643	228,161.7	261,706.8
12.	Educational Services, Health Care, and Social Assistance	375,759.2	4,114	206,118.0	221,515.0
13.	Arts, Entertainment, Recreation, and Hospitality	187,766.8	3,425	77,243.8	108,324.1
14.	Other Services (including Government Enterprise)	149,073.1	2,459	84,671.0	87,139.0
	Total Effects	6,156,390.9	46,358	2,417,607.9	3,213,262.4
II. Distribution of Effects and Multipliers					
1.	Direct Effects	1,777,000.0	14,171	972,727.9	1,032,599.5
2.	Indirect/Induced Effects	4,379,390.9	32,187	1,444,880.1	2,180,662.9
3.	Total Effects	6,156,390.9	46,358	2,417,607.9	3,213,262.4
4.	*Multipliers (= 3 / 1)*	*3.464*	*3.271*	*2.485*	*3.112*
III. Composition of GDP					
1.	Compensation				1,932,990.6
2.	Taxes				458,366.9
	a. Local				96,685.6
	b. State				70,686.2
	c. Federal				290,995.1
3.	Profits, Dividends, Rents, and Other				821,904.9
4.	Total GDP (= 1 + 2 + 3)				3,213,262.4

		Business	Household	Total
IV. Tax Accounts				
1.	Labor Income	1,932,990.6	1,932,990.6	----------------
2.	Taxes	458,366.9	247,957.6	706,324.5
	a. Local	96,685.6	43,410.4	140,096.0
	b. State	70,686.2	11,248.1	81,934.3
	c. Federal	290,995.1	193,299.1	484,294.2

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	26.1
Earnings	$1,360,499.7
State Taxes	$46,108.2
Local Taxes	$78,838.5
GDP	$1,808,251.2
Initial Expenditure (in Dollars)	**$1,777,000,000.0**

EXHIBIT 7.9
National Economic Impacts of Cumulative Federal HTC Investment
by 3-digit industry classification- 1978-2013 ($1.777 billion investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**45146.4**	**822**	**29705.8**	**22594.6**
111CA	Crop and animal production (Farms)	39748.3	678	25800.0	18746.4
113FF	Forestry, fishing, and related activities	5398.1	143	3905.8	3848.2
	Mining	**84910.9**	**222**	**22237.3**	**55232.2**
211	Oil and gas extraction	41898.1	41	12119.8	29302.7
212	Mining, except oil and gas	40856.8	173	9381.9	24451.0
213	Support activities for mining	2156.0	8	735.7	1478.6
22	**Utilities**	**97756.7**	**125**	**16687.4**	**52606.9**
23	**Construction**	**1796692.5**	**14333**	**898264.1**	**1043887.9**
	Manufacturing	**1165033.1**	**4921**	**247001.5**	**400454.1**
311FT	Food product manufacturing	134636.5	535	19326.0	38072.3
313TT	Textile and textile product mills	18442.3	96	4319.5	5579.7
315AL	Apparel manufacturing	26678.9	273	9872.7	10964.9
321	Wood product manufacturing	54178.5	277	13133.9	15184.1
322	Paper manufacturing	36425.6	99	7053.7	11373.2
323	Printing and related support activities	22135.4	132	7240.0	9867.2
324	Petroleum and coal products manufacturing	198696.1	152	38490.8	67353.0
325	Chemical manufacturing	137800.2	161	21603.7	49934.7
326	Plastics and rubber products manufacturing	69388.4	214	13332.0	21661.5
327	Nonmetallic mineral product manufacturing	62833.7	229	13830.3	23838.9
331	Primary metal manufacturing	66033.9	1150	8159.4	16200.8
332	Fabricated metal product manufacturing	110033.6	488	30064.4	42650.8
333	Machinery manufacturing	39304.7	142	9130.7	14596.2
334	Computer and electronic product manufacturing	41471.7	141	13548.9	21165.5
335	Electrical equipment and appliance manufacturing	36432.8	371	8386.7	14041.4
3361MV	Motor vehicle, body, trailer, and parts manufacturing	59189.2	151	12565.2	17481.2
3364OT	Other transportation equipment manufacturing	12816.9	37	2816.9	4101.6
337	Furniture and related product manufacturing	16115.1	140	5934.5	6039.7
339	Miscellaneous manufacturing	22419.6	131	8192.0	10347.6
42	**Wholesale trade**	**84547.4**	**233**	**19858.4**	**28937.1**
44RT	**Retail trade**	**352516.6**	**4244**	**157813.7**	**237966.2**
	Transportation and warehousing, excluding Postal Service	**237434.7**	**1398**	**84953.6**	**125872.5**
481	Air transportation	99558.2	403	34922.5	63415.7
482	Rail transportation	15767.9	36	4108.9	6951.2
483	Water transportation	20271.7	69	6314.8	10599.8
484	Truck transportation	19091.7	60	3528.8	5798.2
485	Transit and ground passenger transportation	42306.2	497	20197.4	18382.7
486	Pipeline transportation	2668.8	5	2554.9	1565.9
487OS	Other transportation and support activities	23106.8	201	7815.7	11594.6
493	Warehousing and storage	14663.4	128	5510.6	7564.4
	Information	**192284.4**	**651**	**48752.1**	**111686.4**
511	Publishing including software	54565.1	291	18234.8	31156.8
512	Motion picture and sound recording industries	19621.4	93	4919.5	11656.1
513	Broadcasting and telecommunications	11545.5	41	6829.6	6668.5
514	Information and data processing services	106552.4	225	18768.1	62205.0
	Finance and insurance	**552999.7**	**2649**	**214095.1**	**250309.5**
521CI	Federal Reserve banks, credit intermediation and related services	133709.9	757	40216.6	78962.6
523	Securities, commodity contracts, investments	150312.3	774	92877.7	69069.3
524	Insurance carriers and related activities	212426.2	1109	61892.5	73350.4

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525	Funds, trusts, and other financial vehicles	56551.3	10	19108.3	28927.1
	Real estate, rental, and leasing	**416579.0**	**3120**	**82044.3**	**205030.2**
531	Real estate	258122.8	2883	63184.2	92308.8
532RL	Rental and leasing services and lessors of intangible assets	158456.2	237	18860.1	112721.4
	Professional and technical services	**237603.4**	**1580**	**117708.4**	**146812.1**
5411	Legal services	36123.3	13	1104.4	18851.9
5412OP	Other professional, scientific and technical services	162699.1	1328	93050.4	100036.1
5415	Computer systems design and related services	38630.9	238	23492.3	27851.4
55	Management of companies and enterprises	150.0	1	61.2	72.8
	Administrative and waste services	**180287.0**	**2063**	**110453.3**	**114894.7**
561	Administrative and support services	170154.6	1997	105811.2	109785.5
562	Waste management and remediation services	10132.4	66	4642.1	5109.2
61	**Educational services**	60107.1	770	30230.3	35558.8
	Health care and social assistance	**315652.1**	**3344**	**175887.7**	**185956.1**
621	Ambulatory health care services	132255.2	1258	86616.5	81016.9
622HO	Hospitals and nursing and residential care facilities	158484.9	1325	72329.4	89563.2
624	Social assistance	24912.0	761	16941.8	15376.0
	Arts, entertainment, and recreation	**48589.4**	**859**	**18851.5**	**29579.9**
711AS	Performing arts, museums, and related activities	19894.5	534	10153.9	12154.0
713	Amusements, gambling, and recreation	28694.9	325	8697.6	17425.9
	Accommodation and food services	**139177.4**	**2567**	**58392.3**	**78744.2**
721	Accommodation	19930.6	250	8673.7	11001.5
722	Food services and drinking places	119246.8	2317	49718.6	67742.7
81	**Other services, except government**	**121432.2**	**2231**	**71732.9**	**69648.9**
GOV	**Government enterprises and the Postal Service**	**27640.8**	**227**	**12938.1**	**17490.1**
HH	**Households**	**0.0**	**0**	**0.0**	**0.0**
	Total	6,156,390.9	46,358	2,417,607.9	3,213,262.4

EXHIBIT 7.10

In-State Economic and Tax Impacts of the Cumulative State HTC Investment in Texas- 1978-2013 ($1.777 billion investment)

	Output ($1,000)	Employment (jobs)	Earnings ($1,000)	GDP ($1,000)
I. Total Effects (Direct + Indirect/Induced)				
1. Agriculture, Forestry, Fishing, and Hunting	35,805.1	701	13,378.8	17,758.3
2. Mining	72,522.9	195	18,232.2	47,505.2
3. Utilities	64,225.4	83	13,376.9	34,540.0
4. Construction	1,789,184.9	14,266	979,389.9	1,039,621.4
5. Manufacturing	778,570.7	3,754	162,797.1	265,654.8
6. Wholesale Trade	57,126.1	154	13,618.3	19,551.9
7. Retail Trade	250,390.6	3,016	113,295.7	169,073.6
8. Transportation and Warehousing	170,015.9	932	58,032.4	92,545.7
9. Information	114,627.2	411	26,658.9	66,775.5
10. Finance, Insurance, Real Estate, Rental, and Leasing	546,305.0	3,853	154,660.4	250,113.1
11. Professional and Business Services	233,849.8	2,015	118,474.8	147,610.2
12. Educational Services, Health Care, and Social Assistance	248,818.4	2,797	137,729.8	146,462.7
13. Arts, Entertainment, Recreation, and Hospitality	93,501.8	1,914	37,952.2	52,954.4
14. Other Services (including Government Enterprise)	1,402,153.8	1,655	48,541.6	51,388.5
Total Effects	5,857,097.6	35,746	1,896,139.2	2,401,555.3
II. Distribution of Effects and Multipliers				
1. Direct Effects	1,777,000.0	14,171	972,727.9	1,032,599.5
2. Indirect/Induced Effects	4,080,097.6	21,575	923,411.3	1,368,955.8
3. Total Effects	5,857,097.6	35,746	1,896,139.2	2,401,555.3
4. *Multipliers (= 3 / 1)*	*3.296*	*2.522*	*1.949*	*2.326*

			GDP ($1,000)
III. Composition of GDP			
1. Compensation			1,389,744.7
2. Taxes			311,762.0
a. Local			73,348.8
b. State			32,452.8
c. Federal			205,960.3
3. Profits, Dividends, Rents, and Other			700,048.6
4. Total GDP (= 1 + 2 + 3)			2,401,555.3

IV. Tax Accounts	Business	Household	Total
1. Labor Income	1,389,744.7	1,896,139.2	----------------
2. Taxes	311,762.0	223,503.6	535,265.6
a. Local	73,348.8	33,889.7	107,238.5
b. State	32,452.8	0.0	32,452.8
c. Federal	205,960.3	189,613.9	395,574.3

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	20.1
Earnings	$1,067,045.1
State Taxes	$18,262.7
Local Taxes	$60,348.1
GDP	$1,351,466.1

Initial Expenditure (in Dollars)	**$1,777,000,000.0**

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EXHIBIT 7.11
<u>In-State</u> Economic Impacts of Cumulative State HTC Investment
by 3-digit industry classification - 1978-2013 ($1.777 billion investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**35805.1**	**701**	**13378.8**	**17758.3**
111CA	Crop and animal production (Farms)	32572.8	607	11416.1	15472.5
113FF	Forestry, fishing, and related activities	3232.3	94	1962.7	2285.8
	Mining	**72522.9**	**195**	**18232.2**	**47505.2**
211	Oil and gas extraction	37568.5	35	8950.5	26274.7
212	Mining, except oil and gas	33386.4	154	8750.6	20155.3
213	Support activities for mining	1567.9	6	531.1	1075.3
22	**Utilities**	**64225.4**	**83**	**13376.9**	**34540.0**
23	**Construction**	**1789184.9**	**14266**	**979389.9**	**1039621.4**
	Manufacturing	**778570.7**	**3754**	**162797.1**	**265654.8**
311FT	Food product manufacturing	77541.3	372	11293.7	23110.8
313TT	Textile and textile product mills	7872.3	44	1727.2	2328.9
315AL	Apparel manufacturing	14546.8	167	5213.1	6063.7
321	Wood product manufacturing	44765.0	227	10709.0	12495.8
322	Paper manufacturing	19939.2	62	3668.9	6146.4
323	Printing and related support activities	5345.8	36	1679.8	2331.8
324	Petroleum and coal products manufacturing	157656.5	117	31103.8	52802.2
325	Chemical manufacturing	89958.7	106	12630.3	32218.1
326	Plastics and rubber products manufacturing	46477.1	146	8803.9	14505.1
327	Nonmetallic mineral product manufacturing	54396.4	201	11943.9	20336.7
331	Primary metal manufacturing	40053.6	1109	5132.5	9827.1
332	Fabricated metal product manufacturing	80881.7	371	22359.4	30850.2
333	Machinery manufacturing	29209.4	106	6534.9	10652.9
334	Computer and electronic product manufacturing	20307.4	70	6565.4	10370.3
335	Electrical equipment and appliance manufacturing	24941.3	334	5690.4	9524.9
3361MV	Motor vehicle, body, trailer, and parts manufacturing	34939.6	89	7185.1	10368.0
3364OT	Other transportation equipment manufacturing	6792.7	23	1575.5	2018.6
337	Furniture and related product manufacturing	10388.0	93	4097.3	3916.0
339	Miscellaneous manufacturing	12557.9	81	4883.0	5787.2
42	**Wholesale trade**	**57126.1**	**154**	**13618.3**	**19551.9**
44RT	**Retail trade**	**250390.6**	**3016**	**113295.7**	**169073.6**
	Transportation and warehousing, excluding Postal Service	**170015.9**	**932**	**58032.4**	**92545.7**
481	Air transportation	87003.1	350	30518.4	55418.4
482	Rail transportation	9605.0	21	2481.6	4234.3
483	Water transportation	13579.5	45	4230.1	7100.6
484	Truck transportation	14334.8	46	2582.8	4353.5
485	Transit and ground passenger transportation	24956.9	303	10402.8	10844.2
486	Pipeline transportation	1979.1	3	1470.2	1161.2
487OS	Other transportation and support activities	11741.1	101	3643.2	5917.1
493	Warehousing and storage	6816.4	64	2703.2	3516.4
	Information	**114627.2**	**411**	**26658.9**	**66775.5**
511	Publishing including software	31651.1	182	10697.8	18164.9
512	Motion picture and sound recording industries	7579.1	52	1998.8	4631.0
513	Broadcasting and telecommunications	8602.7	34	2793.0	4969.6
514	Information and data processing services	66794.3	142	11169.4	39009.9
	Finance and insurance	**267319.0**	**1595**	**99819.6**	**119625.0**
521CI	Federal Reserve banks, credit intermediation and related services	83416.7	497	23084.5	49447.0
523	Securities, commodity contracts, investments	73328.1	475	43983.5	33670.3
524	Insurance carriers and related activities	110165.0	620	32602.0	36298.3
525	Funds, trusts, and other financial vehicles	409.3	2	149.5	209.3

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Real estate, rental, and leasing	**278986.0**	**2258**	**54840.8**	**130488.2**
531	Real estate	193417.5	2111	44014.5	69169.2
532RL	Rental and leasing services and lessors of intangible assets	85568.5	146	10826.3	61319.0
	Professional and technical services	**131863.1**	**826**	**57761.7**	**82692.2**
5411	Legal services	23767.1	8	699.7	12403.5
5412OP	Other professional, scientific and technical services	86180.2	682	44407.4	54227.3
5415	Computer systems design and related services	21864.0	136	12633.4	16036.2
55	Management of companies and enterprises	51.8	0	21.2	25.2
	Administrative and waste services	**101986.7**	**1189**	**60713.2**	**64918.0**
561	Administrative and support services	97048.4	1157	58432.8	62427.9
562	Waste management and remediation services	4938.3	32	2280.3	2490.1
61	**Educational services**	**34902.5**	**460**	**17178.9**	**20332.5**
	Health care and social assistance	**213916.0**	**2337**	**120550.9**	**126130.2**
621	Ambulatory health care services	91955.0	888	57711.9	56332.6
622HO	Hospitals and nursing and residential care facilities	104795.7	895	50964.2	59203.0
624	Social assistance	17165.2	553	11874.8	10594.6
	Arts, entertainment, and recreation	**20635.9**	**500**	**7953.9**	**11697.9**
711AS	Performing arts, museums, and related activities	12225.3	397	6090.7	7579.1
713	Amusements, gambling, and recreation	8410.6	103	1863.1	4118.8
	Accommodation and food services	**72865.9**	**1414**	**29998.4**	**41256.5**
721	Accommodation	4200.8	61	1814.7	2318.8
722	Food services and drinking places	68665.1	1353	28183.7	38937.7
81	**Other services, except government**	**73590.1**	**1480**	**41461.2**	**41462.0**
GOV	**Government enterprises and the Postal Service**	**16112.5**	**175**	**7080.4**	**9926.4**
HH	**Households**	**1312451.2**	**0**	**0.0**	**0.0**
	Total	**5,857,097.6**	**35,743**	**1,895,989.6**	**2,401,345.9**

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EXHIBIT 7.12

<u>National</u> Economic and Tax Impacts of the Annual Recent Average HTC Investment-
2009-2013 ($75 million annual average investment)

		Output ($1,000)	Employment (jobs)	Earnings ($1,000)	GDP ($1,000)
I. Total Effects (Direct + Indirect/Induced)					
1.	Agriculture, Forestry, Fishing, and Hunting	1,905.4	35	1,253.8	953.6
2.	Mining	3,583.7	9	938.5	2,331.1
3.	Utilities	4,125.9	5	704.3	2,220.3
4.	Construction	75,831.1	605	37,912.1	44,058.3
5.	Manufacturing	49,171.3	208	10,424.9	16,901.6
6.	Wholesale Trade	3,568.4	10	838.1	1,221.3
7.	Retail Trade	14,878.3	179	6,660.7	10,043.6
8.	Transportation and Warehousing	10,021.2	59	3,585.5	5,312.6
9.	Information	8,115.6	27	2,057.6	4,713.8
10.	Finance, Insurance, Real Estate, Rental, and Leasing	40,922.0	244	12,498.9	19,218.1
11.	Professional and Business Services	17,637.5	154	9,629.8	11,045.6
12.	Educational Services, Health Care, and Social Assistance	15,859.3	174	8,699.4	9,349.3
13.	Arts, Entertainment, Recreation, and Hospitality	7,924.9	145	3,260.2	4,571.9
14.	Other Services (including Government Enterprise)	6,291.8	104	3,573.6	3,677.8
	Total Effects	259,836.4	1,957	102,037.5	135,618.8
II. Distribution of Effects and Multipliers					
1.	Direct Effects	75,000.0	598	41,054.9	43,581.9
2.	Indirect/Induced Effects	184,836.4	1,359	60,982.6	92,037.0
3.	Total Effects	259,836.4	1,957	102,037.5	135,618.8
4.	*Multipliers (= 3 / 1)*	*3.464*	*3.271*	*2.485*	*3.112*

III. Composition of GDP

		GDP
1.	Compensation	81,583.7
2.	Taxes	19,345.8
	a. Local	4,080.7
	b. State	2,983.4
	c. Federal	12,281.7
3.	Profits, Dividends, Rents, and Other	34,689.3
4.	Total GDP (= 1 + 2 + 3)	135,618.8

IV. Tax Accounts

		Business	Household	Total
1.	Labor Income	81,583.7	81,583.7	----------------
2.	Taxes	19,345.8	10,465.3	29,811.1
	a. Local	4,080.7	1,832.2	5,912.9
	b. State	2,983.4	474.7	3,458.1
	c. Federal	12,281.7	8,158.4	20,440.1

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	26.1
Earnings	$1,360,499.7
State Taxes	$46,108.2
Local Taxes	$78,838.5
GDP	$1,808,251.2

Initial Expenditure (in Dollars)   **$75,000,000.0**

EXHIBIT 7.13

National Economic Impacts of Annual Federal HTC Investment

by 3-digit industry classification- 2009-2013 ($75 million Annual Average investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**1905.4**	**35**	**1253.8**	**953.6**
111CA	Crop and animal production (Farms)	1677.6	29	1088.9	791.2
113FF	Forestry, fishing, and related activities	227.8	6	164.8	162.4
	Mining	**3583.7**	**9**	**938.5**	**2331.1**
211	Oil and gas extraction	1768.3	2	511.5	1236.7
212	Mining, except oil and gas	1724.4	7	396.0	1032.0
213	Support activities for mining	91.0	0	31.0	62.4
22	**Utilities**	**4125.9**	**5**	**704.3**	**2220.3**
23	**Construction**	**75831.1**	**605**	**37912.1**	**44058.3**
	Manufacturing	**49171.3**	**208**	**10424.9**	**16901.6**
311FT	Food product manufacturing	5682.5	23	815.7	1606.9
313TT	Textile and textile product mills	778.4	4	182.3	235.5
315AL	Apparel manufacturing	1126.0	12	416.7	462.8
321	Wood product manufacturing	2286.7	12	554.3	640.9
322	Paper manufacturing	1537.4	4	297.7	480.0
323	Printing and related support activities	934.2	6	305.6	416.5
324	Petroleum and coal products manufacturing	8386.2	6	1624.5	2842.7
325	Chemical manufacturing	5816.0	7	911.8	2107.5
326	Plastics and rubber products manufacturing	2928.6	9	562.7	914.2
327	Nonmetallic mineral product manufacturing	2652.0	10	583.7	1006.1
331	Primary metal manufacturing	2787.0	49	344.4	683.8
332	Fabricated metal product manufacturing	4644.1	21	1268.9	1800.1
333	Machinery manufacturing	1658.9	6	385.4	616.0
334	Computer and electronic product manufacturing	1750.4	6	571.8	893.3
335	Electrical equipment and appliance manufacturing	1537.7	16	354.0	592.6
3361MV	Motor vehicle, body, trailer, and parts manufacturing	2498.1	6	530.3	737.8
3364OT	Other transportation equipment manufacturing	540.9	2	118.9	173.1
337	Furniture and related product manufacturing	680.2	6	250.5	254.9
339	Miscellaneous manufacturing	946.2	6	345.8	436.7
42	**Wholesale trade**	**3568.4**	**10**	**838.1**	**1221.3**
44RT	**Retail trade**	**14878.3**	**179**	**6660.7**	**10043.6**
	Transportation and warehousing, excluding Postal Service	**10021.2**	**59**	**3585.5**	**5312.6**
481	Air transportation	4202.0	17	1473.9	2676.5
482	Rail transportation	665.5	2	173.4	293.4
483	Water transportation	855.6	3	266.5	447.4
484	Truck transportation	805.8	3	148.9	244.7
485	Transit and ground passenger transportation	1785.6	21	852.5	775.9
486	Pipeline transportation	112.6	0	107.8	66.1
487OS	Other transportation and support activities	975.2	8	329.9	489.4
493	Warehousing and storage	618.9	5	232.6	319.3
	Information	**8115.6**	**27**	**2057.6**	**4713.8**
511	Publishing including software	2303.0	12	769.6	1315.0
512	Motion picture and sound recording industries	828.1	4	207.6	492.0
513	Broadcasting and telecommunications	487.3	2	288.3	281.4
514	Information and data processing services	4497.1	10	792.1	2625.4
	Finance and insurance	**23339.9**	**112**	**9036.1**	**10564.6**
521CI	Federal Reserve banks, credit intermediation and related services	5643.4	32	1697.4	3332.7
523	Securities, commodity contracts, investments	6344.1	33	3920.0	2915.1

524	Insurance carriers and related activities	8965.7	47	2612.2	3095.8
525	Funds, trusts, and other financial vehicles	2386.8	0	806.5	1220.9
	Real estate, rental, and leasing	**17582.1**	**132**	**3462.8**	**8653.5**
531	Real estate	10894.3	122	2666.7	3896.0
532RL	Rental and leasing services and lessors of intangible assets	6687.8	10	796.0	4757.5
	Professional and technical services	**10028.3**	**67**	**4968.0**	**6196.3**
5411	Legal services	1524.6	1	46.6	795.7
5412OP	Other professional, scientific and technical services	6866.9	56	3927.3	4222.1
5415	Computer systems design and related services	1630.5	10	991.5	1175.5
55	Management of companies and enterprises	6.3	0	2.6	3.1
	Administrative and waste services	**7609.2**	**87**	**4661.8**	**4849.2**
561	Administrative and support services	7181.5	84	4465.9	4633.6
562	Waste management and remediation services	427.6	3	195.9	215.6
61	**Educational services**	2536.9	32	1275.9	1500.8
	Health care and social assistance	**13322.4**	**141**	**7423.5**	**7848.5**
621	Ambulatory health care services	5582.0	53	3655.7	3419.4
622HO	Hospitals and nursing and residential care facilities	6689.0	56	3052.7	3780.1
624	Social assistance	1051.4	32	715.0	649.0
	Arts, entertainment, and recreation	**2050.8**	**36**	**795.6**	**1248.4**
711AS	Performing arts, museums, and related activities	839.7	23	428.6	513.0
713	Amusements, gambling, and recreation	1211.1	14	367.1	735.5
	Accommodation and food services	**5874.1**	**108**	**2464.5**	**3323.5**
721	Accommodation	841.2	11	366.1	464.3
722	Food services and drinking places	5032.9	98	2098.4	2859.1
81	**Other services, except government**	**5125.2**	**94**	**3027.6**	**2939.6**
GOV	**Government enterprises and the Postal Service**	**1166.6**	**10**	**546.1**	**738.2**
HH	**Households**	**0.0**	**0**	**0.0**	**0.0**
	Total	**259,836.4**	**1,957**	**102,037.5**	**135,618.8**

EXHIBIT 7.14

In-State Economic and Tax Impacts of the Annual Recent Average HTC Investment in Texas -2009-2013 ($75 million annual average investment)

	Output ($1,000)	Employment (jobs)	Earnings ($1,000)	GDP ($1,000)
I. Total Effects (Direct + Indirect/Induced)				
1. Agriculture, Forestry, Fishing, and Hunting	1,511.2	30	564.7	749.5
2. Mining	3,060.9	8	769.5	2,005.0
3. Utilities	2,710.7	4	564.6	1,457.8
4. Construction	75,514.3	602	41,336.1	43,878.2
5. Manufacturing	32,860.3	158	6,871.0	11,212.2
6. Wholesale Trade	2,411.1	7	574.8	825.2
7. Retail Trade	10,568.0	127	4,781.8	7,135.9
8. Transportation and Warehousing	7,175.7	39	2,449.3	3,906.0
9. Information	4,838.0	17	1,125.2	2,818.3
10. Finance, Insurance, Real Estate, Rental, and Leasing	23,057.3	163	6,527.6	10,556.3
11. Professional and Business Services	9,869.9	85	5,000.3	6,230.0
12. Educational Services, Health Care, and Social Assistance	10,501.6	118	5,813.0	6,181.6
13. Arts, Entertainment, Recreation, and Hospitality	3,946.3	81	1,601.8	2,235.0
14. Other Services (including Government Enterprise)	59,179.3	70	2,048.7	2,168.9
Total Effects	247,204.5	1,509	80,028.4	101,360.0
II. Distribution of Effects and Multipliers				
1. Direct Effects	75,000.0	598	41,054.9	43,581.9
2. Indirect/Induced Effects	172,204.5	911	38,973.5	57,778.1
3. Total Effects	247,204.5	1,509	80,028.4	101,360.0
4. *Multipliers (= 3 / 1)*	*3.296*	*2.522*	*1.949*	*2.326*
III. Composition of GDP				
1. Compensation				58,655.5
2. Taxes				13,158.2
a. Local				3,095.8
b. State				1,369.7
c. Federal				8,692.8
3. Profits, Dividends, Rents, and Other				29,546.2
4. Total GDP (= 1 + 2 + 3)				101,360.0

IV. Tax Accounts	Business	Household	Total
1. Labor Income	58,655.5	80,028.4	----------------
2. Taxes	13,158.2	9,433.2	22,591.4
a. Local	3,095.8	1,430.3	4,526.1
b. State	1,369.7	0.0	1,369.7
c. Federal	8,692.8	8,002.8	16,695.6

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	20.1
Earnings	$1,067,045.1
State Taxes	$18,262.7
Local Taxes	$60,348.1
GDP	$1,351,466.1

Initial Expenditure (in Dollars) $75,000,000.0

EXHIBIT 7.15

<u>In-State</u> Economic Impacts of Annual State HTC Investment
by 3-digit industry classification- 2009-2013 ($75 million annual average investment)

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**1511.2**	**30**	**564.7**	**749.5**
111CA	Crop and animal production (Farms)	1374.8	26	481.8	653.0
113FF	Forestry, fishing, and related activities	136.4	4	82.8	96.5
	Mining	**3060.9**	**8**	**769.5**	**2005.0**
211	Oil and gas extraction	1585.6	1	377.8	1108.9
212	Mining, except oil and gas	1409.1	7	369.3	850.7
213	Support activities for mining	66.2	0	22.4	45.4
22	**Utilities**	**2710.7**	**4**	**564.6**	**1457.8**
23	**Construction**	**75514.3**	**602**	**41336.1**	**43878.2**
	Manufacturing	**32860.3**	**158**	**6871.0**	**11212.2**
311FT	Food product manufacturing	3272.7	16	476.7	975.4
313TT	Textile and textile product mills	332.3	2	72.9	98.3
315AL	Apparel manufacturing	614.0	7	220.0	255.9
321	Wood product manufacturing	1889.4	10	452.0	527.4
322	Paper manufacturing	841.6	3	154.9	259.4
323	Printing and related support activities	225.6	2	70.9	98.4
324	Petroleum and coal products manufacturing	6654.0	5	1312.8	2228.6
325	Chemical manufacturing	3796.8	4	533.1	1359.8
326	Plastics and rubber products manufacturing	1961.6	6	371.6	612.2
327	Nonmetallic mineral product manufacturing	2295.9	8	504.1	858.3
331	Primary metal manufacturing	1690.5	47	216.6	414.8
332	Fabricated metal product manufacturing	3413.7	16	943.7	1302.1
333	Machinery manufacturing	1232.8	4	275.8	449.6
334	Computer and electronic product manufacturing	857.1	3	277.1	437.7
335	Electrical equipment and appliance manufacturing	1052.7	14	240.2	402.0
3361MV	Motor vehicle, body, trailer, and parts manufacturing	1474.7	4	303.3	437.6
3364OT	Other transportation equipment manufacturing	286.7	1	66.5	85.2
337	Furniture and related product manufacturing	438.4	4	172.9	165.3
339	Miscellaneous manufacturing	530.0	3	206.1	244.3
42	**Wholesale trade**	**2411.1**	**7**	**574.8**	**825.2**
44RT	**Retail trade**	**10568.0**	**127**	**4781.8**	**7135.9**
	Transportation and warehousing, excluding Postal Service	**7175.7**	**39**	**2449.3**	**3906.0**
481	Air transportation	3672.1	15	1288.1	2339.0
482	Rail transportation	405.4	1	104.7	178.7
483	Water transportation	573.1	2	178.5	299.7
484	Truck transportation	605.0	2	109.0	183.7
485	Transit and ground passenger transportation	1053.3	13	439.1	457.7
486	Pipeline transportation	83.5	0	62.1	49.0
487OS	Other transportation and support activities	495.5	4	153.8	249.7
493	Warehousing and storage	287.7	3	114.1	148.4
	Information	**4838.0**	**17**	**1125.2**	**2818.3**
511	Publishing including software	1335.9	8	451.5	766.7
512	Motion picture and sound recording industries	319.9	2	84.4	195.5
513	Broadcasting and telecommunications	363.1	1	117.9	209.7
514	Information and data processing services	2819.1	6	471.4	1646.5
	Finance and insurance	**11282.5**	**67**	**4213.0**	**5048.9**
521CI	Federal Reserve banks, credit intermediation and related services	3520.7	21	974.3	2087.0
523	Securities, commodity contracts, investments	3094.9	20	1856.4	1421.1
524	Insurance carriers and related activities	4649.6	26	1376.0	1532.0

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
525	Funds, trusts, and other financial vehicles	17.3	0	6.3	8.8
	Real estate, rental, and leasing	**11774.9**	**95**	**2314.6**	**5507.4**
531	Real estate	8163.4	89	1857.7	2919.4
532RL	Rental and leasing services and lessors of intangible assets	3611.5	6	456.9	2588.0
	Professional and technical services	**5565.4**	**35**	**2437.9**	**3490.1**
5411	Legal services	1003.1	0	29.5	523.5
5412OP	Other professional, scientific and technical services	3637.3	29	1874.3	2288.7
5415	Computer systems design and related services	922.8	6	533.2	676.8
55	Management of companies and enterprises	2.2	0	0.9	1.1
	Administrative and waste services	**4304.4**	**50**	**2562.5**	**2739.9**
561	Administrative and support services	4096.0	49	2466.2	2634.8
562	Waste management and remediation services	208.4	1	96.2	105.1
61	**Educational services**	**1473.1**	**19**	**725.1**	**858.2**
	Health care and social assistance	**9028.5**	**99**	**5088.0**	**5323.4**
621	Ambulatory health care services	3881.1	37	2435.8	2377.6
622HO	Hospitals and nursing and residential care facilities	4423.0	38	2151.0	2498.7
624	Social assistance	724.5	23	501.2	447.2
	Arts, entertainment, and recreation	**871.0**	**21**	**335.7**	**493.7**
711AS	Performing arts, museums, and related activities	516.0	17	257.1	319.9
713	Amusements, gambling, and recreation	355.0	4	78.6	173.8
	Accommodation and food services	**3075.4**	**60**	**1266.1**	**1741.3**
721	Accommodation	177.3	3	76.6	97.9
722	Food services and drinking places	2898.1	57	1189.5	1643.4
81	**Other services, except government**	**3105.9**	**62**	**1749.9**	**1749.9**
GOV	**Government enterprises and the Postal Service**	**680.0**	**7**	**298.8**	**419.0**
HH	**Households**	**55393.3**	**0**	**0.0**	**0.0**
	Total	**247,204.5**	**1,509**	**80,022.1**	**101,351.1**

CHAPTER EIGHT

TEXAS PRESERVATION TRUST FUND PROGRAM

TEXAS PRESERVATION TRUST FUND GRANT PROGRAM: BACKGROUND

Texans have inherited a wide array of historic architecture and archeological sites that reflect the diversity of all those who have called Texas home. A most serious problem facing historic preservation in Texas is the rapid deterioration and destruction of thousands of Texas' historic and pre-historic sites. To meet this challenge, the 71st Texas Legislature established the Texas Preservation Trust Fund (TPTF) in 1989 and continued to appropriate monies to the fund over many, but not all subsequent sessions.[69] This interest-earning fund of public and private money was administered as matching grants to qualified applicants for the acquisition, survey, restoration, preservation or for the planning and educational activities leading to the preservation of historic architectural and archeological properties and associated collections of the State of Texas. Competitive Grants were awarded on a one-to-one match basis and were paid as reimbursement of eligible expenses incurred during the project.

Applications were available each year to public or private entities for projects involving eligible historic properties, sites or projects. Currently, there are two steps in the grant application process. First, all applicants are required to submit brief application forms for the Texas Historical Commission (THC) to review prior to each year's deadline. The THC selects the highest priority projects from the initial applications and invites those applicants to move forward to the second step. Successful applicants continue the process by submitting detailed project proposals and budgets

Monies from the Texas Preservation Trust Fund Grant program can be used for such activities as:

A. Development ("preservation," "restoration," "rehabilitation," and "reconstruction," as defined by the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, 1995) architecture costs, the costs of construction, and related expenses approved by the THC; or archeology costs necessary for stabilizing or repairing damage sustained at an archeological site or for protective measures; or

B. Acquisition of absolute ownership of eligible historic resources and related costs and professional fees; or

C. Planning costs necessary for the preparation of property specific historic structure reports, historic or cultural resource reports, preservation plans, maintenance studies, resource surveys, local and regional preservation plans or surveys, and/or feasibility studies; or for professional inventory and/or rehabilitation of state associated held-in-trust archeological collections, professional archeological investigation for site assessment or data collection purposes and the subsequent analysis and reporting of those results to address specific and significant archeological issues to aid with archeological site planning.

D. Heritage Education costs necessary for training individuals and organizations about historic resources and historic preservation techniques.

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[69] After establishment, some legislatures added money to the corpus of the fund at the same time giving authority to issue grants off the interest. Thus, there is the concept that the legislature adds to the fund periodically to allow more working interest for the program.

External factors such as the market downturn of the Great Recession that reduced the fund's investment returns and active hurricane seasons led to minimal grant availability in 2010 and 2011. Further, as a result of the 82nd legislature's budget reductions in 2011, the TPTF grant program was formally suspended. In 2013, the 83rd Texas Legislature reinstated the grant program. Grants were not awarded during the 2012-13 biennium, nor in fiscal year 2014 while the fund's investments began to generate earnings to finance future grants. The THC is in the process of awarding grants during the current fiscal year 2015. The THC anticipates grant awards to be in the $10,000 - $50,000 range. In previous grant cycles, $30,000 was the maximum grant award. A $50,000 grant award will be unusual, but may be considered for projects that make the case for such funding. Grant applications are scored primarily in three areas: endangerment, significance, and project viability. The THC anticipates awarding approximately $500,000 in FY 2015 due to the Trust Fund's earnings during the suspension of the program. Future rounds of the TPTF grants are likely to total in the $250,000 range annually.

TEXAS PRESERVATION TRUST FUND GRANT PROGRAM: GRANT FUNDS SPENT BY YEAR AND ACTIVITY

Exhibit 8.1 shows the Trust Fund Grant funds expended from 1997 through 2011 in both nominal and real (inflation-adjusted) 2013 dollars. From 1997 through 2011, a cumulative total of $4.6 million ($4,620,652) was spent in nominal dollars and $6.6 million ($6,607,567) in real dollars. Since the program spans 15 years, it makes the most sense to consider spending in real terms and references to spending will be in inflation-adjusted 2013 dollars unless otherwise specified.

The annual average grant funds spent over the decade and half (1997-2011) was $440,050. No grant monies were spent in 2010 and only $26,273 was spent in 2011, a reflection of the program's suspension at that point in time as described earlier. The peak grant funds spent by year was in 2003 ($759, 286); grant funds spent approached or exceeded $600,000 annually in 1999, 2004, 2005, and 2008.

Cumulatively from 1997-2011, the TPTF program has aided about 350 recipients (Exhibit 8.1). The average grant fund spent per recipient is therefore a modest $19,000 ($6.6 million/350).

Typically, 20 to 30 grants were made each year except for 2010-2014 when the program was essentially inactive (Exhibit 8.1).

Exhibit 8.2 shows the grant funds spent by type of project, with 8 categories of activities shown, including acquisition, development, education and planning as earlier described. Of the numerous categories, by far the most grant funds spent have been for *development* (e.g. activities to stabilize, preserve, restore or rehabilitate historic resources) - about $3.5 million – and *planning* (e.g. resource plans/surveys, preservation plans and maintenance studies – about $2.0 million. (See Exhibit 8.2 for details). Development and planning activities combined amount to $5.5 million of the total $6.6 million TPTF grant funds spent over 1997 through 2011, or slightly more than $8 of every $10 spent. Development clearly involves rehabilitation and related work to preserve historic resources and the planning activities often lend to the same in the future as the TPTF planning recipients often move forward with future preservation-related construction projects. Thus, in

many respects, the TPTF has continually over 1997 through 2011 involved $5.5 million of present or future construction-related activity.

We earlier calculated that the average TPTF grant fund recipient spent about $19,000 in monies received from the state. Interestingly, that is the order of magnitude average amount for almost all the TPTF activities identified in Exhibit 8.2. For example, over 1997-2011 the TPTF grant funds spent was $137, 375 for acquisition, $225,173 for archeology/ curatorial, $3,537,285 for development, and $2,018,642 for planning. As there were a total of 7 acquisition projects, 11 archeology/curatorial projects, 167 development projects, and 95 planning projects, the average grant fund spent was a near identical $19,625 for acquisition, $20,470 for archeology/ curatorial, $21, 181 for development, and $21,249 for planning.

Exhibits 8.1 and 8.2 and the dollars described in the above discussion focus on the *state* amounts spent as part of the TPTF program. As noted earlier, however, the TPTF grants require at least a one-to-one match. So cumulatively to date over 1997 through 2011, the total (state and local[70]) dollar value associated with the TPTF is about $13.2 million ($6,607,567 X 2), the development activity aided by the TPTF represents cumulatively over about $7 million in value ($3,537,289 X 2), the planning is about $4 million ($2,018,642 X 2); and the average projects represents a state and local expenditure of about $38,000 ($19,041 X 2).

TPTF recipients are from communities large and small, urban and rural throughout Texas (Figure 8.1). Further insight into the wide variety of communities and preservation-related activities supported by the TPTF is afforded by the brief summaries (in Exhibit 8.3) of 5 TPTF grants (of the total 350 awarded to date) for either planning or development (the two most significant categories in this program). Each example lists the historic resource aided by the TPTF, as well as location (county and sometimes city), activity type (development or planning), and the TPTF grant award amount as well as the total project cost (Recall the TPTF matching requirement so that the total cost is double or more the state money coming from the TPTF).

The research team has reviewed many TPTF projects to date and observe the following:

1. While the TPTF recipients have to match the TPTF grant by at least a one-to-one basis, the match (which can be in-kind) is often greater. For example, in the Rufus Hardin High School project (Exhibit 8.3), the TPTF grant award was $30,000 while the total project cost was $106,000; in this case the match was 2.5 to 1, far exceeding the one-to-one requirement.

2. The review of the project to date also strongly suggest that the planning-directed grants (recall these comprised $2 million or 30 percent of the total $6.6 million TPTF public monies awarded to date) are often the prelude to future rehabilitation and other preservation construction projects. For instance, as a hypothetical, isn't it likely that a TPTF planning grant to identify, survey and document and historic resource in districts will lead to some of these resources being placed on the National Register and then some of those properties undergoing future rehabilitation with federal and Texas historic tax credits? Similarly, the

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[70] The local can be public or private dollars.

TPTF funded planning grant for the preparation of a master plan for the stabilization and restoration of the Hunter Gymnasium in Presidio County (Exhibit 8.3) is likely to be followed by stabilization and restoration-related construction. Thus, the TPTF's planning grants which amounted to $2.0 million in inflation-adjusted 2013 dollars are matched by at least another $2.0 million and this combined $4 million in planning resource likely seeds future preservation-related construction.

3. Working throughout the state in urban and rural areas, the fund is typically crucial to grass roots preservation efforts. The Texas Preservation Trust Fund is often nearly the first major donor towards a proposed project and the agency's commitment and promised oversight lends valuable credibility to the preservation efforts and allows local organizers to leverage additional funds. Often these projects are not intended to be self-supporting or income producing in a manner that allows for the use of rehabilitation tax credit programs and the projects are often of too small a scale to justify local bond issuance to fund the otherwise worthy heritage preservation efforts. Examples are the St. Joseph Catholic Church and Kellum-Noble House TPTF projects synopsized in Exhibit 8.3.

4. The TPTF is particularly important for cultural heritage preservation. In Milam County, the TPTF has been utilized to assist two separate projects, the restoration of the International & Great Northern Railroad Depot which serves as a heritage museum for the small community of Rockdale, and the Kay Theater rehabilitation that has been bringing life back to the mid-century theater and downtown Rockdale. Perhaps of even more lasting impact is that based on its successes in the state program, Milam County has created its own Preservation Trust Fund to provide grant assistance to local historic preservation projects.

   On a related cultural preservation theme, theaters have been a critical historic building type that can be financially challenging for a community to preserve without assistance. In addition to the Kay Theater, the TPTF has assisted six additional theaters with planning or rehabilitation work.

   Spur Palace Theater, Spur
   Rialto Theater, Beeville
   Grand Theatre, Electra
   Texas Theatre, Seguin
   Plaza Theatre, El Paso
   Bowie City Auditorium, Bowie

   The community of Seguin restored their Texas Theatre into both a performing arts center and an active community event and meeting center. Even a modest TPTF grant proved valuable towards the multi-million dollar restoration of the Plaza Theatre in downtown El Paso. This historic, atmospheric theatre, seats two thousand patrons for performances and features a Wurlitzer organ with more than 1,000 pipes to help the theater anchor the city's downtown revitalization efforts. The TPTF $30,000 grant award to the Grand Theatre in the community of Electra (Wichita County) seeded a total $125,000 project cost that enabled many needed improvements (e.g., stabilizing the brick facades and building an

accessible entrance). This is part of the ongoing community efforts in Electra to preserve this landmark theatre in the heart of their Main Street district.

5. Historic school and educational buildings are another important cultural resource, yet such buildings may be threatened because once an administrative body such as a local school board, determines a facility is no longer directly useful for their mission, they likely stop spending on it. However, the buildings remain landmarks within their community because of their importance and the direct connection to the citizens' memory and heritage. The TPTF has been drawn on to preserve many historic schools throughout Texas including as examples:

   Old Red Rock Schoolhouse, Pleasanton
   Atlanta-Miller Grade School, Brenham
   Northside ISD School Museum, Bexar County
   Rufus F. Hardin High School, Brownwood
   Brenham High School, Brenham
   Lampasas Colored School, Lampasas
   Old Nacogdoches University Building, Nacogdoches
   St. Augustine School Building, Laredo
   Cart & Wagon House, Fort McIntosh, Laredo Community College
   Old Administration Building, Huston- Tillotson College, Austin
   Namesless Community School, Travis County

   For instance, a $30,000 TPTF grant award seeded a $105,580 project on the Rufus F. Hardin High School that effected critically needed exterior rehabilitation and structural repairs to this building (Exhibit 8.3).

6. Important culturally iconic churches have also been preserved with TPTF assistance. Assisted religious or former religious structures are always important local landmarks for their historic significance and architectural design. In some cases, the funded projects are helping to preserve the exterior of nationally significant properties. For example, a $23,577 TPTF grant award to St. Joseph's Catholic Church in Walker County seeded a $47,155 project that enabled the replacement of a damaged roof with a historically appropriate roofing material (Exhibit 8.3). Illustrative other churches and related structures (e.g., missions) whose preservation was aided by the TPTF include:

   Wesley United Methodist Church, Austin
   Mission Nuestra Senora de la Purisima Concepcion, San Antonio
   Providence Baptist Church, Chappell Hill
   San Elizario Catholic Church, San Elizario
   Zion Hill Church, Nacogdoches
   Texana Presbyterian Church, Edna
   Greater St. James Baptist Church, Fort Worth
   First Christian Church, Grapeland
   St. Michael's Church, Cuero
   Reedy Chapel AME Church, Galveston

La Lomita Mission Chapel, Mission
Sanger Presbyterian Church, Sanger
Sacred Heart of Jesus Catholic Church, Ruidosa
Zion Hill Baptist Church, Nacogdoches
St. Joseph Catholic Church, New Waverly

7. Yet another cultural resource – historic courthouses – have been aided by the TPTF, generally these were funded in the period leading up to the creation of the separate and much larger Texas Courthouse Preservation Program. The following serve as illustrative cases:

   Shackelford County Courthouse, Albany
   Dimmit County Courthouse, Carrizo Springs
   Old Harrison County Courthouse, Marshall
   Reagan County Courthouse, Stiles
   Rusk County Courthouse, Henderson
   Val Verde County Courthouse, Del Rio
   Ellis County Courthouse, Waxahachie
   Old Maverick County Courthouse, Eagle Pass
   Atascosa County Courthouse, Jourdanton
   Hutchinson County Courthouse, Stinnett
   Armstrong County Courthouse, Claude
   Donley County Courthouse, Clarendon
   Castroville City Hall, Former 2nd Medina County Courthouse, Castroville
   Johnson County Courthouse, Cleburne
   Bosque County Courthouse, Meridian
   Taylor County Courthouse, Abilene

8. The TPTF is frequently called upon to assist with preservation and maintenance of historic buildings that serve the needs of non-profit partners, freeing their limited funds to be utilized for operations and services. An example of this is assistance to Eddleman-McFarland House, the home to preservation partner Historic Forth Worth Inc., where TPTF assistance stabilized major retaining walls to keep the building and historic grounds from sliding down the hillside. In Austin, planning funds from the TPTF helped Humanities Texas study and design the restoration of their new headquarters the Byrne Reed House. The statewide non-profit was then able to utilize those plans to leverage hundreds of thousands from other donors including the National Endowment for the Humanities. The initial TPTF commitment directly led to the restoration of the historic home that had been entombed in late 20th century cladding back into a showcase housing administrative offices, meeting space, and public galleries.

   In 2008, Trust Fund assistance helped keep the landmark XIT Ranch Headquarters in its original Dalhart location instead of the building being moved hundreds of miles away, which prior to TPTF intervention was the only viable preservation solution. The XIT Ranch was one of the largest ranches in both the state and country in its heyday and it was

established in the Texas Panhandle in exchange for the construction of the Texas Capitol in the 1880s.

9. Finally, it should be noted that grants are made only from the investment earnings of the fund. Therefore, monetary additions to the fund are protected by the state's Safekeeping Trust and pay dividends year after year to Texas landmarks.

Exhibit 8.1: TPTF Cumulative Grant Funds Spent per Year (1997-2011)

Year	Nominal $	Real 2013 $	Number of Projects	Real 2013 $ per Project
1997	$ 167,500	$ 336,523	19	$17, 711
1998	$ 271,000	$ 520,635	19	$27, 401
1999	$ 346,365	$ 645,488	23	$28, 065
2000	$ 171,127	$ 306,843	32	$9, 589
2001	$ 308,278	$ 525,224	32	$16, 413
2002	$ 281,867	$ 460,829	39	$11, 816
2003	$ 481,248	$ 759,286	23	$33, 012
2004	$ 402,467	$ 590,510	30	$19, 684
2005	$ 535,398	$ 697,696	28	$24, 918
2006	$ 326,743	$ 379,570	24	$15, 815
2007	$ 410,610	$ 449,770	27	$16, 658
2008	$ 590,100	$ 617,054	34	$18, 149
2009	$ 272,950	$ 291,865	16	$18, 242
2010	$ -	$ -	0	$ -
2011	$ 25,000	$ 26,273	1	$26, 273
TOTAL	$ 4,590,652	$ 6,607,567	347	$19, 041

Exhibit 8.2: TPTF Cumulative Grant Funds Spent per Type of Project (1997-2011)

Project Type	Nominal $		Real 2013 $	
Acquisition	$	102,700	$	137,375
Archeology Curatorial	$	198,540	$	225,173
Development	$	2,307,513	$	3,537,289
Education	$	299,000	$	374,979
Emergency	$	115,000	$	121,316
Planning	$	1,423,760	$	2,018,642
TAM Fair Grant/Archeology Fair	$	69,140	$	95,060
Other	$	75,000	$	97,735
TOTAL	**$**	**4,590,652**	**$**	**6,607,567**

Exhibit 8.3: Illustrative TPTF Projects

Sample (small portion) of 2009 Funded Projects

Grand Theatre

Wichita County   Architecture Development Project

TPTF Grant Award $30,000   Total Project Cost $125, 000

Development grant funds were utilized to build a new concrete floor, an accessible entrance, and to stabilize the brick facades as part of the ongoing efforts of the community of Electra to preserve this landmark theatre in the heart of their Main Street district.

Hunter Gymnasium

Presidio County   Architecture Planning Project

TPTF Grant Award $27, 950   Total Project Cost $55, 900

The grant funded the development of a master plan for the stabilization, restoration, and long-term maintenance of the Hunter Gymnasium. This included existing conditions evaluations, structural reports, architectural plans and specifications, maintenance schedules, and other documents to complete the restoration and guide the preservation of the Hunter Gymnasium.

Sample of 2008 Funded Projects

St. Joseph Catholic Church

Walker County   Architecture Development Project

TPTF Grant Award $23,577   Total Project Cost $47, 155

The grant funded the replacement of the damaged composition shingle, main root with a historically appropriate roofing material. The specific material and methods were reviewed and approved in writing by the Texas Historical Commission prior to purchase and installation. The scope also covered repair of damaged decking, related structural elements, and flashing.

Rufus F. Hardin High School
Brown County   Heritage Education Project
TPTF Grant Award $30,000   Total Project Cost $105,580

This grant funded the exterior rehabilitation and structural repairs to the building. Work covered under this grant included repair of the foundation, masonry, roof including gutters and scuppers, and flooring; restoration of windows; reconstruction of exterior doors and of bathroom additions. Masonry work also included testing of the inappropriate coating and removal or cleaning of the coasting based on test   results.

1847 Kellum-Noble House
Harris County   Architecture Planning Project
TPTF Grant Award $20,000 Total Project Cost $40,000

The grant funded the assessment of foundation conditions, recommendations for foundation repair, and preparation of a historic structures report for the Kellum-Noble   House.

Figure 8.1

Texas Preservation Trust Fund Program:
Grant Funds Spent by City

Under $1,000
$1,000-$10,000
$10,000-$25,000
$25,000-$50,000
$50,000-$100,000
$100,000-$400,000

N

0   100   200 Miles
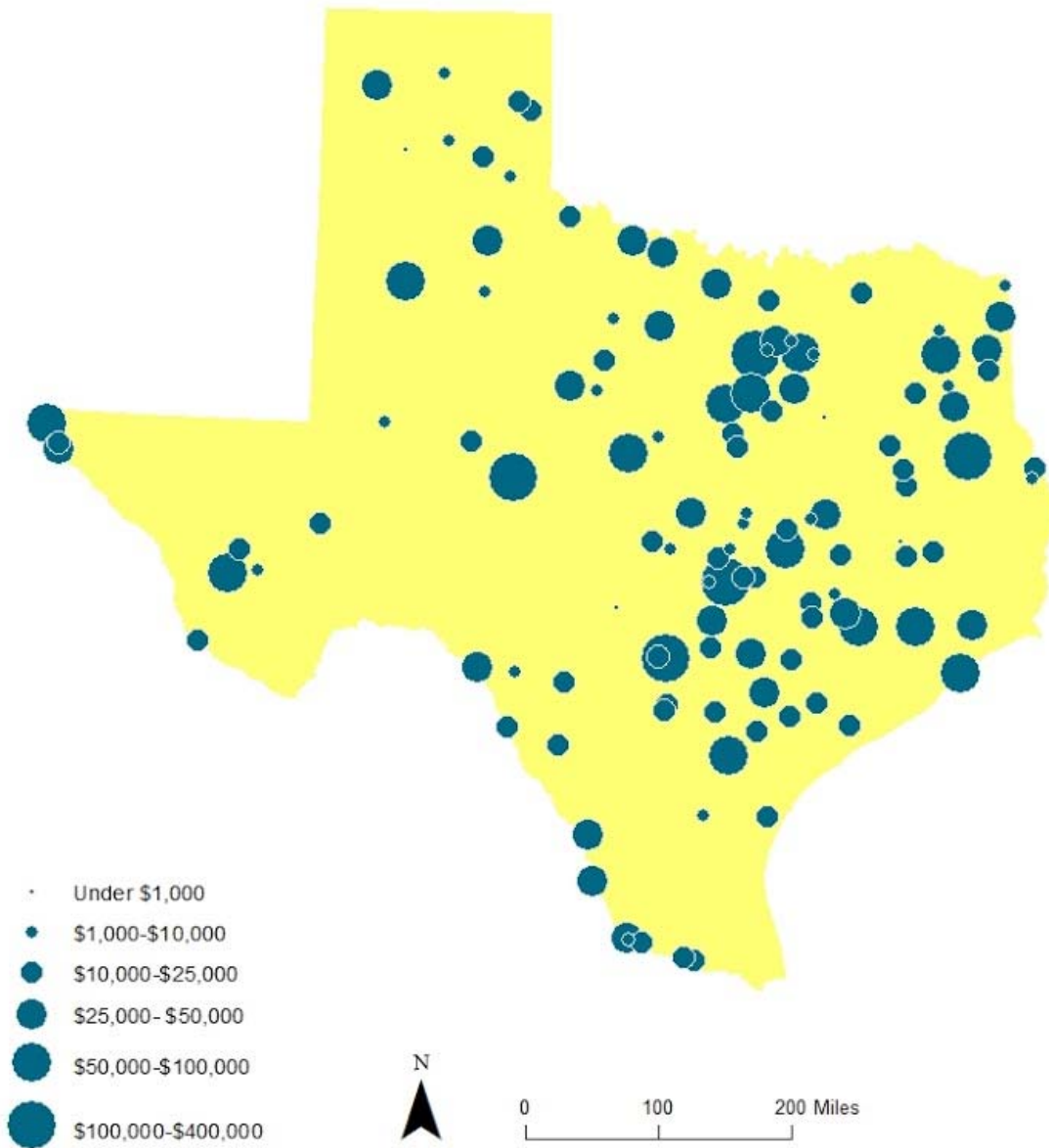
Source: U.S. Census, 2010 Tigerline Shapefiles.

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CHAPTER NINE

ECONOMIC BENEFITS OF HISTORIC PRESERVATION IN TEXAS:

SUMMARY AND CONTEXT

SUMMARY

This chapter synthesizes and lends perspective to the study's findings and illustrates how the data and analytic approaches assembled in the current analysis can be put to use by preservationists. Annual 2013 direct economic effects from historic activity in Texas include at a minimum $772 million in historic rehabilitation spending (combines $741 million in annual average private sector historic rehabilitation outlays and $31 million annual average public capital improvements to Texas courthouses)[71], $2.25 billion in heritage tourism spending, $224 million in net[72] Main Street Program activity, and $93 million in net[73] historical museum operations—for a total of $3.34 billion (all in annual 2013 dollars). Further, the three long-term programs that were examined in this study, the 1978-2013 federal historic rehabilitation investment tax credit applied in Texas, the state's 1981-2013 Main Street-related activity, and the state's 2000-2015 $447 million Texas Historic Courthouse Preservation Program have produced $1.78 billion, $5.29 billion, and $447 million, respectively, in direct economic effects (adjusted for inflation using 2013 dollars) over the lives of the initiatives.

In all cases, base data were assembled and input-output analyses (the preservation economic impact model) applied to project total effects (direct and multiplier) of these activities. Results are summarized in Tables 9.1 and 9.2. When multiplier effects are taken into account from the $3.34 billion annual preservation investment, the total annual impacts to the nation include a net economic gain of 114,122 jobs, $4,433 million in income, $7,307 million in Gross Domestic Product (GDP), and $1,596 million in total (federal, state, and local) tax revenues ($492 million in state and local taxes) (Table 9.1). These are the effects realized by the entire nation. Renovation of a historic home in Austin may require lumber from Oregon, plumbing fixtures from Ohio, and paint from Tennessee. Texas garners roughly 70 to 80 percent of total jobs, income, wealth, and tax benefits of preservation activities that accrue to the nation. On an annual basis, the in-state effects to Texas from the annual $3.34 billion investment in historic preservation include 79,419 jobs, $3,260 million in income, $4,624 million in state GDP, and $1,129 million in total taxes ($291 million in state and local taxes). The net in-state wealth (state GDP less federal indirect business taxes) added to the economy is roughly $4,111 million annually.

The cumulative (aggregate direct spending over time) impacts are not surprisingly quite significant. We shall focus here on impacts to the state. The 1978- 2013 federal historic rehabilitation investment tax credit applied in Texas ($1.78 billion) generated cumulative state-level impacts of 35,746 jobs, $1,896 million in income, $2,401 million in GDP, $140 million in state and local taxes and $2,195 million of in-state wealth. The 1981-2013 aggregate Main Street investment in Texas ($5.29 billion) generated cumulative state-level impacts of 126,719 jobs, $5,763 million in income, $7.362 million in state GDP, $563 million in state and local taxes, and $6,675 million of in-state wealth. Finally, the 2000-2015 aggregate historic courthouse investment has generated in Texas 9,607 jobs, $501 million income, $615 million GDP, $36 million state and local taxes, and $561 million of in-state wealth.

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[71] Additional public investment, aside from the $31 million spent in historic courthouses, exist in the rehabilitation of historic buildings exists in Texas; however, this figure is unable to be quantified within the scope of the current investigation.

[72] Excludes Main Street spending already tallied in historic rehabilitation and heritage tourism.

[73] Excludes Museum spending already tallied in historic rehabilitation and heritage tourism

COMPARING THE BENEFITS

How "large" are the above benefit figures? The standard economic response to almost any query is "it depends." Here, the yardstick of comparison is particularly important. Compared to the total economic scale at the national or state levels, historic preservation does not register as very large. As of 2013, Texas had approximately 15.5 million people employed and a total personal income of about $1.2 trillion. The in-state economic benefits of historic preservation traced above are clearly a small fraction of the statewide employment and earnings totals. In part, the fraction is so small because a portion of the economic activity associated with rehabilitation and heritage tourism leaks out of that state. Recall the Austin restoration using materials from around the country. But even at the national level, historic preservation is small when it is compared to the total economic scale of the country.

Although comparing historic preservation to total economic activity at both the state and national levels is somewhat instructive, it is also misleading: indeed, nearly any well-defined economic activity will not appear large against the sum of all activities. Rather than measuring historic preservation's economic benefits by the yardstick of *all* statewide economic activity, it is more meaningful to examine it against a more appropriate scale, of which there are many. One, for instance, is a "linked" economic activity. Thus, while preservation is not a major Texas employer in the totality of all employment, preservation is an important contributor to the travel industry, which comprised an important component of all employment in Texas.

The geographical scale of comparison is a further consideration. Thus far, we have been considering the more global scales of nation and state, but to paraphrase the adage about politics, to a practical extent "all economics are local." At the local level—and certainly for financially distressed communities, the economic contribution of historic preservation is much more noticeable. Take, for instance, the example of numerous Main Street programs contained in small Texas communities. In these localities, Main Street specifically and historic preservation generally, are very important to local economic invigoration. The same is true with respect to the penetration of "bricks and mortar" historic preservation. Thus, as discussed in Chapter Four, rehabilitation via Main Street is an important activity.

Further, there is the positive support that historic rehabilitation lends to other construction activity in a community. When buildings in a historic neighborhood are rehabilitated in a town, doesn't this encourage further rehabilitation in the city? What often makes communities distinctive is their place in history, so the preservation of these places fosters further rounds of renovation (as well as added tourism and other benefits).

In a complementary way, much as historic rehabilitation encourages all rehabilitation in a community and, for that matter, new construction there as well, these other activities improve the climate for historic preservation. We cannot currently disentangle and measure all these effects. But the fact that they are not quantified does not mean they do not exist. The point is that at a local level, historic preservation has effects that loom relatively much more significant in import than when preservation is related to the overall magnitude of national or state economic activity.

Table 9.1
Summary of the <u>Annual</u> Economic Impacts of Historic Preservation in Texas, 2013

		I	II	III	IV	
		Historic Rehabilitation[††]	*Heritage Tourism*	*Main Street Program*[†]	*History museums*	*Total Examined Economic Impacts*
TEXAS DIRECT EFFECTS		**$772 million** annually of historic rehabilitation expenditures results in:	**$2.25 billion** annually of heritage travel-attributed expenditures results in:	**$224 million** annually of construction and added retail payroll results in:	**$93 million** annually of spending expenses results in:	**$3.34 billion** *(I + II + III+IV)*
↓		National Total (Direct and Multiplier) Impacts				
NATIONAL TOTAL IMPACTS (DIRECT AND MULTIPLIER)	Jobs (person-years)	31,457	70,166	6,901	5,598	**114,122**
	Income ($ million)	1,058	2,819	324	232	**4,433**
	GDP* ($ million)	2,283	4,211	428	385	**7,307**
	Taxes ($ million)	377	1,030	109	80	**1,596**
	Federal ($ million)	248	726	73	57	**1,104**
	Local/State ($ million)	129	304	36	23	**492**
↓		In-State Texas Total (Direct and Multiplier) Impacts				
TEXAS PORTION OF NATIONAL TOTAL IMPACTS	Jobs (person-years)	15,398	54,204	5,385	4,432	**79, 419**
	Income ($ million)	827	2,029	240	163	**3,260**
	GDP* ($ million)	1,041	2,976	310	296	**4,624**
	Taxes ($ million)	234	763	77	54	**1,129**
	Federal ($ million)	173	572	53	41	**838**
	Local/State ($ million)	61	191	24	14	**291**
	In-state wealth** ($ million)	951	2,607	281	272	**4,111**

Source: Rutgers University, Center for Urban Policy Research, 2014.
*GDP=Gross Domestic Product.
** In-state wealth = GDP less federal indirect business taxes.
Note: Totals may differ from indicated subtotals because of rounding.
[†]Excludes Main Street and Museum impacts already tallied in Historic Rehabilitation and Heritage Tourism.
[††]Combines $741 million annual average public sector historic rehabilitation outlays and $31 million annual average public capital improvements to Texas Courthouses.

Table 9.2
Summary of Select <u>Cumulative</u> Economic Impacts of Historic Preservation Programs in Texas
(Federal Historic Tax Credit, Main Street, and Historic Courthouses)

	I *Historic Rehabilitation Federal Tax Credit*	II *Main Street Program*	III *Historic Courthouses*
TEXAS DIRECT EFFECTS	**$1.78 billion** of tax credit-related construction expenses since 1978 to 2013 resulted in:	**$5.29 billion** of construction and added retail payroll since 1981 to 2013 resulted in:	**$447 million** contribution expenditures since 2001 to 2015
↓	**National Total (Direct and Multiplier) Impacts**		
NATIONAL TOTAL IMPACTS (DIRECT AND MULTIPLIER)			
Jobs (person-years)	46,358	162,831	12,443
Income ($ million)	2,418	7,672	646
GDP* ($ million)	3,213	10,084	831
Taxes ($ million)	706	2,712	192
Federal ($ million)	484	1,833	*128*
Local/State ($ million)	222	879	*64*
↓	**In-State Texas Total (Direct and Multiplier) Impacts**		
TEXAS PORTION OF NATIONAL TOTAL IMPACTS			
Jobs (person-years)	35,746	126,719	9,607
Income ($ million)	1,896	5,763	501
GSP* ($ million)	2,401	7,362	615
Taxes ($ million)	535	1,827	140
Federal ($ million)	395	1,264	*104*
Local/State ($ million)	140	563	*36*
In-state wealth* ($ million)	2,195	6,675	561

Source: Rutgers University, Center for Urban Policy Research, 2014.
*GDP=Gross Domestic Product; In-state wealth = GDP less indirect federal business taxes.
Note: Totals may differ from indicated subtotals because of rounding.

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A final note on the scale of the historic preservation benefit also relates to the inadequacy of our measuring capabilities. The quality of life, educational, community pride and other benefits of preservation are not being tallied here. For instance, in the renovation of the historic house in Austin, we count as an economic benefit to the state's economy the job, income, and GDP effects from both the rehabilitation and the ongoing visitation. Not counted, however, is the benefit from the thousands of visitors who now, knowing more about Texas's important history and feeling more pride in the state, ultimately decide to live and work in the state, develop or expand businesses, refer others to visit, and so on. These benefits are elusive to measure but are there and add to the job, income, and GDP effects that are being tallied.

COMPONENTS OF THE BENEFITS OF HISTORIC PRESERVATION

Of the annual benefits from historic preservation noted earlier and summarized in Table 9.1, the largest contribution is from heritage tourism, followed more distantly by historic rehabilitation, the Main Street Program, and finally the historic museum investment. The main reason for the differences in their total contributions is the varying orders of magnitude of the direct effects of the respective activities. Heritage tourism leads, with $2.25 billion in annual spending, followed by the $772 million in historic rehabilitation, $224 annually million for the Main Street program, and $93 million for history museums.

The respective component contributions must be viewed holistically, however. Vibrant and restored historic sites throughout the state are essential to a healthy heritage tourism industry in Texas. In fact, the multiplier effects from the historic rehabilitation compare quite favorably with those of the heritage tourism, as is shown in Table 9.3. In a parallel vein is the economic "bang" per million dollars of directly invested "buck" for the different historic preservation activities, also shown in Table 9.3. Construction generates a relatively high number of jobs per $1 million invested, but so do other components of historic preservation, including heritage tourism, Main Street, and history museum (job generation is high in the last three aforementioned sectors, reflecting their modest wages per job). While ascribing effects to various separate components of historic preservation is useful on one level, it is also an artificial construct, as the various elements interact with one another to create the "heritage economy."

Table 9.3
Economic Effects by Component of Historic Preservation Activity in Texas

Economic Sector	Historic Rehabilitation	Heritage Tourism	Main Street Program	History museums
	Effects Per Million Dollars of Initial Expenditure			
National				
Employment (jobs)	41.5	31.1	30.8	59.9
Income	$1,372,798	$1,250,257	$1,446,288	$2,480,141
GDP	$3,017,706	$1,867,616	$1,911,678	$4,121,453
State				
Employment (jobs)	20.0	24.0	24.1	47.4
Income	$1,073,295	$889,991	$1,073,305	$1,741,072
GDP	$1,350,188	$1,319,912	$1,384,420	$3,165,194
	Ratio of Total to Direct Effects (Multiplier)			
National				
Employment	5.43	2.61	2.66	4.50
Income	2.51	3.24	2.70	5.35
GDP	5.29	3.41	3.17	2.97
State				
Employment	2.61	2.12	2.08	3.56
Income	1.97	2.45	2.01	3.76
GDP	2.37	2.53	2.30	2.28

Source: Rutgers University, Center for Urban Policy Research, 2015.
Notes: GDP = Gross Domestic Product

TOTAL ECONOMIC IMPACTS FROM TEXAS HISTORIC PRESERVATION

We applied the R/ECON™ I–O Model to quantify the economic impact from the $3.34 billion Annual Historic Preservation Investment in Texas. The results are displayed in Exhibits 9.1 through 9.4, and summarized in Table 9.4.

TABLE 9.4
Total Economic Impacts of the Annual (2013)
Historic Preservation in Texas ($3.34 billion)

	In Texas	Outside Texas	Total (U.S.)
Jobs (person-years)	79,419	34,703	114,122
Income ($million)	$3,260	$1,173	$4,433
GDP ($million)*	$4,624	$2,683	$7,307
Total Taxes ($million)**	$1,129	$467	$1,596
Federal ($million)	$838	$266	$1,104
Local & State ($million)	$291	$201	$492
In-State Wealth ($million)***	$4,111	------	------

*GDP =Gross Domestic Product
**Total Taxes = business plus household taxes
***In-State Wealth = GDP minus Federal Indirect Business Taxes

Nationwide Impacts

At the national level, item 1 of section II in exhibit 9.1 shows that the *direct* effects to the nation of spending related to Texas historic preservation activity translate into 36,632 new jobs, $1,454 million in income, and $1,941 million in GDP. The direct GDP/investment ratio (0.58) indicates significant levels of importing of goods and services into the state in the support of the activity. From previous chapters, it is clear that this importing is primarily due to activity not related to the rehabilitation of the buildings themselves, but rather to other activities (e.g., heritage tourism and the operation of history museums). Multiplier effects add 77,490 jobs, $2,979 million in income, and $5,366 million in GDP. Therefore, the total economic impacts of spending related to Texas historic preservation activity—the sum of its direct and indirect and induced effects—include 114,122 (36,632 + 77,490) new jobs, $4,433 million in additional income ($1,454 million + $2,979 million), and $7,307 million added to GDP ($1,941 million + $5,366 million). In all instances, the indirect and induced effects exceed the direct effects (the traditional multipliers are greater than 2.0).

Of the total 114,122 jobs generated nationwide by Texas activities related to historic preservation, over 25 percent (28,840 jobs) are concentrated in the "arts, entertainment, recreation, and hospitality" sector. This same industry accounts for about 15 percent of the total $4,433 million in labor income generated (exhibit 9.1). The lower percentage for income relative to jobs is due to the relatively lower incomes generated in this sector, for which many of the jobs are seasonal and paid at the minimum-wage. Other industries that capture a significant percentage of jobs include: "Finance, insurance, real estate, rental, and leasing" (14,711 jobs or 13 percent); "retail trade" (11,355 jobs or 10 percent); and "professional and business services" (11,223 jobs or 10 percent). Simple division of the number of jobs into the amount of labor income generated shows that, nationwide, the labor income per job supporting activity related to historic preservation is $32,054 for retail trade, $50,216 for services, and $42,010 for finance, insurance, real estate, rental, and leasing.

A finer breakdown of national economic impacts by industry (exhibit 9.2) shows that of the 28,840 jobs created in the "arts, entertainment, recreation, and hospitality" sector, over a quarter (7,507 jobs) are in the accommodation category. Further, 13,967 jobs are in eating/drinking establishments industry. This industry is characterized for paying low wages and offer part-time job opportunities in unusually high proportions; therefore, a division of the number of jobs into the amount of labor income generated shows the income per job is the food service/drinking places sector is $20, 558. An evaluation of the job productivity (GDP per job) reveals a gap of $16,277 ($69,255 versus $52,978) between indirect and direct jobs supporting Texas's activity related to historic preservation (exhibit 9.1). A major reason for that gap is that for comparable jobs, Texas wages are much lower than the wages in most other states. Another contributor is the overrepresentation of lower-paying service-based/food industry jobs in the direct effects.

State-Level Impacts

Exhibits 9.3 and 9.4 present the total in-state economic effects of the $3.34 billion in direct historic preservation spending. Item 1 in section II of exhibit 9.3 shows that Texas retains about 35,352 jobs or 97 percent of the direct jobs (36,632 jobs) created nationally by activity related to Texas historic preservation. Much of the spending on heritage tourism

and on the operation of history museums, however, goes toward items that, although purchased at retail outlets in the state, are produced outside of the state (e.g., gifts, food items, gasoline). As a result, Texas retains a substantially lower proportion of the indirect and induced employment impacts—about 57 percent (44,067 of 77,490 jobs).

In sum, through activity related to historic preservation, Texas annually gains 79,419 jobs (70 percent of the total 114,122 jobs generated nationally), $3,260 million in income (73 percent of the $4,433 million in income generated nationally), and $4,624 million in wealth (63 percent of the $7,307 million added to national GDP). The economic benefits of historic-preservation–related activity that accrue to Texas are concentrated primarily in the direct effects. A large proportion of the direct jobs are in the relatively high-paying construction industry. Hence, at $41,044, the average labor income per job in Texas generated through the state's historic preservation activity is more than the national average labor income per job of $38,848.

Finer-grained detail of state impacts by industry (exhibit 9.4) reflect concentrations similar to those noted at the national level. The main difference, once again, is that the construction industry looms larger at the state level. Nonetheless, of the 79,419 total state-level jobs derived from historic preservation, the greatest concentrations are in eating/drinking places (11,427 jobs) and in accommodation (7,231 jobs). Of the total $3,260 million generated in annual income, the eating/drinking and accommodation industries garner $249 million and $217 million, respectively. The eating/drinking and accommodation industries also account for $354 million and $277 million, respectively, of the total $4,624 million increase in state gross domestic product.

RELATIVE ECONOMIC EFFECTS OF HISTORIC PRESERVATION

Table 9.5 shows, in side-by-side fashion, the relative economic effects of the historic rehabilitation vis-à-vis new construction of different types of buildings (single-family, multifamily, commercial, and educational). The economic impacts include total (direct and indirect/induced) jobs, income, and GDP consequences per standard increment of investment ($1 million) at the state of Texas level.

The side-by-side comparisons in Table 9.5 reveal that across all building and investment types, historic preservation, in the form of historic rehabilitation, is a reasonably comparable economic pump-primer vis-à-vis new construction. Historic rehabilitation generates more jobs per $1 million of investment in educational structures, though fewer jobs than for the construction of new single-family, multifamily, or commercial structures. The income and GDP impacts of historic rehabilitation per $1 million of investment is on par with the income and GDP consequences from the construction of new housing (single and multifamily) and less than the income and GDP impacts from commercial construction. The income and GDP impacts from historic rehabilitation exceed that of comparable investment in new educational buildings, the income per job generated from historic rehabilitation *exceeds* that of almost all new construction categories examined here.

Table 9.5
Relative Economic Effects of Historic Rehabilitation versus New Construction per Million Dollars Spent

Geographic Level/ Economic Effect	Construction Activity				
	Historic Rehabilitation	New Construction			
	Various Types	Single-Family	Multifamily	Commercial	Educational
	Effects Per Million Dollars of Initial Expenditure				
In-State (Texas)					
Employment (jobs)	20.0	27.9	22.5	27.4	16.0
Income ($000)	$1,073	$1,119	$1,093	$1,352	$890
GDP ($000)	$1,350	$1,334	$1,354	$1,479	$1,222

Source: Rutgers University, Center for Urban Policy Research, 2015.
Notes: GDP = Gross Domestic Product

One other consideration of what constitutes a "good investment" is the relative comparison of historic preservation investment (historic rehabilitation, heritage tourism, Main Street, and history museums) versus investment in such important sectors of the Texas economy as cattle, oil/gas, and manufacturing (e.g., machine shops and semi-conductor industries). On this basis, historic preservation typically is on par with or has economic advantages, as illustrated below (see Table 9.6 for details).

Table 9.6
Economic Impacts per Million Dollars of Initial Expenditure in Texas

Economic Effect	Historic Rehabilitation	Heritage Tourism	Main Street	History museums
State				
Employment (jobs)	20.0	24.0	24.0	51.2
Income ($000)	$1,073	$890	$1,089	$1,941
GDP	$1,350	$1,320	$1,391	$3,418

Economic Effect	Cattle	Oil/Gas Extraction	Petroleum Refineries	Machine Shops	Semi-Conductor Manufacturing
State					
Employment (jobs)	14.3	4.7	17.7	34.0	16.1
Income ($000)	$423	$428	$1,460	$957	$946
GDP	$970	$1,012	$1,535	$1,292	$1,359

APPLICATIONS OF THE FINDINGS OF THIS STUDY

As noted earlier (chapter 1), this is one of the most comprehensive statewide studies of historic preservation's economic effects ever conducted in the United States. It also develops, in multiple instances, preservation-specific data, including "recipes" for preservation construction. The "bang for the buck" comparisons noted above are also a contribution to this field of study. But there are other "practical" benefits to be derived from the current investigation. Some examples are noted below.

Others who wish to estimate the economic benefits of historic preservation can readily use the data and systems developed in this study. For instance, assume that a local historic commission wanted to project the economic benefits of $10 million of historic rehabilitation occurring in a historic district; or a county historic museum with a $2 million budget wanted to present to the county council the economic effects of its operations. These projections could easily be made by referring to the base data contained in this study. Table 9.3 shows the employment, income, and GDP effects per $1 million of investment in historic rehabilitation. By a tenfold scaling up of the figures shown in this exhibit, the local historic commission could easily calculate that the $10 million in historic rehabilitation would generate in Texas 200 jobs, $10.7 million in income, and $13.5 million in GDP (all Texas' level impacts). The historic county museum could reference Table 9.3 and, by extrapolation, report Texas economic benefits of 95 jobs, $3.5 million in income, and $6.3 million in GDP.

The point of providing these data, which can readily be produced, is to inform the public and government officials that preservation makes an economic contribution. Besides improving the quality of life, preservation contributes to economic well-being. This information can allow historic preservation to be viewed not as an economic "consumer" (e.g., in the form of local property tax exemption), but as an economic "producer."

Exhibit 9.1
National Economic and Tax Impacts of $3,344 Million
in Annual Historic Preservation Spending in Texas

	Output	Employment	Earnings	GDP
	($1,000)	(jobs)	($1,000)	($1,000)
I. Total Effects (Direct + Indirect/Induced)				
1. Agriculture, Forestry, Fishing, and Hunting	306,938.3	5,710.0	106,516.9	152,189.1
2. Mining	144,179.6	284.0	28,710.7	94,567.7
3. Utilities	225,517.4	360.0	43,231.9	125,279.8
4. Construction	982,622.4	8,048.0	498,980.0	560,587.4
5. Manufacturing	2,481,478.8	9,735.0	524,029.4	870,971.7
6. Wholesale Trade	263,424.3	723.0	57,453.9	90,159.3
7. Retail Trade	880,372.4	11,355.0	363,968.9	588,555.6
8. Transportation and Warehousing	657,843.5	3,918.0	206,738.7	349,462.5
9. Information	538,806.6	1,846.0	115,433.4	312,088.8
10. Finance, Insurance, Real Estate, Rental, and Leasing	2,914,650.2	14,711.0	618,005.4	1,484,739.2
11. Professional and Business Services	1,272,354.0	11,223.0	563,569.7	803,871.9
12. Educational Services, Health Care, and Social Assistance	840,107.4	9,166.0	398,660.0	495,705.8
13. Arts, Entertainment, Recreation, and Hospitality	1,980,435.3	28,840.0	680,335.0	1,110,705.3
14. Other Services (including Government Enterprise)	2,063,053.7	8,201.0	227,759.8	268,378.1
Total Effects	15,551,783.5	114,122	4,433,393.6	7,307,262.6
II. Distribution of Effects and Multipliers				
1. Direct Effects	3,344,170.9	36,632.0	1,454,114.6	1,940,694.4
2. Indirect/Induced Effects	12,207,612.5	77,489.5	2,979,279.0	5,366,568.2
3. Total Effects	15,551,783.5	114,122	4,433,393.6	7,307,262.6
4. *Multipliers (= 3 / 1)*	*4.650*	*3.115*	*3.049*	*3.765*

III. Composition of GDP

1. Compensation		3,618,551.5
2. Taxes		1,123,812.2
a. Local		204,162.9
b. State		186,986.8
c. Federal		732,662.4
3. Profits, Dividends, Rents, and Other		2,564,899.0
4. Total GDP (= 1 + 2 + 3)		7,307,262.6

IV. Tax Accounts	Business	Household	Total
1. Labor Income	3,618,551.5	3,726,834.1	---------------
2. Taxes	1,123,812.1	471,788.7	1,595,600.8
a. Local	204,162.8	75,178.2	279,341.0
b. State	186,986.5	25,124.8	212,111.5
c. Federal	732,662.7	371,485.7	1,104,148.4

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	34.1
Earnings	$1,325,707.8
State Taxes	$63,427.2
Local Taxes	$83,530.7
GDP	$2,185,074.5

Initial Expenditure (in Dollars)   **$3,344,170,932.3**

Exhibit 9.2
National Economic Impacts of $3,344 Million in Annual Historic
Preservation Spending in Texas by 3-digit Industry classification

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**306,938.3**	**5,710**	**106,516.9**	**152,189.1**
111CA	Crop and animal production (Farms)	278,426.7	4,997	93,055.5	132,127.5
113FF	Forestry, fishing, and related activities	28,511.7	713	13,461.5	20,061.4
	Mining	**144,179.6**	**284**	**28,710.7**	**94,567.7**
211	Oil and gas extraction	87,000.1	97	18,751.4	60,846.0
212	Mining, except oil and gas	53,706.8	175	8,941.6	31,340.3
213	Support activities for mining	3,472.5	13	1,017.6	2,381.3
22	**Utilities**	**225,517.4**	**360**	**43,231.9**	**125,279.8**
23	**Construction**	**982,622.4**	**8,048**	**498,980.0**	**560,587.4**
	Manufacturing	**2,481,478.8**	**9,735**	**524,029.4**	**870,971.7**
311FT	Food product manufacturing	538,845.7	1,971	68,039.3	146,829.5
313TT	Textile and textile product mills	55,523.8	293	10,162.4	17,119.1
315AL	Apparel manufacturing	64,297.7	635	18,939.4	26,264.2
321	Wood product manufacturing	49,456.7	251	11,283.5	14,083.2
322	Paper manufacturing	101,705.0	262	15,619.8	32,103.3
323	Printing and related support activities	80,242.3	477	18,686.8	35,859.7
324	Petroleum and coal products manufacturing	374,460.5	418	142,680.9	150,213.8
325	Chemical manufacturing	311,583.9	361	38,817.5	114,233.8
326	Plastics and rubber products manufacturing	107,035.2	325	17,971.8	33,590.6
327	Nonmetallic mineral product manufacturing	62,792.8	228	13,761.4	24,480.5
331	Primary metal manufacturing	107,059.7	1,434	11,301.5	26,626.2
332	Fabricated metal product manufacturing	150,501.2	696	36,943.9	60,047.7
333	Machinery manufacturing	55,592.1	213	12,151.3	21,475.8
334	Computer and electronic product manufacturing	96,968.7	324	25,699.6	49,481.7
335	Electrical equipment and appliance manufacturing	47,552.4	572	9,732.4	18,735.1
3361MV	Motor vehicle, body, trailer, and parts manufacturing	126,378.6	316	22,313.8	37,315.2
3364OT	Other transportation equipment manufacturing	28,016.7	80	5,118.7	9,150.8
337	Furniture and related product manufacturing	34,233.7	302	11,689.7	12,740.8
339	Miscellaneous manufacturing	89,232.1	574	33,115.8	40,621.0
42	**Wholesale trade**	**263,424.3**	**723**	**57,453.9**	**90,159.3**
44RT	**Retail trade**	**880,372.4**	**11,355**	**363,968.9**	**588,555.6**
	Transportation and warehousing, excluding Postal Service	**657,843.5**	**3,918**	**206,738.7**	**349,462.5**
481	Air transportation	259,841.2	1,050	88,826.1	165,511.2
482	Rail transportation	37,908.9	87	8,345.1	16,712.1
483	Water transportation	39,190.0	136	10,502.0	20,492.0
484	Truck transportation	41,022.6	128	6,352.2	12,458.8
485	Transit and ground passenger transportation	123,812.8	1,445	44,328.9	53,798.6
486	Pipeline transportation	13,384.1	25	8,809.0	7,853.1
487OS	Other transportation and support activities	103,146.3	705	27,074.4	52,240.7
493	Warehousing and storage	39,537.6	344	12,501.3	20,396.3
	Information	**538,806.6**	**1,846**	**115,433.4**	**312,088.8**
511	Publishing including software	156,249.9	850	45,718.8	89,031.7
512	Motion picture and sound recording industries	51,590.9	228	10,108.8	30,452.5
513	Broadcasting and telecommunications	64,046.8	184	19,732.9	36,765.5
514	Information and data processing services	266,919.0	584	39,872.6	155,839.2
	Finance and insurance	**1,492,423.6**	**6,765**	**476,111.5**	**739,798.6**
521CI	Federal Reserve banks, credit intermediation and related services	353,078.1	1,951	83,797.8	208,763.1
523	Securities, commodity contracts, investments	413,516.3	1,970	191,522.4	191,177.2
524	Insurance carriers and related activities	543,120.2	2,814	158,935.0	246,398.9

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525	Funds, trusts, and other financial vehicles	182,709.0	28	41,856.3	93,459.2
	Real estate, rental, and leasing	**1,422,226.6**	**7,962**	**170,236.9**	**787,822.1**
531	Real estate	616,027.7	6,982	120,890.6	220,301.3
532RL	Rental and leasing services and lessors of intangible assets	806,198.8	981	49,346.2	567,520.7
	Professional and technical services	**669,387.3**	**4,345**	**263,721.4**	**419,111.9**
5411	Legal services	96,021.9	34	2,442.3	50,111.6
5412OP	Other professional, scientific and technical services	454,649.7	3,567	202,778.3	284,172.2
5415	Computer systems design and related services	117,986.4	741	58,282.4	84,474.1
55	Management of companies and enterprises	729.3	3	218.4	354.0
	Administrative and waste services	**602,966.8**	**6,879**	**299,848.1**	**384,760.1**
561	Administrative and support services	573,760.4	6,688	289,034.2	370,033.0
562	Waste management and remediation services	29,206.4	191	10,813.9	14,727.1
61	**Educational services**	**141,736.7**	**1,788**	**59,185.9**	**83,560.1**
	Health care and social assistance	**698,370.5**	**7,378**	**339,474.2**	**412,145.5**
621	Ambulatory health care services	309,971.9	2,915	168,759.1	189,775.6
622HO	Hospitals and nursing and residential care facilities	333,649.1	2,821	138,330.5	188,576.5
624	Social assistance	54,749.7	1,643	32,384.7	33,793.3
	Arts, entertainment, and recreation	**701,598.9**	**7,364**	**167,679.2**	**391,301.4**
711AS	Performing arts, museums, and related activities	580,089.9	6,137	142,606.4	323,330.7
713	Amusements, gambling, and recreation	121,508.9	1,227	25,072.7	67,970.8
	Accommodation and food services	**1,278,836.3**	**21,476**	**512,655.7**	**719,403.9**
721	Accommodation	524,906.9	7,507	225,519.5	289,742.8
722	Food services and drinking places	753,929.5	13,967	287,136.2	429,661.0
81	**Other services, except government**	**383,963.1**	**7,551**	**196,266.5**	**221,273.5**
GOV	**Government enterprises and the Postal Service**	**71,805.0**	**651**	**31,493.4**	**47,104.4**
HH	**Households**	**1,607,285.4**	**-**	**-**	**-**
	Total	**15,551,783.5**	**114,121**	**4,430,459.6**	**7,303,146.1**

Exhibit 9.3
<u>In-State</u> Economic and Tax Impacts of $3,344 Million
in Annual Historic Preservation Spending in Texas

	Output	Employment	Earnings	GDP
	($1,000)	(jobs)	($1,000)	($1,000)
I. Total Effects (Direct + Indirect/Induced)				
1. Agriculture, Forestry, Fishing, and Hunting	141,713.0	3,580.5	57,047.5	74,335.9
2. Mining	82,962.6	163.2	20,101.4	54,781.8
3. Utilities	171,433.3	289.6	38,913.2	96,235.7
4. Construction	951,973.9	7,781.6	527,186.6	543,287.0
5. Manufacturing	1,429,748.1	6,601.9	377,502.9	519,124.6
6. Wholesale Trade	192,270.9	519.6	45,835.6	65,806.5
7. Retail Trade	597,448.5	7,949.4	277,876.3	397,367.9
8. Transportation and Warehousing	457,308.3	2,462.1	155,712.2	252,611.6
9. Information	277,646.3	1,044.1	67,644.5	161,196.4
10. Finance, Insurance, Real Estate, Rental, and Leasing	1,292,196.7	7,747.7	319,205.3	646,891.4
11. Professional and Business Services	666,327.2	5,844.3	346,706.6	424,589.1
12. Educational Services, Health Care, and Social Assistance	473,752.2	5,301.5	261,656.8	278,393.9
13. Arts, Entertainment, Recreation, and Hospitality	1,590,241.8	24,810.7	607,634.6	961,279.6
14. Other Services (including Government Enterprise)	2,714,709.6	5,322.7	156,629.3	147,682.9
Total Effects	11,039,732.5	79,419	3,259,652.9	4,623,584.3
II. Distribution of Effects and Multipliers				
1. Direct Effects	3,236,892.9	35,352.1	1,412,706.4	1,881,887.0
2. Indirect/Induced Effects	7,802,839.5	44,067	1,846,946.5	2,741,697.3
3. Total Effects	11,039,732.5	79,419	3,259,652.9	4,623,584.3
4. *Multipliers (= 3 / 1)*	*3.411*	*2.247*	*2.307*	*2.457*

III. Composition of GDP

		GDP
1.	Compensation	2,581,766.3
2.	Taxes	744,856.1
	a. Local	143,246.0
	b. State	89,077.6
	c. Federal	512,532.5
3.	Profits, Dividends, Rents, and Other	1,296,961.9
4.	Total GDP (= 1 + 2 + 3)	4,623,584.3

IV. Tax Accounts

		Business	Household	Total
1.	Labor Income	2,581,766.3	3,259,652.9	----------------
2.	Taxes	744,856.1	384,225.1	1,129,081.1
	a. Local	143,246.0	58,259.8	201,505.7
	b. State	89,077.6	0.0	89,077.6
	c. Federal	512,532.5	325,965.3	838,497.8

Effects per Million Dollars of Initial Expenditure (in Dollars)

Employment / Jobs	23.7
Earnings	$974,726.7
State Taxes	$27,300.9
Local Taxes	$61,502.4
GDP	$1,382,580.1

Initial Expenditure (in Dollars) — **$3,344,170,932.3**

Exhibit 9.4
In-State Economic Impacts of $3,344 Million in Annual Historic
Preservation Spending in Texas by 3-digit Industry classification

IO Code	Description	Output (x $1000)	Employment (x 1 job)	Earnings (x $1000)	GDP (x $1000)
	Agriculture, forestry, fishing, and hunting	**141,713.0**	**3,581**	**57,047.5**	**74,335.9**
111CA	Crop and animal production (Farms)	125,055.6	3,122	48,381.3	62,748.8
113FF	Forestry, fishing, and related activities	16,657.4	458	8,666.2	11,587.1
	Mining	**82,962.6**	**163**	**20,101.4**	**54,781.8**
211	Oil and gas extraction	53,917.8	50	12,845.7	37,709.0
212	Mining, except oil and gas	27,158.1	106	6,616.7	15,779.0
213	Support activities for mining	1,886.7	7	639.0	1,293.8
22	**Utilities**	**171,433.3**	**290**	**38,913.2**	**96,235.7**
23	**Construction**	**951,973.9**	**7,782**	**527,186.6**	**543,287.0**
	Manufacturing	**1,429,748.1**	**6,602**	**377,502.9**	**519,124.6**
311FT	Food product manufacturing	322,583.6	1,433	49,779.9	92,108.6
313TT	Textile and textile product mills	19,664.3	112	4,400.7	5,933.3
315AL	Apparel manufacturing	27,352.7	315	9,819.3	11,414.0
321	Wood product manufacturing	33,297.9	169	8,045.9	9,452.3
322	Paper manufacturing	45,721.3	134	8,455.5	14,254.7
323	Printing and related support activities	15,773.7	107	4,964.7	6,887.7
324	Petroleum and coal products manufacturing	320,700.6	434	142,919.5	142,673.0
325	Chemical manufacturing	152,924.4	181	21,745.8	54,525.6
326	Plastics and rubber products manufacturing	57,497.2	177	10,644.3	18,022.0
327	Nonmetallic mineral product manufacturing	46,803.2	173	10,768.9	17,928.2
331	Primary metal manufacturing	51,903.0	1,347	6,495.6	12,953.4
332	Fabricated metal product manufacturing	84,065.2	422	23,701.5	33,161.7
333	Machinery manufacturing	30,120.7	120	7,293.2	11,356.7
334	Computer and electronic product manufacturing	38,673.0	132	12,247.8	19,796.2
335	Electrical equipment and appliance manufacturing	20,103.3	483	4,832.5	7,852.0
3361MV	Motor vehicle, body, trailer, and parts manufacturing	60,451.1	150	12,351.6	17,964.2
3364OT	Other transportation equipment manufacturing	11,702.7	40	2,743.6	3,519.6
337	Furniture and related product manufacturing	20,804.9	194	8,307.8	7,805.5
339	Miscellaneous manufacturing	69,605.2	479	27,984.7	31,515.7
42	**Wholesale trade**	**192,270.9**	**520**	**45,835.6**	**65,806.5**
44RT	**Retail trade**	**597,448.5**	**7,949**	**277,876.3**	**397,367.9**
	Transportation and warehousing, excluding Postal Service	**457,308.3**	**2,462**	**155,712.2**	**252,611.6**
481	Air transportation	232,838.4	936	81,673.7	148,311.2
482	Rail transportation	19,516.3	42	5,042.4	8,603.7
483	Water transportation	20,940.3	69	6,523.1	10,949.4
484	Truck transportation	24,487.0	78	4,412.0	7,436.8
485	Transit and ground passenger transportation	64,068.5	777	26,705.6	27,838.8
486	Pipeline transportation	7,992.7	13	5,937.5	4,689.7
487OS	Other transportation and support activities	70,604.5	388	18,731.5	36,084.1
493	Warehousing and storage	16,860.5	159	6,686.4	8,697.8
	Information	**277,646.3**	**1,044**	**67,644.5**	**161,196.4**
511	Publishing including software	85,382.9	512	29,698.2	48,959.6
512	Motion picture and sound recording industries	15,710.3	107	4,117.5	9,565.8
513	Broadcasting and telecommunications	32,619.7	117	9,561.7	18,661.7
514	Information and data processing services	143,933.3	308	24,267.1	84,009.4
	Finance and insurance	**559,557.5**	**3,319**	**207,324.2**	**256,184.1**
521CI	Federal Reserve banks, credit intermediation and related services	174,562.8	1,043	48,578.8	103,277.4
523	Securities, commodity contracts, investments	155,340.4	980	91,618.4	71,942.0

524	Insurance carriers and related activities	228,751.1	1,292	66,796.9	80,502.7
525	Funds, trusts, and other financial vehicles	903.2	5	330.0	462.0
	Real estate, rental, and leasing	**732,639.3**	**4,428**	**111,881.1**	**390,707.4**
531	Real estate	361,947.9	3,951	82,365.7	129,438.3
532RL	Rental and leasing services and lessors of intangible assets	370,691.3	478	29,515.4	261,269.0
	Professional and technical services	**340,897.8**	**2,070**	**153,002.0**	**217,131.0**
5411	Legal services	54,882.5	19	1,615.6	28,641.9
5412OP	Other professional, scientific and technical services	225,372.0	1,672	116,109.9	144,081.0
5415	Computer systems design and related services	60,412.1	378	35,182.1	44,296.0
55	Management of companies and enterprises	231.2	1	94.4	112.2
	Administrative and waste services	**325,429.5**	**3,774**	**193,704.6**	**207,458.1**
561	Administrative and support services	313,072.1	3,694	187,998.4	201,227.0
562	Waste management and remediation services	12,357.4	80	5,706.2	6,231.1
61	**Educational services**	**69,539.7**	**903**	**33,406.9**	**40,053.3**
	Health care and social assistance	**404,212.5**	**4,399**	**228,249.8**	**238,340.6**
621	Ambulatory health care services	175,954.9	1,688	110,648.6	107,711.0
622HO	Hospitals and nursing and residential care facilities	196,150.5	1,676	95,389.8	110,812.6
624	Social assistance	32,107.1	1,035	22,211.5	19,817.0
	Arts, entertainment, and recreation	**601,493.4**	**6,153**	**142,249.1**	**329,867.6**
711AS	Performing arts, museums, and related activities	536,137.3	5,539	130,408.7	298,653.1
713	Amusements, gambling, and recreation	65,356.1	614	11,840.4	31,214.5
	Accommodation and food services	**1,123,688.4**	**18,658**	**465,385.5**	**631,412.0**
721	Accommodation	501,931.4	7,231	216,826.2	277,060.7
722	Food services and drinking places	621,757.0	11,427	248,559.3	354,351.3
81	**Other services, except government**	**221,711.9**	**4,825**	**137,108.8**	**122,792.9**
GOV	**Government enterprises and the Postal Service**	**38,089.6**	**498**	**19,520.5**	**24,890.0**
HH	**Households**	**1,768,145.2**	**-**	**-**	**-**
	Total	**10,487,909.6**	**79,414**	**3,259,322.8**	**4,623,122.3**

APPENDIX A

ESTIMATING STATEWIDE HISTORIC REHABILITATION SPENDING IN TEXAS

This appendix estimates the dollar amount of historic rehabilitation of buildings (as defined in Chapter 2) effected in Texas in 2009-2013. In that period, the 964 Texas communities reporting to the U.S. Bureau of the Census issued permits for $17.6 billion of new residential building construction annually on average.

Unfortunately, no central repository exists for data on the value of building rehabilitation permits or for new nonresidential building permits issued by Texas communities. Hence, past relationships for each community between permits for new residential building and both new nonresidential and rehabilitation construction were applied to the 2009-2013 data for new residential construction. In the prior study, each of the nine participating Certified Local Governments (CLGs)—Abilene, Dallas, Fort Worth, Grapevine, Laredo, Lubbock, Nacogdoches, San Antonio, and San Marcos—was asked to tabulate the value of building permits that they issued. The data were to be for both new and rehabilitation construction, for as many years as possible during the period extending from 1990 to 1997. They were also asked to provide these data by the categories of structure typically reported by the U.S. Bureau of the Census. These "real" figures replaced the estimates for the CLGs.

The results of applying the relationships for the years 1990-1994 to the actual CLG reports from the prior study are shown in Exhibit A.1. Accordingly, about $9.1 billion in permits for new nonresidential construction and $10 billion in permits for rehabilitation construction were issued annually for the years 2009-2013 in Texas. Of the $10 billion, about $1.9 billion was issued for residential properties and $8.1 billion for nonresidential properties. The 2009-2013 rehabilitation estimates are well grounded, in that 18.6 percent of the residential estimate and 26.5 percent of the nonresidential estimate is composed of actual data from the CLGs.

No data exist that specifically pertain to construction activity on historic properties in Texas. Hence, we again returned to the nine CLGs and asked them to supply data for the same period on the total value of building permits that they issued on historic properties by structure type. For the larger cities, this meant selecting from their building-permits database only those properties that were historic and summing them. For the smaller cities, this meant going through the individual construction permit sheets by hand, culling only those for building permits, selecting only those building permits on historic properties, and summing them. The resulting CLG historic rehabilitation figures were then divided by the total value of relevant rehabilitation permits issued in the nine CLGs for their respective periods of evaluation. The consequent *incidence of historic rehabilitation* for each participating CLG is shown below for residential and nonresidential historic properties.

TABLE A.1

Incidence of Historic Rehabilitation in Nine Texas CLGs

CLG	Residential	Nonresidential	Total Residential and Nonresidential	Period
Abilene	12.6%	15.6%	14.1%	1994-1997
Dallas	12.3%	2.6%	4.3%	1994,1997
Ft. Worth	4.1%	9.6%	8.5%	1994-1997
Grapevine	NA	NA	21.0%	1997*
Laredo	0.6%	7.3%	5.3%	1994-1997
Lubbock	1.2%	0.0%	0.1%	1994-1997
Nacodoches	NA	NA	14.0%	1997
San Antonio	NA	NA	8.0%	1994-1997
San Marcos	19.5%	1.5%	6.0%	1994,1997

Note: *Grapevine was unable to supply information on the value of permits issued for rehabilitation construction for 1997.

The next step was of our approach was to estimate incidences of historic rehabilitation for all 964 Texas communities that reported values of permit issuance between 2009 and 2013. Various methods were tested, including several statistical approaches grounded in regression analysis. In the end, the simplest technique was selected, not only by principle of occam's razor (which suggests that when in wavering between two approaches choose the simplest), but also because it performed better in estimating the incidence levels.

The method used to estimate the incidence levels employs 2012 American Community Survey 5-year Estimates on the age of housing by place. The incidence level is thus measured by taking the ratio of housing built before 1940 to that built before 1980.[74] The idea behind this measure is that housing built before 1980 maintains the lion's share of the value of rehabilitation construction, simply by virtue of its age. That is, housing that is less than 25 years old tends not to receive many alterations or even repairs. This assumption appears reasonable. The part of this ratio that seems less reasonable, at least at first glance, is its numerator—the amount of housing built before 1940. This is because its application seems to assume that all housing built prior to 1940 is "historic" in the sense that is used in this report. That is, in order for this ratio to serve well as a measure of incidence of historic rehabilitation it would appear that all pre-1940 housing in a community would have to be designated historic or be in a district that is designated historic. But this is not the case for the nine CLGs. Hence, some other factor would have to be playing a role that has not yet been considered. Indeed, the "other factor" likely is the higher costs of rehabilitating historic buildings. That is, buildings that are designated historic tend to get more than their fair share of the total rehabilitation investment. Hence, the simple ratio of pre-1940 to pre-1980 housing stock not only has some empirical basis but is also a reasonably logical proxy measure of the incidence of historic rehabilitation in a given Texas community.

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[74] The incidence of nonresidential historic rehabilitation was calibrated to be half that of residential. This is also embraced by findings reported elsewhere in this study that reveal nonresidential properties are less apt to realize enhanced value after being designated historic.

Although the measure worked well for the nine participating CLGs, evidence from a recent New Jersey study (Listokin and Lahr 1997) suggests that the incidence of historic building rehabilitation in rural areas is likely to be about half that in major urban areas. This finding was based on case study work. In addition, it is consistent with economic rationale, which suggests that rarer commodities should have higher value. Indeed, in Texas metropolitan areas, historic buildings are relatively "scarce items" because the Texas economy has tended to grow faster than that of the rest of the nation since 1940. Further, much of the state's economic growth has occurred in metropolitan areas. As a result, the New Jersey urban/rural differential for the incidence of historic residential building rehabilitation was applied to Texas communities as well. Hence, the incidence in a nonmetropolitan community was estimated to be half that of a similarly endowed metropolitan community, except for the case of the single nonmetropolitan CLG, Nacogdoches, which has a real figure, not an estimated one.

After applying the community-level incidence ratios to the respective estimates of rehabilitation activity, final estimates of private historic preservation activity were obtained. The results for each of the 964 communities were derived. These are interpreted as *gross estimates*.

The table below summarizes the results of the method described in this appendix. These results are as follows:

- In 2009-2013, about $10 billion was spent rehabilitating structures in Texas annually. Of this $1.9 billion was spent on residential properties and $8.1 billion on nonresidential properties.

- Of the $10 billion, about $740.8 million (7.4 percent) was spent on privately owned historic properties. Most (nearly 77%) of the activity was on nonresidential properties.

- The estimated average incidence of historic rehabilitation was nearly 9 percent for residential structures and nearly 7 percent for nonresidential structures.

TABLE A.2

Estimated Total and Historic Building Rehabilitation in Texas (2009 - 2013)

Component	Estimated Total Rehabilitation(in $ millions)	Estimated Historic Rehabilitation (in $ millions)	Historic Rehabilitation as % of Total Rehabilitation
Private			
Residential	$1,878.8	$168.6	9.0%
Nonresidential	$8,118.8	$572.2	7.0%
Private subtotal	$9,997.6	$740.8	7.4%

APPENDIX B

INPUT-OUTPUT ANALYSIS:

TECHNICAL DESCRIPTION AND APPLICATION

This appendix discusses the history and application of input-output analysis and details the input-output model, called the R/Econ™ I-O model, developed by Rutgers University. This model offers significant advantages in detailing the total economic effects of an activity (such as historic rehabilitation and heritage tourism), including multiplier effects.

ESTIMATING MULTIPLIERS

The fundamental issue determining the size of the multiplier effect is the "openness" of regional economies. Regions that are more "open" are those that import their required inputs from other regions. Imports can be thought of as substitutes for local production. Thus, the more a region depends on imported goods and services instead of its own production, the more economic activity leaks away from the local economy. Businessmen noted this phenomenon and formed local chambers of commerce with the explicit goal of stopping such leakage by instituting a "buy local" policy among their membership. In addition, during the 1970s, as an import invasion was under way, businessmen and union leaders announced a "buy American" policy in the hope of regaining ground lost to international economic competition. Therefore, one of the main goals of regional economic multiplier research has been to discover better ways to estimate the leakage of purchases out of a region, a measure of the region's self-sufficiency.

The earliest attempts to systematize the procedure for estimating multiplier effects used the economic base model, still in use in many econometric models today. This approach assumes that all economic activities in a region can be divided into two categories: "basic" activities that produce exclusively for export, and region-serving or "local" activities that produce strictly for internal regional consumption. Since this approach is simpler but similar to the approach used by regional input-output analysis, a brief explanation of how multiplier effects are estimated using the economic base approach is provided below. If we let **x** be export employment, **l** be local employment, and **t** be total employment, then

$$t = x + l$$

For simplification, we create the ratio **a** as

$$a = l/t$$

so that $\qquad$ **l** = **at**

then substituting into the first equation, we obtain

$$t = x + at$$

By bringing all of the terms with t to one side of the equation, we get

$$t - at = x \text{ or } t(1-a) = x$$

Solving for **t,** we get $t = x/(1-a)$

Thus, if we know the amount of export-oriented employment, **x,** and the ratio of local to total employment, **a**, we can readily calculate total employment by applying the economic base multiplier, $1/(1-a)$, which is embedded in the above formula. Thus, if 40 percent of all regional employment is used to produce exports, the regional multiplier would be 2.5. The assumption behind this multiplier is that all remaining regional employment is required to support the export employment. Thus, the 2.5 can be decomposed into two parts the direct effect of the exports, which is always 1.0, and the indirect and induced effects, which is the remainder—in this case 1.5. Hence, the multiplier can be read as telling us that for each export-oriented job another 1.5 jobs are needed to support it.

This notion of the multiplier has been extended so that **x** is understood to represent an economic change demanded by an organization or institution outside of an economy—so-called final demand. Such changes can be those affected by government, households, or even by an outside firm. Changes in the economy can therefore be calculated by a minor alteration in the multiplier formula:

$$\Delta t = \Delta x/(1-a)$$

The high level of industry aggregation and the rigidity of the economic assumptions that permit the application of the economic base multiplier have caused this approach to be subject to extensive criticism. Most of the discussion has focused on the estimation of the parameter **a**. Estimating this parameter requires that one be able to distinguish those parts of the economy that produce for local consumption from those that do not. Indeed, virtually all industries, even services, sell to customers both inside and outside the region. As a result, regional economists devised an approach by which to measure the *degree* to which each industry is involved in the nonbase activities of the region, better known as the industry's *regional purchase coefficient*. Thus, they expanded the above formulations by calculating for each *i* industry

$$l_i = r_i d_i$$

and $$x_i = t_i - r_i d_i$$

given that d_i is the total regional demand for industry *i*'s product. Given the above formulae and data on regional demands by industry, one can calculate an accurate traditional aggregate economic base parameter by the following:

$$a = l/t = \Sigma l_{ii}/\Sigma t_i$$

Although accurate, this approach only facilitates the calculation of an aggregate multiplier for the entire region. That is, we cannot determine from this approach what the effects are on the various sectors of an economy. This is despite the fact that one must painstakingly calculate the regional

demand as well as the degree to which they each industry is involved in nonbase activity in the region.

As a result, a different approach to multiplier estimation that takes advantage of the detailed demand and trade data was developed. This approach is called input-output analysis.

A BRIEF HISTORY OF INPUT-OUTPUT ANALYSIS

The basic framework for input-output analysis originated nearly 250 years ago when François Quesenay published *Tableau Economique* in 1758. Quesenay's "tableau" graphically and numerically portrayed the relationships between sales and purchases of the various industries of an economy. More than a century later, his description was adapted by a fellow Frenchman, Léon Walras, who advanced input-output modeling by providing a concise theoretical formulation of an economic system (including consumer purchases and the economic representation of "technology").

It was not until the twentieth century, however, that economists advanced and tested Walras's work. Wassily Leontief greatly simplified Walras's theoretical formulation by applying the Nobel prize–winning assumptions that both technology and trading patterns were fixed over time. These two assumptions meant that the pattern of flows among industries in an area could be considered stable. These assumptions permitted Walras's formulation to use data from a single time period, which generated a great reduction in data requirements.

Although Leontief won the Nobel Prize in 1973, he first used his approach in 1936 when he developed a model of the 1919 and 1929 U.S. economies to estimate the effects of the end of World War I on national employment. Recognition of his work in terms of its wider acceptance and use meant development of a standardized procedure for compiling the requisite data (today's national economic census of industries) and enhanced capability for calculations (i.e., the computer).

The federal government immediately recognized the importance of Leontief's development and has been publishing input-output tables of the U.S. economy since 1939. The most recently published tables are those for 1987. Other nations followed suit. Indeed, the United Nations maintains a bank of tables from most member nations with a uniform accounting scheme.

FRAMEWORK OF ANALYSIS

Input-output modeling focuses on the interrelationships of sales and purchases among sectors of the economy. Input-output is best understood through its most basic form, the *interindustry transactions table* or matrix. In this table (see Table B.1 for an example), the column industries are consuming sectors (or markets) and the row industries are producing sectors. The content of a matrix cell is the value of shipments that the row industry delivers to the column industry. Conversely, it is the value of shipments that the column industry receives from the row industry.

Hence, the interindustry transactions table is a detailed accounting of the disposition of the value of shipments in an economy. Indeed, the detailed accounting of the interindustry transactions at the national level is performed not so much to facilitate calculation of national economic impacts as it is to back out an estimate of the nation's gross domestic product.

TABLE B.1
Interindustry Transactions Matrix (Values)

	Agriculture	Manufacturing	Services	Other	Final Demand	Total Output
Agriculture	10	65	10	5	10	$100
Manufacturing	40	25	35	75	25	$200
Services	15	5	5	5	90	$120
Other	15	10	50	50	100	$225
Value Added	20	95	20	90		
Total Input	100	200	120	225		

For example, in Table B.1, agriculture, as a producing industry sector, is depicted as selling $65 million of goods to manufacturing. Conversely, the table depicts that the manufacturing industry purchased $65 million of agricultural production. The sum across columns of the interindustry transaction matrix is called the *intermediate outputs vector*. The sum across rows is called the *intermediate inputs vector*.

A single *final demand* column is also included in Table B.1. Final demand, which is outside the square interindustry matrix, includes imports, exports, government purchases, changes in inventory, private investment, and sometimes household purchases.

The *value added* row, which is also outside the square interindustry matrix, includes wages and salaries, profit-type income, interest, dividends, rents, royalties, capital consumption allowances, and taxes. It is called value added because it is the difference between the total value of the industry's production and the value of the goods and nonlabor services that it requires to produce. Thus, it is the *value* that an industry *adds* to the goods and services it uses as inputs in order to produce output.

The value added row measures each industry's contribution to wealth accumulation. In a national model, therefore, its sum is better known as the gross domestic product (GDP). At the state level, this is known as the gross state product—a series produced by the U.S. Bureau of Economic Analysis and published in the Regional Economic Information System. Below the state level, it is known simply as the regional equivalent of the GDP—the gross regional product.

Input-output economic impact modelers now tend to include the household industry within the square interindustry matrix. In this case, the "consuming industry" is the household itself. Its spending is extracted from the final demand column and is appended as a separate column in the interindustry matrix. To maintain a balance, the income of households must be appended as a row. The main income of households is labor income, which is extracted from the value-added row. Modelers tend not to include other sources of household income in the household industry's row. This is not because such income is not attributed to households but rather because much of this other income derives from sources outside of the economy that is being modeled.

The next step in producing input-output multipliers is to calculate the *direct requirements matrix*, which is also called the technology matrix. The calculations are based entirely on data from Exhibit A.1. As shown in Table B.2, the values of the cells in the direct requirements matrix are derived by dividing each cell in a column of Table B.1, the interindustry transactions matrix, by its column total. For example, the cell for manufacturing's purchases from agriculture is 65/200 = .33. Each cell in a column of the direct requirements matrix shows how many cents of each producing industry's goods and/or services are required to produce one dollar of the consuming industry's production and are called *technical coefficients*. The use of the terms "technology" and "technical" derive from the fact that a column of this matrix represents a recipe for a unit of an industry's production. It, therefore, shows the needs of each industry's production process or "technology."

TABLE B.2
Direct Requirements Matrix

	Agriculture	Manufacturing	Services	Other
Agriculture	.10	.33	.08	.02
Manufacturing	.40	.13	.29	.33
Services	.15	.03	.04	.02
Other	.15	.05	.42	.22

Next in the process of producing input-output multipliers, the *Leontief Inverse* is calculated. To explain what the Leontief Inverse is, let us temporarily turn to equations. Now, from Table B.1 we know that the sum across both the rows of the square interindustry transactions matrix (**Z**) and the final demand vector (**y**) is equal to vector of production by industry (**x**). That is,

$$\mathbf{x} = \mathbf{Zi} + \mathbf{y}$$

where **i** is a summation vector of ones. Now, we calculate the direct requirements matrix (**A**) by dividing the interindustry transactions matrix by the production vector or

$$\mathbf{A} = \mathbf{ZX}^{-1}$$

where $\mathbf{X}^{-1}$ is a square matrix with inverse of each element in the vector **x** on the diagonal and the rest of the elements equal to zero. Rearranging the above equation yields

$$\mathbf{Z} = \mathbf{AX}$$

where **X** is a square matrix with the elements of the vector **x** on the diagonal and zeros elsewhere. Thus,

$$\mathbf{x} = (\mathbf{AX})\mathbf{i} + \mathbf{y}$$

or, alternatively,

$$\mathbf{x} = \mathbf{Ax} + \mathbf{y}$$

solving this equation for **x** yields

$$\mathbf{x} = \quad (\mathbf{I}\text{-}\mathbf{A})^{-1} \quad \mathbf{y}$$

Total = Total   *   Final

Output   Requirements   Demand

The Leontief Inverse is the matrix $(\mathbf{I}\text{-}\mathbf{A})^{-1}$. It portrays the relationships between final demand and production. This set of relationships is exactly what is needed to identify the economic impacts of an event external to an economy.

Because it does translate the direct economic effects of an event into the total economic effects on the modeled economy, the Leontief Inverse is also called the *total requirements matrix.* The total requirements matrix resulting from the direct requirements matrix in the example is shown in Table B.3.

TABLE B.3
Total Requirements Matrix

	Agriculture	Manufacturing	Services	Other
Agriculture	1.5	.6	.4	.3
Manufacturing	1.0	1.6	.9	.7
Services	.3	.1	1.2	.1
Other	.5	.3	.8	1.4
Industry Multipliers	.33	2.6	3.3	2.5

In the direct or technical requirements matrix in Table B.2, the technical coefficient for the manufacturing sector's purchase from the agricultural sector was .33, indicating the 33 cents of agricultural products must be directly purchased to produce a dollar's worth of manufacturing products. The same "cell" in Table A.3 has a value of .6. This indicates that for every dollar's worth of product that manufacturing ships out of the economy (i.e., to the government or for export), agriculture will end up increasing its production by 60 cents. The sum of each column in the total requirements matrix is the *output multiplier* for that industry.

Multipliers

A *multiplier* is defined as the system of economic transactions that follow a disturbance in an economy. Any economic disturbance affects an economy in the same way as does a drop of water in a still pond. It creates a large primary "ripple" by causing a *direct* change in the purchasing patterns of affected firms and institutions. The suppliers of the affected firms and institutions must change their purchasing patterns to meet the demands placed upon them by the firms originally affected by the economic disturbance, thereby creating a smaller secondary "ripple." In turn, those who meet the needs of the suppliers must change their purchasing patterns to meet the demands placed upon them by the suppliers of the original firms, and so on; thus, a number of subsequent "ripples" are created in the economy.

The multiplier effect has three components—direct, indirect, and induced effects. Because of the pond analogy, it is also sometimes referred to as the *ripple effect*.

- A *direct effect* (the initial drop causing the ripple effects) is the change in purchases due to a change in economic activity.
- An *indirect effect* is the change in the purchases of suppliers to those economic activities directly experiencing change.

- An *induced effect* is the change in consumer spending that is generated by changes in labor income within the region as a result of the direct and indirect effects of the economic activity. Including households as a column and row in the interindustry matrix allows this effect to be captured.

Extending the Leontief Inverse to pertain not only to relationships between *total* production and final demand of the economy but also to *change*s in each permits its multipliers to be applied to many types of economic impacts. Indeed, in impact analysis the Leontief Inverse lends itself to the drop-in-a-pond analogy discussed earlier. This is because the Leontief Inverse multiplied by a change in final demand can be estimated by a power series. That is,

$$(\mathbf{I}\text{-}\mathbf{A})^{-1} \, \Delta\mathbf{y} = \Delta\mathbf{y} + \mathbf{A} \, \Delta\mathbf{y} + \mathbf{A}(\mathbf{A} \, \Delta\mathbf{y}) + \mathbf{A}(\mathbf{A}(\mathbf{A} \, \Delta\mathbf{y})) + \mathbf{A}(\mathbf{A}(\mathbf{A}(\mathbf{A} \, \Delta\mathbf{y}))) + \ldots$$

Assuming that $\Delta\mathbf{y}$—the change in final demand—is the "drop in the pond," then succeeding terms are the ripples. Each "ripple" term is calculated as the previous "pond disturbance" multiplied by the direct requirements matrix. Thus, since each element in the direct requirements matrix is less than one, each ripple term is smaller than its predecessor. Indeed, it has been shown that after calculating about seven of these ripple terms that the power series approximation of impacts very closely estimates those produced by the Leontief Inverse directly.

In impacts analysis practice, $\Delta\mathbf{y}$ is a single column of expenditures with the same number of elements as there are rows or columns in the direct or technical requirements matrix. This set of elements is called an *impact vector*. This term is used because it is the *vector* of numbers that is used to estimate the *economic impacts* of the investment.

There are two types of changes in investments, and consequently economic impacts, generally associated with projects—*one-time impacts* and *recurring impacts*. One-time impacts are impacts that are attributable to an expenditure that occurs once over a limited period of time. For example, the impacts resulting from the construction of a project are one-time impacts. Recurring impacts are impacts that continue permanently as a result of new or expanded ongoing expenditures. The ongoing operation of a new train station, for example, generates recurring impacts to the economy. Examples of changes in economic activity are investments in the preservation of old homes, tourist expenditures, or the expenditures required to run a historical site. Such activities are considered changes in final demand and can be either positive or negative. When the activity is not made in an industry, it is generally not well represented by the input-output model. Nonetheless, the activity can be represented by a special set of elements that are similar to a column of the transactions matrix. This set of elements is called an economic disturbance or impact vector. The latter term is used because it is the vector of numbers that is used to estimate the impacts. In this study, the impact vector is estimated by multiplying one or more economic *translators* by a dollar figure that represents an investment in one or more projects. The term translator is derived from the fact that such a vector *translates* a dollar amount of an activity into its constituent purchases by industry.

One example of an industry multiplier is shown in Table B.4. In this example, the activity is the preservation of a historic home. The *direct impact* component consists of purchases made specifically for the construction project from the producing industries. The *indirect impact* component consists of expenditures made by producing industries to support the purchases made for this project. Finally, the *induced impact* component focuses on the expenditures made by workers involved in the activity on-site and in the supplying industries.

TABLE B.4
Components of the Multiplier for the
Historic Rehabilitation of a Single-Family Residence

DIRECT IMPACT	INDIRECT IMPACT	INDUCED IMPACT
Excavation/Construction Labor Concrete Wood Bricks Equipment Finance and Insurance	Production Labor Steel Fabrication Concrete Mixing Factory and Office Expenses Equipment Components	Expenditures by wage earners on-site and in the supplying industries for food, clothing, durable goods, entertainment

REGIONAL INPUT-OUTPUT ANALYSIS

Because of data limitations, regional input-output analysis has some considerations beyond those for the nation. The main considerations concern the depiction of regional technology and the adjustment of the technology to account for interregional trade by industry.

In the regional setting, local technology matrices are not readily available. An accurate region-specific technology matrix requires a survey of a representative sample of organizations for each industry to be depicted in the model. Such surveys are extremely expensive.[75] Because of the expense, regional analysts have tended to use national technology as a surrogate for regional

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[75]The most recent statewide survey-based model was developed for the State of Kansas in 1986 and cost on the order of $60,000 (in 1990 dollars). The development of this model, however, leaned heavily on work done in 1965 for the same state. In addition the model was aggregated to the 35-sector level, making it inappropriate for many possible applications since the industries in the model do not represent the very detailed sectors that are generally analyzed.

technology. This substitution does not affect the accuracy of the model as long as local industry technology does not vary widely from the nation's average.[76]

Even when local technology varies widely from the nation's average for one or more industries, model accuracy may not be affected much. This is because interregional trade may mitigate the error that would be induced by the technology. That is, in estimating economic impacts via a regional input-output model, national technology must be regionalized by a vector of regional purchase coefficients,[77] **r**, in the following manner:

$$\mathbf{(I\text{-}rA)^{-1}\, r \cdot \Delta y}$$

or

$$\mathbf{r \cdot \Delta y + rA\, (r \cdot \Delta y) + rA(rA\, (r \cdot \Delta y)) + rA(rA(rA\, (r \cdot \Delta y))) + \,...}$$

where the vector-matrix product **rA** is an estimate of the region's direct requirements matrix. Thus, if national technology coefficients—which vary widely from their local equivalents—are multiplied by small RPCs, the error transferred to the direct requirements matrices will be relatively small. Indeed, since most manufacturing industries have small RPCs and since technology differences tend to arise due to substitution in the use of manufactured goods, technology differences have generally been found to be minor source error in economic impact measurement. Instead, RPCs and their measurement error due to industry aggregation have been the focus of research on regional input-output model accuracy.

COMPARING REGIONAL ECONOMIC IMPACT MODELS

In the United States there are three major vendors of regional input-output models. They are U.S. Bureau of Economic Analysis's (BEA) RIMS II multipliers, Minnesota IMPLAN Group Inc.'s (MIG) IMPLAN Pro model, and CUPR's own R/Econ™ I–O model. CUPR has had the privilege of using them all. (R/Econ™ I–O builds from the PC I–O model produced by the Regional Science Research Corporation's (RSRC).)

Although the three systems have important similarities, there are also significant differences that should be considered before deciding which system to use in a particular study. This document compares the features of the three systems. Further discussion can be found in Brucker, Hastings, and Latham's article in the Summer 1987 issue of *The Review of Regional Studies* entitled "Regional Input-Output Analysis: A Comparison of Five Ready-Made Model Systems."   Since

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[76]Only recently have researchers studied the validity of this assumption. They have found that large urban areas may have technology in some manufacturing industries that differs in a statistically significant way from the national average. As will be discussed in a subsequent paragraph, such differences may be unimportant after accounting for trade patterns.

[77]A regional purchase coefficient (RPC) for an industry is the proportion of the region's demand for a good or service that is fulfilled by local production. Thus, each industry's RPC varies between zero (0) and one (1), with one implying that all local demand is fulfilled by local suppliers. As a general rule, agriculture, mining, and manufacturing industries tend to have low RPCs, and both service and construction industries tend to have high RPCs.

that date, CUPR and MIG have added a significant number of new features to PC I–O (now, R/Econ™ I–O) and IMPLAN, respectively.

Model Accuracy

RIMS II, IMPLAN, and RECON™ I–O all employ input-output (I–O) models for estimating impacts. All three regionalized the U.S. national I–O technology coefficients table at the highest levels of disaggregation (more than 500 industries). Since aggregation of sectors has been shown to be an important source of error in the calculation of impact multipliers, the retention of maximum industrial detail in these regional systems is a positive feature that they share. The systems diverge in their regionalization approaches, however. The difference is in the manner that they estimate regional purchase coefficients (RPCs), which are used to regionalize the technology matrix. An RPC is the proportion of the region's demand for a good or service that is fulfilled by the region's own producers rather than by imports from producers in other areas. Thus, it expresses the proportion of the purchases of the good or service that do not leak out of the region, but rather feed back to its economy, with corresponding multiplier effects. Thus, the accuracy of the RPC is crucial to the accuracy of a regional I–O model, since the regional multiplier effects of a sector vary directly with its RPC.

The techniques for estimating the RPCs used by CUPR and MIG in their models are theoretically more appealing than the location quotient (LQ) approach used in RIMS II. This is because the former two allow for crosshauling of a good or service among regions and the latter does not. Since crosshauling of the same general class of goods or services among regions is quite common, the CUPR-MIG approach should provide better estimates of regional imports and exports. Statistical results reported in Stevens, Treyz, and Lahr (1989) confirm that LQ methods tend to overestimate RPCs. By extension, inaccurate RPCs may lead to inaccurately estimated impact estimates.

Further, the estimating equation used by CUPR to produce RPCs should be more accurate than that used by MIG. The difference between the two approaches is that MIG estimates RPCs at a more aggregated level (two-digit SICs, or about 86 industries) and applies them at a desegregate level (over 500 industries). CUPR both estimates and applies the RPCs at the most detailed industry level. The application of aggregate RPCs can induce as much as 50 percent error in impact estimates (Lahr and Stevens, 2002).

Although both RECON™ I–O and IMPLAN use an RPC-estimating technique that is theoretically sound and update it using the most recent economic data, some practitioners question their accuracy. The reasons for doing so are three-fold. First, the observations currently used to estimate their implemented RPCs are based on 20-years old trade relationships—the Commodity Transportation Survey (CTS) from the 1977 Census of Transportation. Second, the CTS observations are at the state level. Therefore, RPC's estimated for sub-state areas are extrapolated. Hence, there is the potential that RPCs for counties and metropolitan areas are not as accurate as might be expected. Third, the observed CTS RPCs are only for shipments of goods. The interstate

provision of services is unmeasured by the CTS. IMPLAN replies on relationships from the 1977 U.S. Multiregional Input-Output Model that are not clearly documented. RECON™ I–O relies on the same econometric relationships that it does for manufacturing industries but employs expert judgment to construct weight/value ratios (a critical variable in the RPC-estimating equation) for the nonmanufacturing industries.

The fact that BEA creates the RIMS II multipliers gives it the advantage of being constructed from the full set of the most recent regional earnings data available. BEA is the main federal government purveyor of employment and earnings data by detailed industry. It therefore has access to the fully disclosed and disaggregated versions of these data. The other two model systems rely on older data from *County Business Patterns* and Bureau of Labor Statistic's ES202 forms, which have been "improved" by filling-in for any industries that have disclosure problems (this occurs when three or fewer firms exist in an industry or a region).

Model Flexibility

For the typical user, the most apparent differences among the three modeling systems are the level of flexibility they enable and the type of results that they yield. R/Econ™ I–O allows the user to make changes in individual cells of the 515-by-515 technology matrix as well as in the 11 515-sector vectors of region-specific data that are used to produce the regionalized model. The 11 sectors are: output, demand, employment per unit output, labor income per unit output, total value added per unit of output, taxes per unit of output (state and local), nontax value added per unit output, administrative and auxiliary output per unit output, household consumption per unit of labor income, and the RPCs. Te PC I–O model tends to be simple to use. Its User's Guide is straightforward and concise, providing instruction about the proper implementation of the model as well as the interpretation of the model's results.

The software for IMPLAN Pro is Windows-based, and its User's Guide is more formalized. Of the three modeling systems, it is the most user-friendly. The Windows orientation has enabled MIG to provide many more options in IMPLAN without increasing the complexity of use. Like R/Econ™ I–O, IMPLAN's regional data on RPCs, output, labor compensation, industry average margins, and employment can be revised. It does not have complete information on tax revenues other than those from indirect business taxes (excise and sales taxes), and those cannot be altered. Also like R/Econ™, IMPLAN allows users to modify the cells of the 538-by-538 technology matrix. It also permits the user to change and apply price deflators so that dollar figures can be updated from the default year, which may be as many as four years prior to the current year. The plethora of options, which are advantageous to the advanced user, can be extremely confusing to the novice. Although default values are provided for most of the options, the accompanying documentation does not clearly point out which items should get the most attention. Further, the calculations needed to make any requisite changes can be more complex than those needed for the R/Econ™ I–O model. Much of the documentation for the model dwells on technical issues regarding the guts of the model. For example, while one can aggregate the 538-sector impacts to

the one- and two-digit SIC level, the current documentation does not discuss that possibility. Instead, the user is advised by the Users Guide to produce an aggregate model to achieve this end. Such a model, as was discussed earlier, is likely to be error ridden.

For a region, RIMS II typically delivers a set of 38-by-471 tables of multipliers for output, earnings, and employment; supplementary multipliers for taxes are available at additional cost. Although the model's documentation is generally excellent, use of RIMS II alone will not provide proper estimates of a region's economic impacts from a change in regional demand. This is because no RPC estimates are supplied with the model. For example, in order to estimate the impacts of rehabilitation, one not only needs to be able to convert the engineering cost estimates into demands for labor as well as for materials and services by industry, but must also be able to estimate the percentage of the labor income, materials, and services which will be provided by the region's households and industries (the RPCs for the demanded goods and services). In most cases, such percentages are difficult to ascertain; however, they are provided in the R/Econ™ I–O and IMPLAN models with simple triggering of an option. This model ought not to be used for evaluating any project or event where superior data are available or where the evaluation is for a change in regional demand (a construction project or an event) as opposed to a change in regional supply (the operation of a new establishment).

Model Results

Detailed total economic impacts for about 500 industries can be calculated for jobs, labor income, and output from R/Econ™ I–O and IMPLAN only. These two modeling systems can also provide total impacts as well as impacts at the one- and two-digit industry levels. RIMS II provides total impacts and impacts on only 38 industries for these same three measures. Only the manual for R/Econ™ I–O warns about the problems of interpreting and comparing multipliers and any measures of output, also known as the value of shipments.

As an alternative to the conventional measures and their multipliers, R/Econ™ I–O and IMPLAN provide results on a measure known as "value added." It is the region's contribution to the nation's gross domestic product (GDP) and consists of labor income, nonmonetary labor compensation, proprietors' income, profit-type income, dividends, interest, rents, capital consumption allowances, and taxes paid. It is, thus, the region's production of wealth and is the single best economic measure of the total economic impacts of an economic disturbance.

In addition to impacts in terms of jobs, employee compensation, output, and value added, IMPLAN provides information on impacts in terms of personal income, proprietor income, other property-type income, and indirect business taxes. R/Econ™ I–O breaks out impacts into taxes collected by the local, state, and federal governments. It also provides the jobs impacts in terms of either about 90 or 400 occupations at the request of the user. It goes a step further by also providing a return-on-investment-type multiplier measure, which compares the total impacts on all of the main measures to the total original expenditure that caused the impacts. Although these latter can be

readily calculated by the user using results of the other two modeling systems, they are rarely used in impact analysis despite their obvious value.

In terms of the format of the results, both R/Econ™ I–O and IMPLAN are flexible. On request, they print the results directly or into a file (Excel® 4.0, Lotus 123®, Word® 6.0, tab delimited, or ASCII text). It can also permit previewing of the results on the computer's monitor. Both now offer the option of printing out the job impacts in either or both levels of occupational detail.

RSRC Equation

The equation currently used by RSRC in estimating RPCs is reported in Treyz and Stevens (1985). In this paper, the authors show that they estimated the RPC from the 1977 CTS data by estimating the demands for an industry's production of goods or services that are fulfilled by local suppliers (*LS*) as

$$LS = D^{e(-1/x)}$$

and where for a given industry

$$x = k\, Z_1^{a1} Z_2^{a2}\, P_j\, Z_j^{aj}$$ and *D* is its total local demand.

Since for a given industry RPC = *LS*/*D* then

$$\ln\{-1/[\ln(\ln LS/\ln D)]\} = \ln k + a_1 \ln Z_1 + a_2 \ln Z_2 + S_j\, a_j \ln Z_j$$

which was the equation that was estimated for each industry.

This odd nonlinear form not only yielded high correlations between the estimated and actual values of the RPCs, it also assured that the RPC value ranges strictly between 0 and 1. The results of the empirical implementation of this equation are shown in Treyz and Stevens (1985, table 1). The table shows that total local industry demand (Z_1), the supply/demand ratio (Z_2), the weight/value ratio of the good (Z_3), the region's size in square miles (Z_4), and the region's average establishment size in terms of employees for the industry compared to the nation's (Z_5) are the variables that influence the value of the RPC across all regions and industries. The latter of these maintain the least leverage on RPC values.

Because the CTS data are at the state level only, it is important for the purposes of this study that the local industry demand, the supply/demand ratio, and the region's size in square miles are included in the equation. They allow the equation to extrapolate the estimation of RPCs for areas smaller than states. It should also be noted here that the CTS data only cover manufactured goods. Thus, although calculated effectively making them equal to unity via the above equation, RPC estimates for services drop on the weight/value ratios. A very high weight/value ratio like this forces the industry to meet this demand through local production. Hence, it is no surprise that a

region's RPC for this sector is often very high (0.89). Similarly, hotels and motels tend to be used by visitors from outside the area. Thus, a weight/value ratio on the order of that for industry production would be expected. Hence, an RPC for this sector is often about 0.25.

The accuracy of CUPR's estimating approach is exemplified best by this last example. Ordinary location quotient approaches would show hotel and motel services serving local residents. Similarly, IMPLAN RPCs are built from data that combine this industry with eating and drinking establishments (among others). The results of such an aggregation process are an RPC that represents neither industry (a value of about 0.50) but which is applied to both. In the end, not only is the CUPR's RPC-estimating approach the most sound, but it is also widely acknowledged by researchers in the field as being state of the art.

Advantages and Limitations of Input-Output Analysis

Input-output modeling is one of the most accepted means for estimating economic impacts. This is because it provides a concise and accurate means for articulating the interrelationships among industries. The models can be quite detailed. For example, the current U.S. model currently has more than 500 industries representing many six-digit North American Industrial Classification System (NAICS) codes. The CUPR's model used in this study has 517 sectors. Further, the industry detail of input-output models provides not only a consistent and systematic approach but also more accurately assesses multiplier effects of changes in economic activity. Research has shown that results from more aggregated economic models can have as much as 50 percent error inherent in them. Such large errors are generally attributed to poor estimation of regional trade flows resulting from the aggregation process.

Input-output models also can be set up to capture the flows among economic regions. For example, the model used in this study can calculate impacts for a county as well as the total Ohio state economy.

The limitations of input-output modeling should also be recognized. The approach makes several key assumptions. First, the input-output model approach assumes that there are no economies of scale to production in an industry; that is, the proportion of inputs used in an industry's production process does not change regardless of the level of production. This assumption will not work if the technology matrix depicts an economy of a recessional economy (e.g., 1982) and the analyst is attempting to model activity in a peak economic year (e.g., 1989). In a recession year, the labor-to-output ratio tends to be excessive because firms are generally reluctant to lay off workers when they believe an economic turnaround is about to occur.

A less-restrictive assumption of the input-output approach is that technology is not permitted to change over time. It is less restrictive because the technology matrix in the United States is updated frequently and, in general, production technology does not radically change over short time periods.

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Finally, the technical coefficients used in most regional models are based on the assumption that production processes are spatially invariant and are well represented by the nation's average technology. In a region as large as an entire state, this assumption is likely to hold true.

APPENDIX C

REVIEW OF THE EFFECTS OF HISTORIC PRESERVATION ON PROPERTY VALUES

Historic designation can exert various effects on property value. Value may be enhanced; value may be diminished; or there may be a neutral effect. To illustrate, property values may be enhanced because of various influences:

1. *Prestige.* Historical designation accords prestige due to the official recognition that a building or area has special qualities. This prestige is recognized by the real estate market; real estate salespersons often stress this point in selling a historic property, and at least some buyers are willing to pay a premium for this designation.

2. *Protection.* Designation by listing in the National Register of Historic Places adds some protection to a historic property or area. Disruptive demolition from highway construction, urban renewal, and other federally aided or licensed projects must take into consideration historic properties. Under a local landmark ordinance, exterior work of a historic property can be reviewed for its historic compatibility. New construction in a historic district may also be regulated for scale and appearance. In short, designation increases the likelihood that the features one finds attractive in a building or an area today will be there tomorrow.

3. *Financial incentives.* Federal tax credits and other financial incentives are often afforded to historic properties. It is observed many times that vacant and deteriorated buildings or entire areas of cities can be enhanced by taking advantage of these programs. As a result, property values are enhanced.

4. *Other factors.* Partially as a result of a historic property's prestige, protection and incentives, designation often includes further interrelated positive consequences. These include encouraging property rehabilitation, preserving neighborhoods, strengthening an area's retail health and tourist trade, and catalyzing formation of community organizations and activity.

Property value may be dampened, however, because of certain designation consequences:

1. *Regulatory costs.* For locally designated landmarks, alteration or demolition of the property accorded historic status must be approved by a local landmarks commission. Owners of historic properties can incur additional expenses as a result of these regulatory requirements, both directly in the form of outlays, and indirectly from the delays attendant to such administrative procedures.

2. *Development constraints.* Local designation may impede the realization of a designated property's "highest value and best use." Instead, the designated property may be reviewed to keep its "current use." Current use is the existing utilization of a property; highest value and best use is the most profitable use incorporating those uses that are legally permissible, physically possible, and financially or economically feasible (Kinnard 1971, 39). However, most ordinances cannot ultimately stop such developments.

It is important to emphasize that owners are not constitutionally guaranteed to realize the highest and best use of their property. For the public good, various police-power regulations such as zoning, subdivision, and historic designation provisions may be imposed. While legally permissible, however, historic designation may have a dampening effect on property value by limiting the maximum development of a parcel, of course no differently than other types of zoning.

The degree to which the varying effects noted above are exerted in any given situation is influenced by numerous factors ranging from the type of designation (e.g., National Register or local landmark designation) and the relationship between a property's current use and its highest value or best use. To illustrate, assume there are two townhouses in a community's central business district, where the underlying zoning is for high-rise buildings. One townhouse is designated a local landmark whereas the other is not so designated. In both instances, the current use is a townhouse. The highest and best use of the nondesignated townhouse is probably to demolish the structure and redevelop the site for a high-rise. The highest and best use of the designated townhouse is its legally permissible use—that is, a historic townhouse.

Assume that the historically designated townhouse is appraised at its current use (which is also its highest and best use given the landmark designation) at $200,000, whereas the nondesignated townhouse, given its highest and best use as a redevelopment site, is appraised at $300,000. In this case, landmark status can be said to detract from value by $100,000. Meanwhile, in a second set of circumstances where designation does not prohibit demolition such as National Register districts where review is not conducted. In this instance, designation may have little discernible impact.

Last, consider a third set of circumstances—the same two townhouses, one designated (with stringent historic controls) and one not, but both located in a residential zone where townhouses are the "maximum" permitted use (e.g., from a land use, density, and floor-area ratio perspective). In other words, a townhouse is both the current as well as the highest and best use. In this instance, it could very well be the case that the historic townhouse, with its prestige of official historic designation and assurance that its desirable historic amenities will be fostered into the future by public regulation, is worth $200,000, whereas the nondesignated townhouse is worth $100,000. Here, historic designation adds $100,000 to market value.

Examples can be posed for the many possible effects of designation. The point to be emphasized is that there can be varied relationships between the presence official historic designation and property value—positive, negative, or neutral.

PART THREE: REVIEW OF LITERATURE

The literature on the subject of historic designation's influence on property value overwhelmingly points to a positive effect. Only a handful of studies that specifically consider the costs of alteration and demolition come to a negative impact conclusion. The literature reviewed in this study consists of analyses dating from the 1970s. More detailed annotations are found in the bibliography.

One of the first pieces of research on historic property values was by Reynolds and Waldron (1969) who reviewed disputes over the level of just compensation due to the federal condemnation of a number of historic buildings in the 1960s and 1970s. They simply summarized by noting that appraisers should be aware that historic buildings need to be valuated differently than other

structures. Soon after, arguments promulgated that just compensations should be required for buildings that were designated but not condemned for purchase by the federal government. Costonis (1974), for example, went so far as to develop a formula that determines the financial cost of alteration and demolition restraints that are imposed as a result of designation. For illustration, he calculated that four landmarked Chicago office towers incurred a loss of value between $400,000 and more than $3,500,000 per building.

Costonis (1974), thus, represents a long line of conceptualization on the part of developers and real estate holders; that is, stringent building codes can discourage the restoration of older properties. Indeed, there is no doubt that properties are designated at least to restrict in some way the manner in which structures on it may be altered or refurbished. Thus, historic designation of a property can require large maintenance expenditures to preserve or restore the historical character of the building or neighborhood. Moreover, for some commercial and industrial properties this extra effort can significantly delay revenue generation. Perhaps the most common theoretical argument is that designation can prohibit a property from attaining its highest value and best use. For example, it could detract from a property's value by prohibiting its conversion to another land use, i.e., a current single-family property to a multistory office building.

One of the earliest comparative analyses of historic and nonhistoric property values was performed by Heudorfer (1975) who contrasted four designated districts in New York City (Central Park West–76th St., Chelsea, Mount Morris Park and Riverside Drive–West 105th St.) with four comparable, adjacent areas. She concluded that historic status had a small to negligible influence on property values. One problematic issue in her analysis was that properties in the historic districts sold for a premium both before and after designation. That is, the two sets of areas may have been insufficiently similar to make a viable comparison. Indeed, much of the literature focusing on historic designation's effect upon property values has done so by analyzing differences across neighborhoods that are subjectively deemed to be similar. Unfortunately, it undoubtedly is quite difficult to select undesignated neighborhoods that have properties that are sufficiently close in age, style, and size to those in the designated neighborhoods to facilitate an unbiased statistical comparison. After all, some underlying set of characteristics of the designated neighborhoods has suggested to policymakers that the subject neighborhoods should be allotted an official historic status while the selected comparison neighborhoods were not.

For example, it may be that the officially designated historic neighborhoods were selected because they embraced architecturally unique structures, a better maintained stock, or simply from a planning perspective that neighborhood could serve as a sort of buffer zone for a neighboring commercial district if it was improved. Almost any rationale used to select for designation a neighborhood over another somewhat similar one also can help to explain relatively higher property prices in the designated neighborhood. Hence, identifying higher property values or appraisals in historically designated versus undesignated neighborhoods is at best weak proof that designation yields higher property values. Nonetheless, Heudorfer's (1975) analysis held some

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promise for proponents of designation since, in some cases, it appeared that the premium for being in a district that formally was designated as historic continued to increase after designation was pronounced. Somewhat stronger proof of designation's effect on property values can result if one can demonstrate that historic property values proportionally appreciate at a significantly different rate from that of undesignated ones during the same period and in the same city. That is, while similar arguments can be made with regard to price changes as for those in the preceding paragraph on price levels, the arguments are mitigated somewhat because the effect of unobserved time-invariant characteristics, including those associated with the selection process described above, can be eliminated.

Soon after and using a similar approach, Scribner (1976) obtained far more sanguine results as far as proponents of designation were concerned. He found that in Alexandria, Virginia, unrestored buildings in the Old Town appreciated in value approximately two and a half times greater over a 20-year period than those outside of the historic district. Similarly, in the Capitol Hill historic district of Washington D.C., buildings increased about 40 percent in value, whereas those immediately adjacent to that district decreased in value by 25 percent. Many subsequent studies have since confirmed this study's general set of findings, albeit in other locations.

Interestingly not until Schaeffer and Ahern (1988) had anyone compared differences across different types of historic designation. Interestingly, these researchers found a significant increase in prices and turnover in the residential neighborhoods of Chicago listed on the National Register of Historic Places, but no corresponding increase in two Chicago neighborhoods listed on the local register. Indeed, in a follow-up study in Chicago, Schaeffer and Millerick (1991) obtained some negative effects on property values emanating from local designation. This finding caused Schaefer and Ahern to speculate that the difference lay in the more stringent controls imposed in the two local districts and in the prestige of location in a nationally recognized neighborhood. That is, it is the designation-engendered burden on property owners for upkeep and maintenance which can provide a mechanism ensuring neighborhood upkeep, was apparently excessive for owners of the locally designated properties in the two Chicago neighborhoods. Coulson and Leichenko (2004) and Leichenko, Coulson and Listokin (2002) later suggested that inefficient levels of maintenance, which can accrue in certain neighborhoods (they were pointing to nondesignated neighborhoods), typically are a result of a prisoner's dilemma-like interaction in which property owners have an incentive to invest only in low levels of maintenance regardless of their neighbors' maintenance behavior. Thus, neighbors employing this strategy wind up in a neighborhood that experiences an overall downward spiral in the quality of housing stock. In such a situation, everybody is made worse off than if they all had agreed to provide high levels of maintenance. Hence, the suggested that restrictions embodied in the designation of a historical neighborhood have the potential to induce owners to internalize this neighborhood externality that comes about when maintenance drops below efficient levels.

Thus, the findings of Schaeffer and Ahern suggest that, at least from a theoretical perspective, compliance with preservation restrictions could overcome the momentum of low-levels of neighborhood-wide investment in properties. Since the landmark study by Schaeffer and Ahern, Coulson and Leichenko (2001) also found national designation of individual properties to be more value-enhancing in their study of Abilene, Texas. Interestingly, when analyzing Memphis neighborhoods, Coulson and Lahr (2005) found that local ordinance with very heavy restrictions provided *greater* returns to historic designation over time than did a national designation or less-restrictive local designation. Nonetheless it remains unclear whether these differences are due to (1) differences in housing geography, (2) restrictiveness of ordinances, (3) the fact that the National Register of Historic Places may get the "cream of the crop," or (4) mechanisms that may be explained by Samuels's (1981) concept of the stage of renovation.

The St. Louis Community Development Agency (1980) considered the implications of historic alteration and demolition restrictions for St. Louis's central business district. The results were mixed. Some buildings may not have been affected, but others that were suitable for intense development were put at a "disadvantage," i.e., landmark designation reduced their value. Interestingly, this is one of few studies done on designation's effects on commercial properties.

Perhaps one of the most frequently cited studies is that by Rypkema (1997), who examined the impact on property values of local historic districts in Indiana. Guided by the desire to represent the geography of the entire state and communities of various sizes, he selected local historic districts in five Indiana cities. The chosen historic districts were in Anderson, Elkhart, Evansville, Indianapolis, and Vincennes.

The overall results in Rypkema's study revealed that local historic districts in Indiana not only provided valuable protection for each community's historical resources but protected and enhanced individuals' financial resources as well. The specific findings by community follow:

- In Anderson the values of properties in the study areas steadily appreciated after the creation of the historic districts.

- In Elkhart the rate of appreciation of properties in the historic district, a particularly depressed area, mirrored the rate of appreciation of the entire Elkhart market.

- In Evansville the appreciation of properties within the local historic district outpaced both the surrounding historic properties not included in the local district and the overall Evansville market.

- In Indianapolis the property values in the local historic district increased at a rate consistent with the metropolitan Indianapolis overall market and exceeded the rate of both the adjacent and highly similar neighborhood and the larger area of Indianapolis within which it sits.

- In Vincennes, while the amount of appreciation over the 15-year period was modest for both commercial and residential properties, commercial properties in the downtown historic district

maintained a pattern of appreciation similar to both the rest of the commercial properties and the overall Vincennes real estate market.

Four communities studied in Georgia all experienced increases in property valuation in historic areas that surpassed increases in values in nonhistoric areas (Leith and Tigure 1999). In Athens, Georgia, for example, a study of seven neighborhoods found that, during a 20-year period, the average assessed value of properties of historic districts increased by nearly 48 percent (an average of 2.4 percent per year) versus only 34 percent for properties in nondesignated neighborhoods (an average of 1.7 percent per year) (Leith and Tigure 1999).

An extensive statistical analysis on the property value impact of designation was conducted in Texas in which Coulson and Leichenko (1999, 2001) found the following:

- Historic designation was associated with higher residential property values in all of the Texas cities included in the study where such valuation was examined. (A total of nine communities—Certified Local Governments (CLGs)—representing a diversity of localities.)

- The positive impact of historic designation was statistically significant in seven of the nine cities: Abilene, Dallas, Fort Worth, Grapevine, Lubbock, Nacogdoches, and San Antonio. In two cities, San Marcos and Laredo, the positive effect of historic preservation is not statistically significant at conventionally accepted levels.

- Among the cities where historic designation had a statistically significant effect on property values, historic designation was associated with average property value increases ranging between 5 and 20 percent of the total property value. The smallest average increases in property values occur in Dallas and the largest average increases occurred in Nacogdoches. In dollar terms, (dollar value change per housing unit) historic designation was associated with average increases in housing values ranging between $2,500 in Dallas and $18,600 in Nacogdoches, with the other cities falling somewhere in between.

Rypkema (2002) examined historic values in Colorado and found the following in a variety of that state's historic districts.

- Denver's Wyman Historic District: The benchmark criteria suggest that the designated district and nondesignated comparison area have paralleled each other since designation; in other words, historic designation has not had a demonstrable, negative economic impact. Since designation, the total appreciation in Wyman is approximately four percent greater than in the nearby area.

- Denver's Witter-Cofield District: The designated and nondesignated areas are not significantly different. Not only have the historic district and nearby area paralleled each other in all benchmark criteria, but the entire case study area has remained consistent with the median sales price for the city of Denver as a whole. This suggests that the Witter-

Cofield district, years after district designation, continues to provide housing representative of other neighborhoods throughout the city.

- Denver's Quality Hill District: Historic designation appears to have made a difference in Quality Hill. Since designation, the district has appreciated faster than the nearby area. Also, the median sales price within the district has risen at a dramatically faster rate than the median sales price just outside the district. Despite a substantial amount of modern, multi-family residential infill, which in some neighborhoods might tend to depress the values of adjacent single-family residential houses, prices in the Quality Hill District have remained much higher than in the city as a whole.

- Durango's Boulevard District: Sales prices in the Boulevard Historic District tend to be significantly higher than those both in the nondesignated comparison area and also in the city as a whole. Our interviews with local Realtors confirmed this trend, noting that the Boulevard District is one of the more desirable and expensive markets in the city. Both the historic district and the nearby area experienced marked increases in value during the 1990s.

A University of Florida (2002) study reviewed more than 20,000 parcels of property in 18 historic districts and a similar number in 25 comparison neighborhoods. (For reference, Florida has more than 9.6 million parcels statewide.) Assessed property values over a ten-year period from 1992–2001 were analyzed in the following cities: Jacksonville, Gainesville, Ocala, Tampa, St. Petersburg, Lakeland, West Palm Beach, and Lake Worth. The Florida researchers found that historic designation and protection did not depress property values and, in at least 15 of the 18 cases studied, property in the historic district appreciated greater than target nonhistoric areas.

Some of the analyses noted above were cited in an excellent "compilation" of the economic effects of historic preservation developed by Rypkema (1994) in a study for the National Trust for Historic Preservation. Rypkema cited the studies, described above, by Leithe, Ford, and the State of Virginia. He also noted numerous other analyses done both abroad (e.g., Canada) and in municipalities and states in the United States showing that historic designation did not depreciate the value but, in fact, enhanced the value of designated properties. A more recent piece by Mason (2005) also reviews much of this literature.

A late-1990s study by Donovan Rypkema found that local historic districts in Indiana not only provided valuable protection for each community's historical resources but protected and enhanced individuals' financial resources as well. In five Indiana communities residential and commercial properties in historic districts appreciated at no less than the city-wide rate, and in four of the five appreciated at a greater rate than the rest of the city. A 2010 University of Florida study reviewed more than 20,000 parcels in 18 historic districts and a similar number in 25 comparison neighborhoods. The Florida researchers found that over a ten-year period historic designation and protection did not depress property values and, in 15 of the 18 cases, property in the historic district appreciated greater than comparable non-designated areas.

Since the two valid theoretical perspectives oppose one another, the determination of whether historic designation improves or dampens property values is best evaluated via observation. Of

course, the argument put forward by developers and property owners against historic preservation have tended to pertain to single, identifiable properties. Meanwhile much of the literature focusing on historic designation's effect upon property values has been performed at the neighborhood/district level. The main approach that has been used to discover the value individual historic properties is called "contingent valuation." When well configured, this approach bifurcates the value of a historically preserved property into its nonpreserved market value and its preserved nonmarket value. Chambers, Chambers, and Whitehead (1997) note that a preserved property's market value is easier to ascertain than its nonmarket value. In the contingent valuation method, householders are asked how they would react to hypothetical conditions/attributes with respect to their own property or a nearby property. In the case of studies of historical properties to date (Willis, 1994; Chambers, Chambers and Whitehead, 1998; Kling, Revier, and Sable, 2004; Del Saz Salazar and Montagud Marques, 2005; Maskey et al., 2007; and Alberini and Longo, 2009), households are surveyed for their willingness to pay for historic preservation of a single, specific property within their community. Their responses are subsequently analyzed to identify the community's overall willingness to pay for the preservation effort.

Contingent valuation's main advantage is that the survey results specifically pertain to the target property. Moreover various sets of researchers have obtained what appear to be reasonable and acceptable results for the specific particular properties they have analyzed. Kling, Revier, and Sable make it clear, however, that developing a viable survey instrument is not easy and also undoubtedly costly to effect. Also while it is both an advantage and disadvantage, the approach is as much preference-forming as preference-informing about the property. That is, a sort of Heisenberg principle applies to it in the case of preservation of historic properties (Kling, Revier, and Sable, 2004)—the very act of surveying people about the value of the property can change the asset's status to them by identifying it as a heritage good when they may not have identified it as such prior to being surveyed. While this is valuable tack to take from the perspective of an advocating group, it is a rather tenuous perspective for a purely scientific evaluation/ investigation.

Diamond and Hausman (1994) have a general distaste for contingent valuation surveys since findings across them tend to be quite similar, even when theory dictates they should be otherwise. Because of this, they suggest the method is fatally flawed for valuing nonmarket goods/services. They go so far as to suggest that it is even flawed as an opinion poll on the survey's focal topic. Diamond and Hausman note that the crux of the problem is that the respondents either do not have solid views on the individual sites that are the target of the valuations or that they strictly focus on their preferences for the site without a clear understanding of the costs to them of those preferences, even if they are presented well in the course of the survey implementation.

In sum, the contingent valuation method has been used in a very limited number of cases to identify the value of historic preservation to properties. When it has been used, the historic preservation as a nonmarket good has been given a positive value. That is, households appear to give positive value to historically preserved properties—value that extends beyond their value as private

properties. Moreover, the studies have tended to find that the costs of preserving the specific structure analyzed are worth the community-wide benefits that are obtained from it. The method has not been used to measure the value of historic districts, however. Moreover, as published, existing studies have not identified the value to residences of their relative proximity to preserved properties. Thus from the perspective of the present study, the body of literature on contingent valuation holds little value, regardless of Diamond and Hausman's (1994) thoughts on the method.

Even before contingent valuation approaches were employed however, researchers applied other techniques using secondary data, rather than surveys, to analyze the value of historic designation to neighborhoods. As time has progressed, so have the methods that have been applied. Most of the methodological innovations have been advancements in defining the theoretical approach for measuring the value of historic designation. That is, analysts have tended to focus on modifying past approaches to overcome the many shortcomings in the methods applied in past studies analyzing the effect of historic designation on property values. As a result, the techniques applied have become more precise and their findings for historic designation more robust. Most of the innovations have derived from the use of more sophisticated data sources—making sure to use appraisal data from benchmark appraisal years or actual home sales information and both with more and better information on the properties and neighborhoods that are analyzed.

The earliest investigations simply compared property values in designated neighborhoods to values of in other neighborhoods that had not been designated. A key to a viable statistical analysis using this approach, as it turns out, is identifying neighborhoods that are otherwise similar except for their historic designation. As discussed by Heudorfer (1975), however, it is typically quite difficult to select undesignated neighborhoods that have properties that are sufficiently close in character to those in the designated neighborhoods. Almost any rationale used to prefer one neighborhood for designation over another also tends to make it characteristically different from that neighborhood when measuring differences in property value.

In fact in many of the early studies, information on the variations in property values or property value growth within neighborhoods is rarely reported; thus, the statistical significance of any difference between designated and nondesignated areas cannot be determined. This serious flaw is due to a lack of either adequate data or of knowledge with regard to proper analytical technique on the part of the researchers.

An improvement to analyses of property values themselves is the so-called "difference-in-difference" approach, which was used in most of the studies prior to 1990 and even several studies published since then. This approach relies solely on comparing sample averages of the *growth rate* in property values in historic areas versus non-historic areas. Still, as with earlier evaluations of property values themselves, rather than the change in value measured here, the researcher controls for no other variables (e.g., property characteristics). (Ford [1989] and Gale [1991], for example, include no statistical controls at all.) Of course, property and neighborhood characteristics vary across different neighborhoods. Thus, the results from the application of a difference-in-difference

analysis are biased and inconsistent to the extent that variables such as property and neighborhood characteristics can explain differences in property values. Typically researchers conducting "difference-in-difference" studies understand multivariate statistical analyses that control for property and neighborhood characteristics can mitigate concerns of bias and inconsistent estimation inherent in their statistical estimates of the effect of designation on property value change. But data limitations often bind their analyses to apply the difference-in-difference approach. In any case, when this approach is applied, it must be understood that the results from such an analysis are likely to be less than perfectly convincing.

Still the "difference-in-difference" approach, does not overcome problems pertaining to the choice of comparison districts. That is, by the very distinction of being historic, many districts have no comparable control. Gale (1991) is most forceful in pointing this out and, hence, tries to convince the reader that his three control districts are indeed comparable. Hence, the study isolates the effect of designation per se on property market outcomes. However, there must have been a reason why the control neighborhoods were not designated, and if this is in any way related to property values, then the results are spurious.

There is also the issue of timing. For a study to be meaningful, growth rates have to be compared using the same period and assuming they are in the same housing market, otherwise market-area or economy-wide effects must be controlled for. Taking the designation date of the historic district and comparing growth rates around the same date for non-historic districts may confuse the fact that the subject and the control are at different stages with respect to rehabilitation effort undertaken. Thus, the issue of timing is key, as Samuels (1981) points out. If designation takes place before the area has experienced significant rehabilitation and restoration, results will be very different than they would be if designation occurs once neighborhood properties are fairly saturated with renovation work. And if the properties are not saturated with renovation, the speed of value improvement can vary not only with how broadly the intention to designate has been disseminated but also the degree of regulatory control levied by the pertinent ordinance and the strictness with which the ordinance is enforced.

Surprisingly, most studies investigate a relationship between designation and property values—as opposed to designation and subsequent property value change. Without a temporal component to such studies, the resulting analyses can reveal only a correlation between historic designation and property values; as a result it is unclear whether high property values induce historic designation or vice versa. Nonetheless, researchers have tended to assume that historic designation causes the higher property values to exist. Essentially using the same findings, one can argue that high property values could have been what induced the urge to designate in the first place. In this vein, it can be important to determine why a particular building or district becomes designated. If designation is the result of preservation efforts by existing owners, then designation itself may have little impact on the path of property values, which would have increased even in the absence

of designation. Indeed, some studies show that prices increased more prior to designation than after, see New York Landmarks Conservancy's (1977) study of Park Slope.

The use of appropriate price data depends on the focus of the researcher. If the main concern is for tax payments, then clearly the assessed value is sufficient. But for an investor, the sales price is perhaps more appropriate. To determine economic value, sale prices should be used where and when possible, since these reflect real transactions rather than the subjective opinion of an appraiser or assessor. Self-reported values such as those found in Census data can be seriously biased since owners may perceive value differently from the market. Nonetheless, if one can argue that the bias is consistently in the same direction and of the same magnitude (such as if owners always overestimate value by 10 percent or if one can control for the official who appraised a property), then the measurement error becomes less important. If, on the other hand, there is asymmetry because owners of properties in historic districts have a different bias than other property owners, then the measurement error problem may be much more severe.

The basic difference-in-difference framework is a sound starting point. And of the genre, Shipley (2000) has undertaken perhaps the most comprehensive examination of the value of historic designation on properties. He does so by comparing average appreciation rates of designated property and nonhistorical property in Canada on a city-by-city basis. He found that in most cities designated properties had greater appreciation rates than other properties. That is like most analyses before his, Shipley found that the effects of designation on property values were positive.

Clearly, by comparing average property values without controlling for other differences between designated and undesignated lots, structures or neighborhoods, the difference-in-difference analyses neglect other possible explanations for the observed differences in historical and undesignated property values. Regression models using individual properties as the unit of observation can overcome this problem. Interestingly, such models appear not to have been applied to the study of the effect of historic preservation on property values before the work of Ford (1989). Since then several theoretical and empirical advancements have been made in the literature valuating historic designation.

Theoretically speaking, the approach used by most researchers using multivariate regression models is called the hedonic pricing model. Hedonic pricing assesses implicit prices to each specified attribute of the properties in the study with historic designation being one of those attributes. That is, the approach assumes that buyers of property reveal their preferences for the bundle of property attributes when paying for a property. Hence by evaluating property sales prices or assessed values (or changes in them) across many properties and by assuming that buyers have fairly similar preference sets, the analyst can identify the prices implicit to each property attribute, as long as there are more properties than there are attributes in the study. The attributes in the broader literature that measure property hedonics include those of the property itself as well as those of both the neighborhood and municipality in which it is located.

Many early regression analyses analyzing the value of designation (Ford, 1989; Schaeffer and Milerick, 1991) were mere extensions of difference-in-difference analyses. In this vein, they improved on their predecessors in that they controlled for many of the differences among the properties in the designated versus nondesignated neighborhoods. The property attributes that Schaeffer and Millerick (1991) found statistically significant in predicting residential property values in Chicago were lot size, number of rooms in the structure, age of structure, presence of a garage, and the number of fireplaces. In addition they investigated neighborhood effects by including the following attributes of the census tract within which the property is located: share of the population that is Black, share of the housing that is owner-occupied, and the median household income. Still, like many studies lacking such controls, the analysis was performed on property-value *levels* and not on their *change* in value. So, as alluded to earlier, it is unclear whether or not the apparently highly restrictive regulations of designation were, in fact, the cause of the lower property values as Schaeffer and Millerick (1991) conclude. That is, it may well have been that the property values in Chicago's historic districts were comparatively quite low even before the districts were designated as historic.

By tying the literature on designation more tightly to the broader literature on hedonic price models, Clark and Herrin (1997) transformed residential property values by using their natural log and also expanded the set of control attributes considerably. Many of the neighborhood attributes in their study of Sacramento properties were made possible by the advent of geographic information systems. From the perspective of historic designation, however, Clark and Herrin (1997) also investigated the possible existence of spillover effects of historic district designation by investigating the values of nondesignated properties both across the street from the study's historic districts as well as within a block of them. Using a similar approach, but lacking many of the neighborhood attributes, Coulson and Leichenko (2001) also examined spillover effects in their analysis of the effect of designation of individual properties in Abilene, Texas, on those surrounding them. In addition, using panel data techniques, Cyrenne, Fenton, and Warbanski (2006) examined the effect of designation and proximity to a historic landmark on the assessed values of 132 commercial properties in Winnepeg, about half of which were already designated historic in 1990 and another 16 percent that were designated as historic between 1990 and 1998. Despite the significant methodological and theoretical advancements, however, the positive associations between designation and property values that all three set of authors derive still do not help answer the ultimate question about the impact of designation on property values since they, like Schaeffer and Millerick (1991) failed to perform their hedonics on property value changes and used property values instead (with a functional form that forced the use of the variable's natural log).

Coulson and Lahr (2005) was the first research team to examine property value changes in the aftermath of historic designation. Although this study also lacked the richness of neighborhood attributes examined by Clark and Herrin (1997) and was limited to an examination of both historic districts and subjectively identified undesignated "comparable" neighborhoods, it revealed that

properties in neighborhoods of Memphis's with more restrictive local designation tended to have property values that appreciated at a faster pace between 1998 and 2002 than did their nondesignated equivalents. In addition, they found that newer properties within historic districts tended to appreciate faster than did older ones.

In the case of property value change, the basic hedonic equation is

$$\Delta P^h = \Sigma_i(P_{i2}\Delta Q_i) + \Sigma_i(\Delta P_i Q_{i1}) + \Delta P_d D$$

(1)

Where ΔP^h is the change in the property value or $P_2^h - P_1^h$ and P_1^h and P_2^h are property values in time 1 and 2, respectively; the P_{i2} is the price of each attribute i in time 2 and ΔP_i are the price changes of those attributes between time 1 and time 2; Q_{i1} is the quantity of attribute i in time 1 and ΔQ_i is the change in the quantity of attribute i. In addition, D denotes whether or not a property is designated, and ΔP_d is the change in the implicit price of historic designation. That is, the change in a property's total value is the sum of three sets of basic measurements: the total value of any new attributes (or changes in existing ones), the change in value of existing attributes, and the implicit price of designation, the last of which is nonzero only when a property is designated historic. The point of this analysis is to identify the value of ΔP_d, and in particular to learn whether its value is statistically significant different from the null value and if so, whether it has a positive or negative sign, i.e., whether designation tends to confer a positive or negative value. Interestingly Coulson and Lahr (2005) found that no controls for changes in attributes were statistically significant. That is, the first term of the left-hand side of Equation (1) has, for all intents and purposes, a null value.

Since Coulson and Lahr (2005), only a handful of research has appeared that advances the study of the valuation of historic designation. Noonan's (2007, 2008) are exceptional in that his return the richness provided by Clark and Herrin's (1997) with regard to neighborhood attributes and uses a repeat-sales framework for attached homes only rather than assessed values for any type of home employed by Coulson and Lahr. He also corrects for spatial error autocorrelation. Unlike Coulson and Lahr, Noonan finds that changes in attributes significantly affected property price appreciation in Chicago from 1990-1999. His findings with regard to proximity to landmarks are somewhat complicated, however. They suggest that landmarks enhance nearby property values but dampen values of more distant properties when their closest landmark property was recently designated. Moreover they show that age of the landmarks also play a role in determining the appreciation rates of proximate properties. If nothing else, what is clear from Noonan's analysis is that assessing the property value impacts of heritage preservation policies may not be as straightforward as much of the literature suggests. Indeed, Noonan and Krupka (20011) have since suggested that Noonan's (2007, 2009) control for proximity to landmarks may have been ill-founded since the designation of a structure "is the result of an interplay amongst the demands of the neighbors, the resistance of the owners, and the administrative behavior of the regulator.

Designation choices therefore reflect more than a community members' or experts' assessments of (architectural, historical, etc.) quality from an inventory of historical resources."

To summarize, a preponderance of empirical literature indicates that historic preservation, particularly district formation and regulation, is associated with higher single-family residential property values. To date, only a few research publications show that properties designated as historic appreciate faster than do non-designated properties. The case for multi-family properties is less sanguine from the perspective of preservation's proponents. In this case, Asabere and Huffman (1994a) find that historic preservation efforts are associated with lower valued properties. Interestingly little evidence is available on the effect on commercial property values of preservation efforts, despite the available federal tax credits specially focused on them. In part, the lack of evidence may be due to the low turnover rates for such properties, which lends to very infrequent observation of their actual values. Still the nascent research that has been done shows that higher commercial property values also tend to be associated with proximity to historic landmarks and districts.

ANNOTATION OF SELECTED STUDIES

ANNOTATION OF SELECTED STUDIES

Real Estate Value and Appraisal

Advisory Council on Historic Preservation. 1979. *Contributions of Historic Preservation to Urban Revitalization.* Washington, DC: U.S. Government Printing Office. *American Vision*s. 1994 (April/May).

This study investigates the effect of historic preservation activities in Alexandria (Virginia), Galveston (Texas), Savannah (Georgia), and Seattle (Washington). Included in the analysis is an examination of the physical, economic, and social changes occurring within historic neighborhoods in each of these cities. According to the study, historic designation and attendant preservation activities provide many benefits, including saving important properties from demolition, assuring compatible new construction and land uses, and providing a concentrated area of interest to attract tourists and metropolitan-area visitors. Designation also has the beneficial effect of strengthening property values—an impact documented by comparing the selling prices of buildings located inside versus outside the historic districts.

Asabere, Paul K., et. al. 1994. "The Adverse Impact of Local Historic Designation: The Case Study of Small Apartment Buildings in Philadelphia." *Journal of Real Estate Finance & Economics* 8, 3: 225.

The authors seek to show that local landmark designation lowers the value of small apartments buildings in Philadelphia by using a hedonic regression that considers a number of property and neighborhood variables, including location, time of sale, and the type of buyer (corporate or partnership). Study data was obtained from property sales records maintained by the city of Philadelphia (n=118). They conclude that local designation is associated with a 24 percent discount in the value of apartment buildings containing 1-4 units, which suggests that additional financial incentives for local designation may be warranted. The study is unique for its focus on residential rental property.

Asabere, Paul K., and Forest E. Huffman. 1994. "Historic Designation and Residential Market Values." *The Appraisal Journal* (July): 396.

This study employs a standard hedonic pricing model to analyze the impact of National Register listing on residential property values in Philadelphia. (N=120; sold b/w Dec. 1986-May 1990; MLS data source.) Standard physical characteristics of properties were controlled for, including age of house and construction materials. Socioeconomic variables were also included from census track data and location within the city was considered. The authors conclude that NR listing is associated with a 26 percent increase in home values; age of house also exerted an unexpected positive influence on value.

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Asabere, Paul K. and Forrest E. Huffman. 1991. "Historic Districts and Land Values." *Journal of Real Estate Research* 6, 1: 1-7.

The study seeks to determine the effect of National Register listing on the value of vacant land within federal historic districts. A hedonic regression is used that considers a number of property and neighborhood characteristics. Data on vacant land transactions was obtained from city records (n=100). The analysis finds that vacant residential lots in federal historic districts sell at a 131 percent premium over vacant lots not located in a federal historic district. A price premium found for non-residential lots was insignificant.

Asabere, Paul K. and Forrest E. Huffman. 1995. "Real Estate Values and Historic Designation." *The Illinois Real Estate Letter* (Winter/Spring): 11-13.

Asabere, Paul K., George Hachey, and Steven Grubaugh. 1989. "Architecture, Historic Zoning, and the Value of Homes." *Journal of Real Estate Finance and Economics* 2: 181-195. [No access online or at Penn; at CU Hotel Sc]

Bauer, Matther. "Use It Or Lose It." NTHP Dollars & Sense of Historic Preservation, #9.

This article presents a very general and brief introduction to the relationship between designation and property values. It is not an empirical study; it does not contain citations or offer firm conclusions.

Benson, Virginia O., and Richard Klein. 1988. "The Impact of Historic Districting on Property Values." *The Appraisal Journal* 56, 2 (April): 223-32.

The impact of historic designation on property values in Cleveland, Ohio is examined in this study. It begins with a historical overview of preservation policy in the United States, including reforms of tax policy and federal urban redevelopment programs. The authors calculate Market Value Ratios (MVR=actual sale price/assessed market value) for properties in two historic Cleveland, OH neighborhoods and then compare these to the MVRs of surrounding, non-historic neighborhoods. They note that listed districts appear to have more volatile MVRs and fewer sales than non-listed districts, which suggest negative consequences of listing. While designation maybe benefit neighborhoods located in cities with expanding population and strong tourist appeal, it may have less utility in rust-belt cities. The article warns that "indiscriminant" over districting may undermine urban redevelopment goals.

Brown, Catherine, et al. 1987. *An Intense Analysis of the Effects of Historic District Designation on Property Values in the Neighborhoods of Winnetka Heights and Munger Place/Swiss Avenue.* Dallas, TX: School of Business, Southern Methodist University.

Clark, D. E. and W. E. Herrin. 1997. "Historical Preservation and Home Sale Prices: Evidence from the Sacramento Housing Market." *The Review of Regional Studies* 27: 29-48.

The authors conduct a hedonic regression analysis to determine if historic district status affects the prices of homes in Sacramento, California. They consider a number of structural variables including the age of the house, number of bedrooms, stories, fireplaces, bathrooms in addition to neighborhood demographic and location characteristics, such as proximity to noxious land uses like railroads, highways, and Superfund sites. Their model explains 53.9 percent of the variation in the sale price. They find that location in a historic preservation district (HPD) results in a 10-17 percent sale price premium. However, residences adjacent to historic districts receive no positive economic spillover affects; rather, a 20 percent price discount is found for properties adjacent to HPDs. (The authors concur with Coffin's suggestion that "an increase in demand for housing within the HPD may cause a decrease in demand elsewhere" in the market.) Proximity to noxious uses decreased values as expected.

Cloud, Jack M. 1976. "Appraisal of Historic Homes." *The Real Estate Appraiser* (September/October): 44–47.

Difficulties of appraising historic homes are highlighted. To illustrate, appraisal assumes that the improvements on land are depreciating assets. In the historic context, however, the home represents "heritage" and therefore is not assumed to lose value. The article suggests three approaches to ascertaining value, all modifications of the traditional cost, market, and income approaches.

A modified cost methodology is recommended based on the following factors: (1) cost on a unit basis of an equally "historically desirable" dwelling in approximately the same physical condition (including site); (2) the average unit cost of an acceptable renovation and/or restoration; (3) less the estimated incurable physical deterioration; (4) plus the value of land and site improvements.

A second strategy uses a modified market approach. Value is determined by adjusting recent nearby "arm's-length" sales. This approach is commonly used in appraisal, but implementation in the historical context requires a number of special emphases. The temporal definition of "recent" sales has to be extended for the appraiser to obtain enough "comps" of historic homes—required because there are relatively few sales of historic properties. Second, and for similar reasons, the appraiser has to consider "comps" over a larger geographical area. Third, the appraiser must be careful to examine only arm's length transfers—donations of properties to private historical societies would not be included. Fourth, the appraiser must carefully adjust the "comps" for "historical value"—which encompasses such considerations as type of architecture, historical significance of the owner/builder, and so on. Fifth, the

"comps" will have to be adjusted by considering required restoration/renovation costs as well as the amount and value of land in each transaction.

A third strategy for determining the value of the historic homes is to use an income approach. The article cautions that utilizing this method is "basically dangerous" since it is often based on hypothetical situations that may or may not be possible or probable.

Coffin, Donald A. 1989. "The Impact of Historic Districts on Residential Property Values." *Eastern Economic Journal* 15: 221-28.

Using hedonic regression Coffin analyzes the relationship between local historic district designation and residential property value in Aurora and Elgin, Illinois. In Aurora, local designation is accompanied by a preservation ordinance that requires owners to obtain a certificate of appropriateness for alterations and repairs. In Elgin, local designation has no such restrictions. Coffin finds that designation increases property values by 7 percent and 6 percent in Aurora and Elgin, respectively. The differences in the increase in value may be due to the extent of regulation, but Coffin is hesitant to make this hypothesis (because of recent homeowner controversy elsewhere in the state over the added costs of making repairs in historic districts). He also examines the interaction among value, designation, and location in a low income area and concludes that designation may have influenced some buyers to consider housing in an area they might otherwise have overlooked, supporting the policy rationale that districts help revitalize older neighborhoods.

Cohen, Michael. 1980. "Historic Preservation and Public Policy: The Case of Chicago." *The Urban Interest* 2, 2 (Fall): 3-11.

Cohen seeks to test two theories that he thinks explain a renewed interest in historic inner-city neighborhoods. The "architectural theory" posits that upper-middle class historic district homebuyers are attracted to the architectural quality of the neighborhoods, having become disenchanted with modern suburban architecture. The "population theory" suggests that professional, managerial and service industry workers, who tend to be young, well educated and without children, are drawn to inner-city locations because of their cosmopolitan character and nearness to their places of employment.

Using census tract level data, the author tests a number of hypotheses. If the architectural theory is true, Cohen thinks that house value and the socioeconomic status of inhabitants ought to be rising higher over time in historic districts than in adjacent areas. On the other hand, if the population theory is true, then the location of the neighborhoods ought to be the motivating factor. Socioeconomic status should be the same in historic districts and immediately adjacent areas.

Cohen finds evidence to support his architectural theory; property values and SES rise more rapidly in historic districts than in neighboring, undesignated areas. However, he also finds little difference in SES between historic district residents and those who live just outside the districts, with the exception of one variable: district residents are wealthier. Cohen concludes that there are two historic

district submarkets: those who buy and restore homes in historic districts and those a little less wealthy who cannot afford buying within the district but settle in adjacent areas to share in the prestige and economic spillover effects. He recommends that cities actively survey and designate historic districts to facilitate middle and upper-middle class resettlement of the inner city, perhaps even encouraging them with tax incentives.

Coulson, N. Edward and Michael L. Lahr. 2005. "Gracing the Land of Elvis and Beale Street: Historic Designation and Property Values in Memphis," *Real Estate Economics*, 33, 487-507.

This study seeks to establish a relationship between historic district designation and residential property values using a hedonic regression of several thousand properties in 11 different Memphis neighborhoods. Appraisal data was obtained from the county assessor's office (n=5889); the impact of designation is measured in appreciation rates over a four-year period. Standard property features and neighborhood characteristics were controlled for, in addition to other less common variables including exterior building material and architectural style. The authors find that local designation adds between 14-23 percent to the appreciation rate compared to homes in undesignated areas. Appreciation rates are higher in locally designated areas than in federal historic districts, suggesting that buyers value the added preservation restrictions (protections). Newly-constructed properties in local historic districts surprisingly reap the greatest economic benefit from designation.

Coulson, N. E. and R. Leichenko. 2001. "The Internal and External Impacts of Historical Designation on Property Values." *Journal of Real Estate Finance and Economics 23*: 113-124.

Coulson and Leichenko determine the economic impact of historic designation on both properties that are designated (internal impacts), and on properties near those that are designated (external impacts). They conduct their analysis on properties in Abilene, Texas, where historic houses are listed individually, as opposed to in districts. This enables the researchers to more accurately assess the external benefits of historic designation within neighborhoods, rather than between them. Abilene also offers property tax abatements for locally-designated historic properties; a cost/benefit analysis is conducted to determine if revenues lost in the tax breaks are made up by increased tax assessments on historic properties and their surrounding units. A hedonic regression is conducted, taking account of standard structural variables associated with the properties and demographic characteristics of the neighborhoods. The authors determine that local designation adds about 17.6 percent to the value of the house. Furthermore, the value of an undesignated house increases 0.14 percent for every designated house in its census tract. The average house value in the study area is $40,000, resulting in an average increase in price of about $560 for each designated house. Multiplying this figure by the number of houses in each census tract, the researchers estimate that local designation adds about $4.5 million to the value of Abilene real estate; taxed at a 1 percent rate, the internal and external impacts of designation on municipal revenues would be at least $40,000. The local tax abatement program costs the city only $23,000 a year, leading Coulson and Leichenko to conclude that the fiscal benefits of designation outweigh its costs.

Dolman, John P. 1980. "Incremental Elements of Market Value Due to Historical Significance." *The Appraisal Journal* (July): 338-53

Dolman attempts to determine if the history of a property yields a value increment above and beyond its highest and best use, particularly in cases of eminent domain disputes. As a case study, he considers the value of Val-Kill, the home of Eleanor Roosevelt, located in Hyde Park, NY. A review of the past relevant literature and an examination of historic property appraisals lead Dolman to conclude that while others have arbitrarily attributed a 100-300 percent increment to the historic value of a property, there is little consistency and certainly no "magic formula" for its calculation. In conclusion, a two-step appraisal process is recommended: first determine the value of the highest and best non-historic use for the property. Second, add to this value a percentage increment to account for the historic status, which should be based upon a number of factors including: associated people and events; condition and age; architectural design and integrity; cost of restoration and administration (for public use); educational potential; suitability for adaptive reuse; and relationship to other local historic resources.

Engle, Robert F., and John Avault. 1973. *Residential Property Market Values in Boston*. Boston: Boston Redevelopment Authority, Research Department.

Ford, Deborah Ann. 1989. "The Effect of Historic District Designation on Single-Family Home Prices." *Journal of the American Real Estate and Urban Economic Association* 17, 3.

Ford examines the relationship between local historic district designation and residential property values in Baltimore, MD. The prices of homes are compared in neighborhoods before and after historic designation, using MLS and census data. A hedonic analysis is conduced with three housing characteristics and four neighborhood variables. The author finds that designation has a significant positive affect on residential values.

Gale, Dennis E., *The Impacts of Historic District Designation in Washington, D.C.* NTHP Dollars & Sense of Historic Preservation, #7.

This paper examines the impact of historical preservation on property prices and values in order to determine if historic preservation does result in the displacement of the current population. The study compares three neighborhoods both before and after historic designation. It also compares these three neighborhoods with three nondesignated neighborhoods. The study found that there was no increase in rated growth of assessments in the pre- and post-preservation periods. Second, there was not much difference in property value between the districts designated as historic districts and those that were not, out of proportion to the general economic conditions at a city level. The study did, however,

recognize two problems: it did not control for the time of designation; and distortions may be caused by the federal income tax code.

Goldstein, M. Robert, and J. Michael. 1979. "Valuation of Historic Property." *New York Law Journal* (December 31): 1 [Only available CU microfilm]

Gordon, Ray L. 1974. "Valuing Historically Significant Properties." *The Appraisal Journal* (April): 200-209.

This article provides general guidelines for the valuation of historic properties in blighted neighborhoods with examples drawn from Savannah, GA. It recommends evaluating neighborhood trends to determine if rehabilitation and redevelopment will be forthcoming. Rehabilitated structures with between 2-6 residential units often show poor cash flow ratios. It concludes that the market approach to valuation is best (assuming an active market), adjusting for variables of size, location, neighborhood, and intact historic fabric.

Haughey, Patrick, and Victoria Basolo. 2000. "The Effect of Dual Local and National Register Historic District Designations on Single-Family Housing Prices in New Orleans." *The Appraisal Journal* (July): 283.

Affects of historic designation on property values are considered for New Orleans between 1992 and 1996. The authors specifically seek to determine if there are differential impacts of dual local and federal listing, as opposed to only federal listing. They conduct a hedonic regression of housing, neighborhood, time of sale, and historic listing variables, in addition to the distance to the central business district measured using GIS Spatial Analyst. Data was obtained from MLS (n=4,376) and census. The findings suggest that housing prices are 33.1 percent higher in federal historic districts, and 23.1 percent higher in dual local and federal listing, compared with unlisted houses. The authors speculate that the higher degree of regulation accounts for lower property values in local districts compared to federal districts. The age of a house is positively significant (those older are more valuable), as is distance to the CBD (those close are more valuable).

Jenkins, Diane, and Jenkins Appraisal Services, Inc. 1997. *A Summary Report Concerning the Impact of Landmarking on Residential Property Values, Palm Beach, Florida*. Palm Beach, FL: Preservation Foundation of Palm Beach.

Leichenko, Robin M., et al. 2001. "Historic Preservation and Residential Property Values: An Analysis of Texas Cities." *Urban Studies* 38, 11: 1973.

The article expands on prior studies by examining a large pool of MLS and appraisal data from nine Texas cities. It begins with a thorough literature review and explanation of the two primary methods for evaluating the affect of designation on property values: difference-in-difference analysis, and hedonic regression. Description of findings and methods are better than any other similar study conducted to date. The authors conclude that local historic designation has a positive effect on house values in all cities, ranging from a 5-20 percent price premium over non-designated residences. National and state designation conferred a greater price premium than did local listing, all other variables held constant. Average increase in property value due to historic designation is calculated in each city. Policy implications of findings—desirability of tax exemptions/abatements—are discussed.

Leimenstall, Jo Ramsay. 1998. "Assessing the Impact of Local Historic Districts on Property Values in Greensboro, North Carolina." Occasional Paper No. 14. *Dollars & Sense of Historic Preservation* (National Trust for Historic Preservation, 1998).

Listokin, David. April 1985. "The Appraisal of Designated Historic Properties." *The Appraisal Journal.*

General rules and considerations for appraising designated properties are discussed at length in the context of the three common real estate valuation techniques. When using cost approach, land and improvement values must be based on current use, not highest and best use. The author does not suggest specific incremental adjustments; rather, he suggests that factors such as replacement vs. reproduction, and elements of depreciation must be carefully considered. A detailed appraisal case study of Town Hall in Manhattan is included. The article greatly expands upon the prior literature.

Listokin, David, et all. 1982. *Landmark Preservation and the Property Tax: Assessing Landmark Buildings for Real Property Taxation Purposes.* New Brunswick, NJ: Center for Urban Policy Research and New York Landmarks Conservancy.

Lockark, W. E., Jr. and D. S. Hinds. 1983. "Historic Zoning Considerations in Neighborhoods and District Analysis." *Appraisal Journal* 51: 485-497.

The study attempts to determine if historic district zoning and architectural quality influence property restoration using difference-in-difference statistical analysis. Building permit data is evaluated to calculate "rates of restoration" for different districts: i.e. the percentage of structures in area for which permits were granted for restoration activities in a given time period. The author conducts two analyses, cross sectional—rates of restoration in historic district compared to non-historic district— and longitudinal—rates of restoration of before designation and after designation in same district.

The longitudinal analysis is inconclusive. Cross sectional analysis finds that restoration activity was positively correlated with districting for residential property, but not commercial; the causality is hard to determine. Architectural quality is even more strongly associated with restoration activity, residential and commercial; owners are more likely to restore higher quality architecture.

Maisenhelder, Howard. 1969. "Historical Value or Hysterical Value." *Valuation* 17, 1.

Maisenhelder warns appraisers against arbitrarily assigning a percentage above normal market value for the historical significance of a property. The article is interesting for the author's circumscribed understanding of historical significance, which is probably an accurate reflection of the dominant way of thinking about preservation at the time. He concludes that "If you can't find substantial answers to WHO lived there, WHAT happened there, WHEN did some Historic event take place there, or WHERE is the significant linkage into history, then forget it "Buster," you just have an old piece of real estate," which presumably does not have much value.

Morton, Elizabeth. 2000. *Historic Districts are Good for Your Pocketbook: The Impact of Local Historic Districts on House Prices in South Carolina*. State Historic Preservation Office, South Carolina Department of Archives and History, 2000. (http://www.state.sc.us/scdah/propval.pdf).

Morton summarizes a report prepared by John Kilpatrick of the University of South Carolina's College of Business in which sales data was used to measure the relationship between local landmark district designation and property values in nine South Carolina cities. The sample sizes are small. Difference-in-difference and hedonic regression analysis are used (different methods used in different cities). She concludes that districting resulted in major increases in property values.

New York Landmarks Conservancy. 1997. *The Impacts of Historic District Designation — summary*. Study conducted by Raymond, Parish, Pine and Weiner, Inc.

Noonan, Douglas S. 2007. "Finding an Impact of Preservation Policies: Price Effects of Historic Landmarks on Attached Homes in Chicago, 1990-1999," *Economic Development Quarterly* 21:1, 17-33.

Rackham, John B. 1977. *Values of Residential Properties in Urban Historic Districts: Georgetown, Washington, D.C., and Other Selected Districts*. Washington, DC: Preservation Press.

This research paper compares property values in a historic district (Georgetown in Washington, D.C.) to those outside this neighborhood. Property values in Society Hill (Philadelphia) and other historic districts are also briefly noted. Side-by-side comparison indicates that historic status increases property value. In the words of the study, "The imposition of historic district controls in an area,

complemented by the general recognition that they have been appropriately placed, results in the following pattern of residential property demand and value: available quality housing in reasonable condition within the district is marketed readily at increasing price levels; existing housing in poorer condition is acquired—often by developers—and renovated; and land for building sites, if available, is obtained and improved in conformance with architectural controls."

Assessment/property-tax implications resulting from the property value appreciation within the historic neighborhoods are also considered. Various assessment strategies to alleviate inequitable landmark property taxation are reviewed, such as assessment at current use. The District of Columbia's efforts in this regard are highlighted.

Reynolds, Anthony and William D. Waldron. 1969. "Historical Value—How Much is it Worth?" *The Appraisal Journal* (July).

This article represents an early attempt to address the issue of appraisal and historic value. It is of interest mainly as a historic document reflecting appraisers' growing awareness of historic properties in the pre-bicentennial era. The appraisal profession's interest in the problem of valuing historic properties was initially drawn by federal condemnation of a number of historic buildings in the 1960s and '70s in which disputes often arose over the level of just compensation.

Reynolds, Judith, and Anthony Reynolds. 1976. *Factors Affecting Valuation of Historic Properties*. Information: From the National Trust for Historic Preservation. Washington, DC: Preservation Press.

This paper presents an appraisal process for valuing landmarks. It notes the importance of proceeding in a step-by-step process that includes definition of the appraisal problem; identification of the property's environment and physical and historical characteristics; examination of alternative uses, including the actual use; collection of data; and estimating value through one or more accepted appraisal approaches.

The paper stresses the importance of considering the "variable characteristics" of the landmark, including site features, improvement level/type, historical significance, as well as the "qualifications" for highest and best use. These characteristics must be examined on a case-by-case basis. In the words of the authors, the "highest and best use of a property with significant historical association or character, if the property is located in a complementary environment and its physical integrity is high, may include preservation or restoration; for historical properties of lesser significance, the highest and best use may be preservation through adaptive use such as conversion of a dwelling to a law office; finally, if the aspects of physical integrity, functional utility and environment are insufficient to warrant preservation, then the highest economic use may be demolition of the structure."

Reynolds, Judith. 1997. *Historic Properties: Preservation and the Valuation Process.* Chicago: American Institute of Real Estate Appraisers, second edition.

Reynolds provides an eclectic publication combining the history of historic preservation, architectural style guide, property valuation analysis, glossary, and directory of common preservation contacts (SHPOs, NPS, etc—but not appraisal specialists). Chapters 5-8 discuss the three valuation approaches with respect to historic properties; chapter 9 covers issues relating to preservation easements. Analysis of the topic is general and does not make good use of the prior literature. More concise and useful is Listokin's "The Appraisal of Designated Historic Properties," 1985.

Rypkema, Donovan D. 1994. "The Economic Effects of National Register Listing." *Cultural Resource Management* 17, 2.

This is a brief, 2-page discussion of the market value of historic properties. It includes a fascinating chart illustrating the relationship between the aggregate number of National Register listings and tax code revisions over time. His point is that the value of historic properties is often a reflection of preservation incentives and the extent to which the market attaches economic significance to the phrase "listed on the National Register."

Rypkema, Donovan D. 2002. "The (Economic) Value of National Register Listing." *Cultural Resource Management* 25, 1.

A concise, 2-page review (w/o citations) of the positive economic benefits of creating historic districts. National Register districts are often stepping stones to local landmark designations; both are an index of the level of local political support for historic preservation. This is largely a restatement of his 1994 CRM article.

Samuels, Marjorie R. 1981. *The Effect of Historic District Designation to the National Register of Historic Places on Residential Property Values in the District of Columbia*. Masters thesis, Department of Urban and Regional Planning, George Washington University, Washington, D.C.

Schaeffer, Peter V., and Cecily Ahern Millerick. 1991. "The Impact of Historic District Designation on Property Values: An Empirical Study." *Economic Development Quarterly* 5: 301.

This study seeks to establish a relationship between historic designation and property values. It uses a hedonic regression analysis that considers a number of property and neighborhood characteristics, as well as interest (cost of capital). Sales data was obtained from one realtor (n=252). National Register listing increased property values in three districts by between 24 percent and 53 percent; however, local landmarks designation lowered the positive effects of the national districting in two of the subject areas, suggesting that buyers considered the restrictions resulting from local designation to be overly burdensome. Study is significant for its analysis of interest rates and purchase behavior

(correlations in data suggest that when borrowing becomes more expensive, buyers partially absorb the cost of debt by purchasing smaller and older houses, with fewer amenities) and for the fact that sales prices in the study area as a whole were declining; designation raised values even in a declining real estate market.

Warsawer, Harold. 1976. "Appraising Post-Revolutionary Houses." *The Appraisal Journal* (July).

Like the Reylonds and Waldron article of 1969, this is another early attempt to address the issue of appraisal and historic value. The author reviews the appraisal of nine federal-era houses in lower Manhattan, some of which were moved for urban renewal from the area surrounding the Washington Street food market, and all subsequently sold by the city as building shells. A combination of the market and cost approach was used for appraisal. Photographs of subject properties are included. The article is interesting for its references to urban renewal, condemnation, and urban redevelopment of historic property in the bicentennial era.

Real Estate and Community Development

Architect Willoughby Marshall, Inc. 1975. *Economic Development through Historic Preservation: Apalachicola Planning Study, Phase One.* Cambridge, Mass.: Architect Willoughby Marshall.

Funded with a grant from HUD's Urban Planning Assistance Program (Section 701 grant), this three-volume study considers the economic potential of historic preservation in Apalachicola, Florida, a small town of 3,100 residents in 1976, located on the Gulf of Mexico in the northwest part of the state. Volume One is a survey of the town's cultural resources, including a breakdown of architectural periods and styles, an archeological assessment, and analysis of the historic town plan; all are illustrated with line drawings and fold-out maps. A basic market analysis of the town's tourism potential is considered; vehicle destination surveys and regional competition in the historic preservation tourism market is assessed. Volume Two includes recommendations for the administration and management of local preservation activities, the use of public funds, and the integration of preservation planning with comprehensive planning. Volume three is a strategy to include citizen participation in the planning process.

An early example of a preservation planning study funded by HUD, the report is also unique for its time in its emphasis on the economic potential of historic preservation, envisioned as a key to "economic revival." The analysis considers the potential increase in the valuation of residential properties in historic districts as well as the direct and indirect employment potential generated by preservation and tourism activities.

Bailken, Michael D. 1981. "Development Alternatives for Preservation for Non-Profit Organizations." *Symposium on Historic Preservation. Pace Law Review* 1, 3: 699-704.

Bailken provides a brief discussion of four economic development programs that where, at the time, just becoming available for historic preservation projects: 1) Community Development Block Grant Program (CDBG); 2) Urban Development Action Grant (UDAG); 3) Title IX program of the Federal Economic Development Administration (EDA); and 4) local tax abatement programs. Highlighted is CDBG use in the rehabilitation of the Loew's Kings Theater on Flatbush Avenue in Brooklyn, and EDA support of a mill adaptive reuse in Patterson, NJ.

Birch, Eugenie. "The Planner and the Preservationist: An Uneasy Alliance," *Journal of the American Planning Association* 50:2 (Spring, 1984): 194-207.

Since WWII, planners have gradually narrowed the scope of their analysis from the region to the city, which preservationists have slowly expanded their scope of concerns from the single memorial structure to urban and rural districts.

Planners and preservationists began to speak a common language and make use of increasingly similar tools following WWII: local district zoning; Transfers of Development Rights.

Planner and preservationists at greatest odds immediately following WWII. Housing and Slum Clearance Act of 1949 funded the destruction of "blighted" urban renewal areas.

Mid 1960s Demonstration and Metropolitan Development Act of 1966 and the Neighborhood Development Program of 1968 call for small scale physical interventions combined with social service programs. Creation of Urban Development Action Grants in 1977 enabled local municipalities to make flexible use of federal dollars; preservation development projects benefited from its availability.

Read *Breath on the Mirror: Seattle's Skid Row Community* (1972) Lorrie Olin.

*Cheverine, Carolyn, Ells Hayes and Charlotte Mariah. 1990. "*Rehabilitation Tax Credit: Does It Still Provide Incentives?" <u>*Virginia Tax Review*</u> 10, 1 (<u>Summer</u>): 167.

An update and expansion on Van Sanders' 1984 article, including an analysis of 1986 ERTA implications for historic property investment. Describes in detail the current tax code provisions (adopted as Tax Reform Act of 1986) for historic buildings such as partnership requirements, passive activity restrictions, three-part tax credit application process, as well as how the credits are allocated among partners and ultimately claimed. Contains section on case law relevant to 1986 revisions. All sources are scrupulously detailed.

Combining the Tax Credits: Proceedings of a Symposium on Ways to Encourage Investment in Historic
    Preservation and Low-Income Housing through the Combined Use of the Historic Rehabilitation Tax
    Credit and the Low-Income Housing Tax Credit. 1998. Cosponsored by the National Park Service
    and Historic Preservation Education Foundation (June).

> This report summarizes issues discussed at a symposium attended by preservationists, real estate
> developers, and financial specialists on combining the Historic Rehabilitation Tax Credit (ITC) and
> the Low Income Housing Tax Credit. It is divided into five major sections that address: 1) State
> Qualified Allocation Plans; 2) cost per unit limits; 3) financial issues; 4) process/timing/coordination;
> and 5) education. Each section begins with a statement of goals followed by proposed actions.
> Overall themes of the report include a need for State Historic Preservation Offices to coordinate
> reviews and share program implementation concerns with State Housing Finance Agencies; the goal
> of educating developers on the joint use of the ITC and Low Income Tax Credit, particularly with
> respect to requirements and project timing; the desirability of amending the tax legislation
> (particularly the ITC) to make it more compatible with the Low Income Tax Credit and more
> attractive to affordable housing developers.

Costello, Dan. 1996. "Transportation Enhancements: Historic Preservation and Community
    Revitalization." *Historic Preservation Forum* 11(1): 33–44.

> Costello highlights preservation projects funded by grants authorized by the Intermodal Surface
> Transportation Efficiency Act of 1991 (ISTEA). Unlike past Federal Highway Administration
> programs, ISTEA gave states and localities flexibility in the use of transportation funding, which
> enabled investment in preservation projects such as the adaptive reuse of historic transportation
> buildings, and the installation of landscaping and period lighting in main street historic districts.
> Briefly profiled are ISTEA-funded projects in West Memphis, Nebraska; Greeneville, Tennessee;
> and Detroit, Michigan.

Delvac, William F., Christy Johnson McAvoy and Elizabeth Morton, eds. 1992. *A Preservationist's Guide*
    to the Development Process. Oakland: California Preservation Foundation.

Douthat, Carolyn. 1994. *Economic Incentives for Historic Preservation: Oakland, California*. Oakland,
    CA: Oakland Heritage Alliance.

> This report briefly reviews the economic and environmental benefits of historic preservation and
> then, based on a survey of programs and incentives offered in fifteen cities, recommends a strategy
> for promoting preservation activities in Oakland. Included in the recommendations are: survey and
> expansion of local historic districts; establishment of design guidelines; various façade improvement
> programs financed by revolving loan funds, tax credits/abatements, and matching grants; technical
> assistance for design, legal, and businesses services; job training targeted at low-income youth;
> municipal support for a preservation demonstration project; and solicitation of Mills Act contracts,

which assesses local property value based on capitalized income, rather than market value. The survey of economic incentives for 15 cities is included as an appendix.

Douthat, Carolyn, and Elizabeth Morton. 1997. *Preservation and Property Taxes: Capitalizing on Historic Resources with the Mills Act.* 2nd ed. / rev. by Michael Buhler. Oakland, Calif.: California Preservation Foundation.

Escherick, Susan M., Stephen J. Farneth, and Bruce D. Judd. *Affordable Housing through Historic Preservation*. Washington, DC: USGPO, n.d.

Discussed in this publication are strategies for overcoming common problems encountered when creating affordable housing in historic buildings using the Historic Rehabilitation Investment Tax Credit (ITC). The booklet is divided into three sections. The first section addresses general approaches for solving adaptive reuse design problems, such as solutions for accessibility, structural modifications, hazardous materials remediation, and code compliance. Section two is comprised of eleven affordable housing/historic building case studies. The third section includes appendixes on the Section 106 process, led paint abatement, and building codes. Consultation with the SHPO and NPS early on in the project to identify character-defining historic features and formulate creative design solutions for meeting the Secretary of the Interior's Standards is emphasized throughout. Overall, the publication largely deals with design issues and, with the exception of brief project timelines provided with the case studies, none of the sections tackle the more problematic financial and scheduling difficulties of combining the ITC with the Low Income Housing Tax Credit that were identified in the NPS's 1998 symposium on the topic.

General Assembly, The State of Georgia. 1987. *Economic Development through Historic Preservation.* Report of the Joint Study Committee, General Assembly, State of Georgia.

Larsen, Kristen. 1989. "Revitalizing the Parramore Heritage Renovation Area: Florida's State Housing Initiatives Partnership Program and Orlando's Historic African-American Community." *Housing Policy Debate* 9(3): 595.

State housing trust funds were developed in the late 1970s and '80s in response to cuts in federal funding for low income housing. Florida established a State Housing Initiatives Program (SHIP) in 1992, which within two years became the largest trust fund of its kind in the country; it was designed to allow local government's maximum flexibility to make funding decision and set development priorities. Orlando targeted its SHIP funding to the Parramore Heritage Renovation Area, a historic African American community. The article is a detailed assessment of Parramore area neighborhood strategic planning, housing funding priorities, and implementation of SHIP resources. Lessons learned in the first three years of SHIP funding in Parramore indicate that to be successful, planners

and program administrators must: 1) facilitate public-private partnerships, particularly with for-profit developers; 2) encourage home ownership; 3) increase the number of moderate-income residents; 4) decrease density; 5) and increase flexibility of the SHIP program, extending deadlines and amending other problematic "accountability" provisions. The author also recommends that planners rethink funding guidelines that require new construction if the cost of housing rehabilitation is greater than $25,000; a sensitivity to the neighborhood's historic housing stock may be key to drawing middle-income owners into the area.

Leith-Tetrault, John. 1998. "Preserving Rooms with a View on History." *NeighborWorks Journal* 16, 3:4–7. [Unavailable]

Listokin, David, Barbara Listokin, and Michael Lahr. 1998. "The Contributions of Historic Preservation to Housing and Economic Development." *Housing Policy Debate* 9(3): 431.

The authors review the past literature on the economic contributions of historic preservation, identify preservation and economic development incentives and initiatives, and, where possible, quantify the magnitude of preservation's impacts on rehabilitation, housing, heritage tourism, and downtown revitalization. Possible adverse effects of preservation on communities, such as displacement and overzealous application of preservation standards, are considered.

Much of the article's quantitative data comes from the 1997 study *Economic Impacts of Historic Preservation* by David Listokin and Michael Lahr. Nationally, rehab accounts for nearly 20 percent of total construction activity; it represents 50 percent or more of the total construction activity taking place in cities (where the building stock is generally older.) In FY 1994, there was $44 billion of permitted rehabilitation in the United States, approximately 5 percent of which ($2.2 billion) was historic rehabilitation. This historic rehabilitation has a catalytic effect, encouraging rehab of adjacent non-historic structures.

A far greater economic benefit from historic preservation is realized in the form of heritage tourism. The authors estimate that "5 percent of all trips in the United States are heritage related, and it is likely that at least $20 to $25 billion is spent each year for heritage travel." The total economic benefits of rehabilitation and heritage tourism (which include the direct investment plus indirect and induced economic impacts) are calculated using an Input/Output model. Preservation is shown to create more jobs, generate more wealth, and yield greater state and local taxes than other non-preservation investments like, new building construction, highway construction, and book publishing.

Preservation activists and developers have also pioneered the revision of building codes to facilitate the renovation of older and historic buildings. Preservation has made significant contributions to affordable housing. The article reports that "Of the 239,862 total housing units completed under federal historic preservation tax incentive auspices since the late 1970s, 40,050, or almost one-fifth, were affordable to low- and/or moderate income (LMI) families." This percentage appears to be rising.

Preservation can have negative consequences when it results in displacement, or when historic district design standards conflict with the creation of low income housing. The authors recommend ways to minimize these conflicts by increasing tax incentives for preservation projects that creating low-income housing, and by adopting a tiered system of historic designation that relaxes some preservation restrictions by recognizing multiple levels of historic and architectural significance.

Listokin, David, and Barbara Listokin, eds. 1993. *Preservation and Affordable Housing: Accomplishments, Constraints, and Opportunities*. New Brunswick, NJ: Center for Urban Policy Research. [Cannot locate copy in library system]

MacRostie, William G. 1994. "Combining Historic Rehabilitation and Housing Tax Credits Makes Good Economic Sense, Project Sponsors Explain." *Tax Credit Advisor* 5(3): 1, 10–11. [Requested ILL]

MacRostie, William G. 1997. "Historic Rehabilitation Tax Credit and Its Combination with the Housing Tax Credit." *Tax Credit Advisor* 7, 6: 4–6. [Requested ILL]

McCall, Dan. 2005. "Are There Added Preservatives in Section 170(h) of the Tax Code?: The Role of Easements in Historic Preservation." *Real Property, Probate and Trust Journal* 39, 4 (Winter): 807.

Section 170(h) of the Federal Tax Code allows owners of "Certified Historic Structures" (those listed on the National Register of Historic Places) to donate facade easements, which enable them to take deductions for a charitable donation on their federal and state income taxes. Easements may also lower property taxes. McCall asks: "What do façade easements do that local preservation laws do not already do?" He argues that the value of easements is not as high as is now commonly believed. The fair market value of the easement is calculated by subtracting the value of the house after easement donation from its value before donation. Before and after valuations can be calculated using any of the three appraisal approaches—market, income, or replacement, though the market approach is generally preferred for residential property. Using the market approach, the appraiser must determine the reasonably "highest and best use" before and after the easement donation. A key consideration is whether the façade easement is more burdensome than existing local zoning and preservation restrictions. However, because property owners and easement holding organizations are free to draft the terms of the restrictions, they may elect to go beyond the scope of local preservation ordinances—by including in the easement the side and rear facades, or the interior, all of which are not typically restricted by local landmark commissions—thus increasing the value of their donation. No value can be ascribed to the fact that the easement exists in perpetuity while local zoning is potentially subject to change at some point in the future. Relevant case law (all dealing with commercial properties appraised with the income approach) suggests that the value of an easement

is approximately 10 percent of the value of the property, although the courts have made some exceptions, granting easements valued at between 10-30 percent where a greater diminution of value is supported by compelling market evidence or testimony documenting that the easement imposes a substantial burden on the owners above and beyond existing local controls. Still, McCall notes recent IRS statements warning that there is no 10 percent rule for easement valuations (or any other fixed percentage of the fair market value); appraisals must be based on the "facts and circumstances," and as more easement-encumbered buildings are sold though arms-length transactions, the value of their easements will be calculated more precisely. While McCall still believes there is preservation value in façade easements, he doubts whether they will prove to have a 10 percent financial value.

Nagy, John. 2002. "Preservation Tax Credits Working Too Well?" www.stateline.org.

Nagy reports that some states with historic preservation tax incentive programs are worried that they may be costing the government too much as they contribute to budget shortfalls. While few seem to deny the benefits of preserving historic buildings or the contributions of historic preservation to "Smart Growth" initiatives, lawmakers in Maryland and elsewhere failed to anticipate the popularity of the program. As the amount of credits being claimed skyrockets, Maryland is considering lowering the percentage of the rehab credit that it allows and perhaps capping the yearly amount of credits available, with applicants competing on a first-come, first-serve basis.

Powers, Lonnie A. 1980. "Tax Incentives for Historic Preservation: A Survey, Case Studies and Analysis." *The Urban Lawyer* 12, 1: 103-33.

The author reviews six different tax law strategies used by the states to promote historic preservation: 1) property tax exemption, full or partial; 2) property tax abatement, including different rates of taxation; 3) property tax credits for rehabilitation; 4) property tax assessment based on current use (as opposed to "highest and best"); 5) property tax assessment to reflect preservation encumbrances, whether private (easements) or imposed by government (local preservation ordinance); and 6) property assessment freezes for a fixed period of time. Variations on each strategy are discussed with reference to state enabling legislations. Next, the preservation provisions of the Tax Reform Act of 1976 are briefly examined. The final section analyzes as case studies the implementation of state preservation incentives in Maryland, Oregon, and Washington, DC. The author concludes that tax incentives for which "the quantity of relief is dependent on the income of the owner or the value of the building" are regressive. As an alternative, Powers suggests creation of a tax incentive that is simple, self administering, and only compensates owners for actual dollars invested in preservation; if financial circumstances prevent the owner from using the deduction (due, for instance, to insufficient tax liability) then the difference should be paid as a reimbursement.

Pruetz, Rick. 1997. *Saved by Development: Preserving Environmental Areas, Farmland and Historic Landmarks with Transfers of Development Rights*. Burbank, Calif.: Arje Press.

Transfers of development rights (TDRs) have evolved in sophistication and extent of use since Costonis published his seminal book on the topic, *Space Adrift*, in 1974. TDRs enable the unused development potential of a site to be sold and transferred to another location, thereby permitting greater density than would otherwise be permitted under existing zoning. Pruetz explains how TDRs can be used to encourage the development of low income housing and other desirable uses and to preserve historic buildings, farmland and environmentally sensitive areas. Because TDRs preserve historic and natural resources through private market investments, they are an attractive alternative to traditional preservation incentives like tax credits and abatements that result in a loss of municipal revenue. Covered in this book are the reasons for using TDR, the procedure for their establishment, legal precedents, and numerous case studies that document variations on the TDR mechanism. The author conducted a mail survey to identify existing TDR programs and to ascertain reasons why other municipalities are do not use them. Historic building TRD programs profiled in this book include the following municipalities: New York, Los Angeles, Seattle, Atlanta, San Francisco, Washington, West Hollywood, Delray Beach, Pittsburgh, New Orleans, San Diego, Scottsdale, Dallas, Denver, Portland, and Charlotte County, Florida.

Ramirez, Constance and Donald R. Horn. 1999. "The Economics of Preserving Historic Federal Buildings." *Forum News* 6, 1 (Sept/Oct.).

Summarizing the findings of a larger study prepared by the U.S. General Services Administration (GSA), the authors report that historic buildings are surprisingly cost effective for the government to own, manage, and maintain. Approximately 450 buildings owned by the GSA, about 25 percent of all its buildings, are considered historic. The cost to own and manage these buildings was compared against industry standards for new office space obtained from the *Building Owners and Managers Association Experience Exchange Report.* The GSA found that their historic buildings had lower operating costs and generated greater revenues and better return on investment than the more modern buildings in its real estate portfolio; buildings constructed in the 1970s received the worst cost ratings for maintenance and operations. Historic buildings often had considerable energy saving advantages over newer buildings. Found to be most vulnerable from an economic perspective, however, were small historic buildings with less than 25,000 square feet. The citation for the full report is: Wolf, Bradley, Donald Horn, and Constance Ramirez. 1999. *Financing Historic Federal Buildings: an Analysis of Current Practice.* Washington: General Services Administration, Public Buildings Service, Office of Business Performance.

Rypkema, Donovan D. 1994. *The Economics of Historic Preservation: A Community Leaders' Guide.* Washington, DC: National Trust for Historic Preservation.

Rypkema, Donovan D. *The Investor Looks at a Historic Building.* NTHP Dollars & Sense of Historic Preservation, #6.

This reprint of a speech, presented by Donovan D. Rypkema at the American Monument Forum in 1991, urges preservationists to understand that developers are rational investors who seek profitable rehabilitation opportunities. Unfortunately, there is often a gap between the cost to rehabilitate a historic building and its economic value to an investor; and it is not the investor who primarily reaps the "values" that preservationists hold so dear—aesthetic value, cultural value, historic value, etc. Therefore, preservationists must advocate for additional financial incentives to close the gap between cost and value. Instead of always focusing incentives on the supply side, new financial inducements should target the demand side for preservation—for example, a tax credit for companies who rent in historic buildings; rehabilitated historic buildings will follow demand.

Schmalbeck, M. 1985. "The Impact of the ERTA and TERA on Tax Credits for Historic Preservation." *Law and Contemporary Problems* 48, 4: 259-80.

Silver, Miriam Joels. 1983. "Note, Federal Tax Incentives for Historical Preservation: A Strategy for Conservation and Investment." *Hofstra Law Review* 10, 3: 887-924.

The author reviews the historic preservation economic incentives in the Tax Reform Act of 1976 (TRA), and the Revenue Act of 1978, the Economic Recover Tax Act (ERTA) of 1981 as well as the use of historic property as a tax shelter, and the 1980 amendments to the National Historic Preservation Act.

Slaughter, Howard B. Jr. 1997. "Integrating Economic Development and Historic Preservation in Pittsburgh, Pennsylvania." *Forum Journal* 11, 3: 41-44.

This brief article describes the partnerships that the Pittsburgh History & Landmarks Foundation formed with local banks to fund economic development and housing projects in Pittsburgh. Through two incentive programs, PH&LF offers loans to minority businesses and CDCs that operate in listed or eligible historic districts.

Stegman, Michael A. 1991. "The Excessive Costs of Creative Finance: Growing Inefficiencies in the Production of Low-Income Housing." *Housing Policy Debate,* 2(2): 357–73.

Stegman explains why the Low Income Housing Tax Credit (LIHTC) program created by Congress in the Tax Reform Act of 1986 is inefficient and costly for the government to provide and complicated for low-income housing developers to use. LIHTC program regulation force developers to creatively finance projects by layering multiple funding sources and subsidies. Arrangement of complex financing draws the resources of community-based housing organizations away from more vital

tasks, like ensuring their tenants have appropriate social services. The LIHTC's cost to the government may be twice what it delivers to projects; and "the lower the income group served, the more complicated and costly it is to arrange the financing." In an appendix, Stegman calculates that the sale of tax credits "results in a tax expenditure that is 37 percent greater than the equity that it raises." Tax credit syndication and other transaction fees further reduce the amount of money available for bricks and mortar expenses. The author concludes that low-income housing should be funded more generously and efficiently through direct capital grants. The article is relevant to preservation because inefficient application procedures and high transaction costs also characterize the Historic Rehabilitation Investment Tax Credit (ITC), which developers are increasingly using in combining with the LIHTC.

Stenberg, Peter L. 1995. *Urban Places in Nonmetro Areas: Historic Preservation and Economic Development.* Washington, DC: Economic Research Service, Rural Economy Division. ERS staff paper; no. 9512.

Van Saders, William P. 1984-1985. "Current Tax Trends Affecting Historic Rehabilitation: Catalyst of Obstacle to the Preservation of Our Nation's History." *Fordham Urban Law Journal* 13: 231-281.

Van Sanders explains in detail how investors exploited real estate tax shelters (so-called "abusive tax shelters) and limited "at risk" provisions by investing in the rehabilitation of historic properties prior to changes in the tax code implemented in 1984. The footnotes contain examples of how changes in the tax code between 1976 and 1984, such as the Alternative Minimum Tax, affected the financial attractiveness of historic rehab investment. The article is fully footnoted with citations to tax codes, court cases, real estate and tax journal literature.

Weinberg, Nathan. 1979. *Preservation in American Towns and Cities.* Boulder, CO: Westview Press, Inc.

Weinberg's chapter on adaptive reuse offers an interesting assessment of the technique's potential at a time when there were only a handful of successful examples; he briefly profiles Larimer Square in Denver, Ghirardelli Square in San Francisco, and Trolley Square in Salt Lake City. Larimer Square was developed after 1965 with "design ideas derived from suburban shopping areas, such as open courtyards, galleries, and arcades." Ghirardelli Square adaptive reuse began in 1962 and set the stylistic precedent for integration of retail functions and historic preservation; it inspired the 1966 conversion of the nearby Del Monte Fruit Company cannery into the "Cannery," another shopping and restaurant venue. In Boston, Weinberg explains how the adaptively reused Old City Hall was leased to "only tenants compatible with the image of the building, including a French restaurant and the Massachusetts Housing Finance Corporation" (Applications from McDonalds and a pornographic movie theater were turned down.) The Pike Place Market redevelopment pursued a different strategy. "In order to ensure continuity in the character of the market," an attribute that would be sacrificed if the site was sold off to separate developers, City officials and the Historical

Commission established a development authority to own and manage Pike Place. In Weinber's words, "both architectural and economic preservation are part of the project." He discusses at length the tensions between the development authority, which want to quickly lease the buildings to high volume, high capacity tenants, and the Historical Commission, which is more concerned with preserving a "traditional mix of market merchants." Residents of Beacon Hill faced a similar problem of preserving retail mix on Chester Street where the "hippie invasion" of the 1960s brought about the displacement of businesses that served the local community by "youth culture" and "trend shops" which could afford to pay higher rents. The Beacon Hill Civic Association, a neighborhood and historic preservation group, sought the help of the Boston Redevelopment Authority. The BRA recommended subsidizing the restoration of commercial facades and reevaluating city tax assessments based on the gross income of commercial tenants.

Wonjo, Christopher T. 1991. "Historic Preservation and Economic Development." *Journal of Planning Literature* 5, 3: 296-307.

Wonjo argues that historic preservation and economic development are two tools that can be used in the revitalization of failing cities. He points out that recent economic developments have often included aspects of historic preservation, and that the two jointly seek to improve city conditions, as well as conditions within communities. Wonjo then examines the history of federal involvement in preservation from the 1906 Antiquities Act until the NHPA of 1966 and the 1986 tax code incentives. He argues that the changes in the 1986 tax code were a response to flaws in the NHPA of 1966 that protected only federally owned sites and lacked an implementation capacity. Wonjo also examines local and state incentives for historic preservation, as well as the question of how planners can contribute to historic preservation efforts.

Economic Impacts of Historic Preservation

Athens-Clarke County Planning Department. *Economic Benefits of Historic Preservation in Georgia, A Study of Three Communities.* NTHP Dollars & Sense of Historic Preservation, #8.

Avault, John, and Jane Van Buren. 198*5. The Economic and Fiscal Aspects of Historic Preservation Development in Boston.* Boston: Boston Redevelopment Authority.

In this brief report the author conducts a basic fiscal impact analysis for the 197 federal rehabilitation tax credit projects completed (or at that time scheduled for completion) in Boston between 1976 and 1986. He calculates that the projects provide an estimated 9,433 jobs with a total payroll of approximately $251 million. Annual permanent job payroll of the predominantly office positions located in these buildings is estimated at $334.1 million (acknowledging that perhaps only 1/5 to 1/3 of these permanent jobs can be directly attributed to the tax credit program). The 197 projects represents a $110, 648,500 federal investment (in the form of forgone taxes), which the author

maintains is paid back in "only a few years" through taxes collected on construction and permanent jobs created in by the projects.

Avault's fiscal impact analysis uses the following assumptions in his calculation of permanent employment and income taxes: 200 square feet of space/office worker; 9 percent vacancy rate; $26,630 average construction wage; $19,822 average office wage. He also assumes that approximately 50 percent of the projects could have been completed without the tax credit, which is based on the findings of a Report to the Joint Committee on Taxation entitled "Information on Historic Preservation Tax Incentives" (GAO/GDD—84-47, March 29, 1984)

Beasley, Ellen, et al. 1976. *Historic Districts and Neighborhood Conservation: Galveston, Texas.* Galveston, TX: Galveston Historical Foundation.

Center for Business and Economic Studies. 1986. *Economic Benefits from the Rehabilitation of Certified Historic Buildings in Georgia.* Atlanta, GA: Georgia Department of Natural Resources.

This study, based on previous ones conducted in New York by deSeve Economics Associates, and in Illinois and Texas by Shlaes & Company, assess the economic benefits to Georgia derived from the 25 percent federal Historic Rehabilitation Investment Tax Credit (ITC). The ITC resulted in 482 projects completed or planned in Georgia between 1981 and 1986, valued at $190.5 million. The direct, indirect, and induced economic impacts of this investment are estimated using multipliers obtained from the US Bureau of Economic Analysis. The researchers estimate that the ITC created over 11,830 jobs, $106.4 million in household earnings, $9.6 million in state tax revenues, and $5.4 million in local tax revenues. These benefits are compared to the cost to Georgia to administer the program, which, after subtracting the 50 percent operating subsidy provided by the Department of the Interior, amounts to between only $35,000 and $44,000 a year. Also of interest are the results of a survey given to developers who used the ITC. Responses indicated that the majority thought the ITC was crucial to the success of their projects and their decisions to invest in inner-city historic properties, as opposed to new construction. They were also generally satisfied with the service provided by both the Georgia State Historic Preservation Office and the National Park Service, although many remarked that the reviews took too long, were inconsistent, and waiting for approval cost money as interest on loans accrued. The report recommends streamlining the application process and eliminating the redundant state and federal level reviews. A sample completed tax credit application is included as an appendix.

Center for Urban Policy Research. 1997. *Economic Impacts of Historic Preservation*. Trenton, NJ: New Jersey Historic Trust.

_____.1999. *Economic Impacts of Historic Preservation in Texas.* Austin, TX: Texas Historical Commission.

_____. 1999. *Historic Preservation at Work for the Texas Economy.* Austin, TX: Texas Historical Commission.

_____. 1997. *Partners in Prosperity: The Economic Benefits of Historic Preservation in New Jersey.* Trenton, NJ: New Jersey Historic Trust.

Certec, Inc. June 1997. *Economic Impact of Missouri's Tourism and Travel: 1995 and 1996.* Frankfort, KY.

Through the Certec Model and an input-output model, this report quantifies tourism impacts at state and local levels, and estimates the indirect effects of tourism dollars. The data and methods used are explained in detail. Wages and employment created by travel in MO are catalogued. The various appendices list MO's attractions and attendance figures for 1995 and 1996.

Chen, Kim. 1990. *The Importance of Historic Preservation in Downtown Richmond: Franklin Street, A Case Study.* Richmond, VA: Historic Richmond Foundation. NTHP Dollars & Sense of Historic Preservation, #10.

Chen assembles building assessment data and financial rehabilitation statistics for a historic ten-block section of Franklin Street into a brief study that underscores the economic importance of historic preservation. Rehabilitated historic properties are shown to appreciate more rapidly than new construction, thus proving to be a benefit to the city's tax rolls.

Clarion Associates of Colorado, LLC. 2002. *The Economic Benefits of Historic Preservation in Colorado.* Denver, CO: Colorado Historical Foundation.

Economic Benefits of Historic Designation, Knoxville, Tennessee. This study focuses on the effect historic designation has had on property and resale values in Knoxville, Tennessee. NTHP Dollars & Sense of Historic Preservation, #15.

Economics Research Associates. 1980. *Economic Impact of the Multiple ResourceNomination to the National Register of Historic Places of the St. Louis Business District.* Report prepared for St. Louis Community Development Agency. Boston,MA: Economic Research Associates.

The ERA study examines the economic effect of designating the St. Louis central business district by: (1) considering the impact of comparable designation activity in Seattle (Pioneer Square), New Orleans (Vieux Carre), Savannah (Historic District), and other jurisdictions; and (2) evaluating the anticipated effect of historic status on numerous prototypical buildings located in the St. Louis CBD. The consultants conclude that designating the St. Louis CBD would have both positive and negative economic impacts, and that the overall effect would depend on such variables as: (1) the applicability/continuation of federal landmark income tax incentives; (2) the type/extent of designation; and (3) future demand for CBD locations.

Government Finance Officers Association. 1991a. *The Economic Benefits of Preserving Community Character: A Case Study of Fredericksburg, Virginia.* Chicago: Government Finance Research Center.

Utilizing the methodology described in *The Economic Benefits of Preserving Community Character: A Practical Methodology* (Liethe, Muller, Petersen, and Robinson), the report examines the economic rewards gained as a result of efforts made to preserve the historic nature of the city and by providing incentives to merchants and residents to remain there. Currently, downtown Fredericksburg is made up of 350 buildings built prior to 1870 and seven 18th century homes and museums open to the public. In order to thwart the exodus of businesses and residents to suburban areas, city officials implemented several bold initiatives. They moved the visitor's center to the heart of the historic district and publicized a walking tour of significant homes and buildings. They enacted a tax exempt program designed to attract the rehabilitation of historic properties by abating from taxation a portion of the increase value over a six-year period. The city made esthetic improvements to the downtown area that included burial of overhead utility wires, implementation of historically accurate streetscaping, and improvements in traffic patterns and parking. The city also implemented the Facade Improvement Grant Program to entice shop owners to improve the appearance of their storefronts. Further, re-zoning of the downtown area to allow apartments above commercial establishments encouraged residential living. The study examined the economic benefits realized from these efforts by looking at construction activity, property values, and revenues from tourism. Construction activity provided important short-term benefits via employment of local workers, the purchase of materials from local business, and the spending of wages in the Fredericksburg area. Over an eight-year period, 777 projects totaling $12.7 million were undertaken in the historic district. These projects created approximately 293 construction jobs and approximately 284 jobs in sales and manufacturing. Area governments reaped $33,442 in building permit fee revenues, while the city accrued $243,729 in locally distributed sales tax revenues. Property values, both residential and commercial, experienced a dramatic increase. Between 1971 and 1990, residential property values in the historic district increased an average of 674 percent as compared to a 410 percent average increase in properties located elsewhere in the city. Commercial properties within the district rose an average of 480 percent compared to an increase of an average of 281 percent for other commercial properties.

The study conducted a survey of downtown merchants as well as a telephone survey to estimate the amount of money coming into the city as a result of meals, lodging, and shopping. It estimates that in 1989 alone $11.7 million in tourist purchases were made within the historic district and another $17.4 million were made outside the district, with secondary impacts resulting in $13.8 million. The fiscal benefits to the city as a result of tourism and sales are estimated at $1,128,060 ($487,200 in meals and lodging, $582,600 in state sales tax, and $58,260 from business and occupational license tax).

_____. 1991b. *The Economic Benefits of Preserving Community Character: A Case Study of Galveston, Texas.* Chicago: Government Finance Research Center.

In the early 1980s the Galveston Historical Foundation took several measures to assist owners of historic properties, including a revolving fund, design and rehabilitation advice, and a paint partnership program. The city also dedicated one cent of the hotel/motel bed tax to historic preservation by establishing tax reinvestment zones throughout the city. Utilizing the methodology described in *The Economic Benefits of Preserving Community Character: A Practical Methodology* (Liethe, Muller, Petersen, and Robinson), the report estimates the economic benefits to the private sector (property owners and retail merchants) as well as the fiscal benefits gained by the city of Galveston. These assessments were made with respect to construction activity, property values, and commercial activity. Construction activity created jobs in construction labor, retail (the sale of construction supplies), manufacturing, and induced jobs by virtue of the workers spending money in the area. Building permit data indicate that over a 20-year period 1,165 construction jobs, 86 manufacturing/sales jobs, and 874 induced jobs were created. The jobs produced $44.1 million in salary income, while the fiscal benefits to the city were $274,943 in sales tax revenues and $63,727 in building permit fees. Over a 16-year period residential sales prices in the historic district rose by an average of 440 percent and commercial sales prices rose an average of 165 percent. It is estimated that, from July 1989 to June 1990, tourists visiting the historic district spent approximately $18 million and that the multiplier effects totaled $29.1 million in sales and $2.7 million in wages. The state gained approximately $1.1 million from sales tax, while the city of Galveston earned about $0.5 million.

_____. 1995. *The Economic Benefits of Preserving Community Character: Case Studies from Fredericksburg, Virginia, and Galveston, Texas.* Chicago, IL: Government Finance Officers Association. NTHP Dollars & Sense of Historic Preservation, #5.

Hammer, Siler and George and Associates. 1990. *Economic Impact of Historic District Designation, Lower Downtown, Denver, Colorado.* Prepared for the Office of Planning and Community Development. Denver, Colorado. NTHP Dollars & Sense of Historic Preservation, #4.

Hendon, William S., et al. 1983. *Economics and Historic Preservation.* Akron, Ohio: Boekman Foundation.

> This book offers a collection of essays on the economics of historic preservation written by academics in the fields of economics, urban studies, history, and planning. It is divided into two parts: the first half includes four chapters discussing theoretical and conceptual issues of cultural economics. The second half consists of case studies in preservation economics.

> Hendon enumerates the costs and benefits of historic preservation that should be factored into an impact analysis, which range from increased tax revenue to displacement and gentrification. A chapter by F. F. Ridley considers preservation policy and the role of government in the regulation and subsidy of preservation projects, which are often claimed to be "merit goods"—i.e. intrinsically good or valuable. D. R. Vaughan warns that cultural tourism, while often proposed as a rationale for historic preservation subsidy, becomes a "Pandora's Box" when increased visitation causes building deterioration or otherwise undermines the character and atmosphere of the historic resource.

> The four case studies include analyses of: 1) management of house-opening ventures in Britain; 2) competing development proposals for the Albert Dock in Liverpool; 3) setting admission prices at historic house museums; and 4) a proposed for-profit popular culture museum.

> The concepts, methods, and theories discussed in the first half of this book are more fully developed by later contributions in the literature, particularly those by Throsby on cultural economics and Listokin on benefit analysis.

Heudorfer, Bonnie Smyth. 1975. *A Quantitative Analysis of the Economic Impact of Historic District Designation*. Masters thesis, Pratt Institute, Brooklyn, NY.

Historic Preservation Section, Georgia Department of Natural Resources. 1991. *Economic Benefits of Historic Preservation: The Impact of Historic Preservation on Local Economies in Georgia.* Georgia Department of Natural Resources, Georgia.

Hutter, Michael and Ilde Rizzo, eds. 1997. *Economic Perspectives on Cultural Heritage.* New York: St. Martin's Press. Papers presented at a conference held in Catania, Sicily from 16-19 Nov. 1995.

Johnson, Daniel G., and Jay Sullivan. 1992. *Economic Impacts of Civil War Battlefield Preservation: An ex ante Evaluation*. Unpublished paper. Virginia Polytechnic Institute and State University. Blacksburg, VA.

The authors attempt to predict the economic impact of war battlefield preservation before it is established. The methodological basis for this evaluation is a cost benefit analysis. The analysis includes foregone and projected benefits in the equation. The authors conclude that battle parks can generate important impacts for local economic development. Further, that battlefield preservation compares well with agricultural production in terms of income and employment. The benefits are, however, concentrated in the service sector.

Kaylen, Michael. March 1999. *Economic Impact of Missouri's Tourism and Travel Industry: Annual Report.* MU-Tourism Research and Development Center. Columbia, MO.

The purpose of this document is to calculate economic impacts of MO travel and tourism for the fiscal years of 1995 through 1998. The analysis is broken into two stages. The first stage estimates economic expenditures from travelers (1) while at destination, (2) while in transit, and (3) oriented with international tourism. The second stage utilizes an input-output model to estimate effects on MO's economy. Direct and multiplier effects of MO's tourism are shown in this report to have a significant impact on the state's economy. This report also describes various economic impacts through extensive charts and graphs.

Kilpatrick, John A. 1995. *The impact of historic designation in Columbia, South Carolina*. Columbia, S.C.: The State Historic Preservation Office.

This study examined actual sales transactions (as opposed to assessments for property tax purposes) in historic neighborhoods (two nationally and locally designated districts) in Columbia, South Carolina from early 1983 to mid-1995. Sales data were collected on all homes within the historic areas that had sold at least twice during the 1983 to 1995 period. Using prices and times between the sales, the study developed an index of house price appreciation within the historic district. A comparable index of price appreciation was developed in parallel for the market as a whole. Comparing these two indices, the study found that "historic properties have an average rate of return higher than [that of] the Columbia market as a whole. The price differential in the historic districts was almost 25 percent greater than the overall community.

Lane, Bob. 1982. *The Cash Value of Civil War Nostalgia: A Statistical Overview of the Fredericksburg Park.*

A report for Virginia County, Virginia argues that national parks based on civil war nostalgia suffer from an inherent contradiction. On the one hand they have been viewed as 'priceless historic jewels handed down from generation to generation, and to which no value can be assigned'; on the other hand they can be viewed as a continuing stream of cash, alternately contributing to the surrounding economy but also costing 'something' in lost taxes. Lane attempts to analyze the second viewpoint through a cost benefit analysis of the Fredericksburg and Spotsylvania National Park. Through his

analysis of lost taxes vs. direct and indirect benefits Lane concludes that the historic sites in question contribute more to the surrounding economy than they take away.

Leithe, Joni L., with Thomas Muller, John E. Petersen, and Susan Robinson. 1991. *The Economic Benefits of Preserving Community Character: A Methodology.* Chicago, IL: Government Finance Research Center of the Government Finance Officers Association.

This study examines the consequences of preservation regulations and incentives on a community's economy and their effects on a local government's fiscal condition. It provides an easy-to-use workbook, complete with sample tables, worksheets and survey forms, and explains how a community can measure economic activity in three broad areas: construction and rehabilitation activity, real estate activity, and commercial activity.

- *Construction and Rehabilitation Activity.* To the extent that community preservation techniques stimulate the rehabilitation of property, economic benefits associated with rehabilitation construction activity itself can be documented.
- *Real Estate Market Activity.* The effect of community preservation on the overall local real estate market as a result of designation or incentive programs can be measured (whether or not directly related to rehabilitation activity).
- *Commercial Activity.* The stimulation or retention of businesses in areas that have been designated or protected or granted incentives and the resulting impact on local economic activity, such as retail sales and the number of business created, can be measured.

Leithe, Joni and Patricia Tigue of the Government Finance Officers Association. *Profiting from the Past: The Economic Impact of Historic Preservation in Georgia,* 1999. (http://hpd.dnr.state.ga.us/assets/documents/profiting_from_the_past.pdf) NTHP Dollars & Sense of Historic Preservation, #17.

Lichfield, Nathaniel. 1983. *Economics in Urban Conservation.* Cambridge: Cambridge University Press.

Listokin, David and Michael Lahr. 1997. "Analyzing the Economic Impacts of Historic Preservation," *CRM* 20, 6. (http://crm.cr.nps.gov/archive/20-6/20-6-12.pdf)

This one page article briefly outlines the research objectives and methods used in the authors' 1997 study: *Economic Impacts of Historic Preservation*.

Listokin, David and Michael Lahr. 1997. *Economic Impacts of Historic Preservation*. Rutgers Center for Urban Policy Research. (http://www.njht.org/ec_study.htm)

This study documents the total economic contributions of historic preservation to the State of New Jersey. It establishes broadly-applicable methods for calculating the total economic impacts from preservation activity—which include direct as well as indirect/induced impacts—using an input/output (I/O) model developed specifically for this analysis. The resulting report is the most comprehensive assessment of preservation's economic contributions ever conducted for the State of New Jersey.

The report considers in detail the economic impacts of historic preservation that stem from three activities: historic rehabilitation, heritage tourism, and the operations of historic sites and organizations. Starting with estimates of the amount of money spent immediately on these three activities the I/O model calculates the economic benefits added by indirect and induced impacts, which can be thought of as the "ripple effects" generated by the initial direct investment. As explained in the report, "the *direct effects* encompass the goods and services immediately involved in the economic activity analyzed, such as historic rehabilitation. This could include, for historic rehabilitation, carpenters hired and steel purchased. *Indirect effects* encompass the value of goods and services needed to support the provision of the direct effects (e.g., materials purchases by the steel plant). *Induced effects* include the goods and services needed by households to provide the direct and indirect labor required to rehabilitate an historic structure (e.g., food purchases by the carpenters' or steel workers' households)." The I/O model reports the total economic impacts of historic preservation activity with respect to four data fields: jobs, income, wealth and taxes.

The authors find that in New Jersey, direct spending on historic rehabilitation, heritage tourism, and the operations of historic sites "annually amount to $123 million, $432 million, and $25 million respectively, for a total of $580 million." The I/O model calculates that "On an annual basis, historic preservation activities in New Jersey result in 21,575 jobs (i.e., person years of employment), $572 million in income, $929 million in total wealth as realized in gross domestic product (GDP), and $415 million in total tax payments ($160 million federal, $94 million state, and $161 million local). These are the effects realized by the entire nation. The renovation of the New Jersey State House, for instance, would likely include steel purchased from Michigan, lumber from Oregon, and paint from New Jersey. New Jersey garners nearly half of the jobs, income, and wealth benefits, and 70 percent of the taxes. On an annual basis, the in-state effects include 10,140 jobs, $263 million in income, $543 million in gross state product (GSP), and $298 million in taxes ($83 million federal, $71 million state, and $144 million local). The net in-state wealth is $460 million annually ($543 million GSP minus $83 million in federal taxes)." The authors believe for a number of reasons that these figures are conservative estimates.

The methods used in the study are as important as its findings. The report first reviews the past literature on the economic impacts of historic preservation. It then explains in detail the methods used to measure direct impacts in each of the three fields of preservation activity—historic rehabilitation, heritage tourism, and historic sites operation. Discussed next are the total impacts estimated by the I/O model. For those interested in the building and functioning of the model, an appendix considers the relative merits of commercially-available I/O platforms, how the model used in the study was customized, and the way in which it calculates indirect and induced impacts.

Also included in the report is a detailed literature review of studies considering the affect of historic designation on property values. The bibliography for the entire report is extensive and includes some annotations.

Listokin, David. 1997. "Growth Management and Historic Preservation: Best Practices Synthesis." *The Urban Lawyer* 29, 2: 199-213.

The article considers the connection between growth management and historic preservation. In theory, growth management should facilitate historic preservation by: 1) Enhancing the sustainability of historic resources by reorienting the direction and location of development to the urban cores, where most historic resources are found; channeling residential and commercial demand downtown creates economically viable uses for historic buildings. 2) Aiding the identification of historic resources; some state growth management plans, like Oregon's, establish as a goal the identification of historic resources. 3) Incorporating preservation into land use planning; local zoning should consider preservation and, ideally, historic resources should be protected by local landmarks ordinances enforced by local preservation commissions. 4) Mitigating against harmful government actions; growth management plans can function like "mini" section 4(f) and 106 reviews minimizing the damage to historic resources caused by state and local government undertakings.

Unfortunately, despite their potential synergy, historic preservation has played a minor role in state growth management plans. The historic preservation goals have either not been implemented, or, in the case of Oregon, their elimination is being contemplated. To reverse these trends, growth management plans should give greater emphasis to historic preservation, local landmarks regulations and reviews should be made flexible and streamlined, and preservation incentives must be created, such as transfers of development rights (TDRs), tax abatements, and technical assistance programs.

Listokin, David, et. al. 1985. *Housing Receivership and Self-help Neighborhood Revitalization*. New York, NY: Rutgers Center for Urban Policy Research.

Since the 1960s, cities in the United States have used housing receivership to address the problem of abandoned residential buildings. Where enabled by state legislation, receivership allows courts to appoint a third party, or receiver, to make repairs to problem buildings. The intent is to preserve the structure's value in the interests of all affected parties (including the owner, neighbors, building residents, and mortgage and lien holders). This book first considers the advantages of receivership over its more widely-used alternative, foreclosure. Receivership can be implemented quickly and proactively; cities do not have to wait for buildings to become tax delinquent; repair expenses are covered by the appointed receiver, as opposed to the municipality becoming the "owner of last resort;" and most importantly, unlike foreclosure which must be applied uniformly (against all of the tax delinquent property in a city), receivership can be used selectively in response to local citizen involvement.

The requirements and procedures of 16 state receivership statutes are examined with particular emphasis on: 1) receivership triggers; 2) initiation of receivership 3) selection of receivership agent; 4) type and nature of receivership process (court proceeding process); 5) notification requirements; 6) receivership duties and powers; and 6) receivership financing, compensation, and discharge. Also discussed are court challenges to enabling legislation, and the different experiences with receivership in New York, Chicago, and Jersey City. A model receivership statute is proposed in addition to general recommendations for its implementation. The participation of neighborhood groups is recommended to identify problem properties and, in some instances, act as the receiver. An annotated bibliography is included.

Listokin, David, ed. 1983. *Housing Rehabilitation: Economic, Social, and Policy Perspectives*. New Brunswick, NJ: Center for Urban Policy Research.

Listokin, David, et. al. 1998. *Successful Mortgage Lending Strategies for the Underserved.* Prepared for U.S. Department of Housing and Urban Development, Office of Policy Development and Research, by Rutgers, the State University of New Jersey, Center for Urban Policy Research (CUPR). Washington, DC: The Office.

The report presents a qualitative and quantitative assessment of mortgage lending strategies designed to reach low-to-moderate-income (LMI) minorities seeking homeownership financing for the purchase of 1-4 unit residential properties. Qualitative information for the study was gleaned from fifty "exemplary lenders" identified by the researchers as having a successful track record of lending to LMI minorities. The strategies employed by these lenders to find and retain LMI mortgagors were documented through telephone interviews. This data was supplemented by strategies discussed in the lending "Best Practices" literature. The report includes chapters with recommendations on management of LMI lending, and attracting, qualifying, and retaining LMI mortgagors. Topics covered include: the disparity between minority and non-minority homeownership rates; federal banking laws that pertain to fair lending; traditional and non-traditional mortgage programs; underwriting criteria; credit scoring; reasons why LMI applicants may have no credit or bad credit; strategies for successfully underwriting LMI loans; and ways to minimize default and delinquency rates. A final chapter consists of a statistical analysis of Home Mortgage Disclosure Act (HMDA) data to determine if the strategies employed by the exemplary lenders are associated with improvement in lending to LMI minorities. The bibliography includes citations keyed to the following topical codes: 1. Background; 2. Redlining and Racial Discrimination in Lending; 3. Strategies to Foster Minority and Moderate-Income Homeownership Financing; and 4. Other.

Listokin, David. 1985a. *Living Cities.* Report of the Twentieth Century Fund Task Force on Urban Preservation Policies. New York: Priority Press Publications.

Naito, Bill. 1992. *Historic Buildings: A Priceless Asset.* Oregon: Historic Preservation League of Oregon.

National Trust for Historic Preservation. 1982. *Economic Benefits of Preserving Old Buildings.* Washington, DC: Preservation Press.

This publication is the result of a conference held in Seattle to discuss historic preservation and the financial incentives of that process. The aim of the conference was to bring clearly into focus the successful record of the historic preservation process, including the benefits of recycling old buildings. The following topics were covered at the conference. Section one discusses possible municipal actions in the preservation process. The hidden assets of old buildings and continuing and adaptive uses for old buildings form the second and third sections of the publication. Section four discusses the costs of preservation, while section five outlines the types of government grants available for the preservation process. Sections six and seven discuss the advantages of historic preservation from a private financier's viewpoint.

_____. 2001. *Maximizing Historic Preservation as a Community Development and Economic Development Strategy for Jacksonville, Florida*. Washington, DC: National Trust for Historic Preservation.

New Jersey Historic Trust. 1990. *Historic Preservation Capital Needs Survey.* New Jersey: New Jersey Historic Trust.

The survey examines the capital needs of historic properties throughout New Jersey. The survey showed a capital need of $400 million for historic preservation. This, however, is a conservative estimate the study was a survey and was directed only at properties that met the eligibility criteria established by the bond act, i.e., properties owned or operated by public or not for profit agencies. Apart from the findings of the survey, the study also provides some useful information on historic resources in New Jersey, the importance of historic preservation and historic tourism for economic development, and case studies of successful preservation.

Oregon State Historic Preservation Office. 1992. *Economic Impact and Fiscal Analysis of Oregon's Special Tax Assessment of Historic Properties. Findings and Conclusion: Executive Summary.* Portland, OR: Parks and Recreation Department.

Pearson, Roy L., and Donald J. Messmer. 1989. *The Economic Impact of Colonial Williamsburg*. Williamsburg, VA: Mid-Atlantic Research Incorporated.

Petersen, John E., and Susan G Robinson. 1988. *The Effectiveness and Fiscal Impact of Tax Incentives for Historic Preservation: A Reconnaissance for the City of Atlant*a. Chicago: The Government Finance Research Center of the Government Finance Officers Association.

Preservation Alliance of Virginia. 1996. *Virginia's Economy and Historic Preservation: The Impact of Preservation on Jobs, Business, and Community*. Staunton, VA: Preservation Alliance.

As part of a larger study of preservation's economic effects, the analysis cited cases of property values increasing relatively faster in historic versus non-historic areas. Examples cited included:

Fredericksburg. "Properties within Fredericksburg's historic district gained appreciably more in value over the last twenty years than properties located elsewhere in the city."

Richmond. "While assessments in the Shockoe Ship historic area appreciated by 245 percent between 1980 and 1990, the city's overall value of real estate increased by 8.9 percent."

Staunton. "Between 1987 and 1995, residential properties in Staunton's historic neighborhoods appreciated by 52 to 66 percent compared to a city-wide average residential appreciation of 51 percent. For commercial properties the average city-wide appreciation between 1987 and 1995 was 25 percent. By contrast, average rates of appreciation of commercial properties in historic districts ranged from 28 to 256 percent.

Profiting from Preservation: The Economic Benefits of Historic Preservation in the John Singleton Mosby Heritage Area. 2003 updated edition. Middleburg, VA: John Singleton Mosby Heritage Area.

This brief report considers the economic benefits of historic preservation, interpreted broadly to include building restoration, heritage tourism, open space preservation, and agriculture. Total direct benefits from rehabilitation activity are reported from three sources: the Virginia Main Street Program, federal and state historic tax credits, and ISTEA grants. For estimates of indirect and induced impacts the Mosby report quotes *Virginia's Economy and Historic Preservation*, published by the Preservation Alliance of Virginia in 1996; "every one million dollars that is spent rehabilitating historic buildings in Virginia generates 15.6 construction jobs, 14.2 jobs in other sectors of the economy, and $779,800 in household earnings." The economic impacts from tourism are documented with data from the Travel Industry Association of America, the Virginia Tourism Corporation, and attendance figures aggregated from area historic sites. Open space and agricultural land are shown to be good tax ratables—unlike residential development, they generate more tax dollars than they require in local expenditure. The economic impacts from area wineries and the

equine industry are reported along with employment and financial output figures for other agricultural activities.

Renner, Lisanne. *Partners in Prosperity: The Economic Benefits of Historic Preservation in New Jersey.* NTHP Dollars & Sense of Historic Preservation, #13.

Robbins, Anthony W. 199*4. Landmark Preservation and Economic Development in New York City.* New York: Landmarks Preservation Commission.

Robinson, Susan G. 1988/89. "The Effectiveness and Fiscal Impact of Tax Incentives for Historic Preservation." *Preservation Forum* 2, 4 (Winter): 8-13.

The article briefly reviews the objectives and methods of a larger study undertaken by Robison and John E. Peterson for the Government Finance Research Center to analyze the fiscal impacts of four financial incentives commonly used by state and local governments to promote historic preservation: property tax abatements, property tax credits, property tax freezes, and sales tax exemptions (on the purchase of preservation-related materials). Each of these incentives is explained clearly and concisely. The study's primary goal was to "develop methodologies for assessing the effectiveness and fiscal impacts of incentive programs for historic preservation in the city of Atlanta." The authors developed a tax model to study the public costs (forgone revenues) of each incentive; they then apply it to thirty-seven hypothetical historic building rehabilitation projects. The analysis suggests that property tax incentives alone were not enough to induce rehabilitation "but could influence land use decisions in that direction by increasing rates of return." The authors recommend cities use a pro forma analysis technique to assess the impact of preservation incentives on historic property owners' investment decisions.

Successes and shortcomings of preservation tax incentives are explored in case study examples from San Antonio, Texas (tax abatement); Seattle, Washington (tax credit); and the State of Oregon (tax freeze).

The study argues that the success of historic preservation depends on financial considerations; thus, before any program is undertaken, the fiscal impacts of the program should be examined. The study provides a methodology that a local government can use to assess the impacts of preservation. It does so by providing guidance for the evaluation of the effects of certain incentives programs based on the experience of Atlanta. The study examines the following incentives for historic preservation: compensation, protection, land use planning, the impact of federal tax credits, state and local tax incentive programs, property abasement tax, property tax, sales tax exemption, individual tax vs. cost to the city, and public sector benefits vs. costs.

Rypkema, Donovan D. and Katherine M. Wiehagen. 1998. *The Economic Benefits of Preserving Philadelphia's Past.* Philadelphia: Preservation Alliance for Greater Philadelphia.

The authors find that historic preservation has been instrumental in the revitalization of Center City, and residential neighborhoods. Over a twenty year period, more than $1.5 billion was spent on the rehabilitation of certified historic commercial properties under the federal Historic Rehabilitation Investment Tax Credit Program (ITC program), creating over 55,000 jobs and generating over $1.3 billion in household income for Philadelphia residents. Historic resources also attract tourists and are an important factor in drawing film companies to locations in the city. Philadelphia's designated historic districts are more racially and economically diverse than other areas of the city; they house a high percentage of the city's college- and graduate-school educated residents.

Rypkema, Donovan D. 1994. *The Economics of Historic Preservation: A Community Leaders' Guide.* Washington, DC: National Trust for Historic Preservation.

Among other economic impacts, Rypkema examines the effects of designation and preservation activity on property values. Rypkema compiles the results from numerous studies. Examples from Rykema are cited below.

In every heritage district designated in Canada in the last 20 years, property values have risen, despite the fact that development potential has been reduced.

(Federal Heritage Buildings Review Office Code of Practice, Government of Canada)

Therefore, it would seem reasonable that, at worst, the listing of property on either of the two registers would have no effect on value, but most likely, at least in the City of Norfolk, such listing would enhance value. (Wayne N. Trout, Real Estate Assessor, City of Norfolk, cited in: *The Financial Impact of Historic Designation*)

The virtually unanimous response from local assessors and commissioners of the revenue has been that no loss of assessed value has occurred as a result of historic designation, and that values have risen in general accord with the values of surrounding properties over the years. (*The Financial Impact of Historic Designation*)

Generally, the assessed values have risen at a rate similar to all other properties. As such, we have no evidence that the listing of a property in either the National Register of Historic Places or the Virginia Landmarks Register adversely influences the assessed value relative to surrounding and/or similar properties. (John Cunningham, Manager of Assessments, Prince William County, cited in *The Financial Impact of Historic Designation*)

The appreciation of renovated historic properties is substantially greater than the appreciation rates for new construction and unrestored historic properties...Unrestored historic properties appreciate at almost identical rates to new construction over the same period. (Kim Chen, *The Importance of Historic Preservation in Downtown Richmond: Franklin Street, A Case Study*)

Rypkema, Donovan. 1997. *Historic Preservation and the Economy of the Commonwealth: Kentucky's Past at Work for Kentucky's Future*. Frankfort, KY: Kentucky Heritage Council. NTHP Dollars & Sense of Historic Preservation, #11.

_____. 1997. *Profiting from the Past: The Impact of Historic Preservation on the North Carolina Economy*. Raleigh, NC: Preservation North Carolina. NTHP Dollars & Sense of Historic Preservation, #19.

_____. 1999. *The Value of Historic Preservation in Maryland*. Baltimore, MD: Preservation Maryland. NTHP Dollars & Sense of Historic Preservation, #18.

Rypkema, Donovan, D. *Virginia's Economy and Historic Preservation: The Impact of Preservation on Jobs, Business, and Community Development*. Stauton, Virginia: Preservation Alliance of Virginia, 1995. NTHP Dollars & Sense of Historic Preservation, #1.

Rypkema, Donovan D., and Katherine M. Wiehagen. 1999. "The Economic Benefits of Preserving Philadelphia's Past." Occasional Paper No. 16. *Dollars & Sense of Historic Preservation* (National Trust for Historic Preservation, 2000). 1.

St. Louis Community Development Agency. 1980. *Economic impact of the multiple resource nomination to the National Register of Historic Places of the St. Louis Central Business District*. Report prepared by Economics Research Associates.

St. Louis Urban Investment Task Force. September 1985. *The Impact of the Historic Rehabilitation Historic rehabilitation tax credit on Neighborhood, Commercial and Downtown Redevelopment and Historic Preservation.* St. Louis, MO: The St. Louis Urban Investment Task Force.

The St. Louis Urban Investment Task Force. *The Impact of the Historic rehabilitation tax credit on Neighborhood, Commercial, and Downtown Development and Historic Preservation in St. Louis.* The St. Louis Urban Investment Task Force. The purpose of this report is to prove the significance of the federal Historic Rehabilitation Investment Tax Credit (ITC), its role as a development tool within the metropolitan region of St. Louis, and more importantly, to highlight St. Louis' rank as the first in the nation in the number of projects qualified for historic rehabilitation tax credits. The document explains the philosophy of the ITC, as well as the significance of the ITC in St. Louis. The concerns over the possible loss of the ITC are discussed in depth, as one example describes an analysis "with" and "without" the ITC in residential rental rates. A map of historic rehabilitation activity for the City of St. Louis, as well as various charts and graphs are attached.

Sanderson, Edward F. 1994. "Economic Effects of Historic Preservation on Rhode Island." *Historic Preservation Forum* 9, 1 (Fall): 22-28.

Sanderson reviews a study completed by the University of Rhode Island Intergovernmental Policy Analysis Program. The purpose of that study was to calculate the direct, indirect, and induced effects of historic preservation programs that were implemented by the Rhode Island Historical Preservation Commission from 1971 to 1993. Sanderson notes that the Preservation Commission showed $240 million in expenditures since 1971, and projects that qualified for federal tax credits accounted for about 80 percent of this total. Further, he notes that when federal, state, local and private funds are taken into account, it represents a 9:1 leveraging ratio of private investment to all sources of public expenditure. He concludes that the economic impact reported in the study significantly understated the real economic benefits of historic preservation. His supporting evidence is as follows. Of the $240 million for goods and services expended since 1971, approximately $186 million (78 percent) went to purchase goods and services in Rhode Island. These historic preservation expenditures resulted in a increase in "value added" in Rhode Island of $232 million. (Value added measures regional output in the same sense that gross domestic product measures national output). Over a twenty-year period, historic preservation created at least 10,722 person-years of employment. (A person-year is defined as one person employed full time for one year). Each $10 million in expenditures created 285 jobs in Rhode Island. These jobs included construction, services, retail, manufacturing, finance, and real estate. Federal tax revenue increased by $64 million, state coffers received $13.5 million, and local tax collectors received $8.1 million. Federal tax credits for rehabilitation of income-producing historic buildings totaled 266 tax credit projects with a cumulative value of $211.5 million. Of these properties, 111 provide space for economically beneficial offices, manufacturing, and retail.

Scribner, David, Jr. 1976. "Historic Districts as an Economic Asset to Cities." *The Real Estate Appraiser* (May/June): 7-12.

This article examines how historic districts in major urban areas are delineated, and also considers the impact of designation on city revitalization. It notes that the property values of buildings within historic areas are higher than sister structures located outside of such neighborhoods. In the Old Town area of Virginia, landmarks are worth approximately 2.5 times comparable buildings located just beyond the boundaries of this historic district. In Capitol Hill in Washington, D.C., values are four times greater; in the Federal Hill area in Baltimore, values are 7.5 times higher. The author argues that the linkage between property value and historic designation should be recognized by appraisers, and recommends that appraisers rethink some of their rules of thumb that are inapplicable in landmark situations.

Shlaes and Co. 1984. *Economic Benefits from Rehabilitation of Historic Buildings in Illinois: Final Report*. Springfield, Illinois: Preservation Services Section, Illinois Department of Preservation.

_____. 1985. *Economic Benefits from Rehabilitation of Certified Historic Structures in Texas: Final Report*. Austin, Texas: Texas Historical Commission.

Spencer, Brenda R. "An Analysis of the Economic Impact of Physical Improvements on Retail Sales." NTHP Dollars & Sense of Historic Preservation, #12.

> Spencer analyzes retail sales data and qualitative observations from the five businesses owners to determine if recent restoration/preservation projects resulted in an increase in retail sales. She finds that all five businesses experienced an increase in gross sales in the year after making improvements and that 4 out of the 5 owners attributed this increase to the physical improvements. Unfortunately it is impossible to separate the affects of the physical improvements from other confounding variables that could also explain the increase in sales, such as changes in product line, advertising, economy, neighboring stores, etc.

Strauss, Charles H., Bruce E. Lord, and Stephen C. Crado. n.d. *Economic Impacts and User Expenditures from Selected Heritage Visitors Centers*. South Western Pennsylvania Heritage Preservation Commission.

University of Rhode Island, Intergovernmental Policy Analysis Program. 1993. *Economic Effects of the Rhode Island Historical Preservation Commission Program Expenditures from 1971 to 1993*. NTHP Dollars & Sense of Historic Preservation, #3.

> The study reviews the impacts of the Rhode Island Historical Preservation Commission's programs on the state economy in the areas of employment, wages, valued added, and tax revenues generated since 1971. It does not, however, assess the cultural value of historic preservation or the degree to which the preservation of historical landmarks contributes to the overall attraction of tourists. The study uses computer models of the state economy to conduct a full economic impact analysis for each of the Commission's programs. These programs are compared to other types of public construction that supply economic stimulus and/or improve public infrastructure. Findings indicate that the greatest impacts of the Commission's programs are in the construction-related industries, with retail sales and the service industries being strong contributors. Dollar for dollar, historic preservation programs generate approximately the same number of jobs as some other construction and maintenance programs. Notably, about 93.4 percent of the funding for the Commission's programs has come from matching federal funds and tax credits thereby, yielding approximately $1.50 dollars in state tax revenues for each dollar spent.

U.S. Advisory Panel on Historic Preservation. 1979. *The Contribution of Historic Preservation to Urban Revitalization*. Washington, D.C.: U.S. Government Printing Office. Report prepared by Booz, Allen and Hamilton, Inc.

Virginia (State of), Department of Historic Resources. 1991. *The Financial Impact of Historic Designation.* Senate Document No. 23. Richmond, Virginia.

_____. Department of Historic Resources. 1991. *The Financial Impact of Historic Designation* (pursuant to Senate Joint Resolution 162).

Vivian, Daniel, Mark Gilberg, and David Listokin. 2000. "Analyzing the Economic Impacts of Historic Preservation." *Forum Journal* 14, 3.

This article conveys information presented and debated at a conference on measuring the economic impacts of historic preservation, held in Washington, DC in October 1989. Participating in the conference were economists, government officials, real estate experts, academics and other preservation professions. Themes discussed included: data sources for economic analysis; methods for measuring the impacts of historic district designation on property values; defining heritage tourism; the untapped potential of Main Street Program data; and the use and limitations of Input-Output models to measure the full economic impacts of historic preservation expenditures.

Wagner, Richard D. 1993. "Urban Downtown Revitalization and Historic Preservation." *Preservation Forum* (September/October).

Walter, Jackson J. 1987. *Historic preservation and places to live: A natural partnership for Healthy American communities.*

Speech before the Policy Advisory Board, of the Joint Center for Housing Studies of MIT and Harvard University. Pebble Beach California. Walter argues that historic preservation can also play an important role in the preservation and provision of inner city housing. It is also an important component in the revitalization of the cities, not only economically, but also culturally. However, in order for cities to take advantage of their heritage, leadership and creativity are needed.

Wilcoxon, Sandra K. 1991. *Economics of an Architectural Legacy: the Economic Impact of the Frank Lloyd Wright Home and Studio Foundation on Oak Park and Chicago.* Chicago, IL: The Frank Lloyd Wright Home and Studio Foundation.

Utilizing a written questionnaire administered four times throughout the year, the Frank Lloyd Wright Home and Studio Foundation in Oak Park, Illinois attempted to assess the direct and indirect economic impact of the home and studio on the local and greater metropolitan areas. The survey

addressed the following: restaurants and hotels patronized, amount spent per person on meals, transportation method, and visitors' plans to shop in the area. An analysis of direct spending found that of the home and studios' $1.6 million dollar operating budget, 36 percent was spent in the local area, 37 percent in Chicago, and 27 percent in other parts of the United States. Indirect spending was calculated using a tourism multiplier of 6 and a wage multiplier of 1.4 for employee salaries. By applying the multipliers to direct spending figures it was calculated that the impact of the home and studio and its visitors and employees on the Chicago area accounts for $21.4 million. Combining direct and indirect spending yields totals of $26.4 million impact on the greater Chicago area and $5.5 million on the village of Oak Park. Using an employment multiplier that states each $1 million in direct spending creates 39 new jobs, it is calculated that the home and studio has created 47 jobs in Oak Park and 133 jobs in Chicago. Counting their own employees, this totals 204 jobs.

Youngblood, George L., Jerry Bussel, Jesse T. Stackwell III, and Gerald P. Wilson, Jr. 1987. *The Economic Impacts of Tourism Generated by the Gettysburg National Military Park on the Economy of Gettysburg.* Gettysburg, PA: Gettysburg National Military Park.

Preservation Economics Policy

Abbot, Carl. "Five Strategies for Downtown: Policy Discourse and Planning Since 1943." In Planning the Twentieth-Century American City, edited by Mary Corbin Sies and Christopher Silver. Baltimore: Johns Hopkins Press, 1996.

Downtown is a constructed concept that has gone through 5 major phases that influence planning behavior:

1945-1955: Downtown as Unitary Center of the SMA: downtown as hub of retail activity, the CBD, the site of essential urban activities, not threatened or endangered. Plans gave priority to neighborhood identity and conservation, housing, but rarely mentioned downtown specifically.

1955-1965: Downtown as Failing Business Center: Downtown threatened by obsolescence, needs drastic intervention in the CBD. No longer as attractive to shoppers, theatergoers, service businesses. Plans call for rezoning and large scale redevelopment of blighted land—urban renewal housing—clean up the area around the CBD.

1965-1975: Downtown as a Federation of Everyday Environments: urban renew acknowledged to be a failure; City now seen as collection of neighborhoods and distinct areas. J. Jacobs wrote about "concentrated pools of use."416 Planning in the 1960s and '70s recognized and sought to delineate and map "functional zones," "functional areas," "functional sub districts" and retail clustering. 417

Subarea analysis continued into the 1990s, but after 1975, it "became accepted background rather than an exciting discovery." 419 [See the NYC special district plans]

1975-1985: Downtown as a Set of Individual Experiences: Desire to stimulate business, compete w/ suburbs. Downtown becomes set of "distinctive social environments" that were to be "consciously designed in the interest of enjoyment and tourism," –"downtown as theme park." 419 Competing with suburban shopping was a failure, so downtown had to emphasize specialized entertainment and shopping—"downtowns conceived as museums, cultural centers, amenity districts, and amusement parks." Festival markets were just one type of "amenity project" popularized in the 1980s; others included conventions centers, arts districts, museums/aquariums, and historic districts. Planning emphasized design control, preservation planning, amenity bonuses, and zoning fine tuning. Springfield, Mass, New Orleans, and SF plans emphasized adaptive reuse, historic preservation, and design review. 422

1985 to Present: Downtown as Command Post: Downtown is part of a national and global network; retailing for the metropolitan market no longer viewed as important downtown function. Not dedicated to, as J. B. Jackson says, "to traditional human activities or institutions."

Becker, Robert. 1991. Beauty—Enhancing Rural Economies through Amenity Resources. Proceedings of the National Policy Symposium, Pennsylvania State University.

Chadbourne, Christopher, Philip Walker and Mark Wolfe. 1997. *Gambling, Economic Development, and Historic Preservation.* Washington: APA Planning Advisory Service.

The authors consider the pros and cons of legalized gambling for the communities in which casinos are located. Impacts on historic preservation, zoning, and land use are emphasized, as are economic impacts. The literature on gambling and economic development raises questions that the authors then seek to answer through an examination of five case studies: Natchez , MI; Joliet, IL; Davenport, IA; Deadwood, SD; and Blackhawk, CO. Among the questions: what is the net economic impact of casino gambling? Who are the winners and losers? How can communities maximize benefits?

To gain public approval, gambling is offered as a means to fund one of the three "E's"—education, economic development, and the environment. Colorado and South Dakota both use a portion of their casino revenues to fund preservation activities. Cities are becoming savvier at demanding exactions from casinos to pay for infrastructure and service impacts. Studies of employment have shown that casinos tend not to lower unemployment or dramatically increase employment rates; rather they promote job shifting, not job creation. Local workers are generally hired for the lowest-paying jobs, while management is imported. The degree to which communities have success in leverage gambling activities to create spin-off development (indirect and induced development) depends upon the locations of the casinos relative to existing business, design standards that create pedestrian linkages, and joint casino/town advertising. Cities need to carefully regulate the non-gambling activities they allow casinos. Related casino activities can compete directly with existing retail, entertainment, and

cultural establishments. Introduction of gambling also tends to unleash real estate speculation, driving up land values and pushing out local businesses. "Because of its return on revenue, casinos can displace any other use in an open marketplace." Casinos are built fast and cheaply; most communities have not be able to enforce design review.

Clarion Associates, Inc. and Granacki Associates for Landmarks Preservation Council of Illinois. 1994. *Property Tax Incentives for Landmarks: An Analysis.*

Costonis, John J. 1974. *Space Adrift: Saving Urban Landmarks through the Chicago Pla*n. Urbana, IL: University of Illinois Press.

This monograph analyzes the transfer of development rights as a mechanism for preserving historic properties. As part of its overall analysis, it considers the impact of landmark restrictions on property value as well as the assessment of landmarks for tax purposes.

Chapter three discusses the cost of historic preservation restrictions—a measure termed "damages." Damages are determined by subtracting a landmark's present value from its fair-market value in the absence of designation. These "before and after" values are estimated by the income approach of appraisal. Other traditional appraisal methods are not so applicable. Applying the cost technique is problematical because it requires precise estimates of physical decline and functional obsolescence—factors inherently difficult to define in a landmark situation. Low sales frequency of landmarks often renders the market approach inappropriate.

Appendix four examines the relationship between landmarks and the property tax. It examines both the principles and practice of real estate taxation, notes how and when landmarks may be penalized by prejudicial assessment, and discusses "intergovernmental agreement" and other strategies for improving the equity of a landmark's assessment/taxation.

Historic Preservation Program. 1997. *Preservation Horizons: A Plan for Historic Preservation in Missouri.* Missouri Department of Natural Resources.

This document is a general overview for the State of Missouri, on how the state would like to create and stimulate public and private interest, funding, policies and planning strategies for historic preservation. The greater emphasis states how heritage tourism and economic development are byproducts of historic preservation programs and cultural resources. Tourism is Missouri's second most important industry, therefore, special consideration should be placed on all organizations, of the local, state or federal level, which promote historic-related tourism. Although the document is broad in nature, more narrowly defined goals include: encouraging public-private partnerships; creating historic preservation education opportunities for public officials; and stimulating historic preservation interest through internet sites published by local and state organizations. In summary, the State of Missouri hopes to integrate historic preservation into all planning and policy procedures.

Historic Tax Credit Program. January 1999. *Missouri Historic Rehabilitation Tax Credit Program.* Department of Economic Development.

The Department of Economic Development is responsible for issuing historic rehabilitation tax credits. Therefore, a general information document was produced to explain key definitions, specific requirements, as well as an explanation of the two approval processes. In addition, two historic tax credit forms are attached. In the appendix of the document, the Secretary of Interior's Standards for Rehabilitation are outlined, listing special concerns and documentation requirements.

Historic Preservation Program and Community Development Division. March 1999. *Federal and Missouri State Historic rehabilitation tax credits for Certified Rehabilitation of Historic Buildings--A Comparison.* Missouri Department of Natural Resources and Missouri Department of Economic Development.

This brief, 6-paged chart is constructed in a 'question-and-answer' style. The questions are followed with individual answers, concerning both federal credit and state credit.

Gale, Dennis E. 1991. "The Impacts of Historic District Designation: Planning and Policy Implications." *Journal of the American Planning Association* 57, 3 (Summer).

This article explores the relationship between historic district designation and residential property value. Gale first reviews the past studies on the effects of historic district designation on residential value. He then explains the findings of his own study that examined property assessment data in three districts before and after they were designated as historic; value trends in these designated neighborhoods were then compared to those in three undesignated "revitalizing neighborhoods." Gale finds that property values declined over this period in all of the districts studied, however, in two of the three historic districts, values declined less severely than the citywide rate. This suggests that designation may insulate a neighborhood from price volatility in the housing market. Nevertheless, "overall economic trends" appear to exercise a greater influence on value than did designation. Based on a reevaluation of the literature in light of his own results, Gale theorizes that the effects of designation on property values may be influenced by the point at which the neighborhood is designated relative to the "property rehabilitation cycle." In other words, neighborhoods that experience substantial rehabilitation followed by designation may experience an increase in value, whereas, values may remain flat or decline in locations where designation precedes the start of major rehabilitation activity. Ultimately, the author concludes that designation does not significantly affect property value. He worries, however, that in their enthusiastic pursuit of historic designation, preservationists inadvertently encourage planners and politicians to overlook comprehensive master planning that includes urban design controls; historic designation is then misused as a "surrogate for neighborhood planning."

Governor's Task Force on Historic Preservation and Heritage Tourism. 2000. *Investing in South Carolina's Future by Preserving Our Past: Report of the Governor's Task Force on Historic Preservation and Heritage Tourism*. Columbia, SC: South Carolina Dept. of Parks, Recreation & Tourism.

Grace, Karen. Historic Preservation Program. 1992. *Annual Report*. Missouri Department of Natural Resources.

> The Historic Preservation Program (HPP), which resides in the Missouri State Historic Preservation Office (SHPO), produced this document. It is an introduction to the efforts and initiatives the HPP actively follows. The document reports on the Historic Preservation Revolving Fund, where the Dept. of Natural Resources actively markets properties to buyers that are able to uphold the tasks of preservation. The Endangered Buildings Evaluation Team was established in 1992, specifically to make recommendations of potential new uses for endangered buildings' conditions. Several other standard programs within the HPP include the Preservation Education Program; Statewide Survey; and the Cultural Resource Inventory (CRI). Other programs include the Main Street Program, promoting preservation and economic revitalization through Missouri's small, historic commercial districts; and the Certified Local Government Program, assisting local level partners to establish and maintain historic preservation programs. The SHPO also utilizes historic rehabilitation tax credits as a means to stimulate private investment from federal tax incentives. In 1992, Missouri ranked in the top 2 percent in its use of historic rehabilitation tax credits.

Krumholz, Norman. 1999. "Equitable Approaches to Local Economic Development." *Policy Studies Journal* 27, 1: 83-95.

> Krumholz points out that the central city economic development "successes" of the 1980s and 1990s (like those described in Frieden and Sagalyn's *Downtown, Inc.*, 1989) absorbed huge public subsidies and tax breaks through "public/private partnerships" but did little to produce jobs for local residents or ameliorate poverty; rather, they often displaced low-income populations for the benefit of suburban residents or new middle-class urban homebuyers. Planners and city government allowed private developers and real estate agents to monopolize the leadership of these projects to achieve their own objectives. Why, asks Krumholz, should public money be spent on such projects when they do not appear to promote local economic development? What is their justification? And who benefits?

> At the same time, Community Development Corporations (CDCs) have demonstrated their capacity to execute urban projects that serve populations most in need. The author offers brief case studies of the following cities that worked with CDCs on development initiatives that attended to redistributive and social justice concerns: Boston, Cleveland, Oakland, Jersey City, and Chicago. These profiles underscore the importance of innovative development tools such as linkage agreements that require private developers to provide clear public benefits (to needy populations) in return for public support. (Examples include low-income housing set asides in residential developments or commercial developments approved contingent upon contributions to a local business loan fund.) Cities must

also invest in education and infrastructure, the two most important economic development initiatives. Lastly, cities must build upon their existing strengths and maximize niche market opportunities.

Kula, E. 1998. *History of Environmental Economic Thought*. London: Routledge.

> Kula offers a concise and accessible history of environmental economics from the Romans to present day. He summarizes the views and writings of major economists and philosophers, among them Adam Smith, Malthus, Ricardo, Marx, Keynes, Galbraith, Boulding and others. The concept of "environment" is narrowly conceived as the natural environment and much of the book addresses issues of resource extraction, population growth, pollution, and the tensions between economic growth and environmental degradation. Still, in its analysis of different approaches to the understanding and correction of "market failures," this book provides the historical and theoretical underpinnings of preservation legislation. Kula describes the writings of Pigou, the economist who popularized the notion of government use of legislation, taxation and subsidy to promote interests of social welfare, and of Galbraith, who advocated for government control of the boundaries of economic growth. This book is a nice compliment to David Throsby's work on cultural economics.

Listokin, David, et al. 1982. *Landmark Preservation and the Property Tax.* New Brunswick, NJ: Center for Urban Policy Research and New York Landmarks Conservancy.

Mason, Randy, ed. 1999. *Economics and Heritage Conservation: A Meeting Organized by the Getty Conservation Institute, December 1998.* Los Angeles: J. Paul Getty Trust.

> This report summarizes the results of a meet organized by the Getty Conservation Institute to broadly consider the potential contributions of economic studies to the conservation of tangible cultural heritage—buildings, sites, collections, and objects. Recognizing that economic considerations are a substantial factor in determining what is preserved, the intent of the meeting was to promote dialog and interdisciplinary research between economists and "culturalists," a term used to describe conservators, art historians, anthropologists, sociologists and other social scientists who traditionally evaluate non-economic values. Topics discussed at the meeting included: the differences between economic and cultural values; the limits and contributions of economic theories to cultural preservation; cultural capital and sustainability; the role of politics in conservation decision making; and reasons why markets appear to "fail" in the context of cultural heritage.

> Particularly insightful is a paper contributed by Arjo Klamer and Peter-Wim Zuidhof on "The Values of Cultural Heritage: Merging Economic and Cultural Appraisals." The authors discuss economic concepts relevant to cultural heritage, emphasizing the lexicon of economic theory. They selectively review influential contributions to the cultural economics literature, highlighting the various tool economists use to measure the value of cultural heritage, such as impact studies, willingness-to-pay studies, contingent valuation studies, and referenda. Examples of each are provided in sidebars. They conclude with suggestions for future research. Among them, how do the institutional solutions commonly used to address market failures—direct interventions, regulation, private market

incentives, information dissemination—influence cultural heritage's valuation (the assessment of existing value) and valorization (the addition of value). And, do cultural values make certain funding arrangements more appropriate and/or effective for particular heritage goods?

Missouri Alliance for Historic Preservation. February 1997. *Proposed State of Missouri Historic Rehabilitation Historic rehabilitation tax credit: Analysis of Costs and Benefits.* Jefferson City, MO: Missouri Alliance for Historic Preservation.

The executive summary begins by stating that this proposal is merely a starting point of a methodology, which will aid in preparing future fiscal analyses. Methodologies were summarized for estimating the state cost of the proposed historic rehabilitation tax credit, as well as for estimating fiscal benefits created by the proposed historic rehabilitation tax credit. In the executive summary, the proposal estimated specific results. For instance, between 1998 and 2003, an additional $200 million in historic rehabilitation activity, will be created. Also, 3,400 construction jobs and 3,800 other jobs will be produced over the next six years. Other proposed results include economic and political benefits at all government levels. The summary includes multiple charts on cost/benefit analyses of the proposed Missouri historic rehabilitation tax credit.

Missouri Department of Economic Development, Missouri Main Street Program. October 1990. *Missouri Main Street Program: Guide to Resources for Downtown Revitalization*. Jefferson City, MO.

Through a collection of summaries, the Missouri Main Street Program identifies several different resources that will assist citizens in downtown revitalization efforts. The document contains contact information and brief service descriptions for numerous government agencies, university centers, business associations and non-profit organizations. Some agencies provide management training specifically, while others provide information on funding, media relations, fundraising tools, and technical assistance.

National Trust for Historic Preservation Flood Response Program, O'Conner & Partners, Inc. October 1994. *Katy Trail State Park, MO: Tourism Assessment and Marketing Recommendations for Flood Recovery.*

This report focuses on six small towns along Katy Trail State Park, however, it is designed to assist all Park corridor communities. The primary focus is increasing the tourism-based economy in this region, as it relates to the Park. The first goal/strategy includes creating new facilities to accommodate Trail users. The second goal/strategy, discussed in heavier detail, utilizes marketing as a means to bring new visitors into the corridor communities. The Park has many natural marketing assets as a heritage tourism region, as a bicycle destination, and through its proximity to wine regions. The visitor profile research also assists the Park in reaching its marketing goals.

Newman, Harvey K. 2001. "Historic Preservation Policy and Regime Politics in Atlanta." J*ournal of Urban Affairs* 23, 1: 71-86.

A carefully documented political history of Atlanta's historic preservation movement. African-American led political regime that identified preservation efforts with the Jim Crow past were unsupportive of preservation throughout the '70s and early 1980s. Describes how these pro-development politicians were gradually compelled to adopt a preservation-based development strategy. The result of professional mediation among politicians and preservation advocates, the City's preservation commission evolved in the mid '80s from an advisory only capacity to a body with the authority to approve or deny development proposals. Also uses a unique "Economic Review Panel" that arbitrates economic hardship demolition requests. The mediation strategy has relevance beyond Atlanta.

Power, Thomas Michael. 1996. *Environmental Protection and Economic Well-Being: The Economic Pursuit of Quality.* Second edition. Armonk, NY: M.E. Sharpe.

Humans desire quality and it is the pursuit of quality, not the struggle for survival and the consumption of necessities, that drives much of our decision making, according to Power. (He estimates that only 12 percent of our spending is on necessities.) The author disputes the claim that environmental qualities (and environmental protection) are non-economic choices. We choose to afford the private luxuries of life but we feel unable to pay for the social costs of vitally important public goods and services—we have "public squalor amid private affluence." Because we desire quality, environmental choices have economic consequences. Governments are shortsighted when they relax environmental (or planning) restrictions in the hopes of attracting new businesses.

Power questions the pro-growth mentality that pervades government decision making. An overemphasis on the "economic base"—the driving force in the economy, particularly those local industries that bring money into an area by exporting some product—neglects the businesses that supply the local economy. Local areas have little or no control over national and international demand for their exported products. Rather, locally oriented service-led growth is the real source of economic development. (Source of new jobs in the last 15 years has been in the expansion of small, local firms, not smokestack industries.) The quality of local amenities and resources—schools, culture, environment, workforce, public infrastructure—is what draws firms to an area and keeps them there. Workers will even accept lower wages to live somewhere that provides a high quality of life and low cost of living. Businesses follow the workforce they need just as readily as people follow jobs. Local efforts to boost economic growth, gauged using the usual metrics of per capita income and or unemployment rate, are often misdirected. Cutting taxes and easing local development restriction to lure new business or retain existing ones only serve to undercut the more important quality of life amenities. Policy makers must do thorough fiscal impact analysis to make effective decisions.

Instead of chasing new businesses, local governments should focus energies on growing new local businesses and expanding existing ones. They can do this by providing local businesses with access to capital; providing technical assistance to small businesses who need expertise with businesses

planning and investment packaging. They should also recognize that economic development includes providing attractive neighborhoods, recreational opportunities, natural beauty, good schools, roads, and services.

Porter, Michael E. May/June 1995. "The Competitive Advantage of the Inner City." *Harvard Business Review* 73, 3: 55-71.

Every location has a unique set of attributes that suggest a certain competitive advantage to the right business. Successful local businesses must serve local the community but must also be capable of exporting to regional, national and international markets. Competitive advantage blooms in clusters of related companies; the critical mass generates growth of companies in related fields.   Porter emphasizes four main competitive advantages of the inner city: strategic location, local market demand, integration with regional clusters, and human resources.   One example he gives is the Boston food processing industries clustered around Newmarket Square. When other markets are often saturated, those in the inner city are often underserved. Inner-city businesses can capitalize on local markets by catering to unmet needs. As opposed to indiscriminate investments in unrelated enterprises, clusters of related businesses maximize the impacts of investments.

Inner city businesses face many obstacles, among them: crime, poor infrastructure, excessive regulation, lack of usable land, poorly educated work force, high taxes and other expenses, insufficient access to capital, and overall unproductive attitudes of urban leaders and residents. Misguided are those community leaders who try to exact unrealistic social benefits from private businesses (through tools like linkage payments, etc—see Krumholtz); according to Porter, these only stunt economic growth.   Government must move away from regulation, direct subsidy, and intervention, toward creating a more hospitable business environment. They must strip away or streamline regulation; act as site and land developers, improve security and infrastructure. CDCs should stay away from business ownership, lending, and entrepreneurship, fields in which they cannot hope to compete with the human and capital resources of the private sector. Instead, they cultivate their strengths in housing, workforce education, community organizing, and job placement.

"Preservation Plan Task Force Reports." 1996. Jefferson City, MO: Department of Natural Resources, Historic Preservation Program. Photocopy.

This report outlines 5 areas of historic preservation goals and strategies: public education; funding and financial issues; public/private partnerships and interaction between all levels of government; preservation policies and planning; and delivery of preservation services. There is a heavy emphasis on establishing historic preservation as an economic development policy. The Task Force Report highlights that historic preservation equates good business, because it produces both revenue and employment.   Several action plans are addressed in order to implement these various goals. Identifying beneficial stakeholders, improving information access to the public via electronic files, removal of disincentives to property owners, and fundraising are all addressed in the implementation procedures.

Reichl, Alexander J. 1997. "Historic Preservation and Progrowth Politics in U.S. Cities." *Urban Affairs Review*, 32, 4:513-535.

> Reichl borrows elements of C. N. Stone's Regime Theory of urban politics to analyze the relationships among historic preservationists and progrowth advocates in New York City, Atlanta and New Orleans. He suggests that "preservation is a means by which widespread support for redevelopment efforts can be politically constructed." First, the historical context for this relationship is developed. Middle class "urban pioneers" who began moving back to cities in the 1960s became allies of the low-income communities fighting urban renewal. Federal programs such as the CDBG and UDAG were reshaped to accommodate preservation initiatives, which had the political support of middle-class voters. Reichl illustrates the role of preservation in redevelopment policy with an examination of the 42 Street redevelopment in New York City. The project, which included plans for massive office towers, became primarily identified with historic preservation in the public and political discourse, despite the fact that preservation of the theaters required only a fraction of the development costs. The preservation component created widespread public support for the project; in the interest of restoring the theaters, preservationists went along with the entire redevelopment plan despite their concerns with the design and bulk of the office towers. Thus, Reichl concludes that the business community often uses historic preservation and the arts to its advantage, while the preservation community furthers its goals through the skillful manipulation of development projects. In contrast, the economic and political regime of Atlanta adopted a progrowth plan that was antithetical to preservation. In New Orleans, preservation is used both to limit growth, and to promote it through heritage tourism in the French Quarter.

Roddewig, Richard J. 1987. *Economic Incentives for Historic Preservation in Atlanta.* Center for Preservation Policy Studies, National Trust for Historic Preservation.

Schuster, J. Mark. "Making a List: Information as a Tool of Historic Preservation," in *Economics of Art and Culture: Invited Papers at the 12th International Conference of the Association of Cultural Economics International*, edited by R. Blundell et. al. Amsterdam: Elsevier, 2004.

Sawicki, David S. Summer 1989. "The Festival Marketplace as Public Policy: Guidelines for Future Policy Decisions." *Journal of the American Planning Association* 55, 3: 347-361.

> The author attempts a pre-completion evaluation of the costs and benefits of a proposed festival marketplace, Underground Atlanta. The project's stated goals were to: create jobs; support the convention industry; spur downtown development; produce revenue for the city (parking, property taxes, sales taxes); physically renew a section of downtown and adjacent areas; and provide business opportunities for local entrepreneurs, particularly minorities. Moreover, cities in general used festival marketplaces to lure suburbanites back downtown. They often required substantial public subsidies;

developers contend that they would not undertake festival market investments "but for" public subsidy.

Sawicki evaluates three impacts: fiscal impacts, other desirable economic benefits, and qualitative benefits (improved urban design and city image). He examines Underground Atlanta's financial projections and questions if the project will produce marginal benefits for the city, or will only draw retail away from other existing downtown businesses. (He notes that Harborplace posted annual sales of over $100 million in its first year, but retail sales in the city as a whole were level or dropped, suggesting that the festival market drew businesses from other retailers.) He concludes that the costs and benefits of festival marketplace projects are difficult to assess; they involve multiple funding sources, revenue streams, and development partners, making it difficult to understand their accounting. He offers guidelines for governments considering festival markets, or any other large municipal investment. Such developments should be: part of a comprehensive plan; evaluated with fiscal impact analysis; subject to public review and comment of costs, benefits, and opportunity costs. These obligations may require that the city hire staff or consultants experienced in real estate analysis.

Throsby, David. 2001. *Economics and Culture*. Cambridge: Cambridge University Press.

Throsby broadly and thoughtfully considers the theoretical intersections between economics and culture. The differences between economic and cultural value are examined at length. The components or range of cultural value include: aesthetic value, spiritual value, social value, historical value, symbolic value, and authenticity value. The social sciences and humanities have developed techniques for measuring these values including: mapping, thick description, attitudinal analysis, content analysis, and expert appraisal. Economic value is measured in the marketplace for private goods by price. For cultural goods whose monetary value is not well measured in the marketplace, economists have developed contingent valuation (CMV) and willingness to pay (WTP) methods designed to assign an economic value to public goods.

The author introduces the concepts of cultural capital and cultural sustainability, and explores the similarities between cultural capital and natural capital. The role of culture in economic development is briefly reviewed, as is cultural tourism.

A chapter on cultural policy concludes the book. Throsby warns that in an increasingly globalized world, cultural policy is often largely dictated by economic policy. Efficiency and cost effectiveness—measurements of economic value—dominate over other cultural values and equity of cultural ownership and access.

de la Torre, Marta, ed., *Assessing the Values of Cultural Heritage: Research Report.* Los Angeles: The Getty Conservation Institute, 2002.

This paper aims to explore value assessment as a particular aspect of conservation planning and management. The pragmatic questions at hand are: how can a wide range of heritage values be

identified and characterized in a way that (1) informs policies and planning decisions, and (2) is relevant to all the disciplines and stakeholders involved?

Treinen, *Michael. 2004.* "Opposing Forces Yet Mutual Catalysts: Reconciling Corporate Policy With the Preservation of Iowa's Historic Buildings." *Journal of Corporation Law* 29, 4: 819.

Treinen comments on the current status of historic preservation efforts in Iowa and offers recommendations for making the state's historic properties more attractive to corporations. Iowa has had some success with historic preservation, however, many large historically significant commercial properties remain underutilized or vacant. Both a state rehabilitation tax credit and local property tax exemption enabling legislation currently exist in Iowa. Communities should advertise their available historic buildings and promote awareness of the existing preservation incentives. While new construction seems to be the default choice for many corporations, the design and construction details of some historic properties provide marketing advantages for image-oriented corporations like architecture firms and some retail establishments. Still, accessibility, parking, and the high construction cost of historic preservation are obstacles. Municipalities should orchestrate public/private partnerships and direct preservation activity to targeting downtown redevelopment areas. Iowans are environmentally conscious; historic preservation has environmental benefits that should be more clearly noted in federal and state preservation incentives statutes, making them potentially more attractive to corporations looking to improve their images by capitalizing on a "corporate goodwill" project. Existing state incentives available to fund construction of new and expanding businesses should be rewritten to prioritize the reuse of historic buildings. Lastly, Iowa should mandate comprehensive local planning; it is now only one of ten states that does not.

Preservation and Gentrification

Allison, Eric. 2005. "Gentrification and Historic Districts: Public Policy Considerations in the Designation of Historic Districts in New York City." Ph.D. Dissertation, Columbia University. [Requested ILL]

Beauregard, Robert A. "Chaos and complexity of gentrification." In *Gentrification of the City*, edited by Neil Smith and Peter Williams. (Boston: Allen & Unwin, 1986).

Author describes the "potential gentrifiers:" "the necessary agents and beneficiaries of the gentrification process." Gentrification is linked to changes in the industrial and occupational structure in the US—decline of manufacturing jobs, increase of professional, administrative, personal service, retail, office, hospitality jobs. Gentrifiers less inclined to have children; tend toward conspicuous consumption; seek public places in which to consumer—restaurants, clubs, movies, plays, shopping—and to find potential, like-minded mates. "The potential gentry represent an 'up-scale' class of consumers who frequent restaurants and bars, and generally treat shopping as a social

event." 44 Items purchased—ability to shop in certain neighborhoods--are coveted status markers. Commercial gentrification fuels more residential gentrification: "the two are mutually supportive." As gentrifiers move into an area "the demand increases for housing and for restaurants, bars, movie theaters and other facilities for public but individualized consumption." They crave "the opportunity to express one's affluence and 'taste' in physical surroundings." 45   Government aides the gentrification process by designating historic districts and "labeling" neighborhoods, e.g. TriBeCa. 52.

Bures, R. 2001. "Historic Preservation, Gentrification, and Tourism: The Transformation of Charleston, South Carolina." In *Critical Perspectives on Urban Redevelopment*. New York: Elsevier Press: 195-210.

The author contends that the historic preservation movement in Charleston led to gentrification that caused racial and economic segregation through the involuntary dislocation of black residents. Racial segregation of gentrifying neighborhoods is documented with census statistics for the period 1920-1990. Historic preservation efforts and events associated with gentrification are framed within the context of other physical and social forces that shaped the city, such as the construction of a bridge that enabled commuting to the suburbs, and the northern migration of African Americans. Bures concludes that preservationists must develop strategies to maintain the social and community environments in addition to their efforts on behalf of the physical environment.

Burke, Padraic. 1978. "Pike Place Market: Long Cherished Symbol in Seattle Undergoing Changes as Developers Move In." *American Preservation* 1, 6 (Aug./Sept.): 22-29.

"But this urban renewal project would be like no other in the country. There would be no wholesale destruction of neighborhoods here, but rather careful and considerate restoration of both the buildings and social fabric of the area. Where there had been displacement of the original population in other projects, here there would be both retention and preservation of the people and the values of the neighborhood. Here human values were to dominate and not the greed of buildings and real estate speculators who saw the thing and not the lives of people and their neighborhood." (26) Relays story of the day the National Commission on Neighborhoods visited the market. Geno Baroni, Assistant Secretary at the Dept. of Housing and Urban Development is reported to have said of the market restoration project: "Why bother…I've seen it all happen before. In Georgetown and in Faneuil Hall. The poor people are being shoved out and the trendy people are moving in. Out goes the place that serves bacon and eggs and in comes something else that serves Sunday brunch six days a week." Of the 27 "working man's taverns that existed in the Market area only a few years ago only five remain. Of some 770 low-cost housing units that existed in the area in 1971 only 138 remain.' The article implies that the market is being changed for the worse by government-subsidized preservation.

Chinatown Neighborhood Improvement Resource Center. *Displacement of San Francisco's Chinatown.* San Francisco, 1978.

This report is quoted in the National Urban Coalition handbook noted below. It is said to propose "an idea of historic preservation which goes beyond the architectural concerns characteristic of conventional historic preservation efforts." It calls Chinatown "a living historic neighborhood" with "its ornate parapets"...etc. but also "historic and cultural richness embodied in the lifestyles of the residential community and in the unique services provided by the small merchants of the neighborhoods."

Cohen, James. 1989. "Combining Historic Preservation and Income Class Integration: A Case Study of the Butchers Hill Neighborhood of Baltimore." *Housing Policy Debate* 9, 3: 663-697.

Nationally, historic preservation efforts often lead to gentrification and the displacement of low-income and minority residents. The Butchers Hill neighborhood of Baltimore is an exception. Baltimore has high degree of income inequality (concentration of poverty) as documented by a number of indicators (Gini Coefficient, index of dissimilarity and isolation index). Cohen explains how neighborhood groups created competing non-profit housing corporations to cater to different ends of the economic spectrum and, as result, Butchers Hill evolved into a mixed-income and mix-race community.

The article reviews federal, state, and local programs to promote mix-income housing, in addition to the National Trust for Historic Preservation's Community Partners Program (CCP) intended to promote mixed income housing and preservation-based development. Among the goals of CCP is to alter the perception that the preservation movement has ignored low-income and minority communities needs.

Gentrification of Butchers Hill began in the late 1960s spurred on by the South East Community Organization (SECO) and its associated community development corporation, (CDC) Southeast Development Incorporated (SDI). Alarmed by the displacement of low-income residents, a "countermovement" to preserve affordable housing emerged, led by the Concerned Citizens of Butchers Hill and the CDC it developed, Jubilee Baltimore. Cohen briefly profiles the creative financing of four mixed-income projects developed by Jubilee Baltimore. As result of gentrification and its countermovement, Butchers Hill is demographically and socioeconomically diverse, a status the neighborhood self consciously seeks to maintain.

In conclusion Cohen offers eight topics for future research: 1) States' use of Low Income Rehabilitation Tax Credit (LIHTC) allocations; what are the drawbacks to the large-scale, entirely-low income developments that most states favor with their LIHTC allocations? 2) Mixed-income development and social services; are they needed and if so, who should pay for them? 3) The relationship between restoration and tenant displacement; what assistance should be provided to displaced tenants? 4) Tenant screening of mix-income developments at both ends of the economic spectrum; what are the appropriate criteria for tenant selection? 5) The extant to which mixed-income developments are also mixed-race; nationally, what are the demographic profiles of successful mixed-income neighborhoods? 6) Identification and choice of historic buildings to restore; who decides? 7) Extent of social interaction between income levels in mixed-income developments; if

social interaction exists, what are its benefits?   8) How can combined use of the Historic Rehabilitation Investment Tax Credit (ITC) and Low Income Rehabilitation Tax Credit be expanded?

Coulson, Edward N., and Robin N. Leichenko. July 2004. "Historic Preservation and Neighborhood Change." *Urban Studies* 41, 8: 1587-1600.

The authors conduct an econometric analysis to determine if designation of historic districts in Fort Worth, Texas leads to gentrification. The literature on neighborhood transition is reviewed with an emphasis on the various modifications of the "filtering" and "tipping" models. The filtering model describes how housing units "filter" down through successively lower income groups as they age and decline in quality, while the tipping model explains how a neighborhood undergoes demographic transitions. Census data from 1990 and 2000 is analyzed to establish if there is a relationship between historic designation and changes in the following five demographic and housing indicators: diversity of population as measured by the Simpson index of diversity, growth rate of population, change in the residential vacancy rate, percentage change in median income, and change in the owner-occupancy. Neighborhoods with historic designation are found to be slightly more Hispanic, and have slightly higher vacancy and home ownership rates. The researchers find a convergence of the census tracts toward the mean for some variables. For example, tracts with relatively high home ownership experience a decline in ownership during the 1990s, and those with low ownership rates experience an increase. A similar convergence was observed for Black and Hispanic populations, indicating that the neighborhoods became more diverse. Interpretation of regression analyses concludes that "historical designation does not lead to gentrification, or any other kind of neighborhood turnover." Designation is, however, associated with higher median house values, which is consistent with the authors' past research findings.

Datel, Robin E. and Dennis J. Dingemans. "Why Place are Preserved: Historic Districts in American and European Cities," *Urban Geography* 9, no. 1 (1988): 37-52.

Researchers sent questionnaires to historic preservation organizations in five metro areas: London, Paris, San Francisco, Washington, DC, and Philadelphia to determine why these groups seek historic district listing. They first note that district designation is often tied to patterns of gentrification; new middle-class homeowners seeks to designate areas in which they live, but neighborhoods of equal historical and architectural interest that are occupied by economically-depressed or even stable working-class residents often go undesignated. In descending order of importance to those survey where the following rationales given for HP: knowledge of history; honor the past; psychological benefits; aesthetics; tourism; economic rationales were way at the bottom of the list. "Sense of place" is articulated in many answers. However, few have studied how sense of place motivates preservation. The literature of preservation "lacks expressions of sense of place and discussion of meaning of places to members and citizens." Architectural surveys and nominations compiled by preservation experts notoriously avoid mentioning sense of place. "But the objective judgments of an outside are not the same as the attachments of an insider" (see citations). What matters to people who live there "is something more personal and experiential, the result of acting and feeling in a

place, not just viewing it."   Cultural resource experts do not consider including experiential, sense of place component in their work. It would involve social science skills outside the realm of their experience and training. If these were considered, perhaps a "different kind of 'preservation' program could be appropriate."

_____.   "Environmental Perception, Historic Preservation, and Sense of Place," in *Environmental Perception and Behavior: An Inventory and Prospects*, research paper No. 209, edited by Thomas F. Saarinen, David Seamon, and James L. Sell (Chicago: University of Chicago Department of Geography, 1984): 131-144.

Authors review the environmental perception studies of historic preservation, giving generous footnotes. The desire to maintain and enhance a sense of place motivates much preservation activity. Yet, examination of particular sense of place and how they motivate preservation activity are few. Surveys of preservationists conducted by the authors confirm that sense of place is important to preservationists. Members of local community may use the technical language the preservationist to express their desire to preserve a neighborhood perhaps because no adequate experiential one exists (see Linda Graber, "Development Control and the Sense of Place: Experiential Foundation of Contemporary Land-Use Planning Movements (PhD dissertation, Univ. of Minnesota, 1979). Capturing the average resident's sense of place would require tools not typically used by preservationists, such as: examination of regional or local literature and art; participation in an observation of relevant decision-making groups; questionnaires; interviews; cognitive mapping. They suggest that a diversity of methods would be best.

Datel, Robin Elizabeth. "Preservation and a Sense of Orientation for American Cities," *Geographical Review* 75, 2 (April 1985): 125-141.

Datel examines preservation activity in Washington, DC, San Francisco, and Philadelphia. She notes that preservation activity accompanies gentrification. Interest in architecture and history, as well as willingness to participate in neighborhood planning, are a function of education and class. Thus, preservationists are most engaged in middle-class areas. Preservation activity, in turn, stimulates real estate development and social change. She notes an irony in that the 1966 NHPA was enacted to "give transient Americans a sense of rootedness and belonging," and yet "In the pursuit of this goal preservationists sometimes have abetted the displacement and disorientation of persons rooted by their own experience."

"Displacement Unsolved."   *American Preservation: The Magazine for Historic and Neighborhood Preservation* 1, no. 1 (1977): 20-26.

Displacement "is … one of the most vexing [problems] in the resurgence of the neighborhood preservation movement in this country."   Includes an interview with Frances Phipps, Ph.D., the National Urban Coalition's Director of Research, who comments on the preliminary findings of her

report on displacement in 47 US cities. She suggests an income tax limit for residents of historic districts (unclear if she's talking about qualifications for property tax abatements). Quotes Russell Wright, an HP consultant who says "I feel that certain commercial uses contribute to the establishment of the character of an area to make it different from other neighborhoods." [See some of his HP plans in the UMD Nat Trust Library] Mrs Mary Widener, Ex. Dir. of Neighborhood Housing Services: "To put it bluntly, many minority residents feel that it [historic preservation] is a conspiracy to move them out of their neighborhood and take their homes."

Foley, John and Mickey Lauria. 2003. "Historic Preservation in New Orleans French Quarter: Unresolved Racial Tensions." In *Knights and Castles: Minorities and Urban Regeneration.* (pp. 67 - 89). Burlington CT: Ashgate Publishing Company.

Preservation of the French Quarter is complicated by competing and often conflicting visions of New Orleans' past and future that are heavily influenced by race, class, and sexual preference. The authors draw on interviews and public statements to form the basis of their conclusions. They argue that the predominantly white, affluent residents of the Quarter see themselves as a minority fighting for the preservation of their unique neighborhood which is threatened by the policies of a largely black political structure. The denizens of the Quarter believe that black indifference toward preservation stems from ignorance; if blacks were educated in the history of the Quarter, some reason, then they too would advocate for policies that promote preservation. On the other hand, "The segregated past still affects the perception of the Quarter by the citywide black majority population, and it is not a place where they feel comfortable to live." In this context, "Education sounds often like the desire to instill values without relfexion [sic] on their cultural bias." Nevertheless, residents of the Quarter espouse an appreciation for diversity and tolerance which appears sometimes at odds with what Foley and Lauria argue are attitudes that express a subtle undercurrent of racism.

Conflicting values clash over the treatment of noise and crime. The Quarter's permanent residents demand that the political establishment enforce the noise ordinance and adopt a "zero tolerance" approach to criminal infractions. The black mayor is, however, receptive to the plight of the predominantly black street musicians who argue that music is a part of their cultural history and a vital facet of the tourist industry. Police enforcement of minor criminal behavior like public intoxication and nudity is relaxed, particularly for visitors, in the interest of promoting the tourism industry that is so critical to the creation of jobs for low-income citizens.

In the face of New Orleans' serious social and economic problems, the authors reason that arguments in favor of preservation sometimes appear elitist, if not inconsequential, to the future of the city. Class and racial differences inform an individual's sense of what is appropriate and therefore "The preservation discourse cannot be accepted, a priori as superior."

Ford, Larry R. (April 1974) "Historic Preservation and the Sense of Place," *Growth and Change* 5, 33-37.

Ford notes that preservation activity is catching on in many west coast cities in the US, particularly San Francisco. He thinks this is positive for a number of reasons, namely b/c it reuses buildings in the "zone of discard" adjacent to the CBD. Due to high central city land values, the question is not one of redevelop or leave as is, but rather renovation vs. urban renewal. Demolition is inevitable unless a profitable renovation scheme can be developed. If the popularity of preservation goes too far, the diversity suffers and districts become "simply quant, high cost office area[s]." "Sterility sets in." He assumes most of these areas are abandoned warehouses; "the people issue is not of direct concern. To a degree, however, responsible preservationists must consider preserving functions as well as architecture for social as well as historic reasons." P36

Gale, Dennis E. *Neighborhood Revitalization and the Postindustrial City: A Multinational Perspective.* Lexington, MA: Lexington Books, 1984.

Ch. 2 reviews US gentrification literature. J. Thomas Black studied 143 central cities w/ populations of at least 50K and found that at 48 percent were experiencing private-market, non-subsidized housing renovation; estimates that b/w 1968-75, 54,600 units were renovated. About 2/3 were designated historic districts. As a whole, the extent of rehab seems small compared to new construction data. More than ½ of sampled population in each study moved to gentrifying neighborhoods from another location within the same city; most studies indicate that < 20 percent of gentrifiers had come from the suburbs. Architectural or historical appeal ranks high on list of reasons gentrifiers move to neighborhoods, along with accessibility to work and economic factors.

Gale, Dennis E. 1979. "Middle Class Resettlement in Older Urban Neighborhoods." *Journal of the American Planning Association* 45, no. 3 (July): 293-304.

Most of the information Gale uses in Ch. 2 in the citation above comes from this article. He has a further explanation of his "stage theory" of how the types of people who move into gentrifying neighborhoods change over time, also discussed in his 1991 article above. Smith has a similar theory in The Revanchist City. Gale's survey results and his analysis of past studies indicate that most people (72-85 percent in Atlanta, New Orleans, NYC, and Washington) rate the architectural/historical/cultural character as a primary reason for their movement to a neighborhood.

Goss, Jon. April1-May 16, 1996. "Disquiet on the Waterfront: Reflections of Nostalgia and Utopia in the Urban Archetypes of Festival Marketplaces." *Urban Geography* 17: 221-247.

Goss employs critical theory in a "textual reading" of festival marketplaces. He examines four of their archetypes: public space, marketplace, street theater, and waterfront. According to Goss, festival marketplaces are illusions of public space created for bourgeois enjoyment and conspicuous consumption; they exist somewhere on a spectrum between kitsch and fetish. Their architectural design and management are careful manipulated to sanitize them of the potential dangers or unpleasantness experienced elsewhere in the city: homelessness, loitering, rowdy youth, etc. Goss,

and those who he quotes, mock Rouse and other neo-traditional designers (like Duany and Plater-Zyrberk) "invested in the nostalgic discourse" for their belief that historic (or historically designed) public spaces have the potential to shape human interaction and promote civic life. Because we morn the loss of these nineteenth century public spaces, we recreate them in the form of the festival marketplace—an "ideal-typical" reproduction of "archaic forms and functions."

Goss draws on a number of cultural critics including Benjamin, Arnet, Boudrillard, Habermas, Freud and others. The paper is well research and includes a lengthy bibliography of newspaper articles and secondary sources relevant to festival marketplaces. While he is critical of the way that their architecture and images are manipulated to compel consumption, Goss admits that the festival marketplace is "profoundly ambivalent;" he acknowledges that they are not as exclusionary as most enclosed malls; people who visit them seem to have enjoyable exchanges; they appear to be fun.

Gotham, Kevin Fox. 2005. Tourism Gentrification: The Case of New Orleans' Vieux Carre (French Quarter)." *Urban Studies* 42, 7: 1099-1121.

Gotham sees "tourism gentrification" as a unique form of gentrification characterized by a distinctive process. It relies on both the globalization of the entertainment industry, on abundant capital made available by the securitization of commercial loans, and the creation of Real Estate Investment Trusts (REITS). The author points to research suggesting that "while tourism may be a 'global' force, it is also a locally based set of activities and organizations involved in the production of local distinctiveness, local cultures and different local histories that appeal to visitors' tastes for the exotic and unique." Historic preservation plays a vital role in the promotion of this "local culture," however, in the interests of development and enhanced tourism, decision are often made that undermine preservation objectives.

Gotham maintains that unlike past theories of gentrification that emphasize the influence of changing consumer demand and market forces, tourism gentrification relies on the intentional production of a market. "Consumer taste for gentrified spaces is…created and marketed, and depends on the alternatives offered by powerful capitalists who are primarily interested in producing the built environment from which they can extract the highest profit." As a result, today the French Quarter is less racially and economically diverse than at any time it its history; local-owned enterprises have been all but entirely replaced by entertainment venues owned by global conglomerates; low-income housing is practically nonexistent. While some residents welcome this change as a sign of progress, others believe that it has eliminated diversity, destroyed the local culture, and undermined the residential neighborhood characteristics that made the Quarter a tourist destination in the first place.

Hays, Stelle. "Butchertown: Main Aims of Neighborhood Are to Preserve Human Resources and to Avoid Displacement. *American Preservation* 1, no. 2 (Dec 1977-Jan. 1978): 58-63.

The Butchertown neighborhood of St. Louis struggles to maintain low income housing as prices rise elsewhere in the city. Resident formed Butchertown, Inc. in 1967 to purchase and restore vacant properties for resale to low-income residents. Tensions exist b/w newer preservation-oriented residents and more long-term homeowners. The two groups have difficulty agreeing to a proposed local historic district.

Hodder, Robert. 1996. "Savannah's Changing Past: Historic Preservation Planning and the Social Construction of a Historic Landscape, 1955 to 1985." In *Planning the Twentieth-Century American City,* edited by Mary Corbin Sies and Christopher Silver. Baltimore: Johns Hopkins University Press.

The historic preservation movement in Savannah, Georgia evolved through three distinct phases that gradually drew together the interests and histories of both while and black preservation advocates. In the first phase, between 1955 and 1973, preservationists founded the Historic Savannah Foundation (HSF) and persuaded the local political and business elites to acknowledge the economic potential of preserving the city's architecture as a tourist attraction. HSF realized a number of high-profile achievements, including the economically-successful redevelopment of Troup Ward, seen by some as a model of privately-funded preservation. The city's black community, however, was troubled by the displacement that accompanied preservation redevelopment. Lee Adler, among the leaders of HSF, encouraged the organization to actively combat the social problems caused by gentrification. When they demurred, he formed the Savannah Landmark Rehabilitation Project (SLRP) in 1975 to show that "The benefits of preservation can be shared by the rich and the poor."

Between 1974 and 1979 the SLRP focused on the city's recently-designated Victorian District, a low-income and predominantly African American neighborhood. The organization channeled private and public funding into a revolving loan fund for low-income home owners and purchased rehabilitated historic properties for low-income renters.

The beginning of the third phase, which spanned from 1980 to 1985, was marked by the relocation of the King-Tisdell Cottage, an African-American landmark, to the Beach Institute Historic Neighborhood. The cottage became the local branch of the Association for the Study of African American History and swelling interest in black history encouraged the formation of the Beach Institute Historic Neighborhood Association (BIHNA). BIHNA worked to ensure that preservation activities served the interests of the existing low-income and black residents. In 1983, HSF, SLRP and BIHNA came together to co-host a conference on preservation, housing, and community development.

Jandl, Ward H. 1979. Editorial and response from editor. American Preservation 2, no. 2 (Dec./Jan.): 90..

Jandl wrote to dispute a claim published in an earlier edition that the Tax Reform Act "has caused many homes to be turned into apartments which otherwise would be have become single-family dwellings." His statistics indicate that 25 percent of new units involve subsidy for low-and moderate-income residents and that most units are created from vacant industrial buildings. In response, the

editors write that they " believe…too many single-family dwellings have become apartment buildings [as a result of the incentives]."

Kasinitz, Philip. Fall 1988. "The Gentrification of Boerum Hill: Neighborhood Change and Conflicts over Definitions." *Qualitative Sociology* 11, no. 3, 163-182.

Gentrification involves the middle-class redefinition of existing inner-city neighborhoods. "Brownstoners" moved into "Gowanus," a neighborhood w/ a slum reputation that was bordered by public housing, beginning in the early 1960s and began calling their new home "Boerum Hill." Long-term residents often form gentrification countermovements to express their own definitions. In the minds of the predominantly white, middle-class members of the Boerum Hill Association, neighborhood boundaries were defined by the brownstone architecture, not by the types of people who lived there. While not necessarily wealthy, the brownstoners had significantly more social and political capital than the existing residents. Many of them journalists, writers, and lawyers, they skillfully used the media to create a history for BH, to oppose demolitions, and create an historic district—to make themselves "visible." According to Kasinitz, landmarking enabled one set of residents to use state policy to make their aesthetic and social vision of the neighborhood a reality. Population plummeted as rooming houses and multi-unit apartment buildings were converted to single-family occupancy. Anti-gentrification advocates redefined "renovation" as gentrification—b/c who could be against renovation? The Puerto Rican community asserted its ethnic identity to resist gentrification, first by organizing a "Three Kings Day" Christmas festival.   Both pro and anti gentrification advocates construct myths about their history and identity. Includes long list of references.

Klimoski, Gretchen. 1978. "From Historic Preservation to Urban Conservation: Urban Revitalization Displaces the Poor—A Working Paper." Published under a different name in '79.

Lewis, Peirce F. Fall 1985. "The Future of the Past: Our Clouded Vision of Historic Preservation." In *Controversies in Historic Preservation*, edited by Pamela Thurber. Washington, DC: National Trust for Historic Preservation.

Lewis thinks the preservationist movement is a dismal failure because it relies on five inherently flawed arguments for why historic buildings should be saved: cultural memory; antique texture; successful proxemics; environmental diversity; and economic gain.   Each has its pitfalls; preservationists must exercise care in how they are used.

If preservationists employ the cultural memory rationale, then were do they draw the line in deciding what to preserve; and how effective are our preservation strategies in conveying cultural memory? Is the adaptive reuse of Ghirardelli Square or (as was being proposed when this essay was written in 1974) Eastern State Penitentiary for retail boutiques an effective strategy to preserve cultural memory?

If "antique texture"—the inherent beauty of old materials—is championed as the reason for preservation, then preservationists must ask (or critics will force them to confront) if the aesthetic qualities of old materials are really inherent, universally-held convictions, or rather if they are the preferences of a white middle-class majority.

And lastly, if economic gains are the reason for historic preservation, then preservationists must ask: who gains, and who loses? Lewis points to the case of New Orleans' French Quarter, where rising property values have displaced minority and low-income residents. [For a classic example of a text that uses Lewis's five flawed arguments in defense of preservation, see Arthur P. Ziegler, Jr.'s *Historic Preservation in Inner City Areas: A Manual of Practice* (Pittsburgh: Allegheny Press, 1971).

Lloyd, Richard. 2002. "Neo-Bohemia: Art and Neighborhood Redevelopment in Chicago." *Journal of Urban Affairs* 24, 5, 517-532.

Creative culture and commerce are drawn to Chicago's Wicker Park neighborhood b/c of its neo-bohemian traditions. Grit, danger, the illicit are seen as authentic, and thus create a "bohemian chic," 518 which is more attractive than "sanitized environments" (e.g., Navy Pier) to workers in creative industries like media, art and music. Lloyd draws heavily on R. Florida's Creative class concepts.

Maher, Timothy, et. al. Dec. 1985. "Whose neighborhood?: The Role of Established Residents in Historic Preservation Areas." *Urban Affairs Quarterly* 21, 2: 267-281.

The authors (all four professors of sociology) seek to determine if revitalization of historic districts can take place without gentrification. Can existing residents (incumbent occupants) of historic districts play an active role in neighborhood revitalization, or does revitalization always cause gentrification as affluent homebuyers displace low-income residents? The researchers conduct interviews with residents of two Indianapolis neighborhoods—Chatham-Arch and Old Northside—to gauge their inclination toward restoration. Information on socioeconomic status is also recorded.

The literature on poverty and urban blight suggests to the researchers three attributes of "slum residents" that may account for their relative inclination toward restoration: lack of money; lack of skills; lack of ambition (culture of poverty).

Statistical analysis of the survey results finds that residents who lack financial resources are generally disinclined toward restoration. Level of education was also negatively correlated with an inclination toward restoration. To test whether a culturally-derived "lack of ambition" influenced residents inclination toward restoration, the researchers analyzed households with and without the following variables: a female head, a single parent, an unemployed member, and a non-white head. Their results are the opposite of what would be predicted by the "culture of poverty thesis." Households headed by single females, non-whites, and with unemployed members were more interested in home improvement, were more critical of the houses around them, and were more likely to report expenditure on major repairs and redecoration projects.

The researchers speculate that the major differences between long-time residents and new homeowners in their inclination toward preservation may have to do with "the way the restoration process unfolds." The more affluent new residents are more self-consciously committed to historic preservation, perhaps because of the way they were courted to move into the neighborhood, the way the media portrays the preservation process, the fact that they have preservation role models with which they can identify, or still other reasons.

In conclusion, the researchers do not find promising evidence that incumbent upgrading will lead to the revitalization of the two neighborhoods. Rather, newcomers are in a better position to guide the direction of redevelopment due to their greater financial and personal assets and the fact that the preservation movement may be catered to their needs and inclinations. Without public intervention, existing residents are likely to be pushed out of the neighborhoods.

Metzger, John T. 2001. "The Failure of a Festival Marketplace: South Street Seaport in Lower Manhattan." *Planning Perspectives* 16: 25-46.

Metzger describes in detail how various interests shaped the design and programming of South Street Seaport. Beginning with a brief history of the seaport area, he documents efforts between 1950 and 1980s to save the area for preservation and redevelopment. In the '60s the site was nearly cleared for the construction of an office development until the newly establish Landmarks Preservation Commission stepped in to designate the area as a district. In 1969 the NYC Planning Commission declared the site an urban renewal area and designed the seaport area for "restoration and rehabilitation." The South Street Seaport Museum was established to obtain ownership of the properties and management restoration activities.

In the mid 1970s the Seaport abandoned its initial plan to redevelop each building individually and instead tried to find a master developer for the site. James Rouse, who in 1976s opened Boston's Faneuil Hall Market to great success, was an obvious choice. Rouse proposed a festival marketplace development with new construction on Pier 17, construction of a new commercial building on an infill site, rehabilitation of existing historic buildings, and permitting pushcart vendors. Artists who lived in the seaport, existing businesses and the fish mongers who occupied the municipally-owned Fulton Fish Market all opposed Rouse's plan. In response, the city proposed changes in zoning and committed to rehabilitating the fish market.

The city leased the buildings to the Seaport Museum who in turn leased them to Rouse for redevelopment. The construction was heavily leveraged with public financing from the city, state and federal government, particularly a large Urban Development Action Grant; Rouse contributed no equity to the project. The $350 million development was projected to generate thousands of construction and full time jobs, and approximately $8.5 annual revenue to the city. When completed in 1983 (Pier 17 opened in 1985), the Seaport fell short of its job creation and revenue goals. The shops were originally leased to small local businesses "that blended with the historic theme and identity" as well as a few national chains. Gradually throughout the '80s the local businesses were

replaced with national chains able to pay higher rents that were needed to help cover operating costs. The identity of the Seaport shifted from a "historic marketplace to suburban-style shopping mall." Rouse went on to build a new of other festival marketplaces in smaller cities that failed and were then closed; the company ceased developing such ventures in 1988.

Murtagh, William J. 1978. "As I See It: Displacement: Challenge for Preservationists/Conservationists." *American Preservation* 1, 6 (Aug./Sept.): 6-7.

Preservationists are widening their scope of concerns and are "becoming interested in preserving networks, neighborhoods, and cultural landscapes." They have "to look inwardly and examine certain problems related to historic preservation. One such problem is the social displacement of current residents by persons with higher incomes and social status." "The imposition of local preservation-oriented zoning controls often accelerates the natural rhythm of change, increasing the rate of real estate turnover, resident mobility and flight, and business and resident displacement." He thinks the problem is w/ the tax structure, appraisers, and real estate industry. "…with minor exceptions, preservationists have failed the other segments of our society and often have forced unwanted changes upon them. For the young and upwardly mobile, change—sometimes caused by preservation—can be beneficial. For others, usually the poor and the elderly, such change is often not good or questionable at best." "As the scope of preservation and conservation expands, such social and economic issues as displacement must be carefully studied."

Nasser, Noha. May 2003. "Planning for Urban Heritage Places: Reconciling Conservation, Tourism, and Sustainable Development." *Journal of Planning Literature* 17, 4: 467.

Although she does not use the word "gentrification," Nassar argues that sustainable planning for heritage places is needed in an age of global tourism because the economic forces generated by tourism often displace the services that cater to the local population. In the last half of the twentieth century, historic towns have come under increasing pressure from affluent tourists and marketing corporations who exploit local resources. Tourism-led development undermines the central precepts of conservation by emphasizing the preservation of the physical and neglecting the cultural. Heritage places need socioeconomic protection as well as architectural protection.

The author believes that cultural heritage is consumer product, thus the selection of heritage places and the way in which they are marketed are "driven by the requirements of the consumer market." This market demands a certain uniformity of retail and service amenities like car parking, fast-food, and luxury western hotels, much of which may not serve the local population. Moreover, development that meets these impulses tends to undermine the individuality of heritage places. These conclusions are supported by recent literature on heritage tourism and its negative externalities that is reviewed in the article.

Heritage tourism can be made sustainable, according to Nassar, by first acknowledging the relationship between building form and use, and second, by incorporating "social ideals" into land

use planning. She identifies two distinct strategies to make heritage tourism sustainable. The functional theory maintains that tourism must be distributed more effectively in accordance with the "carrying capacity" of the resources, restricting the number of visitors as needed. The political economy approach advocates that local ownership and management of tourist resources will help to distribute wealth and balance tourist development with local needs; public participation is prioritized.

National Urban Coalition. *Neighborhood Transition without Displacement: A Citizens' Handbook.* N.p.: National Urban Coalition, 1979.

This brief handbook discusses strategies communities can use to identify and counteract displacement. It includes a section on historic preservation efforts, which it notes are "frequently associated with reinvestment…and displacement," but may also be used by existing residents to improve housing opportunities for low income groups. Case studies were preservation strategies used to combat displacement are provided for Pittsburgh, San Francisco's Chinatown, and Savannah. A bibliography of reports, articles, and books is included.

Newson, Michael D. Summer 1971. "Blacks and Historic Preservation." *Law and Contemporary Problems* 36: 423-432.

Newson gives a scathing critique of the historic preservation movement. Efforts by historic preservationists and real estate professionals to redevelop historically-significant inner-city neighborhoods lead to the displacement of existing black residents in a process the author calls "the Georgetown Syndrome." Blacks sell to white developers because they either cannot resist the prices being offered to them, or they cannot afford the repairs required by code enforcement, which Newson argues is often enhanced in areas that historic preservationists, in league with city officials, see as ripe for redevelopment. He blames the historic preservation movement for being blind to the social implications of their restoration projects.

The author offers suggestions and sees hope for those blacks who desire to resist or to reform the preservation movement. When blacks have more political power in city government, they may take control of landmark commissions or may force zoning boards to deny preservation projects that reduce the supply of low income housing. Banking and insurance reform may give blacks more access to the credit needed to maintain homes in gentrifying areas. Government-sponsored preservation programs may enhance opportunities for black-administered preservation efforts. If these do not work, protest may be the final recourse for those who seek to align the "goals and methods" of historic preservation with "black aspirations."

Petty, Ann E. 1978. "Historic Preservation without Relocations, Savannah Rebuilds Victorian District." *Journal of Housing* 35, 8: 422-3.

Roddewig, Richard, and Michael S. Young. 1979. "Neighborhood Revitalization and the Historic Preservation Incentives of the Tax Reform Act of 1976: Lessons from the Bottom Line of a Chicago Red Brick Three-Flat." *The Urban Lawyer* 11, 1: 35-74.

The article reviews the historic preservation provisions of the 1976 Tax Reform Act and highlights problems developers have encountered in the implementation of the new program. Basic program requirements are described. The authors bemoan DOI's "finickiness in certifying applications" and the fact that the Standards are subject to DOI interpretation, leaving developers unsure of what constitutes an appropriate application, particularly with respect to contemporary and compatible new construction. The layered state and federal reviews, and the desire of reviewers to scrutinize the minutia of rehabilitation proposals, result in costly delays. Based on their observation of rehabilitation projects in Chicago, they conclude that the new tax incentives will only result in gentrification and displacement of those with limited economic means. (Quoted is a memo from the DOI warning that displacement will likely result from National Register listing.) Nevertheless, in the final section they conduct a proforma analysis of a Chicago residential building rehabilitation to illustrate that the preservation tax incentives help to make some historic investments marginally attractive.

Rohrback, Peter Thomas. Oct.-Dec. 1970. "The Poignant Dilemma of Spontaneous Restoration." *Historic Preservation* 22, 4: 4-10.

Rohrback describes tensions between white upper-middle class preservationists and the predominantly black members of the Capitol East Community Organization (CECO) arising from residential restoration efforts in the East Capital Hill neighborhood of Washington, DC. Following a precedent set by Georgetown, preservationists formed the Capitol Hill Restoration Society in 1955 to promote the redevelopment of their neighborhood. In response to displacement and loss of neighborhood control, black residents formed CECO to raise awareness of the problem in the black community and to empower residents to resist gentrification by financing restoration of black homes.

In its defense, the president of Restoration Society argues that his membership cannot be held responsible for "complex problems of integration and shifting population." Rather, their mission is only to restore old homes. Furthermore, he maintains that black residents who held on to their homes are reaping the benefits of enhanced home equity. In a response that follows Rohrback's article, one Restoration Society member contends that CECO has done nothing constructive in the area. He defensively declares his status as a liberal who is committed to the inner city, who resisted the movement to the suburbs, and who is offended by insinuations that he is part of "some sort of white conspiracy." The "laws of economics" are what prohibit racial integration.

Rosen, Joseph A. "Manchester: Once Affluent but Now Low-Income Section of Pittsburgh will be Reborn in Unique Restoration Project." *American Preservation* 1, no. 3 (Feb/Mar 1978): 9-19.

Pittsburgh History and Landmarks Foundation lead by Arthur P. Ziegler, Jr., aims to produce preservation outcomes without displacement. Ziegler says that preservation up until the mid-1960s was not much different from Urban Renewal in that the poor were displaced for the benefit of the rich. He claims that the Mexican War Street Program was the first mixed income, integrated preservation district in the country and that the program "did something to the preservation movement across the country b/c it introduced a social consciousness, an awareness that the poor occupy the majority of our nation's architecturally significant buildings." Lee Adler from Savannah consulted on neighborhood development.

Smith, Neil. 1989. "Comment on David Listokin, Barbara Listokin, and Michael Lahr's 'The Contributions of Historic Preservation to Housing and Economic Development': Historic Preservation in a Neoliberal Age." *Housing Policy Debate* 9, 3: 479-485.

Smith believes that the negative aspects of historic preservation may outweigh its benefits, despite the lack of research documenting a correlation between preservation and displacement. Preservation benefits the rich and middle classes at the expense of the working poor who are displaced. More research is needed to document the "differential effects of historic preservation." The author calls on the preservation movement to "institutionalize at its core a policy of social responsibility."

Sauder, Robert A., and Teresa Wilkinson, "Preservation Planning and Geographic Change in New Orleans' Vieux Carre," *Urban Geography* 10, no. 1 (1988): 41-61.

The Vieux Carre is no longer a "real place" where people live, work and shop but has become, instead, a "Creole Disneyland." Consultants hired by the city in the late 1920s recommended a zoning ordinance to "preserve [the] unusual and historic section of predominant residential uses and small businesses (Harland-Bartholomew and Associates report, 1929). View Carre Commission created was created in 1936 to ensure that "the quaint and distinctive character of the Vieux Carre section …may not be injuriously affected;" it emphasized the retention and maintenance of the historic fabric but also referred to the "quaint and distinctive character." Authors show that in the 1940s, neighborhood services were well distributed throughout the quarter and far outnumbered tourist-oriented gift shops. Working class population was displaced by white, white-collar gentrifiers b/w the 1940-1980s. The Vieux Carre Commission responded to this influx with a preoccupation on the preservation of architectural details; "design preservation" was the commission's understanding of the "tout ensemble." No effort was made to preserve the "integrity" of the district, "the totality of its unique environment." The pursuit of tourist revenue was prioritized over other concerns. A late '60s study recommended a framework for preserving buildings but also "the total effect," recommended "coordinated public and private action should be taken to preserve and strengthen the district's tout ensemble." The Commission ignored the social aspects and implemented the architectural ones recommendation. Tourist gift shops steadily replaced local services (map showing impact on French Market is amazing). Eventually the power to limit uses was given to the Commission, but the hotels, entertainment venues, and gift shops were already well established and the use ordinance was not

vigorously enforced; they were reacting to change, not guiding it. "Much of the Vieux Carre's former integrity stemmed from its social and functional diversity." "The social and functional consequences of the district's preservation...call into question policies which stress the preservation of buildings over the clearly expressed and understood management of the neighborhood, one which emphasizes its suitability for everyday use." In the mid-80s the commission was still working w/ a citizen advisory committee to find was to expand the concept of the "tout ensemble" to include elements of community life like food stores, hardware stores, etc. No policy changes were made.

Tournier, Robert E. 1980. "Historic Preservation as a Force in Urban Change: Charleston." In *Back to the City: Issues in Neighborhood Renovation*, edited by Shirley Bradway Laska and Daphne Spain. New York: Pergamon Press.

Tournier comments on the racial and sociodemographic changes catalyzed by historic district designation in Charleston, South Carolina. He examines census data between 1940 and 1970 for the neighborhoods of Wraggsborough, Radcliffeborough, and Ansonborough. According to the author, these areas had similar architectural character and a high number of buildings identified as significant in the 1940-1941 architectural survey of the city. The neighborhoods experienced rapid physical deterioration to slum conditions following WWII; they were further characterized by a high proportion of black occupants, low owner occupancy, and low median rent. Ansonborough, however, was made a city historic district in 1959. Between 1960 and 1970, it experienced a rapid increase in owner occupancy, mean rent, and a decrease in units occupied by blacks. The historic district placed economic pressure on low-income residents forcing them to move. Low-income owner-occupants were pressured to sell by the high cost of maintaining a house to historic district standards that require in-kind replacement of significant architectural features. While historic districts may be a "jewel to be cherished" by urban planners who seek increased tax revenue, for low-income residents, they are a "painstakingly restored gilded ghetto." Tournier warns that preservation efforts must not loose sight of people in its pursuit of building restoration.

Troy, Austen. July 10-12, 2002. Comments on "Historic Preservation and Neighborhood Change" by N. Edward Coulson and Robin M. Leichenko. A paper prepared for the Lincoln Institute of Land Policy Seminar: Analysis of Land Markets and the Impact of Land Market Regulation.

While acknowledging that Coulson and Leichenko's paper is a well-written contribution to an important subject, Troy argues that the researchers failed to adequately consider alternative explanations for their results. He also raises possible problems with the design of the statistical research. Troy suggests that historic designation is typically used in one of two ways. "Well organized and educated, upper-income neighborhoods (where historical housing is present) tend to use historical designation as a buffer against anticipated neighborhood change." Used in this way, designation is seen as a tool to prohibit the conversion of single-family houses to multi-unit rentals, and as a mechanism to exclude lower-income residents who presumably can not afford to make the costly repairs required by local landmarks commissions. Alternatively, designation may be used under other circumstances with the desire to promote the transition of blighted neighborhoods

through a process of upward filtering (wherein wealthier individuals buy older, deteriorated properties for the purpose of restoration). According to the author, these two motivations for designation help to explain Coulson and Leichenko's results.

Methodological problems may also explain why designation did not appear to be correlated with neighborhood change. Troy argues that the chosen unit of analysis—the census tract—was simply too large; "it allows for so much within-unit heterogeneity. That is, a given tract may have multiple diverse neighborhoods within it, in terms of both socio-economic characteristics and historic housing." Large unit size leads to a small samples size that "prohibits sufficient variation across enough variables."

Lastly, something unique about the Forth Worth housing market—for instance, the "supply of historic housing relative to the overall supply of housing"—may inhibit preservation causing gentrification.

Werwath, Peter. 1998. "Comment on David Listokin, Barbara Listokin, and Michael Lahr's 'The Contributions of Historic Preservation to Housing and Economic Development.'" *Housing Policy Debate* 9, 3: 487-495.

Werwath contends that Listokin, Listokin, and Lahr have not adequately addressed the potential negative side effects of historic preservation, namely gentrification and the displacement of low income residents and small businesses. Preservation projects, according to the author's observations, create low paying jobs in retail sales, food service, housekeeping, and building maintenance, as opposed to the comparatively better employment opportunities created through large-scale urban renewal developments. Preservation also tends to displace low-income residents as middle-class buyers and speculators move into an area and profit from the increasing real estate values that accompany rehabilitation activity. There is no need to incentivize preservation when gentrification is already taking place as a result of market forces such as a growing labor demand and a tight housing supply. These situations call for greater investment in affordable housing. To encourage more moderate rehabilitation that will leave housing more affordable to low-income renters, Werwath recommends eliminating the "substantial rehabilitation" requirement of the Federal Historic Rehabilitation Tax Credit. Lastly, he highlights the needs for greater consistency in the enforcement of the Secretary of the Interior's Standards, and more flexibility in the use of substitute materials such as vinyl windows in lieu of in-kind replacement with wood.

Zukin, Sharon, and Ervin Kosta. "Bourdieu off Broadway: Managing Distinction on a Shopping Block in the East Village." *City & Community* 2004, 3, 2, June, 101-114.

Why study commercial districts? B/c looking at only housing markets or labor markets "neglects one of a district's key functions in urban redevelopment: to create one of the consumption spaces on which cultural producers and new middle class rely." 102 The shops on East 9th street are both diverse (as discussed by J. Jacobs) and have distinction (as used by Bourdieu). "For consumers, distinction implies the serendipitous discovery of unique elements among the aesthetic and social diversity of

the city." 113   Is it possible to manage distinction?   It requires bldg owners to manage who they rent to; city should ensure mix of old and new buildings, and affordable rents; city should offer small biz loans to "innovative, small-scale retail stores;"

Zukin, Sharon. 1990 "Socio-Spatial Prototypes of a New Organization of Consumption: The Role of Real Cultural Capital." *Sociology*, 24, 1, Feb, 37-56.

"…gentrifiers know enough to appreciate historic architectural style and imported cheese."   Shops associated with gentrification include the "international bistro,' the art galleries with bare wood floors and always open doors, the food or designer boutiques where articles are on Exhibit as much as on sale…." They seek shopping that offers "sensory delights." They are the suburban shopping mall with "stone and mortar cachet of central urban areas." 41

First wave of gentrification brings retail opportunities that suit the gentrifiers' consumption desires. Then, the first wave of neighborhood cafes and local-service shops are "bought out and overcome by branches of international chain stores and expensive boutiques. Landmark districts are part of a "socially constructed…symbolic quest for authenticity, validation, monumentality, as well as a myth that an historically preserved enclave—and others like it—represent the real, historical city." 42

Ahlfeldt, G. M., & Maennig, W. (2008). *Monument protection: internal and external price effects* (No. 17). Hamburg contemporary economic discussions.

This paper analyses the impact of heritage-listed buildings on condominium transaction prices in Berlin, Germany. It uses transaction data to test for price differentials between listed and non listed properties to study their impact on surrounding property prices. Proximity to built heritage is captured by distance to listed houses and indicators capturing neighborhoods with built heritage. Impact is assessed by applying a hedonic model to micro level data and a non-parametric approach to location. The findings suggest that while the listed properties do not sell at a premium or discount, heritage listed buildings are found to have positive external effects on surrounding property prices.

The research strategy basically consisted of two steps. First, they developed a hedonic pricing model explaining property prices using a comprehensive set of structural, location, and neighborhood characteristics. In the second step, they extended the baseline model to test for price differentials for condominiums that were heritage-listed in order to attribute price variation to monuments' locations.

Ahlfeldt, G. M., & Maennig, W. (2010). Substitutability and complementarity of urban amenities: External effects of built heritage in Berlin. *Real Estate Economics*, 38(2), 285-323.

This article analyzed the impact of designated landmarks on condominium transaction prices in Berlin, Germany. It tested for price differentials between listed and nonlisted properties and studied their impact on surrounding property prices. The proximity to built heritage was captured by the distance to listed houses and heritage potentiality indicators. Impact was assessed by applying a

hedonic model to micro level data, this process also addressed spatial dependency. The findings suggested that while the designated landmarks do not sell at a premium or discount, landmarks have positive external effects on surrounding property prices within a distance of approximately 600m.

The research strategy consisted of two basic steps and studied condominiums exclusively. First, it developed baseline hedonic pricing models explaining property prices using a comprehensive set of structural, location, and neighborhood characteristics while also addressing spatial autocorrelation. In the second step, the baseline models were extended by the heritage variables to test for price differentials for condominiums within heritage-listed and nonlisted buildings within heritage property areas. The study also attributed price variation to monument location by employing various distance measures

Ahlfeldt, G., Moeller, K., Waights, S., & Wendland, N. (2013, November). The economics of conservation area designation. In ERSA conference papers (No. ersa13p87). European Regional Science Association.

The study acknowledges positive external benefits attached to the historic character of buildings, and that owners of properties in designated conservation areas benefit from a reduction in uncertainty regarding the future of their area. At the same time, it talks about how the restrictions put in place to ensure the preservation of the historic character limit the degree to which properties can be altered and thus impose a cost to their owners. The study tests to see if optimal level of designation is chosen so as to Pareto-maximize the welfare of local owners. They find that an increase in preferences for historic character increases the likelihood of a designation, and that new designations at the margin are not associated with significant house price capitalization effects. The evidence suggests that the preservation policy shows signs of agent type behavior in the interest of property owners. In summary, the results demonstrate that local owners are not being negatively affected by the policy and the restriction it imposes onto their property rights in London.

The study uses a combination of spatial estimation techniques and data. First, it identifies a causal effect of changes in neighborhood composition, i.e., gentrification, on the likelihood of designations using a tobit IV approach. Second, it provides evidence for the existence of external effects heritage effects that give rise to potential policy gains in a spatial hedonic property price analysis. Third, using a quasi-experimental differences-in-differences identification strategy, it demonstrates that new designations do no impact significantly on the market value of properties. It finds weak evidence that adjoining area benefit modestly.

Ashworth, G. J. (2002). Conservation designation and the revaluation of property: the risk of heritage innovation. *International journal of heritage studies*,8(1), 9-23.

The relationship between the designation of heritage areas, property values and the role of local authority policy is examined through the case of Canada's oldest and largest Heritage Conservation District, St. John's Newfoundland. Investment in renovation by public authorities and individuals is

a risky undertaking which does not necessarily result in private and public gains. The causes of the failure of the St. John's Heritage Conservation Area (HCA) to generate private property investment for renovation and enhancement of the historic district are investigated. Conclusions are drawn about the relationship of local authority goals and policies and private initiatives so that the preconditions for possible success and the minimizing of risk, of relevance elsewhere, can be established.

Atherwood, S., Walter, R. J., & Ivy, R. (2013). Residential Selling Price Performance In and Next to Historic Districts: A Case Study of Savannah, Georgia. *The Florida Geographer*, 43.

This study examines fluctuations in property values in seven historic districts and 12 adjacent non historic neighborhoods in Savannah, Georgia, across a nine year period (2002-2010). That includes the mid-2000s bubble in real estate prices and the late 2000s financial crisis. As a community and economic development tool, the historic designation of districts can bring multiple benefits, including a premium to the selling price of homes in designated districts. The study investigated a geographic perspective to residential selling price performance, using a comparison of historic and non-historic districts, and reveal that residential properties in designated historic districts resisted price depreciation better than properties in non-historic neighborhoods.

The findings revealed that year-over-year prices in residential properties in historic and adjacent non-historic areas changed independently of each other even while following the prevailing industry trend of price appreciation in 2002-2007 and subsequent decline, and that price-per-square-foot and the selling prices of homes in historic districts were consistently higher than in non-historic neighborhoods, even after real estate bubble deflation. Geographically, there was a price premium for residential properties contained in designated historic districts. Adjacent neighborhoods that are more differentiated architecturally, as in the case of neighborhoods in the study's extended area, do not experience this premium and are significantly less expensive per square foot.

Brandt, S., Maennig, W., & Richter, F. (2013). Do places of worship affect housing prices? Evidence from Germany (No. 48*). Hamburg Contemporary Economic Discussions.*

Using hedonic pricing models this paper analyzed the impact of places of worship on the prices of adjacent condominiums in Hamburg, Germany. This is the first study on this subject to have been conducted outside the United States. It is also the first work to examine the externalities of places of worship of all five world religions. Furthermore, it is the first study that analyzes the effect of bell ringing on the adjacent residential property prices. Controlling for spatial dependence and by using potentiality variables positive externalities of places of worship within a radius of 1000m were identified. Compared to properties beyond this threshold, price premiums of 4.8% were detected for condominiums at distances of 100m to 200m to the next place of worship. The results also show that the positive externalities near mosques do not differ from those of places of worship of other religions and that the positive effect of churches continues to be felt even after they had been deconsecrated. The influence of church bell ringing on the prices of surrounding residential properties, however, could nt be substantiated.

Cebula, R. J. (2009). The hedonic pricing model applied to the housing market of the City of Savannah and its Savannah Historic Landmark District. *Review of Regional Studies*, 39(1), 9-22

This study applies a hedonic pricing model to the housing market of the City of Savannah, Georgia. The Savannah Historic Landmark District is located both in and adjacent to downtown Savannah. Of the 2,888 single-family homes for the period 2000-2005 for which data are available, 591 are located in the Historic District. The model of the real sales price of a single-family house in the City of Savannah environment reveals it is positively affected by the number of bathrooms, fireplaces, bedrooms, stories in structure, garage car spaces, square feet of finished living space, the presence of a deck, a private courtyard, a pool and/or hot-tub, an exterior construction of brick or stucco, the presence of an underground sprinkler system, and whether the house was new. Six spatial control variables are considered. Locations across from, or adjacent to, open space carry premia, as do locations on cul-de-sacs or lakes. Corner properties do not. In addition, proximity to an apartment complex is capitalized as a negative quantity, as do locations on a busy street. The real sales price of residential properties that closed during May or July tend to be higher. In addition, houses designated as a national historical monument tend to carry with them a modest price premium, as do properties that are simply located within the Savannah Historic Landmark District.

Choy, L. H., Ho, W. K., & Mak, S. W. (2012). Housing attributes and Hong Kong real estate prices: a quantile regression analysis. *Construction Management and Economics*, 30(5), 359-366.

By nature, people's tastes and preferences are unique and diverse so that a constant coefficient of each housing attribute produced by ordinary least squares is not able to fully describe the behavior of homebuyers of different classes. To complement the least squares, quantile regression is used to identify how real estate prices respond differently to a change in one unit of housing attribute at different quantiles. Theoretically, quantile regression can be utilized to estimate the implicit price for each housing attribute across the distribution of real estate prices, allowing specific percentiles of prices to be more influenced by certain housing attributes when compared to other percentiles. Empirical results demonstrate that most housing attributes, such as apartment size, age and floor level, command different prices at different quantiles. With the use of this approach, the efficiency of the mortgage markets is enhanced by offering more accurate prediction of real estate prices at the lower and upper price distribution.

Cox, B. (2014). *The Effects of Historic District Designation on Residential Property Values in Mid-sized Texas Cities* (Doctoral dissertation, Texas State University-San Marcos).

This study explored the effects that residential historic district designations have on residential property values in mid-sized Texas cities. It also independently examined the type of historic designation, proximity to the central business district, and the age of the homes to determine whether they have an effect on residential property values. After looking at aggregate neighborhood data for twenty historic districts spread across ten mid-sized cities in Texas, the study found that homes in historic districts had higher property values that the city median residential property value, although

there was no increase in the value for homes bordering the historic district. It also found that districts with homes built in 1940 or before have higher property values and districts located 0.2 miles or farther away from the central business district have higher property values.

So as to make the results more generalizable, this study conducted quantitative analysis of aggregate data has benefits and weaknesses. It used comparison of means testing to determine whether historic district designation has an effect on residential property values. No spillover effect was observed.

Cyrenne, P., Fenton, R., & Warbanski, J. (2006). Historic buildings and rehabilitation expenditures: a panel data approach. *Journal of Real Estate Research*, 28(4), 349-380.

This study uses a panel data set and employs a hedonic model to determine the characteristics of buildings that have influenced the market value assessments of a set of historic and non-historically designated buildings. Holding the characteristics of buildings constant, the findings indicated higher assessed values for some classes of historic buildings. Furthermore, using a two stage Heckman sample selection model, the findings show that the expenditures on renovations contribute significantly to the change in assessed values for some classes of historic buildings, although less than might be expected.

Degoulet, C. B., Gundry, D., Pani, E., Fossé, I., Wetzel, I. S. E., Panayotou, J., & Wayman, S. (2012). "An assessment of the effects of conservation areas on value," *The London School of Economics and Political Science*.

This study investigates the costs and the benefits that are associated with a location of a property in a conservation area in England. It identifies the effect the designation status has on the value of a property in a spatial hedonic analysis of property transaction prices. It complements the quantitative analysis with an investigation of the origins of the capitalization effects in a textual analysis of interviews with local residents, conservation area officers, architects and real estate agents. It finds through descriptive evidence that a higher (perceived) quality of the built environment is positively correlated with conservation area premia, while the opposite is true for (perceived) problems with planning control. Overall, this study shows that conservation areas remain a generally popular planning tool. This was especially true for areas with high property premia regardless of levels of local deprivation. In addition, the extra constraints placed on householders are generally not perceived as overly burdensome, a factor that is strengthened in areas that are thought of as distinctive by their residents.

The study also finds that the estimated property price premium attached to a location inside a conservation area depends on various characteristics of the area, and that external benefits increase as the surrounding mass of built heritage increases. It finds that the percentage premium attached to a location inside or near a conservation area increases over time. It is also important to note that they do not find a statistically significant designation effect.

Deodhar, V. (2004). Does the Housing Market Value Heritage?: Some Empirical Evidence (No. 0403). Macquarie University, Department of Economics.

This study was conducted in Sydney's upper north shore with the primary aim of estimating the market price differential between heritage-listed and regular, unlisted houses using the hedonic price technique. It also examined the relationship between market price and the level of heritage significance of heritage houses. It aims to clarify how the market behaves when a minority of individually heritage listed houses stand dispersed among non-heritage, regular houses. After controlling for main property attributes, the study found that heritage listed houses enjoyed premium over unlisted houses. This premium is a measure of the combined value placed by the market on both the heritage character of houses, and their statutory listing status. The level of heritage significance was also found to have a positive influence on price.

Gilderbloom, J. I., Hanka, M. J., & Ambrosius, J. D. (2009). "Historic preservation's impact on job creation, property values, and environmental sustainability," *Journal of Urbanism*, 2(2), 83-101.

This study examines the impacts of historic preservation on jobs, property values, and environmentalism in Kentucky and its largest city, Louisville. Kentucky is a national leader in preservation, ranking first in the White House's Preserve America initiative with 73 recognized communities. The study found that tax incentive programs have been an effective tool for creating positive changes in historic areas, and that historic preservation resulted in more job creation than most other public investments. It found that neighborhoods containing historic districts exhibited higher increases in median neighborhood housing values than undesignated neighborhoods. The study also showed that environmentalism and historic preservation are linked together and complement one another. It is interesting to note that residents of historic urban neighborhoods exhibited more environmentally friendly behavior, particularly those living in single family homes.

Heintzelman, M. D., & Altieri, J. A. (2013). Historic Preservation: Preserving Value?. *The Journal of Real Estate Finance and Economics*, *46*(3), 543-563.

While the existing economic literature supports the conclusion that historic districts augment, or at least, protect values for homes within historic districts, this study points out that most studies seem to fall victim to an endogeneity bias since higher value homes are, all else equal, more likely to be included in districts. Thus, these studies are mistaking correlation for causation.

This study uses repeat sales fixed effects (difference-in-differences) analysis to look at homes before and after the creation of districts in the Boston-Cambridge-Quincy MSA between 2000 and 2007, and thus controls for this endogeneity bias. Secondarily, the study also re-examines the effects of a Massachusetts preservation policy, the Community Preservation Act (CPA) which, in part, supports historic preservation. It finds evidence that the creation of a local historic district, on average, reduces home prices for homes the that district between 11.6 and 15.5% This indicates that any restriction implied by the creation of a district outweigh any external benefits to homeowners within if the

district. If, instead, census block fixed effects are employed, the analysis shows a statistically insignificant impact, the sign and magnitude of which depends on the specification. Taken together with the repeat sales result, this confirms our intuition about the importance of controlling for omitted variables and endogeneity biases. Finally, we find evidence that the CPA also lowers property values, by less than 1%, and that being in a Historic District magnifies the negative effect of the CPA.

Heintzelman, M. D. (2010). Measuring the property-value effects of local land use and preservation referenda. *Land Economics*, *86*(1), 22-47.

> This study examines a Massachusetts policy that encourages communities to raise money through referenda for preservation and affordable housing. It uses difference indifferences, fixed effects, and quantile regression to compare home prices before and after such referenda in two towns. It includes covariates representing existing land uses, zoning, and historic resources to estimate the value of these amenities. Standard regression techniques indicate weak effects of the referenda, while the estimated coefficients on land use and historic preservation confirm that preservation has a positive effect on property values. The quantile regression sheds light on some heterogeneity that goes unnoticed in standard regression results.

Heintzelman, M. D. (2010). The value of land use patterns and preservation policies. *The BE Journal of Economic Analysis & Policy*, *10*(1).

> This study measures the impact of the mix of land uses in the immediate neighborhood of a home on property values and the impact of a locally implemented program, the Community Preservation Act (CPA), which provides funds for local open space and historic preservation as well as affordable housing. Using a large dataset containing every home sale in the state of Massachusetts over the span of 8 years, the study employed difference in differences analysis using local as well as house level fixed effects to overcome omitted variables bias in this panel dataset. The results indicated that on average, passage of the CPA reduces property values by about 1.5% in Massachusetts towns. However, it found some heterogeneity while allowing the CPA effect to differ by country, which was reflected in increases in property values in some communities and reduction in others. Variation in local spending priorities had little impact on property values or the effect of the CPA. Finally, it found that cropland, pastures, and low density residential development are the most preferred local land uses, and that homes are more expensive as one increases distance to highways and active rail lines.

Ijla, A. (2008). *The Impact of Local Historical Designation on Residential Property Value: An Analysis of Three Slow-Growth and Three Fast-Growth Central Cities in the United States* (Doctoral dissertation, Cleveland State University).

> A number of limitations in several previous studies have made policy development as well as a complete assessment of the impact of designation difficult. Some past studies focused only on historic neighborhoods in one city or one state, while the others tested the impact of historic designation in

general without distinguishing between local, state, or federal designation. Lastly, several earlier studies have also relied on comparing changes in property values in historic areas with those non historic areas but with too few control variables to isolate the effects of historic area designation. This study expands upon previous work by examining the effects of local historic designation on residential property values across six central cities in five states in the United States while controlling for numerous other variables that could impact the property values.

The study employs hedonic regression models and differences on differences (case control) descriptive statistical models to estimate the impact of local government designation of an area as a historical district on the prices of residential property. This was accomplished by the pairing of each historic district with a similar community that was not designated as historic. The research was performed in three fast growth and three slow growth central cities. The results indicated that local historic designation is associated with higher property values in the six central cities. In addition, the positive appreciation effects of local historic designation in slow growth central cities were higher than in first growth central cities by 7.7 percent suggesting that historic designation has a role to play in urban revitalization for areas striving to improve property values despite slow population growth.

Iroham, C. O., Oloyede, S. A., & Oluwunmi, A. O. (2011). An Analysis of the Location of Worship Centers on Residential Property Values in Ota, Nigeria.*Journal of Sustainable Development in Africa*, *13*(1), 13-22.

> This study aimed to discover the effect of having a worship center, in the case the Living Faith Church, Ota which is the largest single worship center in the world, on the property values in the study area. It surveyed 45 local estate agents and used t-tests at a 95% confidence level to analyze the date. It found that the location of religious centers had a significant impact on the residential rental values. The study recommends that worship centers be situated close to residential properties so as to enhance economic development, but to ensure an affective traffic control scheme at the same time.

Katari, P. (2005). *Preservation and Residential Property Values: The Case of Philadelphia* (Doctoral dissertation, University of Pennsylvania).

> This study, while accepting the assumption that the fair market value of a property in a historic district reflects both positive and negative externalities, aimed to contribute to the knowledge on the impacts of local historic districting on property values in Philadelphia. Using residential real estate transactions data, the impact of designation on property value in Philadelphia was quantified through event studies and comparable neighborhood studies. For the purposes of this study, only primarily residential historic districts were considered.

> The study found strong and clear increases in property values after designation in all five of the neighborhoods studied. There was found to be no decrease in property values either in real terms or when compared to trends in comparable neighborhoods, and no wild fluctuations in property value

occurred. There were also no cases where a homeowner was likely to have lost money on a property because of designation on the Philadelphia Register of Historic Places.

Kwon, Y., Kim, S., & Jeon, B. (2014). Unraveling the factors determining the redevelopment of Seoul's historic hanoks. *Habitat International*, *41*, 280-289.

Despite continued debate on the importance of historic preservation in cities, very little was known about the causes of the large-scale loss of hanoks in Seoul. In this paper, unique parcel-level spatial data on hanoks was constructed to empirically identify the potential determinants of their loss between 2002 and 2013.When multiple factors associated with hanoks were examined, the results indicated that both parcel- and urban-scale factors were significantly associated with whether they were lost or protected from redevelopment. Hanoks that were relatively new, large, and already converted to a different use were more likely to be lost than older, smaller, and single-family residential-use hanoks. This research also suggested that hanoks with desirable qualities, such as a southern orientation and membership in a cluster, were more resistant to redevelopment or demolition, which provided important implications for urban design and the planning of historic neighborhoods. Urban planning districts and nearby redevelopment projects had significant influence on the redevelopment decision. But the effects of the latter variable-redevelopment effects-varied substantially depend on the hanoks' locational characteristics.

Lazrak, F., Nijkamp, P., Rietveld, P., & Rouwendal, J. (2014). "The market value of cultural heritage in urban areas: an application of spatial hedonic pricing," *Journal of Geographical Systems*, *16*(1), 89-114.

The paper provides one of the first applications using a spatial autoregressive model to investigate the impact of cultural heritage—in particular, listed buildings and historic–cultural sites (or historic landmarks)—on the value of real estate in cities. In addition, this paper suggests a novel way of specifying the spatial weight matrix—only prices of sold houses influence current price—in identifying the spatial dependency effects between sold properties. The empirical application in the present study concerns the Dutch urban area of Zaanstad, a historic area for which over a long period of more than 20 years detailed information on individual dwellings, and their market prices are available in a GIS context. In this paper, the effect of cultural heritage is analyzed in three complementary ways. First, we measure the effect of a listed building on its market price in the relevant area concerned. Secondly, we investigate the value that listed heritage has on nearby property. And finally, we estimate the effect of historic–cultural sites on real estate prices. We find that, to purchase a listed building, buyers are willing to pay an additional 26.9 %, while surrounding houses are worth an extra 0.28 % for each additional listed building within a 50-m radius. Houses sold within a conservation area appear to gain a premium of 26.4 % which confirms the existence of a 'historic ensemble' effect.

Leckert, S. P. (2004). Is it Worth it? The Effect of Local Historic District Designation on Real Property Values in New Orleans, Louisiana.

> This study looks at the change in property values over a ten year period(1993-2003) in New Orleans, Louisiana, to identify the effect that local historic protections have on real property values. Sales price for the entire city are compared to sales price in two locally designated historic districts and one control neighborhood. The study found mixed results, and the author could not make any definite statements regarding the impact of historic district designation on residential property values . Average sales prices grew faster in historic districts than for the city as a whole, but this was also true for the Comparison Neighborhood which does not fall under the protections of the Historic District Landmarks Commission. Average sales prices per square foot in the Comparison Neighborhood and in one historic district grew faster than for the city as a whole, but average prices per square foot grew slightly slower in the second historic district than for the city as a whole.

Narwold, A., Sandy, J., & Tu, C. (2008). "Historic designation and residential property values," *International Real Estate review*, 11(1), 83-95.

> This paper uses hedonic regression analysis to estimate the impact of the historic designation on the value of single-family residences in the City of San Diego. It specifically aimed to understand the impact of the Mills Act enacted by the State of California in 1972 which allows local municipalities the option of setting up a historic designation program, with the main feature being that it allows the owners of historic buildings a reduction in their property taxes in return for an agreement to not alter the exterior façade of the designated building. The results suggested that the designation creates a 16 percent increase in housing value. The authors emphasize that California's approach to historic preservation through the Mills Act provides an alternative model to the traditional approaches consisting primarily of either public ownership of the structures or the creation of historic districts. They argue that communities gain by making sure historically significant structures are preserved while the owners of those structures are compensated with tax savings and higher property values. The level of participation in the Mills Act program indicates that it has been successful in encouraging the owners of historically significant structures to preserve and maintain their buildings and that this can serve as a template of how historic preservation can be achieved in other places as well.

Nijkamp, P. (2012). "Economic Valuation of Cultural Heritage." *The Economics of Uniqueness*, 76.

> The author argues that in economics heritage can be seen as an asset with the theoretical basis in capital theory. He writes that stakeholders should weigh the different values and trade offs between conservation and development, identifying the acceptable level of change and the extent of adaptive use. He promotes a blend of regulation and incentives so as to conserve historic city cores and heritage assets through integrated conservation. Finally, he argues that heritage is a public good and that the economic justification for public sector investment is well established. But that it is unreasonable to expect the public sector to be the sole investor, and that the solution is to have combination of public and private investment depending on the context.

Mayor, K., Lyons, S., & Tol, R. S. (2011). "Does the housing market reflect cultural heritage? A case study of Greater Dublin." tara.tcd.ie

> To understand whether the housing market reflects cultural heritage, this study uses several specifications of a hedonic price equation to establish whether distance to cultural heritage site is capitalized into housing prices in Greater Dublin, Ireland. It finds that the distance to the nearest historic building has a significant and robust effect on housing prices. The authors argue that previous works in economics understate the potential of the actual behavior in revealing preferences towards more intangible goods, such as cultural heritage goods.

Rickman, D. S. (2009). Neighborhood historic preservation status and housing values in Oklahoma County, Oklahoma. *Journal of Regional Analysis and Policy*, *39*(2), 99-108.

> This study estimates the property value impacts of historic designation of neighborhoods for Oklahoma County, Oklahoma. It uses spatial and temporal variations of hedonic prices and historic district property values along with the use of finely delineated spatial fixed effects using tax assessor data. It found that neighborhood district designation is associated with significant relative appreciation of housing values in most districts. Some of the factors which appeared to influence the rate of appreciation were the time span of neighborhood historic designation and the area crime rate. The author argues that the variation in results across historic neighborhood suggests that policy makers need to take into account the conditions under which historic designation is most like to succeed.

> Here, the comparison involved controlled for the influence of structural characteristics such as square footage, age and condition of the properties on housing values. The analysis also controlled for non historic designation location effects on property values. Separate regression were run to allow for changing values of housing characteristics and location effects which reduce the bias in the estimated historic district effects. Location fixed effects also were included to control for unmeasured broad location influences on property values. Finally, use of a separate variable for each historic district rather than a single variable for all historic districts were used it aid in understanding what type of designation and under what conditions historic designation increases property values.

Rypkema, D., Cheong, C., & Mason, R. (2011). Measuring economic impacts of historic preservation. *A Report to the Advisory Council on Historic Preservation, Washington, DC, November*.

> This study sought to identify indicators that can be used to regularly, consistently, meaningfully, and credibly measure the economic impact of historic preservation over time. The main finding that was consistent over the study was that research on the relationship between historic preservation and economics is critical and needs to be provided on a regular basis. To be useful, however, research findings and resulting recommendations need to be written so that they are comprehensible to preservation advocates, public servants, elected officials, and the general public.

Shipley, R., Jonas, K., & Kovacs, J. F. (2011). Heritage Conservation Districts Work Evidence from the
Province of Ontario, Canada. *Urban Affairs Review*,*47*(5), 611-641.

The purpose of this study was to address the concerns of resistance to heritage conservation districts in North America despite how regulating change in historic districts to maintain their character has been a conservation tool used around the world. Here, the oldest of 32 of 93 districts in Ontario were studies using resident surveys, land use mapping, townscape evaluation, land value records, municipal documents, and interviews. Findings indicated that people who live and own property in districts are satisfied, requests for alterations ad approved promptly, districts meet most of their goals, and property values perform better in the marketplace than those in surrounding areas.

Thompson, E., Rosenbaum, D., & Schmitz, B. (2011). Property values on the plains: the impact of
historic preservation. *The Annals of Regional Science*,*47*(2), 477-491.

This paper studies the impact of historic designation on the sale price of single family homes in Lincoln, Nebraska neighborhoods. It contributes to the literature by measuring the impact of historic designation using sale prices rather than assessed values, and by utilizing time series, cross section data with both pres-designation and post-designation observations. The entire sample is used to estimate a difference in difference model which shows that historic designation yields a $5,000 increase in the value of single family homes in the period after designation. The study finds that designation has no statistically significant impact on appreciation rates in either the designated or control neighborhood. The author also notes that results of the difference in difference models might not be robust and that futures analysis using panel data sets need to utilize both the difference in difference and the repeat sales models for a more complete empirical analysis.

Wang, W. Y. G., Knox, K. J., & Hite, G. E. (2013). The Impact of Historical Designation on Property
Values Before and Following Hurricane Ike: The Case of Galveston Texas. *Journal of Real Estate
Portfolio Management*, *19*(3), 225-234.

The desire to preserve architectural heritage ensures that the historic districts continue to contribute to Galveston's economy. After Hurricane Ike, it became more challenging for homeowners in historic districts on Galveston Island to renovate damaged properties. A study of property values in Galveston, Texas indicates that increases in property values in historic districts were generally comparable to those in nonhistoric regions. Property values in the historic districts are less sensitive to negative macroeconomic shocks. In addition, property values that are above 95th percentile and below 5th percentile respond differently to macroeconomic shocks than those with average values.

Winson-Geideman, K., & Jourdan, D. (2009). The Impact of Historic Facade Easements on
Condominium Value. *Appraisal Journal*, *77*(4).

Historic facade easements are a commonly used method to encourage the preservation of historic structures in the United States. By accepting the terms of the agreement, property owners are prevented from altering the exterior of a property without the permission of the easement holder. Donors are entitled to tax benefits based on reductions in appraised property value, and the public

benefits from the preservation of structures that are historically important. This article contributes to valuation literature by assessing the impact of facade easements on the value of historic condominium buildings located in Savannah, Georgia. It finds that historic façade easements have a substantial negative impact on condominium value due to the loss of property rights.

Zahirovic-Herbert, V., & Gibler, K. M. (2014). Historic District Influence on House Prices and Marketing Duration. *The Journal of Real Estate Finance and Economics*, *48*(1), 112-131.

While much historic district research focuses on whether historic designation results in a price premium, this study takes a more comprehensive look at the buying processes, which must consider marketing duration within the historic district as well as influences on the sale of properties adjacent to the historic district. It examines how historic district designation in Baton Rouge, Louisiana is capitalized either through a price premium or marketing duration and how that mechanism differs between neighborhoods inside and outside the historic district boundaries. It employs a three stage least square model to account for the effects of endogenous marketing duration on price capitalization estimates. It finds that the more certain benefits from historic designation are reflected in a price premium while the reduced regulation coupled with the cachet of being located near but not inside the district result in shorter marketing duration.

Zahirovic-Herbert, V., & Chatterjee, S. (2012). Historic preservation and residential property values: evidence from quantile regression. *Urban Studies*,*49*(2), 369-382.

This article reviews the current state of affairs in preservation practice and scholarship and builds new connection with four leading discourses in urban revitalization: the New American City, place matters, anchor institutions, and legacy cities. It calls for an expansive research agenda to address preservation's role in revitalization and to rethink preservation policy in the twenty first century.