Understanding Economic Studies

Real Places
Preserving Historic Texas
Austin
January 11, 2018

Donovan Rypkema
PlaceEconomics
A peek behind the curtain
Basic Kinds of Studies

- Economic Impact Studies
  - Statewide
  - City or Countywide
- Property Value Studies
- Catalytic Studies
- Sector/Institution Studies
- Tax Credit Studies
- Effectiveness of Program Studies
Levels of Analysis

- Academic & Technical Professionals
- Practitioners
- Graduate Students
- “Do it Yourself”
Challenge 1

There is no such thing as a “historic preservation” industry.
Challenge 2
Different Audiences
Challenge 3

Vastly Different Methodologies required for what typically has been measured
Challenge 4

Developing research methods and explanations that are credible to economists but understandable and usable by mere humans
Challenge 5

Many of the “values” of historic preservation are not economic values.
Preservation has multiple values

- Cultural Value
- Aesthetic Value
- Social Value
- Symbolic Value
- Educational Value
- Environmental Value
But the built heritage is fragile, therefore *all* of those values are at risk.

Historic Preservation also has economic value.
Some Basic Principles

• The meaninglessness of a single number
• “As compared to what?”
• Causation vs Correlation
• Change over time
• Catalyst
• Change in scale
Requirements for Data

- Meaningful
- Accessible
- Reliable
The Big Four

Downtown Revitalization

Heritage Tourism

Property Values

Jobs and Income
Major Measurables

1. Jobs and Household Income
2. Heritage Tourism
3. Downtown Revitalization
4. Property Values
Usually Based on Tax Credit Projects

- Data reliable
- Data available
- Data meaningful
- QREs
- Investment beyond QREs
1. Jobs & Household Income

Some basic vocabulary

- Output
- Impact
- Multipliers
- Econometric Models

- Direct Effect
- Indirect Effect
- Induced Effect
1. Jobs & Household Income

OUTPUT is the amount of Goods or Services produced

For example:

- $’s of automobiles manufactured, or
- architectural services provided, or
- restaurant meals served, or
- rice grown
1. Jobs & Household Income

*Impact* is the set of consequences resulting from the *Output*

- Additional Output
- Jobs (Employment)
- Labor Income
- Effect on Other Industries
1. Jobs & Household Income

An *Econometric Model* is a mathematical assembly of millions of pieces of statistical data and using that data to identify patterns of relationships upon which reasonable predictions can be made.

One of the tools that can be developed from these models is *Multipliers*.
A Multiplier is a mathematical representation of the economic effect of production beyond the production itself.
1. Jobs & Household Income

Direct/Indirect/Induced

**Direct** is within the project itself
(for example auto worker on assembly line)
1. Jobs & Household Income

Direct/Indirect/Induced

**Indirect** is supplied to the project itself (for example steel worker for steel sold to automobile manufacturer)
1. Jobs & Household Income

*Direct/Indirect/Induced*

**Induced** is activity resulting from the project

(for example haircut bought by auto worker)
For Historic Rehabilitation projects…

“Output” is the investment in the rehabilitation of the historic building.
Therefore $1,000,000 in direct investment (output) spurs an additional $375,596 in Indirect output and $375,781 in Induced output or an additional $751,378 in Total output.
1. Jobs & Household Income

Issues

• Defensible methodology
• Common in industry
• Economic development standard
• Elected officials understand (or pretend to)
• Relatively easy to apply
• Not always so easy to explain
• **Good for measuring rehabilitation projects where construction cost is known**
• Can get multipliers on any geographic level
• Internationally, not all countries have such models
Major Measurables

1. Jobs and Household Income
2. Heritage Tourism
3. Downtown Revitalization
4. Property Values
2. Heritage Tourism

Types of Tourism Surveys
A. Survey of arriving/departing visitors
B. Random survey of population
C. Site visitor surveys
D. Vendor surveys
## 2. Heritage Tourism

Survey – Government Inbound/Outbound Travelers

<table>
<thead>
<tr>
<th>Activities of Russian Visitors to US – 2009</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Shopping</td>
<td>91%</td>
</tr>
<tr>
<td>Dining in Restaurants</td>
<td>82%</td>
</tr>
<tr>
<td>Visiting Historical Places</td>
<td>65%</td>
</tr>
<tr>
<td>Sightseeing in Cities</td>
<td>65%</td>
</tr>
<tr>
<td>Amusement/Theme Parks</td>
<td>60%</td>
</tr>
<tr>
<td>Art Gallery/Museum</td>
<td>40%</td>
</tr>
<tr>
<td>Touring Countryside</td>
<td>38%</td>
</tr>
<tr>
<td>Cultural Historic Sites</td>
<td>36%</td>
</tr>
<tr>
<td>Visit Small Towns</td>
<td>32%</td>
</tr>
<tr>
<td>Nightclubs/Dancing</td>
<td>28%</td>
</tr>
</tbody>
</table>
2. Heritage Tourism

Issues

- Usually survey based
- Accessible databases, sometimes sortable
- Difficulty in defining “historic tourist”
- Difficulty in what should count
- Difficulty in “historic one of several activities”
- Measure “impacts”
- Measure visitor activities
- Can be “localized”
Quarterly Surveys

- Who is traveling
- Who they traveled with
- How much they spent
- Main purpose of trip
- Transportation
- Accommodations
- Activities enjoyed trip (30+)
- Special Interests
### Rhode Island Data

**Activities:**
- Landmark/Historic Site: 19.6%
- Museum: 15.1%

**Particular interest:**
- Cultural activities and attractions: 28.5%
- Historic places, sites and landmarks: 35.7%

<table>
<thead>
<tr>
<th>Total RI State Person-Trips Heritage Visitors (million)</th>
<th>Overnight</th>
<th>Day</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7.2</td>
<td>15.2</td>
<td>22.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenditures by Heritage Visitors (million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lodging</td>
</tr>
<tr>
<td>Transportation within Rhode Island</td>
</tr>
<tr>
<td>Food &amp; Beverage</td>
</tr>
<tr>
<td>Retail</td>
</tr>
<tr>
<td>Recreation, Entertainment, Admissions</td>
</tr>
<tr>
<td>TOTAL</td>
</tr>
<tr>
<td>Expenditures by Heritage Visitors (million)</td>
</tr>
<tr>
<td>-------------------------------------------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Lodging</td>
</tr>
<tr>
<td>Transportation within Rhode Island</td>
</tr>
<tr>
<td>Food &amp; Beverage</td>
</tr>
<tr>
<td>Retail</td>
</tr>
<tr>
<td>Recreation, Entertainment, Admissions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenditures by Heritage Visitors (million)</th>
<th>Direct</th>
<th>Indirect/Induced</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lodging</td>
<td>$326</td>
<td>$143,589,630</td>
<td>$222,852,771</td>
</tr>
<tr>
<td>Transportation within Rhode Island</td>
<td>$166</td>
<td>$102,884,227</td>
<td>$150,157,678</td>
</tr>
<tr>
<td>Food and Beverage</td>
<td>$423</td>
<td>$152,826,782</td>
<td>$248,650,744</td>
</tr>
<tr>
<td>Retail</td>
<td>$265</td>
<td>$122,631,367</td>
<td>$202,230,314</td>
</tr>
<tr>
<td>Recreation, Entertainment, Admissions</td>
<td>$192</td>
<td>$80,082,860</td>
<td>$135,967,730</td>
</tr>
</tbody>
</table>
Major Measurables

1. Jobs and Household Income
2. Heritage Tourism
3. Downtown Revitalization
4. Property Values
3. Center City Revitalization

What to measure

• Amount of investment
  • public sector
  • private sector
  • Institutions/other
• Amount of investment in historic buildings
  • public sector
  • private sector
  • Institutions/other
• Number of net new businesses
• Number of small businesses
• Number of business expansions
• Number of net new jobs
3. Center City Revitalization

What to measure

- Retail sales
- Sales tax collections
- Property tax collections
- Assessed value of property
- Number of hotel rooms
- Hotel room occupancy rate
- Square footage of office space
- Number of residential units
- Real estate sales transactions
- Rent levels (all types)
- Building permits issued
- Cultural institution attendance
- Special event attendance
Using Main Street Data

- Good
  - Available
  - Meaningful
- Not so good
  - Reliable
  - Comparible
An Attempt at Comparability

- With State as a whole and/or National
  - Job growth
    - (but often don’t have base number)
  - Business open to close ratio
  - Net new businesses
  - Sales tax growth
    - (indirect and estimated)
Case Study – Norwich, England
Heritage Based Revitalization Program

- Pedestrian flow up 60% to 300%
- 40% of pedestrians stay longer
- 24% of pedestrians come more often
- 80% of elderly and 98% of families with children support project
- Significant reduction in noise and air pollution
Case Study – Ghent, Belgium
Heritage Based Revitalization Program

- 84% of visitors are returning
- Reduction of accidents in immediate area
- Access improved for people with disabilities
- Major reduction of vehicle flows
- New cultural institutions established
The Sustainability of Urban Heritage Preservation

Valparaiso, Chile
Oaxaca, Mexico
Porto, Portugal
Syracuse, Italy
Medinas of Morocco
Alleppo, Syria
Edinburgh, UK
Verona, Italy
Quito, Ecuador
Salvador, Brazil
Veracruz, Mexico
Measures of Success

- Private investment
- New middle class residents
- Increasing property values
- More businesses
- Higher tax generation
- Better property maintenance
- Lower vacancy
Major Measurables

1. Jobs and Household Income
2. Heritage Tourism
3. Downtown Revitalization
4. Property Values
Property Values

Ways to Measure Property Value Change

• Before and after designation
• Comparison with similar non-designated neighborhood
• Comparison with overall market
• Comparison with neighborhood with similar undesignated neighborhoods
Property Values

Ways to measure change in property values

- Re-sales of same property
- Hedonic pricing
- Increasing number of annual transactions (Malaysian study)
Property Values

Databases for changes in property values

- Actual transactions (small sample problem)
- Assessment data as proxy for rate of property value movement
- Census data (many MANY weaknesses)
- Zillow
## Our Usual Property Values Approach

- Comparison over time
- Change in value, not value itself
- $/s.f.
- Compare all residential 4 units and less
- Compare Local Districts, National Register Districts, and rest of city

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Savannah HD</td>
<td>$104.17</td>
<td>$106.30</td>
<td>$134.46</td>
<td>$136.22</td>
<td>$152.07</td>
<td>$166.08</td>
<td>$196.76</td>
<td>$221.99</td>
<td>$233.43</td>
<td>$233.00</td>
<td>$213.62</td>
<td>$179.45</td>
<td>$188.58</td>
<td>$202.45</td>
<td>$221.89</td>
</tr>
<tr>
<td>Cuyler-Brownsville</td>
<td>$23.73</td>
<td>$27.71</td>
<td>$29.66</td>
<td>$35.87</td>
<td>$37.27</td>
<td>$41.46</td>
<td>$41.30</td>
<td>$59.98</td>
<td>$71.11</td>
<td>$51.64</td>
<td>$51.84</td>
<td>$43.21</td>
<td>$39.33</td>
<td>$40.74</td>
<td>$40.02</td>
</tr>
<tr>
<td>Mid-City</td>
<td>$29.75</td>
<td>$31.97</td>
<td>$39.63</td>
<td>$47.19</td>
<td>$53.42</td>
<td>$58.66</td>
<td>$78.32</td>
<td>$103.20</td>
<td>$109.90</td>
<td>$104.07</td>
<td>$87.49</td>
<td>$68.58</td>
<td>$71.84</td>
<td>$70.23</td>
<td>$75.69</td>
</tr>
<tr>
<td>Victorian</td>
<td>$33.05</td>
<td>$48.59</td>
<td>$58.05</td>
<td>$59.31</td>
<td>$71.54</td>
<td>$79.05</td>
<td>$96.40</td>
<td>$108.41</td>
<td>$136.51</td>
<td>$128.82</td>
<td>$117.79</td>
<td>$96.64</td>
<td>$100.59</td>
<td>$105.13</td>
<td>$105.44</td>
</tr>
<tr>
<td>Rest of Savannah</td>
<td>$46.76</td>
<td>$49.39</td>
<td>$53.42</td>
<td>$55.61</td>
<td>$59.24</td>
<td>$55.04</td>
<td>$75.01</td>
<td>$82.74</td>
<td>$88.63</td>
<td>$82.89</td>
<td>$78.19</td>
<td>$69.79</td>
<td>$64.81</td>
<td>$64.40</td>
<td>$64.50</td>
</tr>
</tbody>
</table>
Pros and Cons of Property Assessment Approach

Positives
- 100% data
- Neutrality of estimates
- In depth data
- Usually digitally accessible
- Numbers over time
- Consistency of errors

Negatives
- Often not “market value”
- Old assessments
- Cyclical assessments
- Often heavily rely on replacement cost rather than market
Why we’ve moved beyond the Big Four

- Smart clients
- GIS
- Big Data
Reasons for City Level Studies

1. Get’s rid of the “but that ain’t here” argument
2. Familiar point of reference
3. Politicians see direct impact
4. Opportunity to tap local expertise
5. Can be put into consensus context
6. Study can be used for implementation
Most Important Reason

It is at the local level where the future of historic buildings is decided.
Recent City Level Historic Preservation Impact Studies

Los Angeles - Underway
San Antonio - Underway
Indianapolis - Completed
New York City - Underway
Miami/Dade County - Completed
Pittsburgh - Completed
Raleigh - Underway
Savannah - Underway
A geographic information system (GIS) lets us visualize, question, analyze, and interpret data to understand relationships, patterns, and trends. (ESRI)
We use GIS to... 

- Collect data by area
- Compare data
- Analyze data
- Map data
### Where does the data come from?

<table>
<thead>
<tr>
<th>Federal Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Census</td>
</tr>
<tr>
<td>Consumer Expenditure Survey</td>
</tr>
<tr>
<td>LEHD – Longitudinal Employment Household Dynamics</td>
</tr>
<tr>
<td>Bureau of Labor Statistics</td>
</tr>
<tr>
<td>Other Department of Commerce</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>State Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHPO for tax credit activity</td>
</tr>
<tr>
<td>State Main Street Office</td>
</tr>
<tr>
<td>State Department of Commerce</td>
</tr>
<tr>
<td>State Department of Labor</td>
</tr>
<tr>
<td>State Office of Economic Development</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Local Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property tax records</td>
</tr>
<tr>
<td>Building permits</td>
</tr>
<tr>
<td>New business licenses</td>
</tr>
<tr>
<td>Crime statistics</td>
</tr>
<tr>
<td>Voter records</td>
</tr>
<tr>
<td>Planning documents &amp; studies</td>
</tr>
<tr>
<td>Shape files</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downtown organization</td>
</tr>
<tr>
<td>University research bureaus</td>
</tr>
<tr>
<td>Chamber of Commerce</td>
</tr>
<tr>
<td>Economic development organization</td>
</tr>
<tr>
<td>Foundations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Private Sector Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreclosure data</td>
</tr>
<tr>
<td>Tourism data</td>
</tr>
<tr>
<td>IMPLAN</td>
</tr>
</tbody>
</table>
- Lowest level for which data is available
- Make reasonable allocations when necessary
Lessons Learned for Making Studies Useful
Lessons Learned

Tell story in words, pictures and numbers

Housing + Transportation Affordability Index

<table>
<thead>
<tr>
<th>Category</th>
<th>What it measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real estate</td>
<td>Past disinvestment and prospective reinvestment</td>
</tr>
<tr>
<td>Stability</td>
<td>Population trends and related quality-of-life issues</td>
</tr>
<tr>
<td>Neighborhood char.</td>
<td>Sense of place through the built environment</td>
</tr>
<tr>
<td>Walkability</td>
<td>Proximity to community assets and condition of bike-ped infrastructure</td>
</tr>
<tr>
<td>Fiscal</td>
<td>Economic costs and contributions of neighborhood elements to City</td>
</tr>
<tr>
<td>Economic opp.</td>
<td>Wealth-generating opportunities for residents</td>
</tr>
<tr>
<td>Engagement</td>
<td>Resident participation in neighborhood</td>
</tr>
<tr>
<td>Environment</td>
<td>Past land uses, natural resources, and current quality-of-life factors</td>
</tr>
</tbody>
</table>

Neighborhood scores: 🟢 Above average  🟡 Average  🟠 Below average

City of Raleigh: 49.01%
Local Historic Districts: 36.77%
National Register Districts: 42.30%
A throw-away society is not sustainable.

California State Senator Alex Padilla
Economic Development and State Historic Tax Credit Act

California Assembly – 75 to 0
California Senate – 30 to 0

VETO
Getting rid of all the plastic bags in California for a year reduces impact on landfills by 123,000 tons.

Reusing rather than razing forty-nine 50,000 square foot warehouses reduces impact on landfills by 122,500 tons.
End all use of plastic bags in California and reduce $\text{CO}_2$ emissions by 468.1 tons/year.

Reuse rather than build new five 50,000 square foot warehouses – travel related $\text{CO}_2$ is reduced by 537.5 tons.
X all plastic bags X entire life =
Lessons Learned

Actively distribute information through multiple channels
Lessons Learned

Use advisory panel
Lessons Learned

Make publication attractive and reader friendly
Lessons Learned

Use other people’s data

Preferences of Those Planning to Buy within 5 Years

- Close to shops, restaurants, & offices
- Shorter commute but smaller home
- Available public transit
- Mix of homes
- Mix of incomes
Millennials as Home Buyers
US -- 2016

- Share of All Home Buyers: 34%
- Share of Buyers of Houses built 1913-1960: 44%
- Share of Buyers of pre-1913 Houses: 59%

National Association of Realtors
Lessons Learned

Use qualitative vignettes as well as quantitative data
Courtney Williams and Michael Shoriak were both born and raised in Louisiana, and both went on to obtain master’s degrees in historic preservation and architectural conservation out of state. They met in Philadelphia at graduate school and subsequently returned home to New Orleans to found Cypress Conservation in 2013.

While their first projects came by word of mouth, they have since built an impressive resume of building conservation projects, including Gallier Hall and the Louisiana Governor’s Mansion. Not only do they rehabilitate some of Louisiana’s most well known landmarks, they’ve taken on their own renovation project as well.

Shortly after founding Cypress Conservation, Williams convinced her father to purchase a long-vacant pair of buildings on Gravier Street in New Orleans’ Central Business District. These 1840s former warehouses are now being rehabbed by Cypress into one connected mixed-use building. Hiring local talent and highlighting as much original detail as possible in the design, Shoriak and Williams are using the State Commercial Tax Credit and federal historic tax credit to make the project feasible.

The Cypress team is driven by their appreciation and passion for the impact historic buildings have on New Orleans’ landscape and economy. Shoriak said, “1600-year-old cypress joists in a 200-year-old building coming alive again in 2017 is what makes me love this work.”
Lessons Learned

Convert numbers to understandable example

What could be done with that much money?

- The School District could pay the salaries of 86 teachers
- The City could provide a $200/month rental subsidy every month for 1,283 families
- The County could pay a fourth of the total budget of the Sheriff’s Office
Every $1 the Historic Tax Credit costs the Federal Treasury ultimately generates $1.22 to the Federal Treasury
Lessons Learned

Actively involve potential influencers during research process
Lessons Learned

Make sure research is robust and academically defensible
Lessons Learned

Frame argument to advance someone else’s priorities
And that, dear friends, is how Economic Impact Studies are made.
Thank you very much

Donovan Rypkema