LONG WAVES, LIFECYCLES, AND URBAN DEVELOPMENT: CONTEXT FOR SHORT-TERM PURPOSEFUL ACTION

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OUTLINE

Introduction
Theory of Long Waves
Research Problem
Heuristic Model
Results
Conclusions / Take Home Points
INTRODUCTION

Cities and Regions are path dependent

Long waves and urban development: seen in transport, economic development

Planners focus on “short waves” when long waves ask us, “what is the context” of our actions

Long wave theory focuses on very SLOW transformational changes
LONG WAVE THEORY

Braudel: Events are path dependent and rarely deviate; View history with *Longue Duree*

Berry: Technology comes in waves; Cyberspace is the Fifth Wave

Lifecycles: in the form of S-curves
BRAUDEL

• TIME
  • Environmental
  • Empires, Civilization, Society
  • People and la vie quotidienne
• A WORLD ECONOMY
  • Boundaries
  • Dominant Capitalist City at Center
  • Hierarchy of Zones
BERRY & LIFECYCLES

Processes are characterized in terms of a pattern growth, decline, and then growth.
RESEARCH PROBLEM

Develop a Heuristic Model
Based on Long Waves, Lifecycles

Use the model to examine two metropolitan regions (that seem to be at different stages in their lifecycle)

Suggest how “long wave thinking” can (better?) inform planning practice
HEURISTIC MODEL

- Diversification of Economic Base
- Established vs. Emerging Companies
- Migration
- Education / Human Resource / Creativity
- Connectivity
ANALYTICAL COMPARISON

Two metropolitan statistical areas (MSAs)

- St. Louis MSA, Missouri/Illinois
- South Florida, Florida

P-Census, Articles, Reports
South Florida and St. Louis Metropolitan Areas

South Florida

St. Louis
SOME ROUGH COMPARISONS

ST. LOUIS MSA

- MSA population (2009): 2,892,874
- Land area covers roughly 9,100 sq. mi (14,645 sq. km)
- GDP as of 2008: 128.5 billion dollars

SOUTH FLORIDA MSA

- MSA population (2009): 5,547,051
- Land area covers 6,137 sq. miles (9,876.5 sq. km)
- GDP as of 2008: 261.2 billion dollars
### SOME SIMILARITIES AND DIFFERENCES

<table>
<thead>
<tr>
<th>Variable</th>
<th>St Louis MSA</th>
<th>South Florida MSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Size (2008, 2000, growth rate)</td>
<td>2,828,3998 / 2,700,011 / 4.8%</td>
<td>5,525,947 / 5,007,564 / 5.9%</td>
</tr>
<tr>
<td>Households (2008, 2000, growth rate)</td>
<td>1,117,722 / 1,048,818 / 6.6%</td>
<td>2,072,456 / 1,905,394 / 8.8%</td>
</tr>
<tr>
<td>Average Household Income (2008, US Average)</td>
<td>$66,294 / $67,918</td>
<td>$69,600 / $67,918</td>
</tr>
<tr>
<td>Projected HH Income Growth Rate (Local, US Ave)</td>
<td>9.7% / 11.7%</td>
<td>11.9% / 11.7%</td>
</tr>
<tr>
<td>Masters, Professional or Doctorate Degree (Place, US)</td>
<td>8.93% (9.02) / 8.9%</td>
<td>9.45% (9.34) / 8.9%</td>
</tr>
<tr>
<td>Bachelors Degree (2008, 2000)</td>
<td>15.78% (15.82) / 15.8%</td>
<td>14.95% (14.77) / 15.8%</td>
</tr>
<tr>
<td>% Owner Occupied (2008, 2000)</td>
<td>72.4% / 68.6%</td>
<td>66.5% / 66.32%</td>
</tr>
<tr>
<td>% Built &lt; 1939</td>
<td>15.2% / 16.2%</td>
<td>2.16% / 2.54%</td>
</tr>
<tr>
<td>% Black (Place, 2008, 2000, 2008 US Average)</td>
<td>18.3% (17.74) / 12.4%</td>
<td>19.8% (18.95) / 12.4%</td>
</tr>
<tr>
<td>% Hispanic (Place, 2008, 2000, 2008 US Average)</td>
<td>2.05% (1.50) / 15.2%</td>
<td>39.2% (34.03) / 15.2%</td>
</tr>
<tr>
<td>% Speak Only English at Home</td>
<td>94.83%</td>
<td>55.56%</td>
</tr>
<tr>
<td>Estimated Median Owner-Occupied Housing Unit Value</td>
<td>139,543 / 95,103</td>
<td>288,438 / 110,247</td>
</tr>
<tr>
<td>% 1 Unit Detached (2008, 2000)</td>
<td>68.56% / 68.24%</td>
<td>42.8% / 42.46%</td>
</tr>
<tr>
<td>% 3-19 Units (2008)</td>
<td>13.94%</td>
<td>16.96%</td>
</tr>
<tr>
<td>% 20+ Units (2008, Total, 20-49, 50+)</td>
<td>4.64% / 1.81, 2.83</td>
<td>25.01% / 9.63, 15.38</td>
</tr>
<tr>
<td>% Mobile Home, Trailer, Boat, RV, Van, etc</td>
<td>5.22%</td>
<td>2.99%</td>
</tr>
<tr>
<td>Average Length of Residence</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Peak Building Period</td>
<td>1939 or earlier (15.2%)</td>
<td>16.2%</td>
</tr>
<tr>
<td>% Families Below Poverty (2008, 2000)</td>
<td>7.6% / 7.5%</td>
<td>10.78% / 10.78%</td>
</tr>
<tr>
<td>% HH &lt; 15K, 15K-25K</td>
<td>11.64% (14.13) / 10.35% 12.28</td>
<td>14.08% (17.39) / 11.17% 13.49</td>
</tr>
</tbody>
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RESULTS

1. Diversification of the economic structure
2. Shift Share Analysis & Sectors
3. Migration In, Out and Foreign Born
4. Education & Creativity
5. Connectivity
SHANNON DIVERSITY MEASURE

Basically a calculation using the formula

Ranges from 0 (perfect concentration) to 1 (perfect diversity)

St. Louis: .94 and .94
South Florida: .94 and .90
DIVERSIFICATION

Based on calculations from ’91 and ‘09…
St. Louis has maintained its highly diversified economy
South Florida has become more mildly more specialized

St. Louis employment grew at rate of 4.9%, South Florida at rate of 5.4%
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<tr>
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<th>ST. LOUIS</th>
<th>SOUTH FLORIDA</th>
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<tbody>
<tr>
<td>Total Jobs</td>
<td>119K jobs from 1991 to 2009</td>
<td>437K jobs from 1991 to 2009</td>
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<tr>
<td>Examples</td>
<td>Growth in Education/Health,</td>
<td>Growth in Education/Health,</td>
</tr>
<tr>
<td></td>
<td>Professional/</td>
<td>Professional/</td>
</tr>
<tr>
<td></td>
<td>Business</td>
<td>Business</td>
</tr>
<tr>
<td>Loss in Manufacturing</td>
<td></td>
<td>Loss in Manufacturing</td>
</tr>
<tr>
<td>100% of growth due to</td>
<td></td>
<td>Local Competitive Advantage:</td>
</tr>
<tr>
<td>larger economy</td>
<td></td>
<td>21% of growth</td>
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MIGRATION

Domestic Migration
- Both MSAs have negative balances of domestic migrants

International Migration
- Both MSAs have positive balances of international migrants

Foreign Born
- 4% of St. Louis
- 36% of South Florida

International Immigrants are fueling growth in South Florida
Both MSAs are average in comparison to the rest of the USA in Bachelor’s degrees

- Percentage of Bachelor’s: 15.78% of St. Louis MSA
- 14.95% of South Florida MSA

Neither MSA is particularly “creative”

- Florida’s Creative Index: St. Louis ranks 66th
- Miami ranked 116th
- West Palm Beach ranked 130th
CONNECTIVITY

ST LOUIS
Lambert Airport
$5.1 billion impact on region
Steady loss of passengers: 14 million in 2004 to 6 million in 2010
The region is losing connectivity

SOUTH FLORIDA
Three major airports: MIA, FLL, PBI
Each are able to specialize:
International flights and freight, low-cost carriers and cruise ship flights and North-South flights
CONCLUSIONS

Regions can be placed on a long-term trajectory

Location, location, location: where a region is located can determine its growth

Knowing one’s place: Re-invention is necessary for regions to remain relevant, since change is inevitable and hierarchy changes long term
CONCLUSIONS

Regions midway up the S-curve
Higher Growth Rate
Lower per capita income but higher projected income growth rate
Higher average HH size
Lower % of owner-occupied dwellings
Newer average age of built environment

Regions at the top of the S-curve
Lower Growth Rate
Higher per capita income but lower projected income growth rate
Lower average HH size
Higher % of owner-occupied dwellings
Older average age of built environment
CONCLUSIONS

Regions midway up the S-curve:
More specialized economy
Economic growth due to some local advantage
Domestic migration is negative but international migration is fueling growth

Regions at the top of the S-curve:
More diversified economy
Economic growth reliant on nat'l/sectoral growth
Domestic migration is negative and international migration is negligible
CONCLUSIONS

Regions midway up the S-curve
- Region is “connected” via most technologically advanced method of transport (Air)
- Region does not identify strongly with any corporate HQ
- Region is expected to continue to grow, population-wise

Regions at the top of the S-curve
- Region is losing “connectivity” because it lags in the most advanced method of transport (Air)
- Dominated by several HQs; region identifies with long term corporate presence
- Region is losing dominance population-wise; growth not keeping up with average
Cities and Regions Exist Within a Broad Time-Space Continuum and On a Hierarchy

At the scale of the City/Region, development patterns and economic and social structures are largely ‘GIVENS’

Short term purposeful action is often limited in geographic scope and impact

It will take thousands of “glocalized” events to move the position of the city or region “up” or “down” the global hierarchy of inter-urban geography.