Cities, New Growth Theory and the Arts

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Price Growth by Distance to City Centers
2001-2008

Percent Growth, 2001-2008

0-2 miles
2-5 miles
5-10 miles
over 10 miles

0
0.1
0.2
0.3
The Central Paradox

• Why is it that in an era in which transportation and communication costs have virtually vanished, cities have become more important than ever?
• Urban resurgence is visible in high income levels, robust housing prices, and a concentration of innovation in urban areas.
• This is even clearer in the developing world.
Cities and the New Growth Theory

• In the early 1980s, Paul Romer solved the conundrum of generating permanent growth with competitive markets by assuming that production had increasing returns through an externality that he called knowledge.
• In 1988, Lucas argued that knowledge was embodied and better thought of as increasing returns to human capital.
• Sub-national data was seen as a means of testing these ideas.
• We focused on the question of whether firm size or industrial concentration would increase local growth.
Economic Growth and Firm Size

Employment Growth 1977-2009
(by Quintiles of 1977 Firm Size)
Chinitz: Contrasts in Agglomeration: New York and Pittsburgh
Industrial Concentration and Growth

Employment Growth 1977-2009
(by Quintiles of Industry Concentration by 1977 Wages)

Employment Growth, 1977-2009

1 2 3 4 5
Knowledge / Human Capital Spillovers

• If knowledge spillovers are global, then local human capital may not matter.

• If these spillovers are local, then they will show up in two linked tests of $w(h,H)$, where $h$ is individual and $H$ is aggregate.

• Test # 1 (Rauch) $dw/dH$, holding $H$ constant

• Test # 2 (Acemoglu/Angrist): compare $dw/dh$

\[
dAggregate\ wage/dH = dw/dh + dw/dH
\]
A Little Calculation

• The coefficient of log productivity on share with b.a.’s is 1.7 (holding share with h.s. constant) meaning that if you moved from 100% h.s. grad with no college to 100% b.a. productivity would increase fivefold, which is vastly higher than micro-level estimate.

• Significant issues with endogeneity, etc.

• Large social multipliers in unemployment and across countries as well.
Unemployment and Education
Figure 7:

Mean Change in Population, 1970-2000

- Lowest
- Second
- Third
- Fourth
- Highest

Source: U.S. Census Bureau
Figure 4: Population Growth for MSAs in the Northeast and Midwest

- 8% 15% 15% 20% 53% 0% 10% 20% 30% 40% 50% 60%
- 0% - 7.5% 7.5% - 9.5% 9.5% - 11% 11% - 15% 15% - 31%
- Percent of Population with a BA (1970)
The Rise of the Consumer City
# Ranking of Top and Bottom US MSA’s, according to Estimated Amenity Value

<table>
<thead>
<tr>
<th>Metropolitan Statistical Area (MSA)</th>
<th>Highest</th>
<th>Lowest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honolulu, HI</td>
<td></td>
<td>Stamford, CT</td>
</tr>
<tr>
<td>Santa Cruz, CA</td>
<td></td>
<td>Norwalk, CT</td>
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<tr>
<td>Santa Barbara-Santa Maria-Lompoc, CA</td>
<td></td>
<td>Anchorage, AK</td>
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<tr>
<td>Salinas-Seaside-Monterey, CA</td>
<td></td>
<td>Rochester, MN</td>
</tr>
<tr>
<td>Los Angeles-Long Beach, CA</td>
<td></td>
<td>Detroit, MI</td>
</tr>
<tr>
<td>San Francisco, CA</td>
<td></td>
<td>Midland, TX</td>
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<tr>
<td>San Jose, CA</td>
<td></td>
<td>Trenton, NJ</td>
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<tr>
<td>Santa Rosa-Petaluma, CA</td>
<td></td>
<td>Minneapolis-St.Paul, MN</td>
</tr>
<tr>
<td>Oxnard-Ventura, CA</td>
<td></td>
<td>Nassau-Suffolk, NY</td>
</tr>
<tr>
<td>San Diego, CA</td>
<td></td>
<td>Bloomington-Normal, IL</td>
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</tbody>
</table>

*Notes*: Estimated Amenity Value measured as residual from an OLS regression of log median house value on log median income in 1990.
Growth and Amenities in the US
When are high real wages bad?

Figure 3: Log of Real Wages and City Size, 1970
Declining Real Wages and the Rise of the Consumer City

Figure 4: Log of Real Wages and City Size, 2000
Cities and the Arts

- Cities and the generation of artistic breakthroughs
- The arts as an amenity that produces value in and of itself.
- The arts as an attraction to higher human capital individuals.
- The arts as an input into the productive process for consumer industries.
The Chicago Home Insurance Building, built in 1885, is widely considered the world’s first metal-framed skyscraper. This technology would come to dictate the shape of most cities in the twentieth century and beyond.

*Chicago History Museum/Getty Images*

Until nearby commercial structures began to dwarf it in 1890, Trinity Church had been New York’s tallest building for forty years. The two buildings to the church’s left held that honor for thirty years until they were destroyed in a terrible attack that ultimately illustrated the resilience of a great city.

*Jeff Greenberg/ World of Stock*
Brunelleschi Understands Perspective
Donatello and Low Relief Sculpture

Author: F. Tronchin
Masaccio and the Brancacci Chapel
Does this mean anything for arts policy?

• Artistic clusters have long existed and often created great results (House of Wisdom).
• But does this mean that arts support should be targeted into clusters or not.
  – Can clusters possibly be managed?
• The presence of local externalities doesn’t necessarily mean that we just encourage people to move from A->B because A’s benefit is B’s loss.
Intrinsic Value of the Arts

• Private valuation (e.g. Galenson and Weinberg)
• Landmark buildings and architectural quality does sell at a premium.
  – Vandell and Lane find a 22% gap from top to bottom
  – Doug Noonan’s work) sell at 5-13% premiums (but landmark status doesn’t seem to help).
  – Some work finds that architectural quality tends to be worth more in newer than in older buildings.
• External impact of public art is harder to assess
Arts and Human Capital

• There is some connection between arts establishments and human capital.
• I’m using a museum of museums per capita from 1990 described in “Consumer City”
• The causality isn’t entirely obvious, but it does suggest more demand for arts among the more skilled.
• That complementarity is the basis for arts-oriented human capital strategies.
<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
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<th>(3)</th>
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<th>(6)</th>
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<tr>
<td></td>
<td>Visited an art gallery or museum</td>
<td>Went to a bar or tavern</td>
<td>Went out to dinner at a restaurant</td>
<td>Went to the movies</td>
<td>Went to a pop or rock concert</td>
<td>Went to a classical concert</td>
<td>Entertained people in my home</td>
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<td>City resident</td>
<td>0.1891</td>
<td>0.051</td>
<td>0.1071</td>
<td>0.202</td>
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<td>Suburb resident</td>
<td>0.0808</td>
<td>-0.0049</td>
<td>0.0636</td>
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<tr>
<td>City x after 1990</td>
<td>-0.0064</td>
<td>-0.0057</td>
<td>-0.0726</td>
<td>0.0497</td>
<td>-0.0008</td>
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<td>Survey year</td>
<td>-0.0055</td>
<td>0.0022</td>
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<td>-0.0065</td>
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<td>College Graduate</td>
<td>0.3581</td>
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<td>High School Dropout</td>
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<td>0.0104</td>
<td>-0.1834</td>
<td>-0.1152</td>
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<td>Age</td>
<td>0.0101</td>
<td>-0.018</td>
<td>0.008</td>
<td>-0.0288</td>
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<td>Age squared</td>
<td>-0.0001</td>
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<td>0</td>
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<tr>
<td>Female</td>
<td>0.095</td>
<td>-0.3808</td>
<td>-0.0411</td>
<td>0.0119</td>
<td>-0.0329</td>
<td>0.068</td>
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<td>[0.0070]**</td>
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<td>[0.0070]**</td>
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<td>Log income</td>
<td>0.0747</td>
<td>0.0593</td>
<td>0.225</td>
<td>0.114</td>
<td>0.0564</td>
<td>0.046</td>
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<td>[0.0051]**</td>
<td>[0.0050]**</td>
</tr>
</tbody>
</table>
Museums and Subsequent Changes

• A one standard deviation increase in the number of museums p.c. increase growth in share BAs from 1990-2000 by 2/10 of one percent (controlling initial size and pct ba).
• No visible impact on income or pop. Growth.
• House price growth increases by 4 percent with one standard deviation more museums p.c.
• Same coefficient for 1980-2000 (but not significant) also no impact on income or pop growth (and none on housing).
Versace’s Miami Mansion

Photo by Daniel di Palma