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University of Missouri

Comprehensive Wealth Measurement and Spatial Hedonic Analysis: Social Capital and Social Amenities

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Social Amenities and Comprehensive Wealth



Sources:

<http://spiritualution.org/articles/lonliness-stress-isolation-and-lack-of-human-compassion-in-urban-life-coming-back-to-nature>;

<http://www.lockwoodglen.com/amenities>;

<http://www.theprofessionaldigest.com/2013/04/outourcing-location-selection-critical-decision-factors.html>;

<http://powrightbetweentheeyes.typepad.com/.a/6a00d83451bd1369e2017ee6524c0f970d-pi>

The Structure of this Presentation

- Research question and main topic
- Concept of social amenities
- Relationship between social amenities and social capital
- Sources of social amenities
- Proposed contributions of this research
- Conceptual framework
- Next steps



Research Question

How can we estimate the value of local amenities including social amenities generated by investments in social capital?



Main Topic

- ***Roback's (1982) Spatial Equilibrium Model***
 - Hypothesizes that more amenable places induce increased willingness to pay higher housing prices and willingness to accept lower wages.



Concept of Social Amenities

- Definition – site-specific social characteristics that enhance a location as a place to live or work.
 - As a flow of benefits from accumulated social capital stock.
 - Come from a range of activities, organizations, and facilities that support the formation, development and maintenance of social relationships and structure in a community.



Relationship between Social Amenities and Social Capital

- How do investments in social capital contribute to the social amenities of a location to live and work?
 - Public investments in social capital, built capital, and services with intention, and thus endogenous.
 - Private investments in social capital without intention, and thus externalities.



Sources of Social Amenities

	Private investments in mobile social capital	Private investments in immobile social capital	Public investments
Type of investments	Familial relationships Professional organizations Political involvement	Neighborhood relationships Volunteerism Civic service Neighborhood watch	Public spaces Festivals and events Public programs
Private benefits	Higher income Better educational attainment Better jobs	Higher property values Lower taxes	Higher property values Improved health Better public services Profitable businesses
Social benefits (Externalities)	Lower crime rates Lower poverty Better government Higher employment rates	Lower crime rates Lower poverty Better government Higher employment rates	Lower crime rates Lower poverty



Proposed Contribution of this Research

- Explicitly model role of social amenities
- endogenously generated by public investments in social capital, built capital, and services
- Possibility that private investments in social capital can produce externalities as forms of social amenities (or disamenities).
- The concept of mobile versus immobile social capital has apparently not been addressed.



Proposed Conceptual Framework

	Roback's (1982) Spatial Equilibrium Framework	Proposed Framework
Starting point	Utility: $U(x, l^c; s)$ Production: $f(l^p, N; s)$	Utility: $U(x^c, l^c, g; s)$ Production: $f^p(l^p, N^p, g; s)$ Services: $f^g(x^g, N^g; s)$
Basic Model	<ul style="list-style-type: none"> • Consumer (utility max.) • Producer (cost min.) <ul style="list-style-type: none"> • separate but in equilibrium 	<ul style="list-style-type: none"> • Consumer (utility max.) • Producers (cost min.) • Public (cost min.) • Community allocates <ul style="list-style-type: none"> • Labor • Land • Between <ul style="list-style-type: none"> • Direct consumption of land • Private goods production • Public service production • Public services generate social capital and social amenities



Proposed Conceptual Framework

	Roback's (1982) Spatial Equilibrium Framework	Proposed Framework
Spatial issues	<ul style="list-style-type: none">• Site-specific, fixed amenities<ul style="list-style-type: none">• affect utility• affect cost of production	<ul style="list-style-type: none">• Site-specific, fixed amenities<ul style="list-style-type: none">• affect utility• affect cost of production• Site-specific, social amenities<ul style="list-style-type: none">• also affect utility and firms• endogenous
Value of amenities	<ul style="list-style-type: none">• Implicit price of amenities are sum of incremental differences in<ul style="list-style-type: none">• wages• land values	<ul style="list-style-type: none">• Implicit price of natural and social amenities are sum of incremental differences in<ul style="list-style-type: none">• wages• land values



	Roback's (1982) Spatial Equilibrium Framework	Proposed Framework
Empirical model	<ul style="list-style-type: none"> Assume spatial equilibrium Wage and residential site values estimated separately Sum marginal valuation of wages and site values. $\frac{\partial WTP}{\partial s} = \left c \frac{dr}{ds} - \frac{dw}{ds} \right $	<ul style="list-style-type: none"> System of equations $x^c = f(l^c, g, N^g, s, l, N, Z_1)$ $l^c = f(x^c, g, N^g, s, l, N, Z_2)$ $g = f(x^c, l^c, N^g, s, l, N, Z_3)$ $N^g = f(x^c, l^c, g, s, l, N, Z_4)$ $N^p = N - N^g$ $l^p = l - l^c$ $x^g = x - x^c$
Key extensions	<ul style="list-style-type: none"> Unit of analysis: 98 largest cities in 1973. Consumers and producers Exogenous amenities Reduced form approach 	<ul style="list-style-type: none"> All counties for the entire U.S. in 2012 Includes government sector Endogenous social amenities Structural equations approach

Variables and Data

- x^c Consumer expenditure on tradable goods
- l^c Consumer expenditure on residential housing
- g Local direct general expenditures (\$ per capita)
- N^g number of public employees
- N number of employees
- l land area
- s Natural amenity indicators
- Private investments in social capital (e.g., Volunteerism)



Next Steps

- Complete data collection
- Check and organize data
- Specify and estimate econometric model
- Calculate implicit values of various amenities, investments in social capital, and wealth



Thank You!

