

Urban Planning and Sustainable Development

The Role of Sustainability in Local Economic Development

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While a significant amount of literature related to sustainability has emerged across many academic disciplines in recent years, many questions remained unanswered. Past research tells us that many cities are engaging in sustainability policy to protect the environment (Portney, 2003) and some cities are using sustainability policies in their economic development toolkit (Koven and Lyons, 2010). However, what currently does not exist is an examination of the relationships between local economic development policies and their sustainability policies. Recent ICMA survey data can begin to explore the quantitative relationships between local economic development policy and sustainability policy in American cities. The authors merged two recent ICMA surveys to examine the intersection of economic development and sustainability practices. Over 400 cities responded to both surveys, offering a valuable and unique opportunity to understand the relationships between economic development and sustainability policies. Specific questions examined in this research include: 1. What specific sustainability policies do cities engage in when they indicate they use sustainability as part of their economic development plan? 2. Are there relationships between jobs created and a city's engagement in sustainability initiatives? 3. What types of cities (base sector, population size, government form, suburban, etc) tend to engage more in sustainability as part of their economic development efforts? 4. How does growth or shrinkage of local economy factor into a city's engagement in sustainability initiatives? Findings from this research will offer a unique and valuable look into the increasingly connected policy areas in American cities.

The Opportunities and Limits of Urban Sustainability Planning

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Across the U.S., there is an on-going competition among cities to show that they are the greenest. Cities highlight their sustainability plans that feature efforts to reduce energy consumption, promote public transit, create more green infrastructure and urban gardens, and prepare for climate change, etc. Urban sustainability planning is here to stay, and in many ways has started to change the urban planning paradigm. However, even as important strides have been made, the extent to which urban sustainability planning is able to address some of the more difficult planning challenges of air pollution, exposure to toxic environments, citizen engagement, regional equity, vulnerability to climate change, and environmental justice is still open to question. This paper uses the cases of Philadelphia, New York, and Chicago to develop

a framework to evaluate the opportunities and limits of urban sustainability planning. Through a careful analysis of each city's approach to sustainability planning, the research demonstrates areas where sustainability planning has made important strides and others where it has yet to meet its goals. The paper seeks to broaden our discussion of urban sustainability planning to see whether and how urban sustainability planning can help us tackle the more vexing urban planning problems facing our cities and regions.

The Green Dividend of Sustainable Planning Practice: How Portland Provides a Compass

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By several standards, Portland is considered one of the most livable and sustainable mid-size cities in the United States. If one looks at some basic statistical data, Portland looks to be an average American City; its size, average income, and unemployment rate are about the same as roughly 270 fellow mid-sized cities in the country. Despite these ordinary stats, Portland is different from most other US cities in one crucial way: it has actually reduced its per capita carbon emissions by 6% below 1990 levels. How has the city accomplished all of this? By embracing urbanism. Over the last 40 years Portland has instituted policies that incentivized the construction of dense, mixed-use development. Combined with generous investments in streetcars, light rail, and bicycling infrastructure, Portland has created a dense, walkable urban environment that has been attracting new residents and new investment ever since. Despite Portland not having even one Fortune 500 Company, it has the largest percentage of college-educated residents of any midsize city in America. Young educated persons love the "green city" because it provides an opportunity to practice stewardship of the earth; nearly 40% of Portlanders choose to give up their car and use alternative transportation. Indeed, Portland's charm is that it is weird, unconventional, and promotes a healthy lifestyle. People "vote with their feet" to live the green lifestyle, and today Portland is living proof that investing in such a lifestyle pays off in a big way.

The Smart Grid and Green Infrastructure, Applying Patrick Geddes to Metropolitan Infrastructure in the 21st Century

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Over a century ago urban planner, Sir Patrick Geddes, provided ideas about resource conservation and using local building materials that are now in motion in modern sustainable

development. His interdisciplinary and holistic approach was not limited to the environment as he also encouraged a cultural shift focused on general life enhancement integrating people with their environment. Geddes labeled initial periods of waste and indifference the paleotechnic, and identified the possibility for enlightened societal transitions to periods he labeled neotechnic and geotechnic. This paper describes two strategies in metropolitan infrastructure that support the transition to neotechnic and geotechnic including the modernization of the electric grid known as the smart grid, and increasing utilization of green infrastructure. These conservation strategies represent Geddes' concepts in the 21st century and help illustrate his foresight in sustainable development. The smart grid represents the neotechnic as it enables a more efficient use of electricity consumption and a new level of customer participation that increases consumer awareness. Likewise, green infrastructure through the use of natural processes of evaporation, infiltration, and plant transpiration represents the geotechnic vision by 'bringing the field to the city' (Geddes, 1915) to improve the health of the community and the environment. In addition to these benefits both of these strategies support Geddes' concept of the Energy Balance Sheet, a method of accounting for natural energy sources in a way that treats them as capital. Both the smart grid and green infrastructure have utility as a tool to highlight waste and quantify the real value of energy efficiency gains that may help shift the balance in the direction of the neotechnic and geotechnic age.

The Impact of LEED Neighborhood Certification on Condo Prices

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New urbanism and smart growth are sustainable urban development concepts focusing on, amongst others, walkability, high density, open public spaces, pedestrian activity, neighborhood revitalization, public transit, community and mixed uses. The US Green Building Council offers LEED certification for existing or developing neighborhoods that are in line with the new urbanism and smart growth concepts. We investigate whether LEED neighborhood certification 1) adds a premium to condo sales prices and 2) moderates the relationship of LEED building certification and sales prices. Using the Pearl District in Portland, Oregon as a laboratory and employing a second order spatio-temporal autoregressive model, we find no evidence that LEED neighborhood certification directly or indirectly affects sales prices. Our results suggest that, contrary to LEED building certification, LEED neighborhood certification fails to add value for condo buyers. We explain our findings with the free rider problem as it relates to public goods and neighborhood delineation issues. Our study has implications for developers and urban planners. Our findings suggest that developers and urban planners should think of LEED neighborhood certification as an investment in more sustainable urban neighborhoods, however, should not anticipate any financial payoff from increased sales prices. Compared to LEED building certification, developers may not be able to recapture their

investment in LEED neighborhood certification, particularly in settings such as the Pearl district investigated in this study.