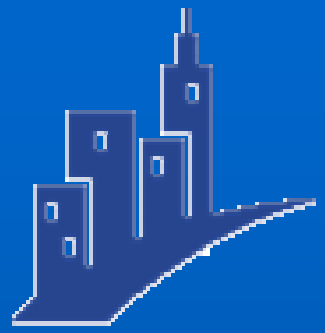
The Brookings Institution

Metropolitan Policy Program
Robert Puentes, Fellow



Investing in a Better Future:

A Review of the Fiscal and Competitive Advantages of Smarter Growth Development Patterns

National Building Museum
Smart Growth Speaker Series
August 16, 2004

The Brookings Institution

Metropolitan Policy Program

Redefining the challenges facing metropolitan America and promoting innovative solutions to help communities grow in more inclusive, competitive, and sustainable ways.

Elevated from policy center to a full program July 2004

Purpose

- Better capture a definition of smart growth
- Couple the challenges of the growth debate with the onset of economic sluggishness
- Respond to the policy initiatives of Governors and state legislators
- Reframe the current thinking about how communities grow

There is a consistent, general consensus over the last fifty years that compact development:

- Reduces the cost of building and maintaining public infrastructure
- Reduces the cost of delivering services
- Improves economic performance
- Brings economic gains to suburbs

But …… the devil is in the details

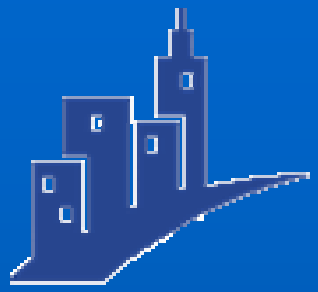
Outline

I Defining smarter growth development patterns

II Smart growth benefits: Making the case

III Smart growth benefits: What the research says

IV Pulling it all together



I Defining smarter growth development patterns

Broadly defined, smart growth, refers to a new way of thinking about how places grow and develop.

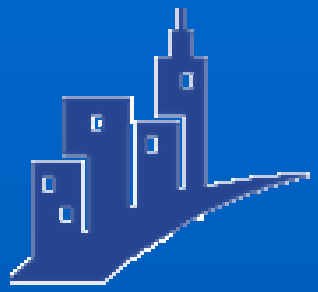
Almost never does *smart growth* mean *no growth*.

Entails accommodating growth in such a way as to maximize benefits and counteract sprawl

→ limiting expansion
→ encouraging higher density development
→ encouraging mixed-use (as opposed to separation)
→ promoting transportation choice
→ revitalizing older places
→ preserving open space
→ promoting more affordable housing choices.

This project narrows the definition to two crude measures: compactness and density

- Misses the social, environmental, design dimensions of smart growth and other goals (social equity) and tools (open space preservation).
- Does not ignore the advantages of sprawl: particularly lower land costs—a significant factor in a nation with serious housing affordability challenges.
- Yet, that does not change the importance of the economic benefits outlined in the paper.



II Smart growth benefits: Making the case

1. Fiscal Savings

Fiscal savings from more compact vs. more dispersed development may be the result of:

- lower marginal costs for serving each additional person as each person locates at higher densities (economies of scale)
- lower marginal cost for serving each additional person as each person locates more closely to existing major public facilities (economies of geographic scope)

2. Economic Competitiveness Benefits

Several premises frame the latest academic literature:

- Metropolitan economies today are driven by knowledge
- Worker preferences for residential locations matter
- The concentration and agglomeration of firms AND workers facilitate the flow of information and knowledge exchange
- How a region grows physically effects how it grows economically.

2. Economic Competitiveness Benefits

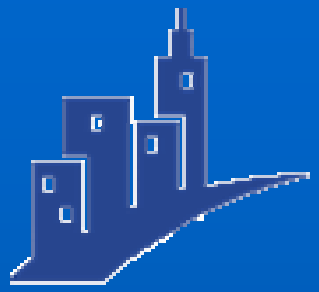
Economic productivity gains result from:

- The "agglomeration" efficiencies and "knowledge spillovers" from dense labor markets, high clustering of jobs, efficient transportation systems.
- In the "knowledge economy," clusterings of talented people ("human capital") represent a prime driver of aggregate economic growth.
- More qualitatively, evidence suggests that workers in key industries seek out smart growth attributes.

3. Regional Benefits

Regional benefits are connected to the growing literature on urban-suburban "interdependence" and the relatedness of city and suburban fortunes.

- Urban decay can harm existing infrastructure, reduces regional amenities, weakens agglomeration economies, and imposes other social costs.
- To the extent that smart growth fosters urban revitalization, it may well promote the economic well being of the suburbs as well as the city.



III Smart growth benefits: What the research says

Smart growth reduces the cost of providing infrastructure and delivering services

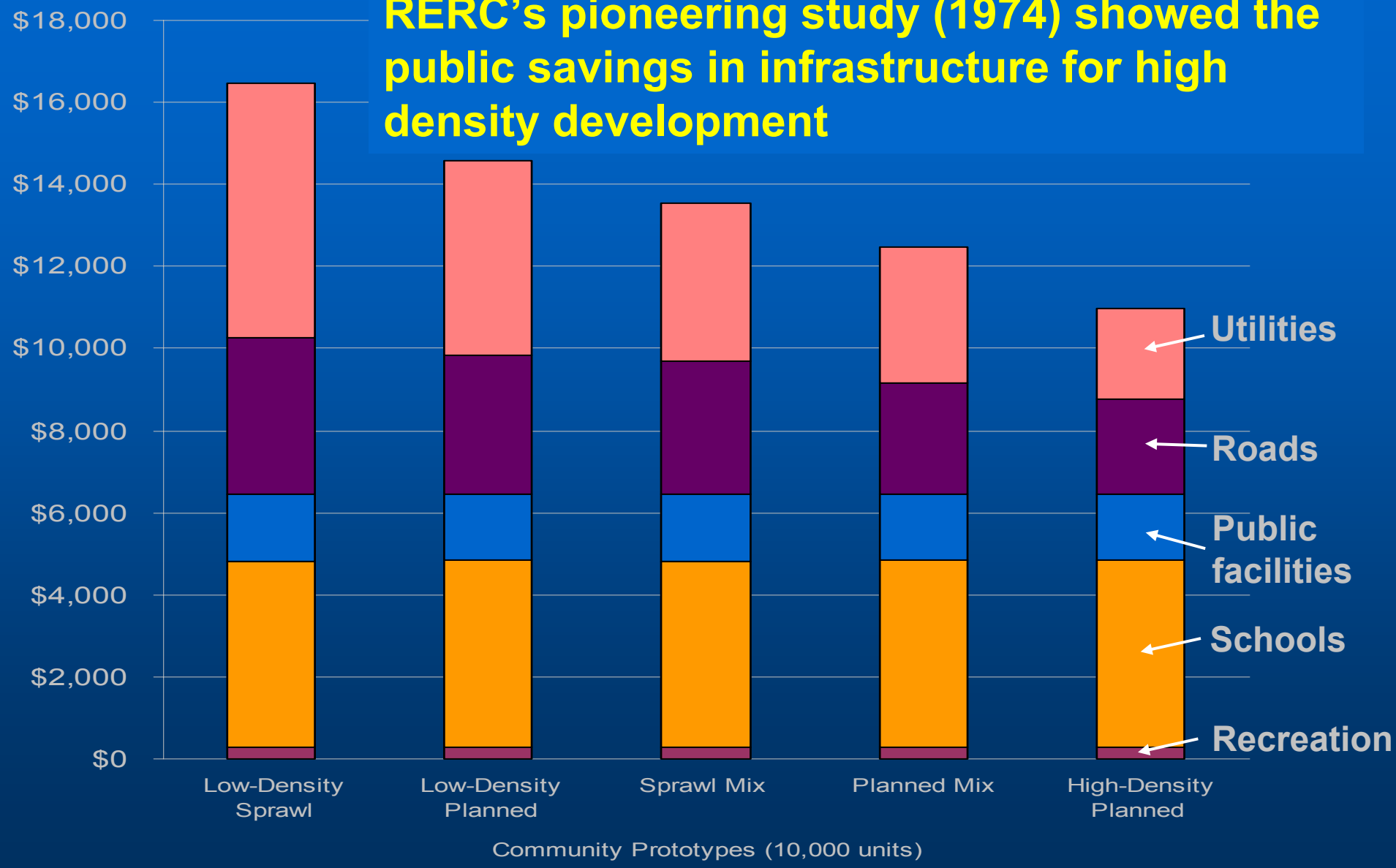
Smart growth improves economic performance

Smart growth benefits suburbs as well as cities

Smart growth reduces the cost of providing infrastructure and delivering services

Savings on capital facility costs

RERC's pioneering study (1974) showed the public savings in infrastructure for high density development



Real Estate Research Corporation (1974) "The Costs of Sprawl:" Summary of Findings

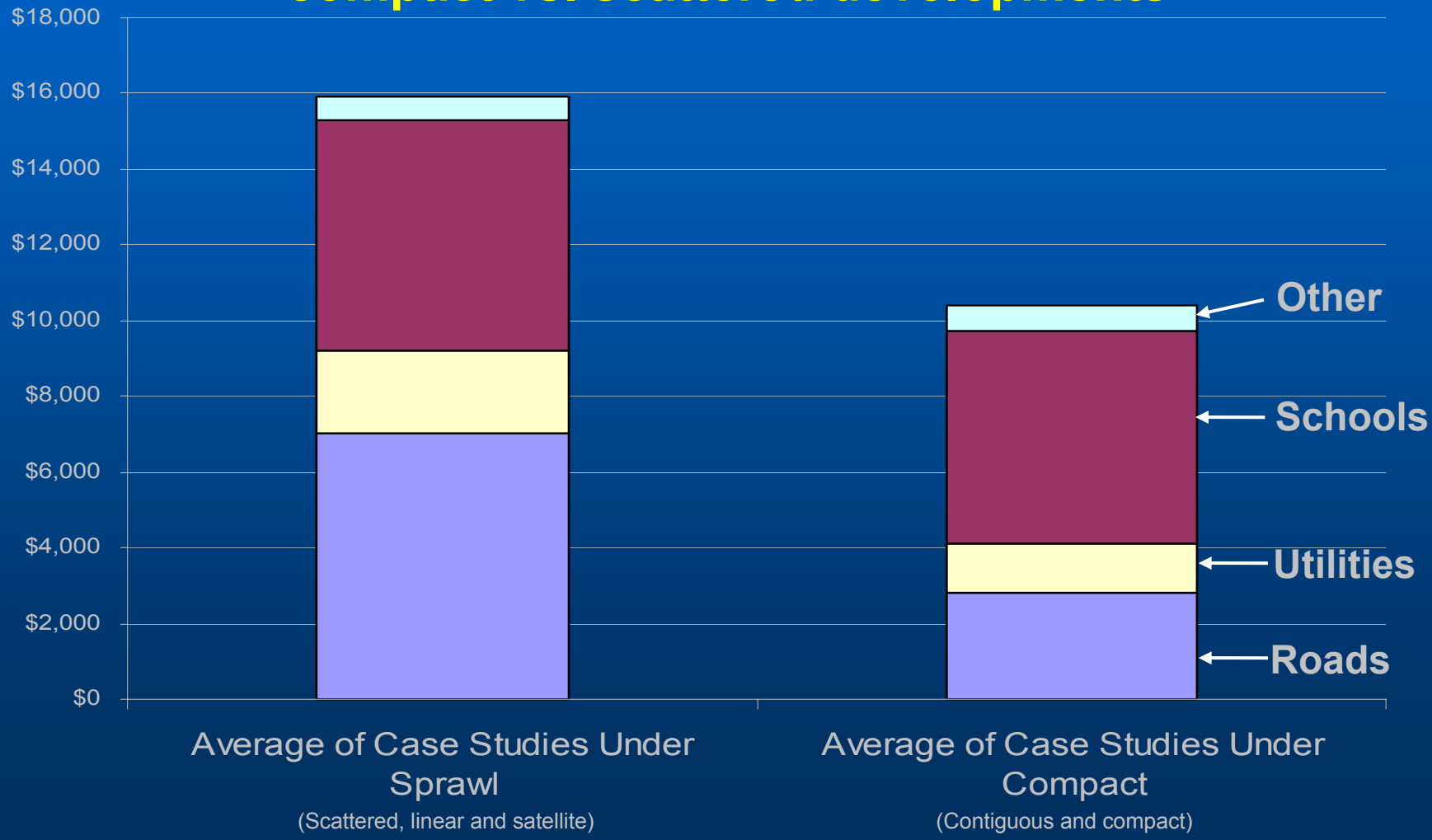
Duncan (1989) -- showed that the costs for providing infrastructure per dwelling unit is lowest and most efficient for more compact developments

Efficiency Rank	Study Area	Urban Form	Cost
1	Downtown Orlando	Compact	$9,252
2	Southpoint	Contiguous	$9,767
3	Countryside	Contiguous	$12,693
4	Cantonment	Scattered	$15,316
5	Tampa Palms	Satellite	$15,447
6	University	Linear	$16,260
7	Kendall	Linear	$16,514
8	Wellington	Scattered	$23,960
Average			$14,901

Duncan (1989) -- Florida Growth Patterns Study Total Public Facilities Costs by Development Type (Per Dwelling Unit 1989 Dollars)

Savings on capital facility costs

A more recent study using Duncan's research showed the infrastructure savings, particularly for roads, for compact vs. scattered developments



Office of Technology Assessment, 1995, "The Technological Reshaping of Metropolitan America."

Burchell et al (2000) – Infrastructure costs of trend versus planned development in New Jersey, 2000-2025 (in millions)

	Trend	Planned	Diff.
Roads	$3,720	$2,860	23.4%
Water and Sewer	$11,190	$9,730	13.0%
Total	$14,910	$12,590	15.6%

Burchell et al (2002) – Infrastructure costs of uncontrolled versus controlled growth nationwide, 2000-2025 (in millions)

	Uncontrolled	Controlled	Diff.
Local Road Infrastructure	$927,010	$817,310	11.8%
Water / Sewer	$189,767	$177,160	6,6%
Total	$1,116,777	$994,470	10.9%

Bollinger, Berger and Thompson (2001) - The cost of delivering new services for every 1,000 residents in select Kentucky counties is lower in more compact places.

*Services include Police, Fire, Highway, Schools, Sewer, and Solid Waste

	Development Pattern	Cost
Central city counties		
Fayette	(more concentrated)	($1.08)
Jefferson	(more spread out)	$37.55
Suburban counties		
Shelby	(more concentrated)	$88.27
Pendelton	(more spread out)	$1,222.39
Counties with small towns		
Warren	(more concentrated)	$53.89
Pulaski	(more spread out)	$239.93
Outer ring and rural		
Garrard	(more concentrated)	$454.51
McCracken	(more spread out)	$618.90

Bollinger, Berger and Thompson (2001)- Dollar Costs of New Services* Per 1,000 New Residents for a Family of 4 in Kentucky

H.C. Planning Consultants, Inc. and Planmetrics, LLP found revenue loss due to depreciated properties in Rhode Island cost communities about $50 million each year

Cost Items	Net cost (20 years) in millions	Net cost (per year) in millions
Capital cost of infrastructure	$243	$12.2
Operating cost of infrastructure	$181	$9.1
Total expenditures	$424	$21.2
Value of agricultural products lost due to farmland loss	$14	$.7
Tax revenue loss due to depreciated properties in urban centers	$782	$39.1
Revenue loss to accommodate less compact development in non-urban areas	$212	$10.6
Total revenue loss	$1,008	$50.4
Total costs	**$1,432**	**$71.6**

Grow Smart Rhode Island. 1999. “The Costs of Suburban Sprawl and Urban Decay in Rhode Island” Providence: The Rhode Island Foundation.

Smart growth improves economic performance

Key smart-growth goals (e.g., compactness & density) may each be associated with enhanced economic growth

- **Ciccone and Hall (1996)**: average labor productivity increases with greater employment density
- **Cervero (2000):** found higher productivity in dense cities with efficient transportation systems than in more dispersed places
- **Nelson and Peterman (2000):** compared to others, growth management metros were likely to see improvements in metropolitan level personal income
- **Carlino (2001):** links denser local economies to increased patenting

Ciccone and Hall (1996) Productivity and the Density of Economic Activity

State	Density Index*	Productivity (1998 $)
DC	1.67	43,164
New York	1.59	41,921
New Jersey	1.48	44,488
Massachusetts	1.47	37,296
Illinois	1.46	39,150
Maryland	1.45	34,439
Rhode Island	1.43	30,055
Connecticut	1.42	41,927
California	1.42	40,723
Pennsylvania	1.40	34,661

Average	Density Index*	Productivity (1998 $)
Top 10	1.48	38,782
Middle 40	1.33	34,071
Bottom 10	1.19	31,578

*Note: The density index reflects raw employment at the county level.

Smart growth benefits suburbs as well as cities

Improving conditions in a regional core can improve performance across the region and in the suburbs.

- **Voith (1998):** found that city income growth positively affected suburban growth on 3 indices (income, housing prices and population)
- **Pastor and others (2000):** reductions in central city poverty rates led to metropolitan income growth.
- **Haughwout and Inman (2002):** present strong evidence that the finances of the central city and welfare of suburbs is related to the extent that suburbs should fund anti-poverty programs in the city.

IV Pulling it all together

During times of tight budgets, more efficient and beneficial growth strategies make more sense than ever.

Experts agree:

More compact, dense communities save taxpayers' money and improves economic productivity

The costs of sprawl outweighs its benefits

But….. There are limitations to the current research

Most of the research relies on modeling/projections of costs

- Actual costs are estimated for different development scenarios
- There is heavy emphasis on projected future costs rather than on actual past spending
- Some research uses “hypothetical” scenarios

It is difficult to make generalizations

- No consistent definitions of “compact” vs “sprawling” development
- Case studies are valuable but inherently local

Few academic studies link urban form to job/economic growth or other cost savings

Suggestions for future research

Reality-based research

- Comparing communities with similar fiscal, tax, and service structures would be more tangible.
- Determining with some specificity who pays for what. That is, to what extent are public costs passed on to the consumer?

Smart growth specific research

- Develop typology and measurement of specific smart growth characteristics and communities - rather than proxies.

Physical growth and economic growth

- Investigate the hypothesis that how a region grows physically affects how it grows economically.

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