Development in Your Community:
Are we asking the right questions?

The Fiscal Impact of Development Patterns

Christopher Zimmerman
Vice President for Economic Development

Massachusetts Smart Growth Conference
DCU Center, Worcester Massachusetts
May 18, 2017
Arlington, Virginia

Area: ~ 26 sq. miles
Population: ~ 212,000
Arlington, Virginia

- Density confined largely to Metrorail corridors (~11% of land area)
  - 92% of total office
  - 40% of total housing units

- The 7 station sectors in the 2 corridors - constituting one-tenth or less of the County’s land area – produce more than half of County tax revenue
Development patterns & budgets:

How communities develop affects government expenditures and revenues.
Since the ‘70s, studies have confirmed: Low-density sprawl costs municipalities more than compact development.
Expenditures for infrastructure and services are more efficient in denser, better connected areas.
Development affects costs

Compact development offers efficiencies in delivering services.
– Police and fire departments have less area to cover.
– Fewer miles of road to cover for trash pickup, school buses.
– Fewer miles of water and sewer pipes to maintain.
A scenario analysis tool

A fiscal impact model focused on the relative effects of sprawl versus compact development
Comparative development patterns for the same population

<table>
<thead>
<tr>
<th>Scenario A</th>
<th>Scenario B</th>
<th>Scenario C</th>
</tr>
</thead>
</table>

Communities for which the model has been applied

- Madison, Wisconsin
- West Des Moines, Iowa
- Doña Ana County, New Mexico
- Macon, Georgia
- Indianapolis, Indiana
- Battle Creek, Michigan
- Kalamazoo, Michigan
- Rifle, Colorado
- Brookings, South Dakota
- Pittsburg, Kansas
- Chattanooga, Tennessee
- St. James Parish, Louisiana
- Pagosa Springs, Colorado
- Tulsa, Oklahoma (pending)
- Collier Co., Florida (pending)
Fiscal Impact Model: Data Inputs

- Roads + Maintenance
- Water/Sewer
- Stormwater
- Fire/EMS
- Solid Waste
- Schools
THE COMPACT DEVELOPMENT SCENARIO REDUCES CITY EXPENDITURES

Total Projected Annual City Costs of Pioneer District Development at Build-Out in Today’s Dollars

- Low Density
- Base
- Compact
MACON MODEL PROJECTS THAT MOVING FROM 1 UNIT PER ACRE (NET) TO 16 REDUCES PER CAPITA COUNTY COSTS BY 25%

Hypothetical Residential Programs in Macon-Bibb

NOTE: Does not include potential density-related savings associated with solid waste or use of existing infrastructure
## Summary of Results by Scenario

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Total Annual Budgetary Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Density Greenfield</td>
<td>$(200,000) - $0</td>
</tr>
<tr>
<td>High Density Greenfield</td>
<td>$(200,000)</td>
</tr>
<tr>
<td>Downtown Infill</td>
<td>$(800,000)</td>
</tr>
<tr>
<td>Downtown Infill Premium</td>
<td>$(1,000,000)</td>
</tr>
</tbody>
</table>

**Macon-Bibb County and Schools Combined**
Indianapolis

Projected annual net fiscal impact at build-out
City of Indianapolis and Indianapolis school transportation budget combined

![Bar chart showing projected annual net fiscal impact at build-out for different scenarios.](chart.png)
Density can affect property value and property tax revenue per acre in 2 ways:

↓ By simply allowing for more occupiable space – 2 houses are worth more than 1, all else equal

← By creating economies of agglomeration, and enabling conditions for the “walkable” urban premium to emerge making each square foot more valuable
Density, combined with appropriate urban design, can sharply increase property value and property tax revenue per acre.

### Assessed Values per Acre in Metro Boston by Neighborhood Category

- **WalkUPs (.83 FAR)**: $7,000,000
- **Walkable Neighborhoods (.45 FAR)**: $1,000,000
- **Edge Cities (.14 FAR)**: $2,000,000
- **Drivable Subdivisions (.04 FAR)**: $3,000,000

---

17
Downtown Macon has highest average property values per acre in Bibb County

- Downtown Avg. Assessed Value per Acre: $1.3 million
- Shoppes at River Crossing: $967,000 per Acre
- County Avg: $77,000
Hot Spot Analysis

Definition - A hot spot analysis visualizes geographically where a higher density or cluster of activity occurs. When looking at the value of a parcel of land in a community, a hot spot analysis is a way of describing the relationship a development pattern has upon the land value around it.

Hot/Cold: Indicates a statistical significance between the various development areas. (i.e. - If one area is higher in value (hot) those around it are likely to be higher as well.)

Not Significant: Indicates there is not a statistical relationship between the value of a parcel, and the value of its neighbors.
Value by Total Parcel – Fitchburg, MA

Total Value of Each Parcel

- $0 - $100,000
- $100,001 - $250,000
- $250,001 - $1,000,000
- $1,000,001 - $2,000,000
- $2,000,001 - $5,000,000
- $5,000,001 - $10,000,000
- $10,000,001 - $40,000,000
Parcel Value by Acre – Fitchburg, MA

Parcel Value by $ per Acre

- $0 - $100,000
- $100,001 - $250,000
- $250,001 - $500,000
- $500,001 - $1,000,000
- $1,000,001 - $1,000,000
- $2,000,001 - $16,000,000
- $10,000,001 - $40,000,000
Hot Spot Analysis – Fitchburg, MA

Share of Total Land Area Per Hotspot Category

- Cold: 16%
- Hot: 5%
- Not Significant: 79%

Share of Total Value Per Hotspot Category

- Cold: 12%
- Hot: 31%
- Not Significant: 57%

(Property Values Normalized by Using Value per Acre)
Hot Spot Analysis – Fitchburg, MA

(Property Values Normalized by Using Value per Acre)
Development Example – Fitchburg, MA

Main Street, Fitchburg, MA
Development Example – Fitchburg, MA

Main Street, Fitchburg, MA

Total Value: $194,000

Acres: ~ 0.11

Value Per Acre:
$1,700,000
Development Example – Fitchburg, MA

Main Street, Fitchburg, MA
Development Example – Fitchburg, MA

Total Value: $325,000

Acres: ~ 0.41

Value Per Acre: $784,000
Value by Total Parcel – Northbridge, MA

Total Value of Each Parcel
- $1 - $100,000
- $100,001 - $250,000
- $250,001 - $1,000,000
- $1,000,001 - $2,000,000
- $2,000,001 - $5,000,000
- $5,000,001 - $10,000,000
- $10,000,001 - $61,393,900
Parcel Value by Acre – Northbridge, MA

Parcel Value by $ per Acre

- $1 - $100,000
- $100,001 - $250,000
- $250,001 - $500,000
- $500,001 - $1,000,000
- $1,000,001 - $2,000,000
- $2,000,001 - $10,000,000
- $10,000,001 - $47,479,000
Hot Spot Analysis – Northbridge, MA

Share of Total Land Area Per Hotspot Category

Share of Total Value Per Hotspot Category

(Property Values Normalized by Using Value per Acre)
Hot Spot Analysis – Northbridge, MA

(Property Values Normalized by Using Value per Acre)
Why does this matter?

Return on investment

• Locating government facilities
• Incentivizing development
• Infrastructure investments
For more information about our fiscal analysis, or other services, please contact me:

Christopher Zimmerman
Vice-president for Economic Development
czimmerman@smartgrowthamerica.org
(202) 971-3939