Clusters and Economic Development: 
Towards a New Model for Regions and Inner Cities

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Harvard Business School

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What is Competitiveness?

- Competitiveness is the **productivity** (value per unit of input) with which a nation or region utilizes its human, capital, and natural resources. Productivity sets a region’s standard of living (wages, returns on capital, returns on natural resources)

  - Productivity depends both on the **value** of products and services (e.g. uniqueness, quality) as well as the **efficiency** with which they are produced.

  - It is not **what** industries a region competes in that matters for prosperity, but **how** firms compete in those industries

  - Productivity in a region is a reflection of what both domestic and foreign firms **choose to do in that location**.

- Nations and regions compete in offering the **most productive environment** for business
- The public and private sectors play **different but interrelated roles** in creating a productive economy.
Enhancing Competitiveness: Improving the Business Environment

Context for Firm Strategy and Rivalry
- Local rules, regulations, and norms that encourage investment and productivity
- Open and vigorous local competition

Factor (Input) Conditions
- Presence of high quality, specialized inputs available to firms
  - Human resources
  - Capital resources
  - Physical infrastructure
  - Scientific and technological infrastructure
  - Administrative systems (e.g., permitting and approvals)
  - Wide availability of information
  - Natural resources

Demand Conditions
- Sophisticated and demanding local customer(s)
- Local needs that anticipate those elsewhere

Related and Supporting Industries
- Access to capable, locally based suppliers and firms in related fields
- Presence of clusters instead of isolated industries
- Successful economic development is the process of enhancing the business environment to support and encourage increasingly sophisticated ways of competing
Cluster Development
Life Sciences in Massachusetts

- Health and Beauty Products
- Surgical Instruments and Suppliers
- Medical Equipment
- Dental Instruments and Suppliers
- Ophthalmic Goods
- Diagnostic Substances
- Containers and Packaging
- Analytical Instruments

Teaching and Specialized Hospitals

Biological Products

Biopharmaceutical Products

Research Organizations

Cluster Organizations
MassMedic, MassBio, others

- Specialized Business Services
  Banking, Accounting, Legal
- Specialized Risk Capital
  VC Firms, Angel Networks
- Specialized Research Service Providers
  Laboratory, Clinical Testing

Educational Institutions
Harvard University, MIT, Tufts University, Boston University, UMass
Institutions for Collaboration
Massachusetts Life Sciences, Selected Organizations

**Life Sciences Industry Associations**
- Massachusetts Biotechnology Council
- Massachusetts Medical Device Industry Council
- Massachusetts Hospital Association

**General Industry Associations**
- Associated Industries of Massachusetts
- Greater Boston Chamber of Commerce
- High Tech Council of Massachusetts

**Economic Development Initiatives**
- Massachusetts Technology Collaborative
- Mass Biomedical Initiatives
- Mass Development
- Massachusetts Alliance for Economic Development

**University Initiatives**
- Harvard Biomedical Community
- MIT Enterprise Forum
- Biotech Club at Harvard Medical School
- Technology Transfer offices

**Informal networks**
- Company alumni groups
- Venture capital community
- University alumni groups

**Joint Research Initiatives**
- New England Healthcare Institute
- Whitehead Institute For Biomedical Research
- Center for Integration of Medicine and Innovative Technology (CIMIT)
# The Composition of Regional Economies

**United States, 2004**

<table>
<thead>
<tr>
<th></th>
<th>Traded</th>
<th>Local</th>
<th>Natural Resource-Driven</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Share of Employment</strong></td>
<td>29.3%</td>
<td>70.0%</td>
<td>0.7%</td>
</tr>
<tr>
<td><strong>Employment Growth Rate, 1990 to 2004</strong></td>
<td>0.7%</td>
<td>2.4%</td>
<td>-1.2%</td>
</tr>
<tr>
<td><strong>Average Wage</strong></td>
<td>$49,367</td>
<td>$30,416</td>
<td>$35,815</td>
</tr>
<tr>
<td><strong>Relative Wage</strong></td>
<td>137.2%</td>
<td>84.5%</td>
<td>99.5%</td>
</tr>
<tr>
<td><strong>Wage Growth</strong></td>
<td>4.2%</td>
<td>3.4%</td>
<td>2.1%</td>
</tr>
<tr>
<td><strong>Relative Productivity</strong></td>
<td>144.1</td>
<td>79.3%</td>
<td>140.1</td>
</tr>
<tr>
<td><strong>Patents per 10,000 Employees</strong></td>
<td>20.4</td>
<td>0.4</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Number of SIC Industries</strong></td>
<td>590</td>
<td>241</td>
<td>48</td>
</tr>
</tbody>
</table>

Note: 2004 data, except relative productivity which uses 1997 data.

Specialization of Regional Economies
Selected U.S. Metropolitan Areas

Note: Clusters listed are the three highest ranking clusters in terms of share of national employment
Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School
Specialization by Traded Clusters
Columbus, Ohio Economic Area

Note: Traded clusters with small employment (Aerospace Engines, Fishing and Fishing Products, Sporting Goods, Textiles, Footwear) are not displayed. Clusters located out of scale have been placed on the border with coordinates labeled (Percent of national cluster employment; percent change in national cluster employment share).

The Evolution of Regional Economies

San Diego

Climate and Geography

U.S. Military

Hospitality and Tourism

Transportation and Logistics

Power Generation

Aerospace Vehicles and Defense

Communications Equipment

Analytical Instruments

Information Technology

Education and Knowledge Creation

Medical Devices

Biotech / Pharmaceuticals

Bioscience Research Centers

The Process of Economic Development

**Old Model**

- **Government** drives economic development through policy decisions and incentives

**New Model**

- Economic development is a **collaborative process** involving government at multiple levels, companies, colleges and universities, and other institutions

- Competitiveness must become a **bottom-up process** in which many individuals, companies, clusters, and institutions take responsibility
Towards a Strategic Direction for Regions

Regional Strategy

What unique competitive position for the region?

Cluster Development

General Business Environment

Organization for Economic Development

What clusters?

What cross-cutting issues?

What organizational structure?
Columbus
Assessing the General Business Environment

Advantages
- Central location to 60% of the North American population
- Good transportation infrastructure: highways, railroad and airports
- Easy, convenient lifestyle
- Well-educated workforce
- Moderate cost of doing business
- Large university
- Prime research institution (Battelle)
- Proximity to assets in Cleveland and Cincinnati (e.g., capital, research, arts)

Disadvantages
- Relatively few direct flights and lack of a hub airport
- Lack of first-tier research universities
- Difficult to recruit (not retain) talent
- Little venture capital
- Lack of natural attractions

Advantages
- Several large corporate headquarters
- Appropriate regulatory framework in financial services

Disadvantages
- Limited support for entrepreneurship and startups
- Cumbersome / outdated regulations in several sectors
- Weak tax policy combining high tax rates with high relocation

Advantages
- Population resembles the average U.S. consumer market
- Core group of demanding clients for information services

Disadvantages
- Local and regional customers generally not the most sophisticated (e.g., apparel, financial services), nor perceived as driving product and technology innovation

Source: Compete Columbus project, Prof. Michael Porter, and Monitor Group.
Towards a Strategic Direction for Columbus

Logistics and Distribution

Automotive

Logistics-Sensitive Manufacturing

Financial Services

Advanced Business Services

Focused Life Sciences

Source: Compete Columbus project, Monitor Group.
Public / Private Cooperation in Cluster Upgrading
Minnesota’s Medical Device Cluster

Context for Firm Strategy and Rivalry

- Aggressive trade associations (Medical Alley Association, High Tech Council)
- Effective global marketing of the cluster and of Minnesota as the “The Great State of Health”
- Full-time “Health Care Industry Specialist” in the department of Trade and Economic Development

Factor (Input) Conditions

- Joint development of vocational-technical college curricula with the medical device industry
- Minnesota Project Outreach exposes businesses to resources available at university and state government agencies
- Active medical technology licensing through University of Minnesota
- State-formed Greater Minnesota Corp. to finance applied research, invest in new products, and assist in technology transfer

Demand Conditions

- State sanctioned reimbursement policies to enable easier adoption and reimbursement for innovative products

Related and Supporting Industries
Inner City Economic Revitalization
Premises of the New Model

Traditional Approach

- Reduce Poverty
- Need: Social Services
- Geographic Space: The Neighborhood
- Focus on Deficiencies
- Lead: Government

New Model

- Create Jobs and Wealth
- Need: Business Growth and Investment
- Geographic Space: The Region
- Focus on Advantages
- Lead: Private Sector
Economic Performance of Inner City Economies

*Cities with population above 50,000 are shown (82 cities)
Source: State of the Inner City Economies, Initiative for a Competitive Inner City.
Inner City Economic Development

The Competitive Advantages of Inner Cities

- **Strategic location**
  - Located near regional transportation and telecommunications nodes

- **Underserved local market**
  - $90 billion of annual spending power
  - 800,000+ business establishments
  - Urban customers are growing and mirror future U.S. demand patterns

- **Linkages to regional growth clusters**
  - Efficient location for cluster support functions

- **Underutilized workforce**
  - Largest pool of available workers amid a tight long-term labor market
Composition of Inner City Economies
Top 20 Clusters, 100 Largest Inner Cities

Inner City Jobs, 2003

Source: State of the Inner City Economies project, ICIC, based on Cluster Mapping Project, HBS.
INNER CITY RETAIL JOB GROWTH: TOP 50 INNER CITIES
1992 – 2003

(1) Top 50 population cities represent ~80% of inner city retail market both by number of jobs and number of establishments

Source: Census 2003 Zip Code Business Patterns; ICIC Inner City Zip Code Definitions
Inner City Retail Performance versus Growth Drivers

Cities can achieve or fail to achieve retail job growth despite initial circumstances.

Source: Initiative for a Competitive Inner City & Boston Consulting Group Retail Initiative; Census Bureau, Economic Census, Claritas
LARGE RETAILERS ARE NOW FOCUSING MORE ON HOW TO OPTIMIZE THEIR OPERATIONS FOR THE INNER-CITY

“In the past 10 years that I've been looking at this, I think the discussion has definitely changed from one of making the business case, to one of 'How do I do it successfully?'”

- Todd Turner, Food Marketing Institute

“The challenge of operating in urban markets is really the velocity of products and customers. We’re operating the same size store that we are in smaller communities, but we have two to three times the sales.”

- VP of Communications, Family Dollar

"We sometimes go where other retailers don't go because they're sticking to one footprint. We have a mix of store types to work with."

- Jeff Lowrance, spokesman for Food Lion

Source: Initiative for a Competitive Inner City & Boston Consulting Group Retail Initiative.
THE PENETRATION OF THE LARGEST RETAILERS VARIES MARKEDLY IN INNER CITIES (I)

(1) Drug stores are part of Health and Personal Care census category
Source: Chain Store Guide, infoUSA, ICIC, BCG Analysis
THE PENETRATION OF THE LARGEST RETAILERS VARIES MARKEDLY IN INNER CITIES (II)

% of stores in IC, 2006

Inner city percentage of national retail demand (5%)

(1) Drug stores are part of Health and Personal Care census category
Source: Chain Store Guide, infoUSA, ICIC, BCG Analysis
Overview

Payless sees inner city locations as an integrated part of the company strategy

- Corporate vision to “democratize shoe fashion and design” has led to a long-standing presence in urban and inner-city markets
- The rise of mass discounters has created challenges which increased the importance of urban locations where Payless faces less competition
- Payless’ target consumer is well represented in the inner city demographics - Price and fashion-conscious women

Payless has successfully adapted its concept to urban settings

Payless has modified its format to two stories for urban locations

### ADDRESSING THE INNER CITY OPPORTUNITY

**Payless Shoes**

<table>
<thead>
<tr>
<th>Identified market opportunity</th>
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<tbody>
<tr>
<td>Sees opportunity in the inner city</td>
</tr>
<tr>
<td>• The Payless development model uses high income density and foot traffic as the most important criteria for store locations</td>
</tr>
<tr>
<td>• Payless values co-tenants like drugstores, grocers and even mass discounters because it sees foot traffic is so important</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adapted store format and operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Payless has a two story format for inner cities with merchandise for certain sizes, or men’s and kids’ departments, upstairs</td>
</tr>
<tr>
<td>• Traditional security measures like product tagging and security cameras are sufficient</td>
</tr>
<tr>
<td>- Need “greeters” in very few stores</td>
</tr>
<tr>
<td>- Never allow one person to work in the store</td>
</tr>
<tr>
<td>• Little difficulty in recruiting and retaining employees</td>
</tr>
<tr>
<td>- Stronger manager loyalty because of typically less competition for employees</td>
</tr>
<tr>
<td>- Easier to recruit staff that live near the store</td>
</tr>
</tbody>
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<thead>
<tr>
<th>Targeted product selection</th>
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</thead>
<tbody>
<tr>
<td>Tailors product selection</td>
</tr>
<tr>
<td>• Inner city customers are “more fashion conscious” than rural, suburban consumers</td>
</tr>
<tr>
<td>• Stocks different size selection based on customer demographics</td>
</tr>
<tr>
<td>- “Fewer [women’s] size 13 shoes in Hispanic and Asian neighborhoods and fewer size 5’s in predominantly African American ones”</td>
</tr>
<tr>
<td>• Payless matches each new store to a “sister store” based on customer demographics</td>
</tr>
</tbody>
</table>

Source: Initiative for a Competitive Inner City & Boston Consulting Group Retail Initiative.
INDIGENOUS IC RETAILERS CAN BE SUCCESSFUL EVEN WITH INCREASING COMPETITION FROM NATIONAL STORES

**Ashley Stewart**

- **Identified market opportunity**: Found that women’s apparel retailers were severely underrepresented in the inner city
  - Wanted to bring an upscale shopping experience to the inner city
    - *“There was no place for a working woman to get a nice suit or a nice blouse to go out in”*
  - Grew exponentially through equity investment, strong demand, and lack of competition
    - 1995 – 5 stores
    - 2006 – close to 200 stores located in urban areas from New York to Los Angeles
    - Looking to expand the number of stores throughout the United States

- **Adapted store format and operations**: Reaches its core demographic through targeted product selection
  - Specializes in “plus” sizes, catering to its core customer demographic
    - 50% of African American and 40% of Hispanic women wear “plus” sizes, versus only 30% of Caucasian women
  - Success at building consistent brand image while micro-marketing to particular customer segments
    - The brand is an eclectic mix that is embraced by its fashion conscious clientele

- **Focused on employee training and retention**: Sees community involvement as key to success
  - Organizes 300 to 350 fashion shows a year to raise money for the community
    - Free guerrilla marketing
    - Distribution of discount coupons drives business back to the store
  - Community leaders drive business to the store through personal endorsements

**Source**: Initiative for a Competitive Inner City & Boston Consulting Group Retail Initiative.
INNER CITY RETAIL SITE DEVELOPMENT
Harlem

Harlem USA broke ground at 300 W 125th street in 1998...

...and the upper Harlem-Bronx inner city retail sector has grown significantly since then

<table>
<thead>
<tr>
<th>Demographics</th>
<th>1998</th>
<th>2003</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (M)</td>
<td>1,556</td>
<td>1,622</td>
<td>4.2%</td>
</tr>
<tr>
<td>Households (K)</td>
<td>543</td>
<td>565</td>
<td>4.1%</td>
</tr>
<tr>
<td>Med. income(2) ($K)</td>
<td>25.5</td>
<td>25.6</td>
<td>0.3%</td>
</tr>
<tr>
<td>Pop. Density (‘000 people/sq. mile)</td>
<td>60</td>
<td>63</td>
<td>4.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Retail market</th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Sales(1) ($B)</td>
<td>3.7</td>
<td>4.1</td>
<td>11.5%</td>
</tr>
<tr>
<td>Establishments (K)</td>
<td>5.2</td>
<td>5.9</td>
<td>13%</td>
</tr>
<tr>
<td>Jobs (K)</td>
<td>37.5</td>
<td>46.8</td>
<td>25%</td>
</tr>
</tbody>
</table>

(1) Retail sales data is for 1997 and 2002 in 2006 dollars
(2) Median income from 2000 and 2005, and are both quoted in 2005 dollars
Source: Census 2003 Zip Code Business Patterns; ICIC Inner City Zip Code Definitions; Claritas, US Dept of Labor BLS, BCG analysis
# DEVELOPING INNER CITY RETAIL PROJECTS

## Harlem

<table>
<thead>
<tr>
<th>Development step</th>
<th>Developer approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site identification</td>
<td>Identified site early and pioneered development</td>
</tr>
<tr>
<td></td>
<td>“Was clear to me that there was a tremendous opportunity here. This was an area where new retail hadn’t been built since the 20’s...yet this was not clear to most people”</td>
</tr>
<tr>
<td>Site assembly &amp; acquisition</td>
<td>Exercised patience and persistence during initial development</td>
</tr>
<tr>
<td></td>
<td>“It took years to convince the city and other owners to sell to us, we were interested in this site since the mid-80’s”</td>
</tr>
<tr>
<td>Retailer recruitment &amp; approval</td>
<td>Selected retailers that filled unmet need</td>
</tr>
<tr>
<td></td>
<td>“The city didn’t believe that retail could succeed at first. But we knew the unmet retail need was enormous – residents told us”</td>
</tr>
<tr>
<td></td>
<td>“The community wanted certain retailers in their neighborhood”</td>
</tr>
<tr>
<td></td>
<td>“Our favorable relationship with the Harlem Development Council (HDC) is what convinced the city to approve our deal”</td>
</tr>
<tr>
<td></td>
<td>“HDC is apolitical, and a strong force in the community”</td>
</tr>
<tr>
<td>Community approval</td>
<td>Built relationships with strong CDC</td>
</tr>
<tr>
<td></td>
<td>“We bought most of the needed parcels but the city was being uncooperative with the last parcel – due to political infighting”</td>
</tr>
<tr>
<td></td>
<td>“With help from the community, we convinced the city to sell”</td>
</tr>
<tr>
<td>Financing / incentives</td>
<td>Used community support to help with site assembly</td>
</tr>
<tr>
<td></td>
<td>“The initial subordinated loan from the Upper Manhattan Enterprise Zone (UMEZ) gave banks the commitment they needed to give us the rest of the financing”</td>
</tr>
</tbody>
</table>

Source: Initiative for a Competitive Inner City & Boston Consulting Group Retail Initiative.
Inner City Retail Development
Implications

• The inner city represents a $120B market for retailers, about ~5% percent of the US retail market
• There is an ~$40B demand gap which means that there is still significant opportunity out there for retailers to enter the inner city
• Successful retailers and cities have recognized the opportunity and successfully pursued it
• There are valuable lessons from the front line on how to succeed in IC retail development
  - For retailers - willingness to experiment, adapt format, product mix, and operations
  - For developers – focus resources on IC, leverage community groups
  - For Cities – clear hurdles for development, focus investment around targeted sites, develop comprehensive marketing plan

Source: Initiative for a Competitive Inner City & Boston Consulting Group Retail Initiative.
Inner City Economic Development
The Role of Land and Land Development

• Shortage of sites for businesses and business expansion is a leading constraint to inner city economic development

ISSUES

• Getting land into productive use at reasonable cost
• Allocating and preserving land for retail, commercial, and industrial uses
• Enhancing the productivity of sites for business
  - Access
  - Parking
  - Infrastructure

• Brownfields development is on the front line of inner city revitalization