Industrial Strategies for Distressed Urban Economies

September, 2009
The Return of Industry to U.S. Cities

The United States should be more competitive in industry in the next decade

• Falling dollar reduces relative price of U.S. exports
  – Dollar has depreciated against the euro from $1.20 in 2000 to $0.63 in 2008
• Increased energy costs and “greening” favor domestic production
  – Crude oil prices increased dramatically from $16 per barrel in 1999 to $73 per barrel in 2009
• Real estate bubble accelerated loss of industrial land and jobs in the U.S.
  – Mass reductions in industrial land availability, e.g., 40% of industrial land in Bay Area is “at-risk” despite huge industrial job growth
  – Huge upward pressure on prices, e.g., in Los Angeles, industrial land prices increased from 1/3rd to 2 times residential due to pressure from conversions

<table>
<thead>
<tr>
<th></th>
<th>1998-2008</th>
<th>2008-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchange Rate</td>
<td></td>
<td>↑</td>
</tr>
<tr>
<td>Residential</td>
<td>↓</td>
<td></td>
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<tr>
<td>Green</td>
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</tr>
</tbody>
</table>

Source: European Central Bank, Bloomberg
Industry as an Opportunity for Job Growth

The critical change in U.S. industrial activity is in the mix, not the level of activity

• Total industrial employment has been stable since the late 1970s and is expected to remain constant between 2006 and 2016

• There has been a shift away from manufacturing to other industrial activity

Source: BLS 10-Year Employment Projections, Employment Hours and Earnings (EHE) Annual Average Employment, and ICIC Analysis
Note: Total Industrial Employment is sourced from EHE and reported at sector (2 digit NAICS) level
Understanding Industrial Opportunities

Growth opportunities span a wide range of sectors

Projected Industrial Employment Growth Rate, 2006-2016

- Declining Industries: -16%
- All Industries: -0.4%
- Growing Industries: 8%

Percentage of Job Growth or Decline from 2006 to 2016

- Transportation: 2%
- Utilities: 97%
- Manufacturing: 16%
- Construction: 15%
- Wholesale: 35%
- Transportation and Logistics: 10%
- Growing Manufacturing: 7%

Source: BLS 10-Year Employment Projections, QCEW 2006 Data, and ICIC Analysis
Note: Total Industrial Employment is sourced from QCEW and reported at industry (6 digit NAICS) level

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Cities are the Natural Location for Industrial Activity

<table>
<thead>
<tr>
<th>Key Industrial Sectors:</th>
<th>Sector Needs:</th>
<th>Advantages of Urban Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation/Logistics/Wholesale</td>
<td>Infrastructure Population patterns</td>
<td>Largest US cities are at the intersection of a majority transport options:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 24% of US ports</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 66% of the 50 largest airports</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 35% of intermodal facilities</td>
</tr>
<tr>
<td>R&amp;D Manufacturing (High-Tech)</td>
<td>Knowledge cluster Educated workers</td>
<td>The regions surrounding the 100 largest inner cities contain two-thirds of the US population</td>
</tr>
<tr>
<td></td>
<td>Low-cost flex space</td>
<td></td>
</tr>
<tr>
<td>Traditional Manufacturing/Construction</td>
<td>Skilled labor Industrial assets</td>
<td>Concentration of “Eds/Meds” in cities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Concentration of highly skilled and educated workers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Existing footprints, incubator space, etc.</td>
</tr>
</tbody>
</table>

Source: CBECs Survey Data and ICIC Analysis, 1992-2003 Growth Rate

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National Challenge 1: Industrial Land

There is increasing demand for large tracts of industrial land

Land Mismatch Represents a New Challenge...

The fastest-growing clusters require either very small or large tracts

Job Growth Rate vs. Average Acreage per Establishment (2006)

...Which is Exacerbated by Trends within Growing Industries

Establishment growth fastest in very large firms

E.g.: Mega-Distribution Centers (500,000 square feet) now account for 22% of DCs, compared to 4% in 1998

Establishment Growth Rate by Industry (1990-2006)

Source: US Census of Manufacturers, ICIC Analysis

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National Challenge 2: Industrial Skills

There is a national shortage of skilled production workers

Types of Employees Expected to Be in Short Supply Over the Next Three Years (Reported in 2005)

- Skilled Production
- Scientists and Engineers
- Unskilled Production
- Sales and Marketing
- Management and Admin
- Customer Service
- Other Skill Set
- No Shortage Reported

Cities Can be Categorized Based on Industrial Assets (and Aspirations)

Supply and demand of industrial land and assets varies by city

<table>
<thead>
<tr>
<th>Industrial Asset Supply</th>
<th>Industrial Asset Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Declining</td>
</tr>
<tr>
<td></td>
<td>Boston</td>
</tr>
<tr>
<td>High</td>
<td>Growing</td>
</tr>
<tr>
<td></td>
<td>Flint/Detroit</td>
</tr>
<tr>
<td></td>
<td>Baltimore</td>
</tr>
<tr>
<td></td>
<td>Newark</td>
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A City’s “Asset/Land Mix” Determines the Relevant Development Strategy

Supply of Industrial Land/Assets

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<tr>
<td>Boston</td>
<td>Flint/Detroit</td>
</tr>
<tr>
<td><strong>Competitive Advantage:</strong></td>
<td><strong>Competitive Advantage:</strong></td>
</tr>
<tr>
<td>Eds and Meds</td>
<td>Land/Skills</td>
</tr>
<tr>
<td>Needs: Strategic move away from industrial</td>
<td>Needs: Industrial strategy that leverages land, worker skills</td>
</tr>
<tr>
<td><strong>Competitive Advantage:</strong></td>
<td><strong>Competitive Advantage:</strong></td>
</tr>
<tr>
<td>Legacy and Location</td>
<td>Port/Heavy Industry</td>
</tr>
<tr>
<td>Needs: Estimate demand for land in key sectors; policy to create/preserve land</td>
<td>Needs: Inventory and matching of supply and demand of industrial land</td>
</tr>
</tbody>
</table>

Demand for Industrial Land

Declining
Growing
Example: Legacy Manufacturing Cities

The decline of traditional manufacturing sectors will free up large industrial land tracts

- The projected 10-year vacated building space in declining industries across the U.S. = over 1 billion square feet
- Growing industrial activities in the US will require an almost identical amount of industrial space

Three industries will account for one-third of the decline in demand for industrial space but they also represent a source of newly-released land for future development

These industries are geographically concentrated

Site characteristics of heavy industry -- access, shape, proximity to residential -- usually amenable to other industrial uses

Brownfields policy is a critical path item

Source: QCEW 2006 and 2008; BLS 10-year projections, ICIC Analysis
Geographic Concentration of Industrial Decline

The majority of the industrial decline is concentrated in select states

Percentage of Total Industrial Job Decline by State (1979-2000)

Automotive

- Michigan: 51%
- New York: 19%
- California: 6%
- Pennsylvania: 7%
- Wisconsin: 7%
- Remaining Declining States: 11%

Metal Manufacturing

- Pennsylvania: 39%
- Ohio: 20%
- Illinois: 14%
- New York: 11%
- Michigan: 8%
- Remaining Declining States: 8%

Apparel

- New York: 49%
- Pennsylvania: 15%
- North Carolina: 14%
- Georgia: 8%
- Tennessee: 7%
- Remaining Declining States: 7%

Source: QCEW 1979 and 2000, ICIC Analysis

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Industrial Strategy for Auto Legacy Cities

• Step 1: Traditional Economic Development/Job Creation Strategy
  – Benchmark economy, focus discussion on facts, eliminate noise
  – Define growth objectives for existing industries, align development strategies with emerging opportunities
  – Challenge will be reliance on data-driven method that is heavily weighted towards the past; applicability is limited when there is rupture
  – Augment with steps 2 and 3 below

• Step 2: Auto Legacy Assets and Opportunities
  – Identify and anticipate emerging patterns in the global automotive industry
  – Evaluate how automotive assets were deployed in the past
  – Examine the current diversification of leading automotive economies globally, e.g., Shanghai, Stuttgart
  – Look at successful restructuring of other automotive dependent economies globally

• Step 3: Visioning
  – Scale of problem
  – Identify and exploit the unique competitive assets in Southeast Michigan
  – Translate assets and opportunities into economic development strategies

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National Case for Revitalizing Urban Activity

The U.S. as a whole will benefit greatly from strategies to re-urbanize industrial activity

Three outcomes are possible:

1. Continue trend of suburban industrialization
   - Abandon brownfields; eliminate more greenfields; higher costs; huge carbon footprint
2. Accept faster decline within industrial segments nationally
   - Further job loss nationally, more income inequality
3. Develop national policies and city strategies to bring industry back to U.S. cities

Why re-urbanize industrial activity?

Equity
- Inner cities and their residents need jobs: between 1998-2006, the 100 largest inner cities added just 10,000 jobs while their regions added over 6 million jobs

Efficiency
- Industrial land in the Midwest can be redeployed to fuel national industrial growth

Environment/Energy
- Re-focusing industrial activity in cities reduces supply chain costs

Source: State of the Inner City Economies (SICE) Database, QCEW 2006 and 2008; BLS 10-year projections, ICIC Analysis