Logistics Led Economic Development: Success Factors for Infrastructure Investments

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1. Background and Introduction

- United States – one of the most consumer driven markets in the world – high demand for goods, commodities and services.
- Freight mobility – important element in fulfilling demand – affects state economy – driving force for maintaining and creating jobs – economic development.
- 67.6% – increase in the value of freight transported in the U.S. between 2004 and 2014 (USDOT, 2014).
- Strategic investments in the freight and logistics sector – crucial to accommodate this continuing rise in domestic and international freight.

Logistics Investments
- Apportionment of funds to improve the efficiency of freight distribution through infrastructure (terminals, real estate and telecommunications); operations (transport modes and equipment); and human resources (labor, management, governance, research and development) - Rodrigue, 2013.
- Focus of this presentation – infrastructure – logistics activity centers (LACs)

1. Background and Introduction (cont’d)

- Logistics Activity Centers (LACs)
  - Intermodal Logistics Centers (ILCs) + satellite marine terminals + multimodal logistics parks + inland ports + seaports, etc.
  - LAC – term used to steer away from a lack of consensus on terminology and functions.

2. Objectives

- Determining factors of success for LAC development through literature review and case studies from across the U.S. and abroad.

- Identify domestic sites for conducting extensive interviews to further investigate on the said success factors.

3. Literature Review

Evaluating Success Factors of Logistics Activity Centers (LACs)

- World Bank’s Logistics Performance Index (LPI)
  - Comprehensive index to assist countries to identify challenges and opportunities they face in logistics trade performance.
  - Six parameters – customs, infrastructure, international shipments, logistics quality and competence, tracking and tracing, timeliness.
3. Literature Review (cont’d)

Evaluating Success Factors of Logistics Activity Centers (LACs)

The Agility Emerging Markets Logistics Index

- Ranks 45 emerging markets around the world based on size, business conditions, infrastructure and other factors that make them attractive for investment.
- Three broad measurement metrics – market size and growth attractiveness (50% of overall score), market compatibility (25%), market connectedness (25%).
- Key findings
  - Supply chain risks vary by region – corruption & natural disasters (some parts of Asia), corruption & govt. instability (some parts of Latin America), terrorism & govt. instability (some parts of Middle East & N. Africa), poor infrastructure & govt. instability (some parts of Sub-Saharan Africa).
  - Lack of reliable infrastructure – the biggest obstacle to e-commerce growth in emerging markets – results in extra time and higher costs to deliver goods.

3. Literature Review (cont’d)

Factors Influencing the Success of Logistics Investments

  - Assessing potential for successful investments in logistics in order to achieve economic development.

- Key insights
  - The need for a strategic location.
  - The need for an integrated logistics approach instead of a modal approach.
  - The need for a highly skilled labor force.

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<tr>
<th>ICT</th>
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Source: Khan (2003)
3. Literature Review (cont’d)

Factors Influencing the Success of Logistics Investments

- Munoz & Rivera (2010)
  - Analysis of the critical factors needed for developing a logistics hub – a case study of Panama.

- Key insights
  - Strategic location as the foundation to a successful logistics hub.
  - Pillars – required processes.
  - Capstone – reinforcement element that guarantees successful development.

Source: Munoz and Rivera (2010)

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3. Literature Review (cont’d)

Factors Influencing the Success of Logistics Investments

- Brito (2010)
  - Analyzing the key elements for a successful logistics hub.

- The Tioga Group et. al (2006)
  - Case studies of inland ports and related developments with the goal of developing economic activity around transportation infrastructure

Source: Brito (2010)
4. Insights from Literature Review

Success Factors of Logistics Activity Centers (LACs)

• Strategic Location
  • Access to a large market; utilization of major roadways and air/rail/port facilities, if present; lower labor costs; availability of cheap land, etc.

• Economic Incentives for Development
  • Presence of a FTZ; presence of tax exemptions; regional job creation

• Champion
  • Long term vision & commitment; flexible and effective plan

• Government
  • Political consensus/support; adequate funding/capital; burden & flexibility of regulations

• Other Factors
  • Success with competition; delays in project completion; corruption; security threats and other risks

5. Preliminary Results

Evaluating Success Factors of Logistics Activity Centers (LACs) – Domestic (a)
### 5. Preliminary Results (cont’d)

#### Evaluating Success Factors of Logistics Activity Centers (LACs) – Domestic (b)

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**Legend - DC Category:**
- X: Key factor that could affect the overall success of the project.
- O: Important factor that could seriously affect the overall success of the project.
- M: Minor factor that could possibly have an impact on the overall success of the project.

### 5. Preliminary Results (cont’d)

#### Evaluating Success Factors of Logistics Activity Centers (LACs) - International

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6. Site Selection Process

Site Selection
Based on the literature review and case study analysis of success factors, the following highly successful and high capacity sites were selected for conducting interviews and further analysis:

- Alliance Texas Logistics Activity Center, Fort Worth, TX, USA
- CenterPoint Logistics Activity Center, Joliet/Elwood, IL, USA
- KC SmartPort (Economic Development Entity), Kansas City, MO, USA
- Global III Intermodal Terminal, Rochelle, IL, USA
- CenterPoint Logistics Activity Center, Kansas City, MO, USA

7. Insights from Site Interviews

Alliance Texas LAC, Fort Worth, TX, USA

- **Location:** Easy access to Dallas-Fort Worth region (6.5m people), direct access to major roadway networks (reduce drive time inside the cities) – 48.8m people by one day of trucking & 111m by 2 days.

- **Presence of multimodal transportation:** Cargo-only air facility on site (DFW nearby as well); BNSF (class I railroad) hub inside the LAC; Union Pacific (class I railroad) just East of the LAC; easy access to I-35, I-114 and I-130; FedEx & UPS hubs inside the LAC (later clearance times – advantage in overnight delivery orders)

- **Cost benefits:** Presence of an FTZ within the LAC – smooth transfer of commodities to and from international destinations; presence of heavy transloading facility on site – enormous cost advantages (230% in specific cases).

- **Economic incentives:** Workforce development initiatives (educational programs, certifications) – providing Alliance with competitive advantages.
7. Insights from Site Interviews (cont’d)

CenterPoint LAC, Joliet/Elwood, IL, USA

- **Location:** Easy access to Chicago (8m people), increased logistics density (easy access to large population based markets).
- **Presence of multiple transportation:** Multiple class I railroads on the same property – customers get more competitive prices – maximize benefits; Presence of about 15,000 ft. of straight rail track inside the LAC – not that easy to get anywhere else; Access to major roadway networks.
- **Cost benefits:** Reduced drayage costs at the LAC – $10m savings in specific cases.
- **Economic incentives:** 10 year 50% tax abatements from the city and local government.

Source: www.centerpoint-intermodal.com

7. Insights from Site Interviews (cont’d)

KC SmartPort Economic Development Entity, Kansas City, MO, USA

- **Competitive location:** Ability to reach 85% US population in 2 days; Easy access to large markets (including the Midwest) – Kansas City (2.2m people.)
- **Transportation advantages:** 5 of the 7 class I railroads have a presence in the Kansas region – key advantage for companies; Easy access to major transportation infrastructure (air, rail, road); Hubs of FedEx & UPS (largest sorting facility in the U.S.) – great advantage (late clearance times).
- **Cost benefits:** Zero inventory taxes and lower labor costs.
- **Economic incentives:** 10 year 50% tax abatements in return for job creation, workforce development initiatives (educational/training programs) – seen as an advantage by companies.

Source: http://kcsmartport.thinkkc.com/
7. Insights from Site Interviews (cont’d)

Global III Intermodal Terminal, Rochelle, IL, USA

- **Location**: Easy access to the interstates - easiness to “get in and get out” of the LAC – critical factor for locating at Global III.
- **Transportation advantages**: Major presence of a class I railroad (UP) on site – improved transit times; Presence of city railroads (BNSF & UP) – additional customer benefits; Easy access to I-55 and I-80.
- **Cost benefits**: Reduced drayage costs – significant cost efficiencies.
- **Economic incentives**: Tax abatements in return for jobs created.

Source: https://www.up.com/customers/intermodal/index.htm

CenterPoint LAC, Kansas City, MO, USA

- **Location**: Easy access to the highway network and a large market (Kansas City, MO – 2.2m people)
- **Presence of strong labor markets**: presence of skilled labor force.
- **Economic incentives**: 10 year 50% tax abatements from the city & local government – attracting factor for customers.
- **Move-in ready speculative buildings**: Build and they will come.

8. Conclusions and Recommendations

Research Findings – 5 Major Categories to focus on for enhancing:
- Logistics Activity Center Development
- Economic Competitiveness Through Logistics Development

<table>
<thead>
<tr>
<th>STRATEGIC LOCATION</th>
<th>DEMAND ELEMENTS</th>
<th>SUPPLY ELEMENTS</th>
<th>TRANSPORTATION INFRASTRUCTURE AND ACCESSIBILITY</th>
<th>ECONOMIC INCENTIVES FOR DEVELOPMENT</th>
<th>CHAMPION</th>
<th>GOVERNMENT</th>
<th>OTHER FACTORS</th>
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<tbody>
<tr>
<td>Access to a large market</td>
<td>Availability of cheap land</td>
<td>Local suppliers’ quality</td>
<td>Utilization of major road networks, if present</td>
<td>Job creation</td>
<td>Governor</td>
<td>Government</td>
<td>Other Factors</td>
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<tr>
<td>Labour Cost</td>
<td>Availability of cheap land</td>
<td>Local suppliers’ quality</td>
<td>Utilization of major road networks, if present</td>
<td>Innovation (IT facilities, educational programs, higher education programs, etc.)</td>
<td>Governor</td>
<td>Government</td>
<td>Other Factors</td>
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<tr>
<td>Labour Quality</td>
<td>Availability of cheap land</td>
<td>Local suppliers’ quality</td>
<td>Utilization of major road networks, if present</td>
<td>Long-term vision and commitment</td>
<td>Governor</td>
<td>Government</td>
<td>Other Factors</td>
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<tr>
<td>Local Support</td>
<td>Availability of cheap land</td>
<td>Local suppliers’ quality</td>
<td>Utilization of major road networks, if present</td>
<td>Flexible and effective plan</td>
<td>Governor</td>
<td>Government</td>
<td>Other Factors</td>
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8. Conclusions and Recommendations (cont’d)

Recommendations to Enhance Logistics Led Economic Development

Speak with a single voice

- Exemplify a unified vision and marketing plan that is shared by all stakeholders throughout various government levels (statewide, regional, local) and organizations (state DOT, ports, railroads, land developers, shippers)
8. Conclusions and Recommendations (cont’d)

Form a sustainable coalition amongst other Florida organizations

- Form a coalition composed of various stakeholders in the freight/logistics and economic development sectors
  - State DOT, State Economic Entity
  - Seaports, Maritime operators
  - Railroads, land developers, selected key shippers

- Examples
  - Georgia – The Center of Innovation for Logistics
  - New York/New Jersey – Council for Port Performance
  - Missouri – KC SmartPort

8. Conclusions and Recommendations (cont’d)

Develop and disseminate a clear, distinctive value proposition

- Features of the facility must be unique or distinct from other key competitors

- Craft a memorable identity as a desirable location for logistics operation

- Establishing an identity for the Region
  - For Florida as an example: “Freight moves faster where the sun always shines.”
8. Conclusions and Recommendations (cont’d)

Build the capacity to flex with changing needs

- Create a list of shovel-ready sites and ready-to-go commercial facilities
- Anticipate the changing needs of customers via consistent communication
- Be flexible in operations and offer multiple options to make it easy for prospective customers

8. Conclusions and Recommendations (cont’d)

Clarify freight mobility and economic development intentions through transportation planning and other planning documents

- Respondents to state DOT surveys had limited knowledge of specific freight/logistics-focused projects and economic benefits
- In many cases, state investment was a small portion of a larger project, and economic development was often conducted within other state agencies or private entities
- Transportation planning documents that set forth projects benefiting freight mobility and economic development should clearly convey their intention
8. Conclusions and Recommendations (cont’d)

Educate state and local level transportation professionals regarding specific needs of the freight industry as well as type of commodities being served

- Develop a better understanding of the needs of freight movement or commodities served for specific industries among planning professionals and elected officials

8. Conclusions and Recommendations (cont’d)

Establish methods to measure the impact of freight/logistics related projects

- Few states had mechanisms in place to measure the impact of freight/logistics related projects. Those that had measurements evaluated
  - Number of new jobs produced or existing jobs retained
  - Improvements in travel time and reductions in congestion

- Current tools and methods to measure project impact
  - “Current State of Estimation of Multimodal Freight Project Impacts” (Wygonik, et al., 2014)
8. Conclusions and Recommendations (cont’d)

Examine ways of bolstering investment in transportation infrastructure

• Unstable funding has made it difficult for states to keep up with traffic growth and system maintenance, leaving no additional funding for infrastructure development

• Revenue options for the state to consider
  • Florida’s Metropolitan Planning Organization Advisory Council’s “Statewide Transportation Revenue Study”

8. Conclusions and Recommendations (cont’d)

Support Public-Private Partnerships (P3’s)

• Government support for prospective projects that utilize P3s.
8. Conclusions and Recommendations (cont’d)

Allow private sector to lead, but offer government support

- Develop a strong relationship between the public and private sector

- Private sector should lead as a champion, while the government’s role is to analyze the vision and assist the private sector in creating a successful LAC

- Offer government support in three different aspects
  - Political support
  - Adequate funding
  - Flexibility level of regulations

8. Conclusions and Recommendations (cont’d)

Provide economic incentives and out-of-the-box savings options for companies to relocate in Florida

- Provide an economic incentive for businesses to settle or remain in the area
  - Lowered labor costs, zero inventory tax, tax abatements (Kansas City, MO)

- Provide alternative options to reduce freight and logistics costs
  - Access to multimodal transportation (railyards, seaports, cargo airports)
  - Additional methods to reduce drayage costs
9. Acknowledgements

Speaker

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