Freight and Development Corridors: Various Perspectives

MCLI AGM

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Freight Gateways, Corridors and Distribution Centers: Key Elements

A. Geographical Issues of Logistics
B. Freight Transport Corridors and Mega-Urban Regions
C. Freight Corridors
Integrated transport demand
- Two components of logistics:
  - Materials management (derived demand).
  - Physical distribution (induced demand).
- Difficult to tell MM and PD apart.
- Manufacturing and mobility are now much more embedded.

Elements
- Flows: nature of circulation.
- Nodes: locations servicing distribution (DC).
- Networks: spatial structure of distribution.
A geography of distribution

- Globalization: dominant paradigm of economic and transport geography.
- Economic geography:
  - Locations, dynamics and relations.
- Transport geography:
  - Flows (modes and terminals) and accessibility.
- Logistics have changed the relationships between economic and transport geography.
- Geography of distribution:
  - Integrating economic and transport geography.
  - Challenging the derived transport demand.

Changes in the Relative Importance of Logistical Functions

- Demand Driven
- Supply Driven

Inventory
Transport System
Information System
Conventional and Contemporary Arrangement of Goods Flow

**Conventional**

- **Raw Materials & Parts**
  - Raw Materials
  - Storage
- **Manufacturing**
- **Distribution**
  - National Distribution
  - Regional Storage
  - Local Distribution
  - Retailers
- **Customers**

**Contemporary**

- **Supply Chain Management**
  - Raw Materials
  - Manufacturing
  - Distribution Center
  - Retailers
- **Customers**

Material flow (delivery)

Information flow (order)

Core component
Freight Distribution and Network Strategies

- **Point-to-Point**
- **Corridor**
- **Hub-and-Spoke**

**Fixed Routing**

**Flexible Routing**

- Transshipment node
- Route node
- Network node
- Unserviced node
- Route
- Alternative route
B – Freight Transport Corridors and Mega-Urban Regions

Geographies of urban freight distribution

- Global:
  - Network of gateways interacting in a sphere of production, consumption and circulation.
  - Growth of freight being shipped and a complexification of supply and distribution chains.
- Local:
  - Relocation of transport terminals and distribution centers.
  - Increased land consumption and search for locational flexibility.
  - Shift from port/rail dominance to road/air.
- Regional:
  - Regional division of economic activities regulated by hubs.
  - Freight corridors: Dominant convergence paradigm of urbanization integrating global, regional and local processes.
Paradigms in the Representation of Transport Corridors

- Location and Accessibility Paradigm
- Specialization and Interdependency Paradigm
- Distribution Paradigm

- Order: High, Low
- Specialization and interdependency: High, Low
- Articulation Point
- Distribution
B – Freight Transport Corridors and Mega-Urban Regions

Mega-urban regions

- Structural and functional entities.
- Oriented along corridors.
- Freight flows:
  - Derived from the location of production and consumption activities.
  - Derived from the complex web of intermediate activities.
- Freight regulation:
  - Articulation points: interface and regulation of freight distribution.
  - Freight corridors: physical capacity of distribution.
  - Freight distribution centers: flows and spatial structure.
Articulation Point and Freight Distribution

- Promote the continuity of flows in supply chains.
- Functions of transshipment (A), integration (B) and convergence (C).
Work flow pattern of EURIFT

Visions and Conceptual Models

1. Development of single window for dissemination of information to all interested parties
2. Good practises, benchmarks and metrics
3. Innovation - introduction of new technologies and concepts
Activities

Corridor studies - where are the multimodal corridors for freight?

Examples!

EURIFT is Pan-European!

- cross borders
- cross watercourses
- combine nations
- combine regions
South Africa: Priority domestic and regional corridors

- Improve rail infrastructure through PPP involvement
- Improve road infrastructure, particularly single lane capacity constraints through PPPs administered by SANRAL
- Enhance overloading control, penalties and prosecution
- Work with SADC to align overloading strategies
- Reduce border post delays through enhanced infrastructure capacity and improved skill base
- Work towards one-stop border post
- Involve the private sector in PPP’s such as concessions for port operations
- Develop appropriate Logistics Activity Precinct infrastructure

- Improve road infrastructure through PPPs administered by SANRAL
- Enhance overloading control, penalties and prosecution
- Work with SADC to align overloading strategies
- Reduce border post delays through enhanced infrastructure capacity and improved skill base
- Work towards one-stop border post
- Work with Mozambique Government to enhance status of Maputo as specialist port

- Address capacity shortfalls in City Deep and DCT through PPP involvement in infrastructure and operations
- Improve rail infrastructure through immediate investments in the short term and PPP involvement to significantly upgrade this rail corridor in the medium term
- Introduce competing rail operators in selected sectors (containers, chemicals, domestic coal etc) over time
- Improve road infrastructure at existing road freight bottlenecks through PPPs established by SANRAL
- Enhance overloading control, penalties and prosecution
- Involve the private sector in PPP’s such as concessions for port operations
- Enhance and expand port infrastructure through private sector involvement
- Develop appropriate Logistics Activity Precinct infrastructure