



The Dualism of Urban Freight Distribution: City vs. Suburban Logistics



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Agenda

- Introduction
- Placing City and Suburban Logistics in their Context
- Trends Impacting Suburban Logistics
- City and Suburban Logistics: Convergence or Divergence?
- Conclusions

Introduction

- Growing city logistics research and policies in cities around the world
 - Focus on last mile deliveries to retail stores in central areas.
 - Freight operations in sub-urban areas widely underrepresented.
- Placing the metropolitan area in city logistics
 - Little consideration to freight distribution outside central areas or from large terminal facilities such as ports, rail terminals or airports.

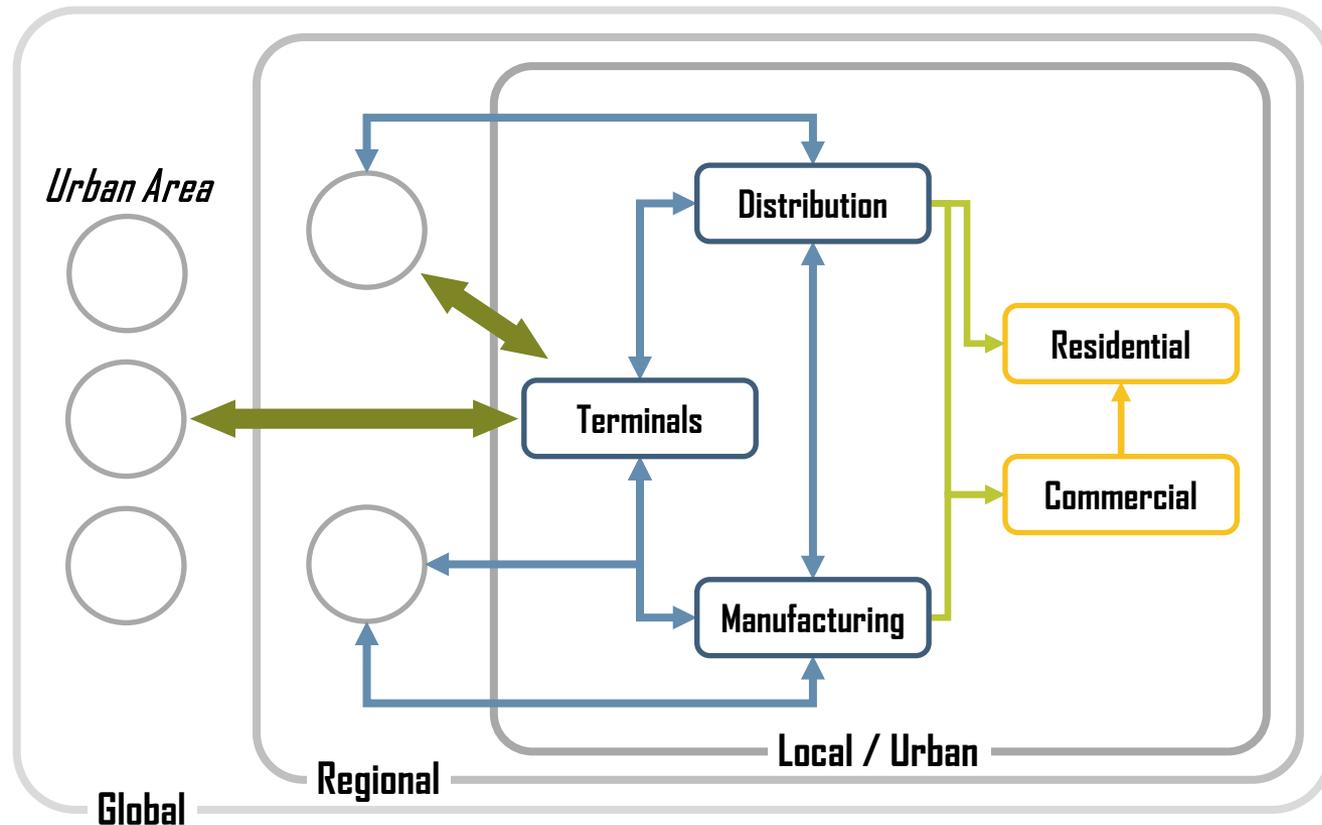




Some Queries

- To what extent deserves suburban logistics attention as a distinct dimension of urban freight transport research?
 - Are we observing an emerging dualism in city logistics between the central areas and suburbia?
 - Will regulations enforcing city logistics incite a growth of this dualism?
 - Will this expected dualism involve different urban distribution channels, operations and modes depending if city or suburban logistics are involved?
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Urban Freight Flows: A Functional and Geographical Typology



↔ Large scale flows (shipload, trainload)

↔ Industrial and terminal haulage (container, truckload)

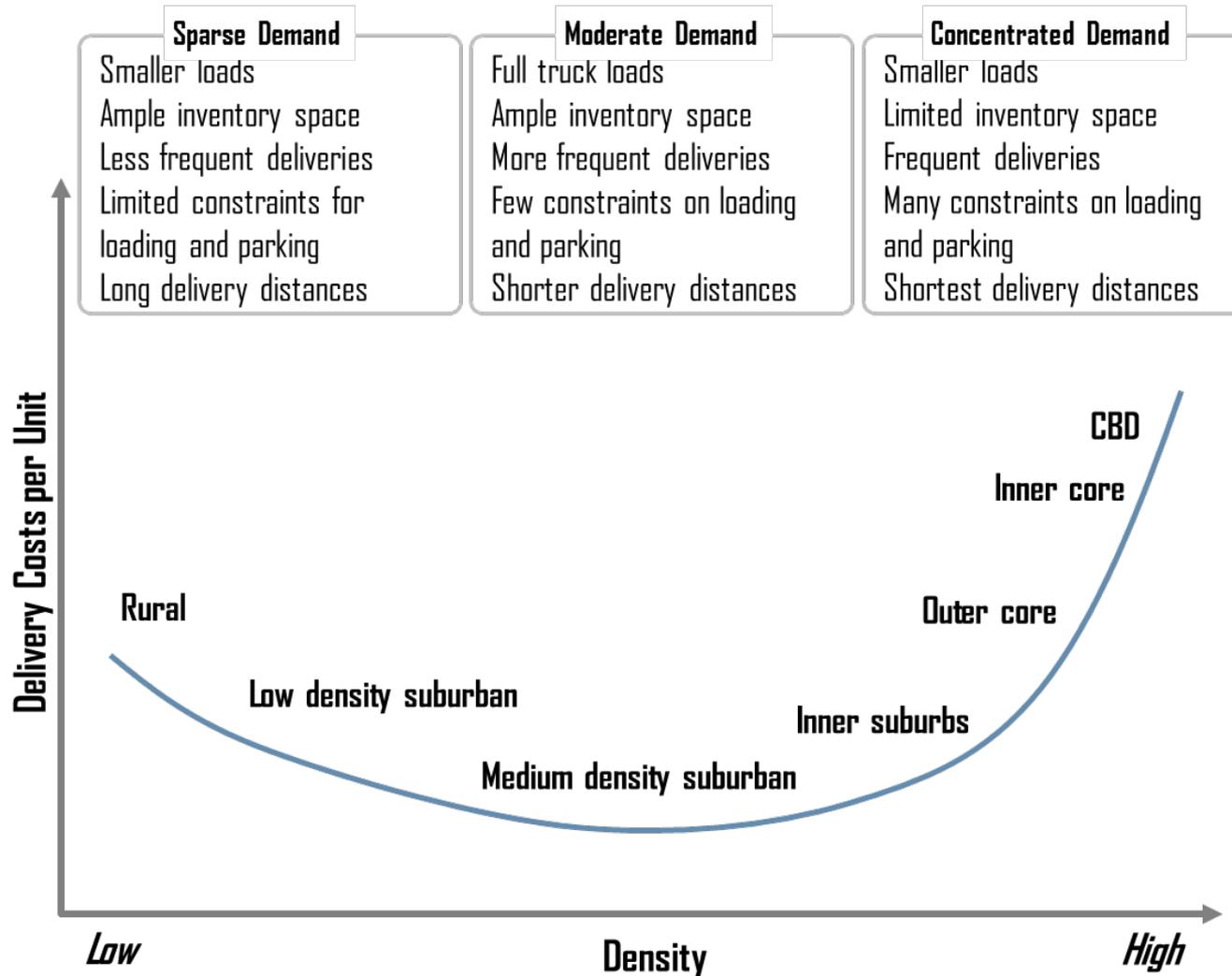
Producer-related flows

→ Urban deliveries (trucks, vans, parcels)

→ Consumer shopping trips

Consumer-related flows

Relationship between Urban Density and Commercial Freight Deliveries



Dualism of Urban Logistics

City Logistics

High-density central areas (CBD).

Infrastructure constraints.

Good opportunities for load consolidation.

'Low hanging fruits': focus of research and policy.

Suburban Logistics

Lower density urban areas.

More residential and less commercial activities.

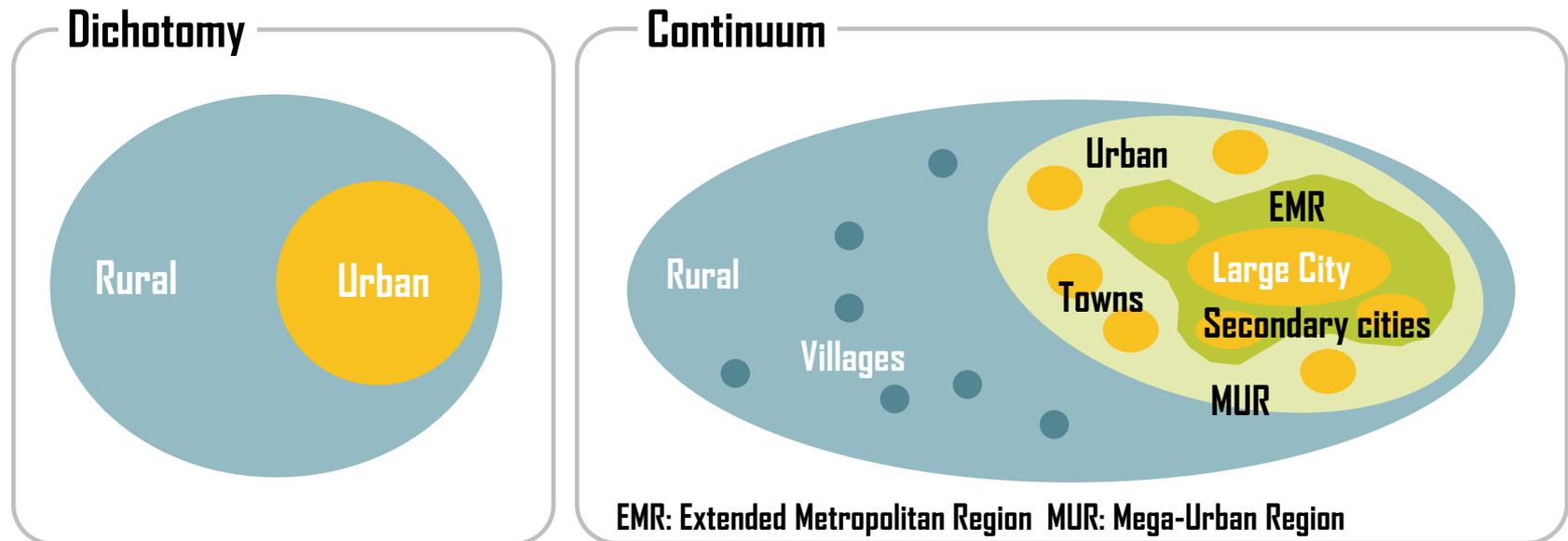
Clusters of production, distribution and large terminals.

Dispersed activities (residential, logistics and production).

An increasing share of urban economic activity worldwide.

(Sub)Urbanization as Consumption Paradigm

- Towards differentiated polycentric urban regions
 - New nexuses of freight distribution at suburban centers.
 - More complex and diverse interactions between core city and suburbs.
 - Distinct differences of urban and suburban consumption patterns.
 - Socioeconomic and spatial composition of suburbs are prone to higher levels of e-commerce.



Logistics Sprawl: The Suburbanization of Logistics

- Spatial de-concentration of logistics facilities and distribution centers in metropolitan areas
- Two effects on urban logistics
 - Increased distribution distances for deliveries in urban areas.
 - Reduced distance travelled by large trucks serving logistics facilities in peripheral areas.
- Resulting impact?
 - The creation of expansion of a logistics space in suburban areas.
 - New forms of interactions between suburban and city logistics.
 - Adapted vehicles.
 - The use of urban distribution centers.

Increasing Global and Regional Trade Flows

- Setting of major gateways
 - Ports and rail terminals tend to be located in central areas surrounded by urban development.
- Implications for cities
 - Terminal haulage as a factor impacting urban accessibility.
- Implications for gateways
 - Local traffic regulations, urban congestion, and land scarcity.
 - Impede efficiency and restricts capacity extensions of gateways.





City and Suburban Logistics: Convergence or Divergence?

- Factors of divergence
 - Rebalancing between distribution (-) and delivery (+) costs.
 - Creation of distinct distribution channels:
 - A city logistics distribution channel with adapted vehicles and constraining regulations.
 - A (sub)urban distribution channel with standard operating procedures.
 - Smart growth policies (divergence in suburbia):
 - Unintended consequences could emerge.
 - Freight distribution industry could respond by servicing smart growth neighborhoods in a less efficient and reliable manner.
 - The emergence of ecommerce:
 - High density areas prone to the benefits of consolidation (loads and locations).
 - Low density areas prone to the benefits of lower delivery costs (accessibility and parking).
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Conclusions: Emergence of a New Field of Freight Research and Policy

- City logistics strategies and regulations: a divergence in urban freight distribution?
 - Suburban logistics opens up a paradox in city logistics:
 - Becoming more the norm while city logistics is the exception.
 - Suburban areas represent an ideal environment for freight flows mainly due to their lower densities.
 - Compartmentalization of distribution (central / suburban).
 - Will this divergence simply be functional or will it involve costs?
 - Density or regulatory driver of the divergence?
 - If density-based: What is the density threshold?
 - If regulatory-based: What level of burden?
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Questions?



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