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Ranking projects of Logistics Platforms

A methodology based on the ELECTRE multicriteria approach

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Abstract

A multicriteria methodology is presented to rank projects of Logistics Platforms (PL) in a public policy program to establish a competitive logistical territorial management in different regions in Mexico.

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1. Introduction

A multicriteria methodology is presented to rank projects of Logistics Platforms (PL) in a public policy program to establish a competitive logistical territorial management in different regions in Mexico.

The article first introduces the 8 different types of PL in the program: Distribution Logistics Platforms (PLADIS), Logistics Platforms at Border (PLF), Logistics Platform for Cluster Support (PLC), Port Logistics Activities Zone (ZAL), Air Cargo Centers (CCA), Intermodal Rail Terminals (TIF) and Dry Ports (PS), Agrolog Centers (AGROLOG) and Food Logistics Centers (CLA). Immediately, many aspects related to Logistics Platform are discussed: regional production size , level of globalization of manufacturing processes , market size (urban-metropolitan - regional) for logistics services , facilities available supply distribution centers, reception centers and

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distribution load centers and orders, current connectivity and accessibility of potential locations to develop the project, complexity of commercial distribution channels, access regulations freight vehicles, features of cross-border transactions , etc. . After, the multi-criteria evaluation approach is described by binary relations of overrating and methodology for ranking proposal, based on ELECTRE IV algorithm. Finally, we present and discuss results of its application.

2. Typology of Logistics Platforms

2.1. Distribution Logistics Platforms (PLADIS)

Logistics Distribution Platforms (PLADIS) are an infrastructure for the production of transport and logistics in urban/ regional/megalopolis freight distribution, and the integration of trans-border supply chains.

There are three types of distribution logistics platforms (PLADIS): (1) Metropolitan PLADIS, (2) Regional PLADIS, and (3) International PLADIS. The PLADIS are related to: i) Physical distribution of goods articulating intercity transport and urban operations, (and trans-border, if it is applicable) ii) The location of Distribution Centers for enterprises producing and marketing of consumer goods, and iii) the metropolitan physical distribution of goods in a system of urban centers

2.2. Logistics Platforms at Border (PLF)

The Logistics Platforms at Border (PLF) is a support infrastructure for the production of transportation and logistics services in proximity to land border crossings. Provide facilities to carriers (trucking and rail) for cross-border traffic management (change of tractor, exchange of locomotives and staff ,driving freight transfer from one vehicle to another, etc.), inventory management, order processing and consolidation of cargo units on export destinations, facilities for offices and freight brokers, services for drivers (hotels and restaurants) and the vehicles.

2.3. Logistics Platform for Cluster Support (PLC)

The Logistics Platform for Cluster Support (PLC) is an infrastructure for the production of transportation and logistics services to support the logistics supply chains of companies, industrial and commercial distribution, in the competitive segments in priority sectors, that have been consolidated in a regional cluster. In such platforms usually are installed Logistics Operators (storage and inventory management, order processing, traffic management of physical distribution), Distribution Centers, Reception and Distribution Centers and terminals for trucking companies.

2.4. Port Logistics Activities Zone (ZAL)

The Port Logistics Activities Zone (ZAL) are infrastructure for receiving, handling and distribution of freight from port activities and his hinterland. The range of services includes infrastructure (logistics buildings, business center, offices, etc.) for logistics operators, freight forwarders, customs brokers, motor carrier and railroad dealers, mporters and exporters.

2.5. Air Cargo Centers (CCA)

The Air Cargo Logistics Centers (CLCA) specialize in logistics activities related to air cargo.

If the Air Cargo Logistics Center (CLCA) has only airside commonly called Terminal Air Cargo or Air Cargo Logistics Center in the front (or “first”) line . In some cases the CLCA also has a section on the “second” line (no air side) . The CLCA in first and second line always found within the territorial reserves the airport, managed by the airport authority. CLCA “third” line also exist outside the territorial reserves the airport, for which there should be an Strategic Bonded Warehouse (RFE) , and assign a transit route " inbond " from the CLCA in first and second line . In CLCA “first” line are conducted: in the ramp, handling companies perform loading and unloading of the aircraft , while in the logistics buildings, freight forwarding activities , cross -docking on different aircraft , customs operations, and procedures for control agency (safety , agriculture, health , etc.) . In the CLCA “second” line may exist inbond warehouses, with or without controlled temperature, with or without controlled atmosphere, with inventory management, order processing, customs operations and trucking traffic management ; also includes Business Service Centers and offices for cargo airlines , cargo business units of passenger airlines , general sales

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