

**TRANSPORT GEOGRAPHY OF NORTH AMERICA: ROAD, RAIL, AND MARITIME NETWORKS***Tuxtamuratova Dilnoza Dilmurodovna**Bukhara State Pedagogical Institute*

**Abstract:** North America's transport geography is defined by a vast, integrated network of highways, railways, and maritime routes that form the backbone of the continent's economic connectivity. This article explores the structure, spatial distribution, and functional interrelationships of these transport systems across the United States, Canada, and Mexico. The study highlights the strategic importance of major corridors, trade flows under the USMCA agreement, and the role of ports and inland hubs in continental logistics. It also examines contemporary challenges such as infrastructure aging, congestion, and climate vulnerability.

**Keywords:** Transport geography, North America, highway systems, rail freight, seaports, intermodal logistics, USMCA, NAFTA corridor

Transport networks are vital to the economic integration and spatial development of the North American continent. Comprising the United States, Canada, and Mexico, North America hosts one of the world's most sophisticated and extensive transport infrastructures.

Historically shaped by westward expansion, industrialization, and trade liberalization (notably NAFTA and now USMCA), the continent's road, rail, and maritime networks have evolved into interconnected corridors supporting billions of dollars in goods movement annually.

This paper examines the geographic structure and dynamics of the three main transport modes—**automobile (highways)**, **railway**, and **maritime shipping**—in the North American context. It also discusses recent shifts driven by economic globalization, digitalization, and environmental pressures.

This study employs a multi-scalar approach that includes:

**GIS mapping and spatial analysis** of transport corridors and logistics hubs;

**Review of government transport data** from U.S. Department of Transportation (USDOT), Transport Canada, and Mexico's Secretaría de Comunicaciones y Transportes;

**Comparative case studies** of key systems: the Interstate Highway System, Class I freight railroads, and major seaports such as Los Angeles, Houston, and Vancouver;

**Literature review** on regional transport planning and trade logistics under the USMCA framework.

### Road Transport System (Highways)

- The **United States Interstate Highway System**, initiated in the 1950s, spans over **78,000 km**, linking major metropolitan areas, border crossings, and industrial centers.
- **Canada's Trans-Canada Highway** is the world's second-longest national highway system, stretching over 7,800 km from British Columbia to Newfoundland.
- **Mexico's Federal Highway Network**, including toll-based "autopistas," connects northern maquiladora zones to central markets and ports.

### Key Road Corridors:

- **I-35 Corridor**: From Laredo (Mexico–US border) to Minnesota, crucial for USMCA trade.
- **Pan-American Highway**: Links Canada, the U.S., and Mexico, extending into Central America.

### Rail Transport System

- North America's rail network is freight-dominated. The U.S. alone operates over **225,000 km** of rail lines.
- **Class I Railroads** (e.g., Union Pacific, BNSF, Canadian National, Canadian Pacific Kansas City, Ferromex) manage continental-scale operations.
- **Intermodal rail terminals** (e.g., Chicago, Kansas City, Toronto, Monterrey) serve as vital links between seaports and inland destinations.

### Notable Developments:

- The 2023 **CPKC merger** (Canadian Pacific + Kansas City Southern) established the first rail network linking Canada, the U.S., and Mexico under a single operator.

### Maritime Transport System

- **Major seaports:**
  - **U.S.:** Los Angeles, Long Beach, New York/New Jersey, Houston
  - **Canada:** Vancouver, Montreal, Prince Rupert
  - **Mexico:** Manzanillo, Veracruz, Lázaro Cárdenas
- These ports handle containerized and bulk cargo, forming gateways for trans-Pacific and trans-Atlantic trade.
- **Great Lakes–St. Lawrence Seaway** enables inland navigation between the Atlantic Ocean and central North America.

North America's transport geography reflects both **natural constraints** (e.g., mountains, coasts, rivers) and **economic imperatives** (e.g., trade, urbanization). The integrated tri-national network under USMCA has allowed:

- **Efficient supply chain integration**, especially in automotive, electronics, and agriculture sectors;
- Growth of **inland logistics hubs** like Chicago, Dallas, and Guadalajara;
- Expansion of **multimodal freight systems** using rail-truck-port connectivity.

#### Challenges:

- **Infrastructure aging**: Many roads and bridges require major rehabilitation;
- **Congestion**: Urban bottlenecks and port delays impact delivery times;
- **Environmental vulnerability**: Hurricanes, wildfires, and heatwaves affect transport continuity;
- **Carbon emissions**: Transport is a major GHG contributor, prompting investment in electrification and sustainable mobility.

#### Technological Innovations:

- Smart logistics (IoT, AI) and automation (self-driving trucks, automated ports);
- Electrification of freight corridors and promotion of rail-to-truck modal shifts.

North America's road, rail, and maritime transport systems form an intricate, high-capacity network critical for continental and global trade. Their effectiveness is shaped by geographic patterns, economic linkages, and political cooperation across borders.

#### Recommendations:

- Invest in **infrastructure modernization** with a focus on climate resilience;
- Promote **intermodal transport** to enhance efficiency and reduce emissions;
- Support **regional coordination** in planning and policy under USMCA frameworks;
- Accelerate adoption of **smart and green technologies** across all transport modes.

A robust, adaptable, and sustainable transport geography will be key to North America's future competitiveness and environmental responsibility.

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