



THE STRATEGIC ROLE OF RAILWAY TRANSPORT CORRIDORS IN THE UNITED STATES: EFFICIENCY, INTEGRATION, AND GLOBAL TRADE CONNECTIVITY

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Abstract: Transport corridors are essential to the functioning of modern economies, enabling the efficient movement of goods across domestic and international markets. In the United States, railway corridors represent a key component of the national transport system, supporting large-scale freight operations and supply chain integration. This article examines the structure and role of railway transport corridors in the United States, with particular emphasis on their contribution to long-distance transportation, intermodal connectivity, and logistics efficiency. It also considers their interaction with other transport modes and the challenges affecting their performance. The study concludes that railway corridors remain a strategically important element of the U.S. transport infrastructure, significantly contributing to economic development and global trade connectivity.

Key words: transport corridors; railway corridors; United States; freight transportation; intermodal transport; logistics systems; infrastructure; global trade; supply chains.

The development of efficient transport corridors has become a decisive factor in shaping the competitiveness of modern national economies and their integration into global trade networks. As international supply chains continue to expand and become more complex, countries are increasingly dependent on reliable and well-structured transport systems that ensure the continuous and cost-effective movement of goods across long distances. In this regard, transport corridors function not only as physical infrastructure but also as strategic economic assets that influence trade performance, regional development, and industrial connectivity.

In the United States, the transport system represents one of the most sophisticated and highly integrated networks in the world, characterized by the simultaneous operation of railway, road, maritime, and air transport corridors. This multimodal structure allows the country to efficiently manage both domestic freight distribution and international trade flows, ensuring strong connectivity between production regions, consumption markets, and global shipping routes. Within this integrated system, railway transport corridors occupy a particularly important position due to their ability to handle large volumes of freight across extensive distances with high operational efficiency. Unlike other transport modes, rail systems in the United States are specifically designed for heavy and long-haul freight transportation, making them a central component of national logistics performance and supply chain stability.

The significance of railway corridors is further reflected in their strong contribution to freight movement across the country. According to the Association of American Railroads, rail

transport accounts for a major share of long-distance freight activity measured in ton-miles, demonstrating its dominance in bulk and interregional cargo transportation¹. This performance highlights the essential role of rail infrastructure in supporting economic activity across industrial, agricultural, and energy sectors. Moreover, the scale of the U.S. railway system is among the largest in the world, extending across approximately **140,000 miles** of operational track². This extensive network enables direct connectivity between major ports, inland distribution centers, and manufacturing hubs, thereby facilitating efficient integration between domestic logistics systems and international trade corridors.

Another defining feature of the U.S. transport framework is the increasing importance of intermodal logistics, where railway corridors operate in close coordination with maritime and road transport systems. This integration enhances the flexibility and efficiency of freight movement, allowing cargo to transition seamlessly between ships, trains, and trucks. As a result, intermodal transport has become a key driver of cost reduction and supply chain optimization within the United States. Despite its advanced development, the railway transport system also faces structural and operational challenges, including infrastructure maintenance requirements, capacity constraints in high-density corridors, and the need for modernization in response to technological and environmental demands. These challenges highlight the importance of continuous investment and strategic planning in sustaining the long-term efficiency of the rail network.

Therefore, this article focuses on a comprehensive analysis of railway transport corridors in the United States, examining their structural characteristics, operational efficiency, and strategic role within national and global logistics systems. Special emphasis is placed on their interaction with other transport modes and their contribution to the overall competitiveness of the U.S. economy in international trade.

Overview of Transport Corridors in the United States

The transport corridor system of the United States represents one of the most advanced and strategically significant logistics infrastructures in the world. It is designed to support the continuous movement of goods, services, and resources across a vast geographical territory while simultaneously integrating the country into global trade networks. The system is characterized by its multimodal structure, in which maritime, road, railway, and air transport corridors operate in close coordination, forming a unified national logistics framework. The importance of transport corridors in the United States is directly linked to the country's economic structure, large-scale industrial production, and high level of international trade integration. Due to its geographic size and diversified economy, the United States requires a highly efficient transport system capable of connecting coastal ports, inland industrial centers, agricultural regions, and major consumption markets. As a result, transport corridors play not only a logistical role but also a strategic economic function in maintaining national competitiveness and global supply chain stability.

Maritime Transport Corridors

¹ Association of American Railroads (AAR). (2025). *Freight Rail Facts & Figures*.

<https://www.aar.org/freight-rail-facts-figures/>

² U.S. Department of Transportation (USDOT). (2024). *Freight Analysis Framework (FAF)*.

<https://www.transportation.gov/>

Maritime transport corridors constitute the most important gateway for international trade in the United States. The country's geographical access to the Atlantic Ocean, Pacific Ocean, and Gulf of Mexico enables extensive maritime connectivity with Asia, Europe, and Latin America. According to the U.S. Bureau of Transportation Statistics, approximately **80–90%** of international trade volume is transported via maritime routes, making sea corridors the dominant mode of global cargo movement³. Major seaports such as **Los Angeles, Long Beach, Houston, Savannah, and New York–New Jersey** function as critical nodes in the global logistics network. These ports handle millions of TEUs (twenty-foot equivalent units) annually and serve as entry and exit points for containerized cargo, crude oil, refined petroleum products, automobiles, and industrial goods. A key characteristic of maritime corridors in the United States is their strong integration with inland transport systems. Ports are directly connected to railway terminals and highway networks, allowing cargo to move efficiently from ships to inland destinations. This intermodal connectivity significantly reduces logistics time and enhances supply chain efficiency.

Road Transport Corridors

Road transport corridors in the United States are primarily represented by the Interstate Highway System, which forms the most extensive and flexible transport network in the country. The system spans approximately **48,000 miles** of interstate highways, while the total public road network exceeds 4 million miles, making it one of the largest road systems globally⁴. Road corridors play a central role in domestic freight distribution, particularly in short- and medium-distance transportation. They are essential for last-mile delivery, retail logistics, and regional supply chain operations. The flexibility of road transport allows direct door-to-door service, which is particularly important for consumer goods and time-sensitive deliveries.

However, road transport also faces structural limitations. Congestion in metropolitan areas, rising fuel costs, labor shortages in trucking industries, and environmental concerns have increased pressure on highway systems. Additionally, long-distance freight transport by road is less efficient compared to rail in terms of cost per ton-mile and fuel consumption.

Air Transport Corridors

Air transport corridors represent the fastest but most specialized segment of the U.S. logistics system. Although air freight accounts for less than **1%** of total cargo volume, it represents a significantly higher share of total trade value due to its focus on high-value, time-sensitive, and perishable goods⁵. Major air cargo hubs such as **Airport Memphis International, Louisville Muhammad Ali International Airport, and Chicago O'Hare International Airport** serve as global logistics centers. Memphis, in particular, is one of the busiest cargo airports in the world due to its role as a major distribution hub for express delivery services.

Air transport corridors are widely used for industries such as electronics, pharmaceuticals, aerospace components, and urgent medical supplies. Despite their speed advantage, air

³ U.S. Bureau of Transportation Statistics (BTS): <https://www.bts.gov>

⁴ Federal Highway Administration (FHWA): <https://www.fhwa.dot.gov>

⁵ Federal Aviation Administration (FAA): <https://www.faa.gov>



corridors are limited by high operational costs, limited cargo capacity, and environmental impact concerns.

Railway Transport Corridors

Railway transport corridors represent one of the most efficient and structurally important components of the U.S. transport system. The United States operates approximately 140,000 miles of freight rail network, making it one of the largest rail systems in the world⁶. Rail transport is particularly dominant in long-distance freight movement, accounting for approximately **40%** of long-distance ton-miles, which is higher than any other transport mode. This highlights the critical role of rail corridors in bulk commodity transportation, including coal, grain, chemicals, automobiles, and intermodal containers.

Rail corridors are highly important in connecting maritime ports with inland industrial and distribution centers. This function allows rail systems to serve as a bridge between international trade and domestic consumption markets, significantly improving logistics efficiency. Another key advantage of railway transport is its cost efficiency. Rail is generally 2–4 times more fuel-efficient than trucking for long-distance freight movement, making it both economically and environmentally advantageous⁷.

Table 1

Comparative Structure of Transport Corridors in the United States

Transport Mode	Network Scale	Freight Role	Share / Impact	Key Advantage
Maritime	Coastal + global ports	International trade gateway	~80–90% trade volume	High capacity, low cost
Road	4+ million miles	Domestic distribution	Majority of domestic freight value	Flexibility & accessibility
Air	Limited major hubs	High-value cargo	<1% volume, high value share	Speed
Rail	~140,000 miles	Long-distance bulk freight	~40% ton-miles	Efficiency & sustainability

Source : U.S. Bureau of Transportation Statistics (BTS): <https://www.bts.gov>

The multimodal transport corridor system of the United States is organized as an integrated logistics structure in which maritime, railway, road, and distribution networks function in a sequential and interconnected flow of cargo movement. In this system, international freight first enters the country through major seaports such as **Los Angeles, Long Beach, and New York–**

⁶ Association of American Railroads (AAR): <https://www.aar.org/freight-rail-facts-figures/>

⁷ U.S. Environmental Protection Agency (EPA): <https://www.epa.gov>

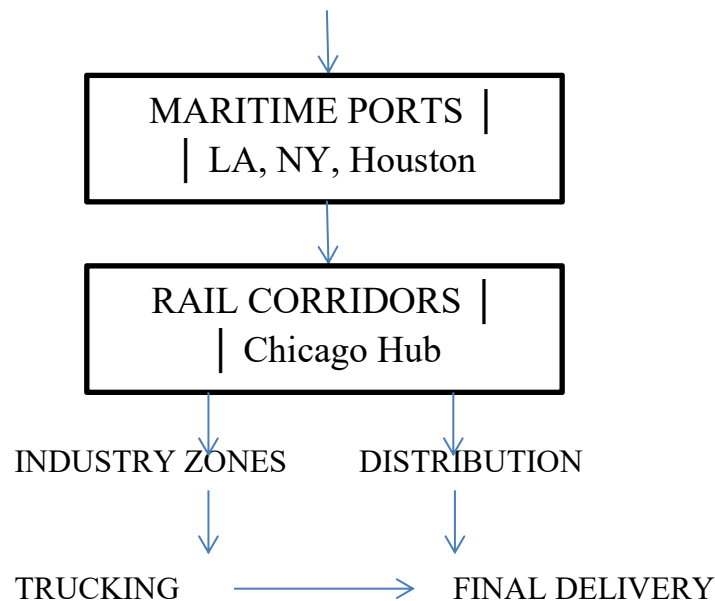
New Jersey, which serve as primary gateways for global trade. From these ports, goods are transferred to railway transport corridors, which provide efficient long-distance inland transportation and connect coastal entry points with central logistics hubs, particularly major redistribution centers such as Chicago.

After rail-based transportation, freight is directed to regional distribution centers and industrial zones, where goods are sorted and prepared for further allocation within domestic markets. In the final stage of the logistics chain, road transport corridors ensure last-mile delivery to consumers, retail networks, and local business destinations. This sequential interaction between transport modes demonstrates the highly coordinated nature of the U.S. logistics system, where each mode performs a specific functional role while remaining structurally dependent on the others to maintain overall efficiency and continuity of supply chains.

Diagram 1

Multimodal Transport Corridor System (USA)

GLOBAL TRADE



The transport corridor system of the United States is not structured around a single dominant mode but rather operates as a highly integrated multimodal network. Within this system, railway corridors function as the central connecting layer between maritime gateways and inland distribution systems. This structural integration enables efficient redistribution of goods, reduces logistics costs, and strengthens the resilience of national and international supply chains.

Railway Transport Corridors in the USA

The railway transport corridor system in the United States represents one of the most sophisticated and economically significant freight transport networks in the world. It is not simply a collection of rail lines, but rather a highly integrated continental system that supports



national production, international trade, and regional economic specialization. The efficiency of this system is one of the key reasons why the United States maintains its strong position in global logistics and supply chain networks.

Unlike many countries where rail infrastructure is fragmented or primarily focused on passenger transportation, the United States has developed a freight-dominated railway system. This structural characteristic allows rail corridors to operate at a very large scale, transporting bulk commodities, intermodal containers, and industrial goods across extremely long distances with high cost efficiency. The system is deeply integrated into the national economy and functions as a backbone for long-haul logistics. According to the Association of American Railroads (AAR), the United States operates approximately **140,000 miles of freight rail infrastructure**, making it the largest freight rail network globally. Furthermore, rail transport accounts for approximately **40% of long-distance freight movement measured in ton-miles**, which is higher than trucking and other transport modes in long-distance logistics. This demonstrates the dominant role of railway corridors in connecting production regions with consumption markets across the country⁸.

West Coast Gateway Corridor (Pacific Trade Axis)

The West Coast corridor is one of the most strategically important freight routes in the United States because it serves as the primary entry point for Asian imports. Major ports such as Los Angeles and Long Beach handle a significant share of containerized cargo entering the country. Once goods arrive at these ports, they are transferred directly to railway systems that transport freight inland toward major distribution hubs. This corridor connects coastal California with inland states such as Nevada, Arizona, and further extends toward the Midwest region.

The importance of this corridor lies in its ability to handle extremely high volumes of international trade while maintaining efficiency through intermodal integration. Without this corridor, congestion at ports would significantly increase, and national supply chains would experience severe delays.

Midwest Corridor and Chicago Hub System

The Midwest corridor, centered around Chicago, represents the core structural node of the entire U.S. railway system. Chicago is not simply a city with rail infrastructure; it is a **continental logistics interchange point** where eastern and western railway systems converge.

This region is unique because:

- It connects **all major Class I railroads**
- It functions as a **redistribution hub for intermodal freight**
- It handles both inbound international cargo and domestic distribution flows

According to AAR estimates, approximately **25% of all U.S. rail freight passes through the Chicago region**, either originating, terminating, or being transferred there. This makes

⁸ Association of American Railroads (AAR): <https://www.aar.org/freight-rail-facts-figures/>

Chicago one of the most important railway logistics centers in the world. The complexity of this system also means that Chicago acts as a bottleneck in the network. While it increases efficiency through centralization, it also creates congestion challenges, requiring continuous infrastructure upgrades and coordination among multiple railway operators.

East Coast Corridor (Atlantic Economic Axis)

The East Coast corridor connects major economic and political centers such as New York, Philadelphia, Boston, and Washington D.C. This corridor is particularly important for international trade with Europe and for servicing the high-density consumption markets of the eastern United States.

Unlike the West Coast corridor, which is primarily import-driven, the East Coast corridor handles a more balanced flow of imports and exports. It also plays a key role in connecting maritime ports with inland industrial regions through rail-based distribution systems. The East Coast corridor is highly dependent on intermodal connectivity, especially rail-truck integration, due to the dense urban structure and limited space for expansion.

Major Railway Companies and Network Governance

The U.S. railway corridor system is operated by a small number of large freight companies known as Class I railroads. These companies are responsible for managing the majority of national freight traffic and maintaining corridor infrastructure across multiple states.

The four dominant operators are:

- Union Pacific Railroad
- BNSF Railway
- CSX Transportation
- Norfolk Southern Railway

These companies operate as integrated corridor managers, rather than simple transport providers. They control long-distance routes, coordinate intermodal terminals, and manage freight flows between ports, industrial zones, and distribution hubs. A key feature of the U.S. railway system is its **private-sector ownership model**, which encourages continuous investment in infrastructure. Each year, rail companies invest approximately **\$20–25 billion in infrastructure maintenance and expansion**, focusing on track upgrades, signaling systems, and intermodal terminal development⁹. This investment structure has allowed the railway corridor system to maintain high efficiency despite its age and scale.

Chicago is widely recognized as the most important railway hub in North America and one of the most significant freight interchange centers in the world. Its strategic importance is based on geographic centrality and historical development as a transportation crossroads.

The city functions as:

⁹ Association of American Railroads (AAR): <https://www.aar.org/freight-rail-facts-figures/>



- A convergence point for **six major railroads**
- A national intermodal freight transfer center
- A redistribution hub connecting coast-to-coast logistics flows

Rail freight arriving from the West Coast is redistributed in Chicago before being sent to the East Coast, South, or Canadian markets. Similarly, goods from eastern ports are routed through Chicago for distribution toward western and midwestern states.

This system creates both efficiency and complexity. While it enables centralized control of freight distribution, it also makes Chicago a critical congestion point in the national rail network. Infrastructure modernization projects are continuously being developed to reduce delays and increase throughput capacity.

Table 2

Key Characteristics of U.S. Railway Corridors

Indicator	Value
Total rail network	~140,000 miles
Freight share (ton-miles)	~40%
Annual freight volume	~1.5 billion tons
Chicago freight share	~25% of rail traffic
Major operators	4 Class I railroads

Source : Association of American Railroads (AAR): <https://www.aar.org/freight-rail-facts-figures/>

One of the most important characteristics of U.S. railway corridors is their deep integration with other transport modes, particularly maritime and road systems. This intermodal structure is essential for maintaining supply chain efficiency across long distances.

The typical freight movement process follows this structure:

International Shipments → Port Terminals → Rail Corridors → Chicago Hub → Regional Distribution Centers → Truck Delivery → Final Consumers

This system ensures that each transport mode performs a specialized function:

- Ships handle international bulk transport
- Rail handles long-distance inland movement
- Trucks handle local and final delivery

This division of labor significantly reduces logistics costs and increases system flexibility. It also allows the United States to manage extremely large volumes of global trade without creating bottlenecks in any single transport mode.

Conclusion

The railway transport corridor system of the United States represents a highly developed and strategically important component of global logistics infrastructure. It plays a central role in connecting maritime gateways, industrial regions, and consumption markets through an efficient intermodal network. The analysis shows that railway corridors are not only transportation routes but also key economic structures that enhance trade efficiency, reduce logistics costs, and strengthen supply chain resilience.

A significant finding of this study is the dominant role of rail transport in long-distance freight movement and its strong integration with maritime and road transport systems. The presence of major logistics hubs, particularly Chicago, demonstrates the importance of centralized redistribution points in optimizing freight flows across large territories. Furthermore, the U.S. system highlights how continuous investment, private sector involvement, and technological development contribute to the long-term efficiency of transport corridors. Despite its high level of development, challenges such as infrastructure congestion, aging assets in certain corridors, and increasing freight demand remain relevant. However, ongoing modernization efforts and digital transformation are expected to further improve system performance and sustainability.

From the perspective of developing countries such as Uzbekistan, the U.S. railway corridor model provides several important lessons. First, the development of **intermodal transport systems** linking rail, road, and logistics centers can significantly improve national supply chain efficiency. Second, the establishment of **logistics hubs similar to Chicago** in strategically located regions could enhance cargo redistribution and reduce transportation bottlenecks. Third, increasing investment in **rail infrastructure modernization and digital freight management systems** would improve both domestic and international connectivity. Finally, stronger integration of national transport corridors with regional trade routes (Central Asia–China–Europe) could enhance Uzbekistan’s role as a transit hub within Eurasian logistics networks.

Overall, the U.S. railway corridor system offers a valuable reference model for improving transport efficiency and logistics integration in developing economies, particularly in countries seeking to strengthen their position in global trade networks.

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