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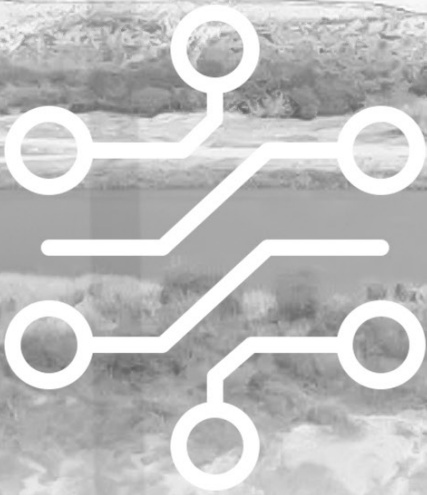
FOR BORDER ECONOMIC & ENTERPRISE DEVELOPMENT

TEXAS A&M INTERNATIONAL UNIVERSITY

UNDERSTANDING
TRADE THROUGH
DATA NARRATIVES

2024 CROSSING PATHS:

Insights into U.S.
International Trade



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Introduction

Understanding Trade Through Data Narratives

“Crossing Paths: Insights into U.S. International Trade” emerged from a simple yet powerful premise: that the complex story of international trade, particularly between the United States and Mexico, deserves to be told in a way that resonates with everyone—from business leaders and policymakers to students and community members. Launched in 2024 by Texas A&M International University’s A.R. Sanchez Jr. School of Business Texas Center for Border Economic and Enterprise Development, this monthly publication series transforms intricate trade data into accessible narratives revealing the vital connections binding our economies together.

Our approach combines data analysis with clear, compelling visualization to make international trade statistics meaningful and actionable. Each month, we select specific aspects of U.S.-Mexico trade - from traditional commodities like corn and roses to emerging sectors like air conditioning equipment and natural gas - and examine them through multiple lenses: historical trends, geographic distribution, port dynamics, and broader economic implications.

Throughout 2024, our analyses have revealed several key themes: the growing importance of regional trade integration, the critical role of border infrastructure, the impact of technological advancement on trade processes, and the deep interconnections between U.S. and Mexican economies. From Laredo’s emergence as the top U.S. port of entry to Mexico’s ascension as America’s leading trading partner, we’ve documented historic shifts in North American commerce.

This publication serves multiple audiences: business leaders seeking market intelligence, policymakers crafting trade policy, academics studying economic trends, and community members interested in understanding how international trade shapes their daily lives.

By making trade data accessible and meaningful, we aim to foster informed dialogue about the future of North American economic integration.

Introduction

Methodology and Approach

The methodology behind Crossing Paths has three parts. First, we source primary data from reliable institutions, including the U.S. Census Bureau's Economic Indicators Division, the Bureau of Transportation Statistics, and Mexican government agencies such as the Instituto Nacional de Estadística y Geografía (INEGI). Second, we apply analytical techniques to identify patterns, trends, and relationships within this data. Finally, we transform these insights into visual narratives that make complex trade relationships immediately comprehensible.

For this publication, we adopted a four-part analytical structure for each month: Overview, Key Elements and Data Points, Trade Dynamics, and Broader Implications. This template serves a strategic purpose in making complex trade data both accessible and actionable while building toward deeper understanding.

The Overview situates each topic within the broader U.S.-Mexico trade relationship, providing essential context. Key Elements and Data Points then delivers concrete metrics that quantify the scale and scope of trade activity. Trade Dynamics examines the patterns and relationships that emerge from these data points, while Broader Implications connects these specific insights to larger economic trends and future opportunities.

This progressive structure allows readers from different backgrounds - whether business leaders seeking market intelligence, policymakers crafting trade policy, or community members interested in local economic impact - to engage with the material at their preferred level of detail. The consistent format ensures both accessibility and analytical rigor while maintaining enough flexibility to explore diverse topics, helping all stakeholders understand how specific trade patterns fit into the larger picture of North American economic integration. What makes Crossing Paths unique is its focus on Port Laredo and the U.S.-Mexico border region as a lens through which to view broader economic integration. By examining how goods, services, and people move across this vital corridor, we illuminate the practical realities of international trade and its impact on local communities, regional development, and national economies.

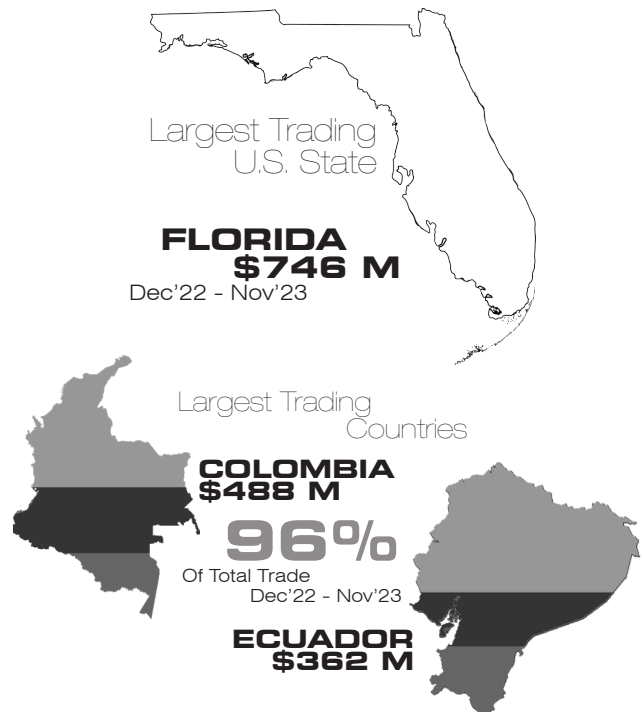
January 2024: A Valentine's Day Lens into North American Trade

OVERVIEW

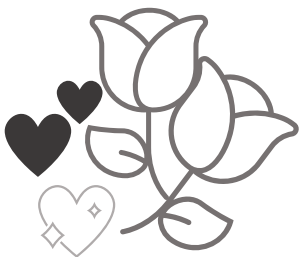
The inaugural edition of Crossing Paths takes an innovative approach to understanding North American trade flows. It examines two Valentine's Day staples: roses and cocoa products. This analysis demonstrates how seasonal consumer demands influence and shape international logistics networks, particularly across the U.S.-Mexico border region.

Through detailed trade data spanning 2003-2023, we uncover how these commodities move through various ports of entry, showcasing the specialized nature of cross-border infrastructure. While Miami leads fresh-cut rose imports from South America, the movement of cocoa products through northern ports and Port Laredo highlights the deep integration of U.S.-Mexico-Canada supply chains.

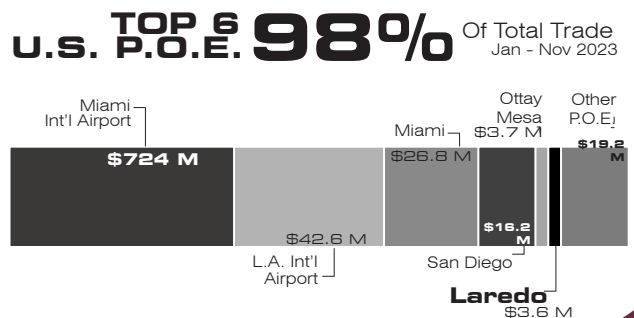
FRESH CUT ROSES AND BUDS



We analyze the dynamics of international trade values and their economic effects on **Port Laredo**



Our inaugural piece shines a spotlight on the romantic staples of Valentine's Day: **Roses & Chocolates**



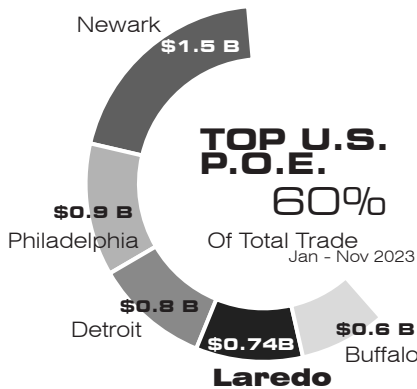
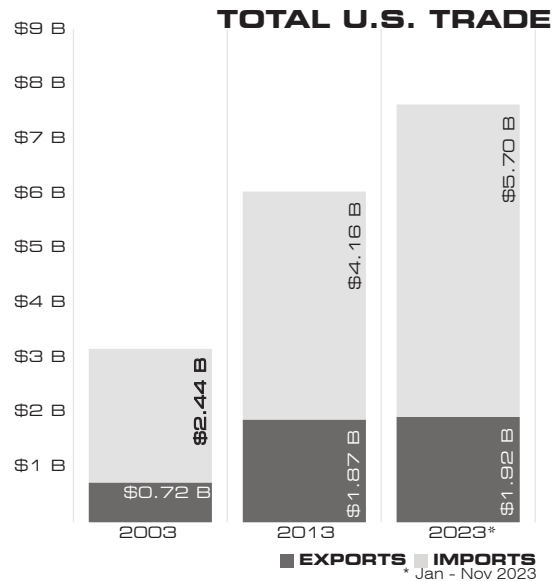
January 2024: A Valentine's Day Lens into North American Trade

Key Elements and Data Points

Fresh-cut roses present a fascinating case of concentrated trade patterns, with imports reaching \$829M against modest exports of \$12.3M through November 2023. The dominance of Florida (\$746M) in state trading, coupled with Colombia and Ecuador controlling 96% of trade volume, demonstrates how geographic proximity and specialized infrastructure shape trade flows.

The cocoa trade reveals a more complex network, with \$5.70B in imports balanced against \$0.72B in exports. New Jersey emerges as the leading state (\$1.8B), while Canada is the primary trading partner (\$3.0B). This distribution pattern, with significant volumes moving through various ports, including Port Laredo, illustrates the intricate nature of North American supply chains.

COCOA & COCOA PREPARATIONS



January 2024: A Valentine's Day Lens into North American Trade

Trade Dynamics

The geographic distribution of trade flows tells a compelling story of regional specialization. Rose imports concentrate through southeastern air cargo facilities, leveraging speed and efficiency for these perishable goods. This pattern showcases how infrastructure development responds to specific product requirements and market demands.

Meanwhile, cocoa products flow through a diverse network of land ports, with significant movements through Port Laredo and northern crossings. This multi-directional flow highlights the maturity of North American trade infrastructure, where different ports develop expertise in handling specific product categories while maintaining the flexibility to process diverse cargo types.

Broader Implications

These Valentine's Day commodities provide a window into the sophistication of North American trade networks. While South American rose imports demonstrate U.S.-Latin American trade relationships, the movement of cocoa products through multiple ports, including Port Laredo, reveals the deep integration of U.S., Mexico, and Canada supply chains and the critical role of cross-border infrastructure.

The analysis underscores a broader truth about North American trade: even seemingly simple consumer goods rely on complex international networks. These patterns reflect the strategic importance of maintaining efficient cross-border trade flows and suggest opportunities for further regional economic integration through enhanced port specialization and coordinated infrastructure development.

February 2024: Mexico's Historic Trade Milestone

OVERVIEW

The February edition of Crossing Paths captures a pivotal moment in North American trade history: Mexico's emergence as the United States' leading import destination. This achievement, marking the first time that Mexico has held this distinction, represents a fundamental shift in global supply chains and regional economic integration.

Out of the total U.S. world trade of \$5.1 trillion in 2023, the combined trade with Mexico, Canada, and China accounts for an impressive 42% (\$2.15T), underscoring the concentrated nature of U.S. international trade relationships and the growing importance of regional partnerships.

This month's feature focuses on U.S. International trade and the dynamic trade relationships between the United States and its top partners: **Mexico, Canada, and China.**



U.S. TOP TRADE PARTNERS



Mexico cementing its position as the **U.S.'s primary trading partner**, surpassing Canada and China

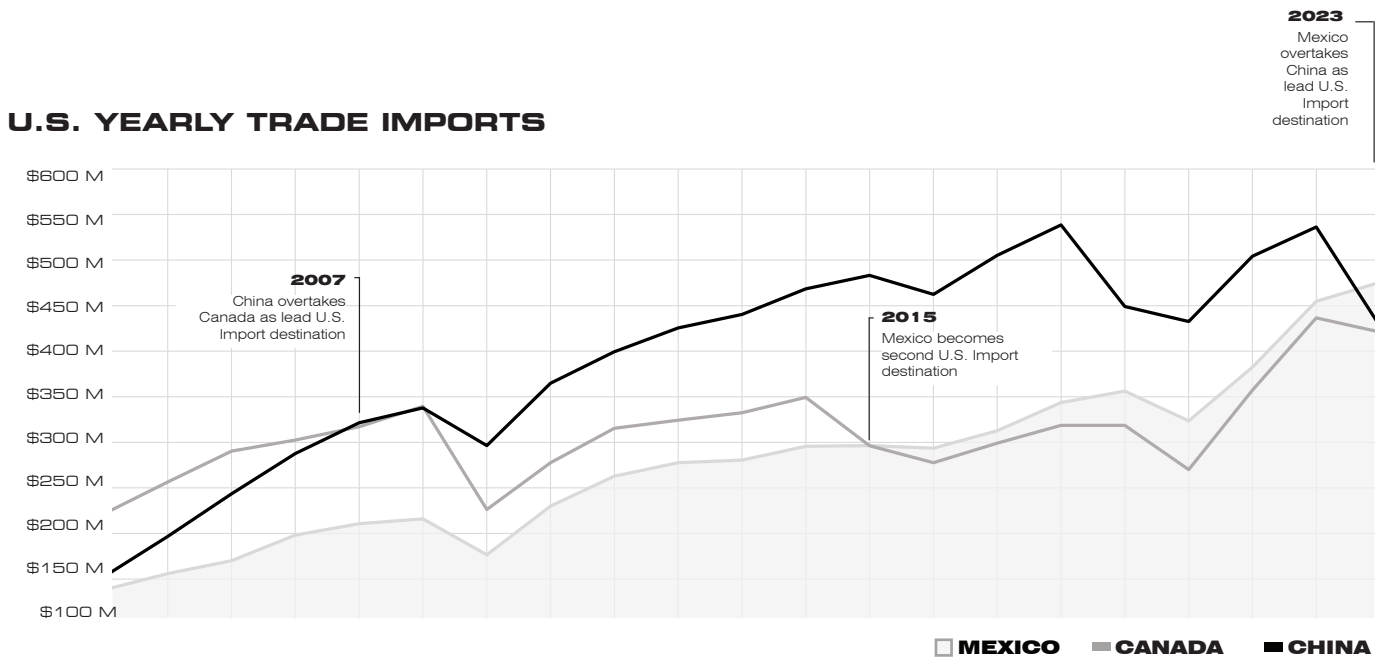
February 2024: Mexico's Historic Trade Milestone

Key Elements and Data Points

The data reveals Mexico's commanding position with \$799B in total trade, comprising \$323B in exports and \$476B in imports. This surpasses both Canada (\$774B) and China (\$575B), demonstrating a more balanced trade relationship with North American partners compared to the trade patterns with Asia.

The timeline analysis identifies key milestones: China overtook Canada as the leading U.S. import destination in 2007, Mexico rose to second place in 2015, and finally, Mexico ascension to the top position in 2023. This progression illustrates the steady strengthening of North American trade integration.

Mexico's ascendancy as the leading import destination for the U.S., marking the first time in two decades that it has held this distinction, signaling a significant milestone in cross-border trade dynamics.



February 2024: Mexico's Historic Trade Milestone

Trade Dynamics

The visualization tracks two decades of trade relationships, showing how U.S. import patterns have evolved. Mexico's rise reflects both geographic advantages and strategic shifts in global supply chains, with nearshoring initiatives and regional integration playing crucial roles in this transformation.

The balanced nature of U.S.-Mexico trade, with substantial flows in both directions, contrasts sharply with the more imbalanced relationship with China, where imports significantly outweigh exports. This pattern suggests a more sustainable and mutually beneficial economic partnership within North America.

Broader Implications

Mexico's emergence as the top U.S. trading partner signals more than just a statistical milestone – it represents the culmination of decades of economic integration and the success of regional trade agreements. This shift suggests a strengthening of North American supply chains and the growing importance of nearshore manufacturing.

The data points to a broader restructuring of global trade patterns, where regional partnerships and proximity to market are increasingly valued. For U.S.-Mexico trade relations, this transition promises continued growth in cross-border commerce and deeper economic integration, reinforcing the strategic importance of efficient border infrastructure and harmonized trade processes.

March 2024: Port Laredo's Rise to Prominence

OVERVIEW

The March edition documents a historic achievement: Port Laredo's ascension to become the number one port of entry for U.S. international trade in 2023. With a total trade value of \$321 billion, Laredo surpassed other ports of entry like Chicago (\$311 billion) and Los Angeles (\$293 billion).

This milestone reflects not just port performance but also the growing strength of the U.S.-Mexico trade relationship. Laredo handles 39% (\$313B) of the total U.S.-Mexico trade (\$799B). The positive growth rate of 7.4% compared to 2022 stands in stark contrast to declines at other major ports.

In this edition, we explore the ascent of **Port Laredo as the number one port of entry (POE)** for U.S. international trade in 2023.

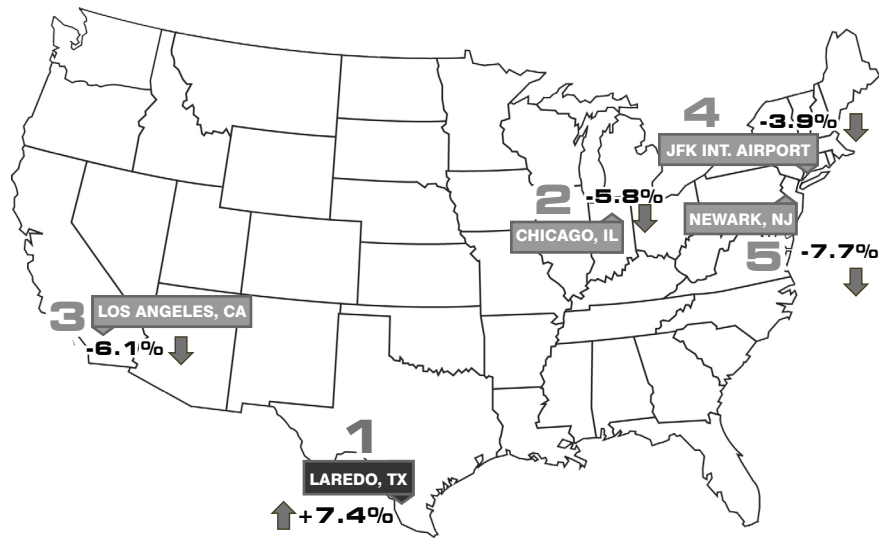
1 \$321 billion
Laredo, TX

2 \$311 billion
Chicago, IL

3 \$293 billion
Los Angeles, CA

4 \$248 billion
JFK Int'l Airport

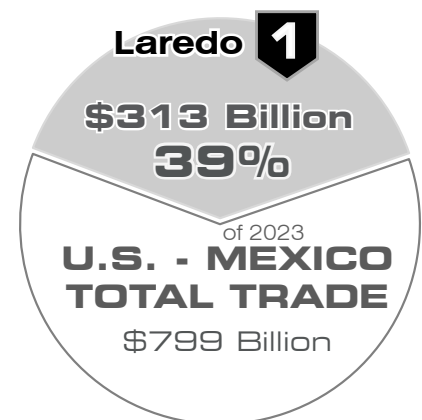
5 \$239 billion
Newark, NJ



↑↓ 2023 % GROWTH VS 2022

Top 5 U.S. POE account for **28%** of Total U.S. Trade of **\$5.1 Trillion** in 2023

We showcase **Port Laredo's** prominence across key metrics from **total trade value** to its strategic importance in **U.S.-Mexico trade** relations



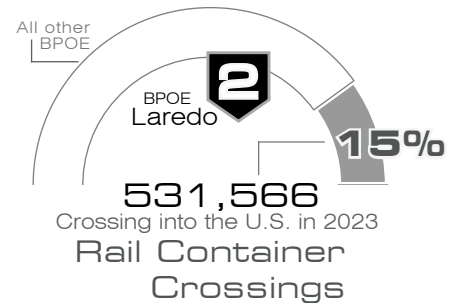
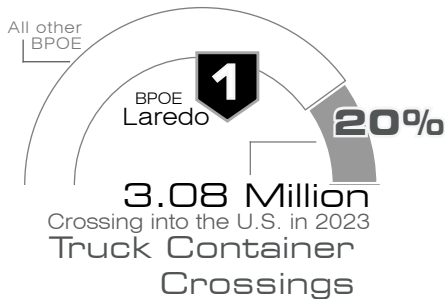
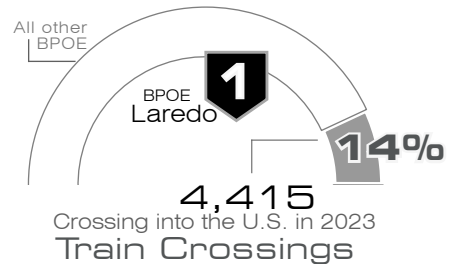
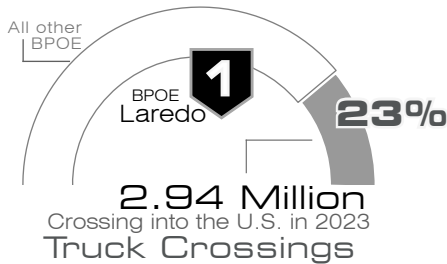
March 2024: Port Laredo's Rise to Prominence

Key Elements and Data Points

Port Laredo's dominance extends beyond total trade value to operational metrics. Leading in truck crossings with 2.94 million entries and ranking first in train crossings with 4,415 crossings, the port demonstrates unparalleled multimodal capabilities.

The port's share of U.S.-Mexico trade (39%) significantly outpaces that of other border crossings. Its overall position among U.S. ports of entry, controlling 28% of total U.S. trade, reinforces its critical role in national commerce. Laredo's consistent growth amid global trade fluctuations highlights its resilience and strategic importance.

We also highlight **Port Laredo's leadership in** facilitating the movement of goods, with its top rankings in **truck, train, and container crossings**.



March 2024: Port Laredo's Rise to Prominence

Trade Dynamics

Laredo's performance metrics reveal a well-rounded port operation, excelling in both commercial and transportation infrastructure. The port leads in truck container crossings (3.08 million) and maintains a strong second position in rail container crossings (531,566).

These figures demonstrate Laredo's vital role in facilitating cross-border supply chains, particularly in the automotive, manufacturing, and consumer goods sectors. The port's ability to handle diverse cargo types through multiple transport modes underscores its sophistication and adaptability.

Broader Implications

Port Laredo's ascendance reflects the broader transformation of U.S.-Mexico trade relations, where efficient border infrastructure and coordinated customs processes drive economic integration. This success story demonstrates how strategic investment in port facilities and technology can catalyze regional economic growth.

The port's performance validates the nearshoring trend and suggests that North American supply chains will continue to strengthen. As companies seek reliable, efficient trade routes, Laredo's role as a premier gateway for U.S.-Mexico commerce appears set to grow further.

April 2024: Laredo's Bridge Crossings - The Pulse of Border Commerce

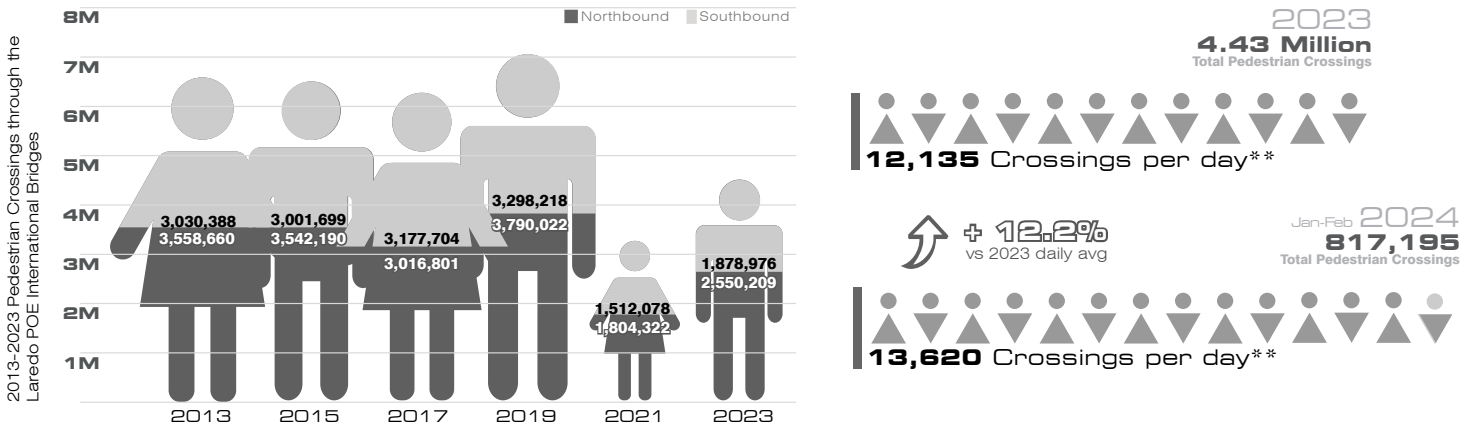
OVERVIEW

April's edition examines the vital signs of U.S.-Mexico integration through a decade-long analysis of Laredo's International Bridge crossings. The data reveals substantial growth across all crossing categories—pedestrians, passenger vehicles, and commercial trucks—painting a picture of increasing bilateral connectivity.

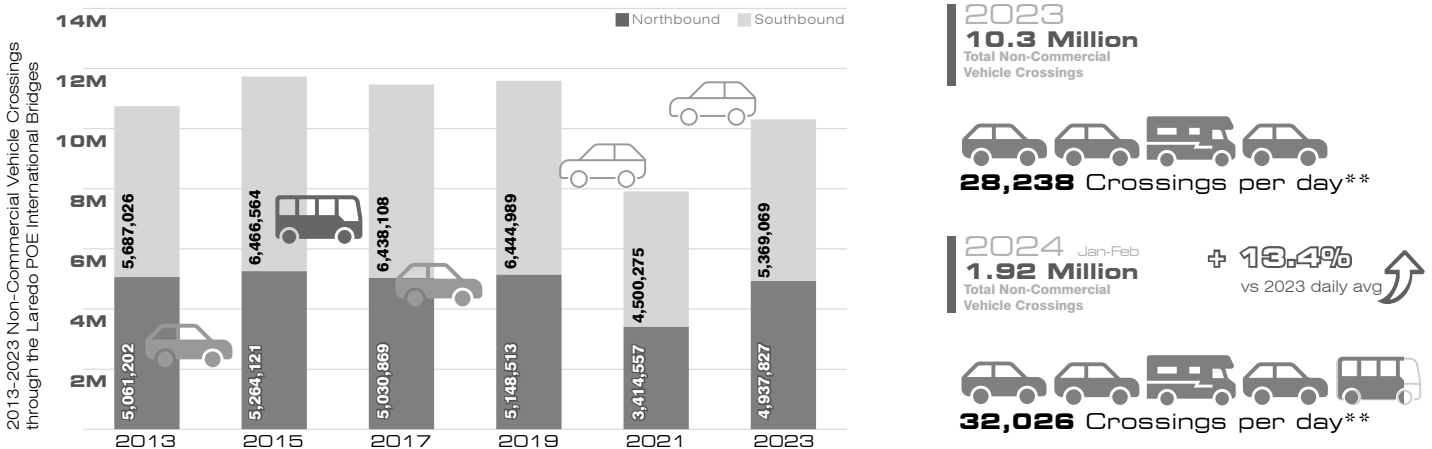
The comparison of daily average crossings from 2013 to 2023, along with early 2024 data, demonstrates not just growth but acceleration in cross-border movement, with all categories showing double-digit increases in early 2024 compared to 2023 averages.

This month's edition analyzes **Port Laredo International Bridge Crossings** and examines trends over the past decade.

Our **10-year timelines** cover north and southbound crossings for all Laredo International Bridges, providing a clear view of **pedestrian, passenger vehicle, and commercial truck traffic**.



** The daily average is estimated by considering international bridges operating 7 days a week 365 days a year.



April 2024: Laredo's Bridge Crossings - The Pulse of Border Commerce

Key Elements and Data Points

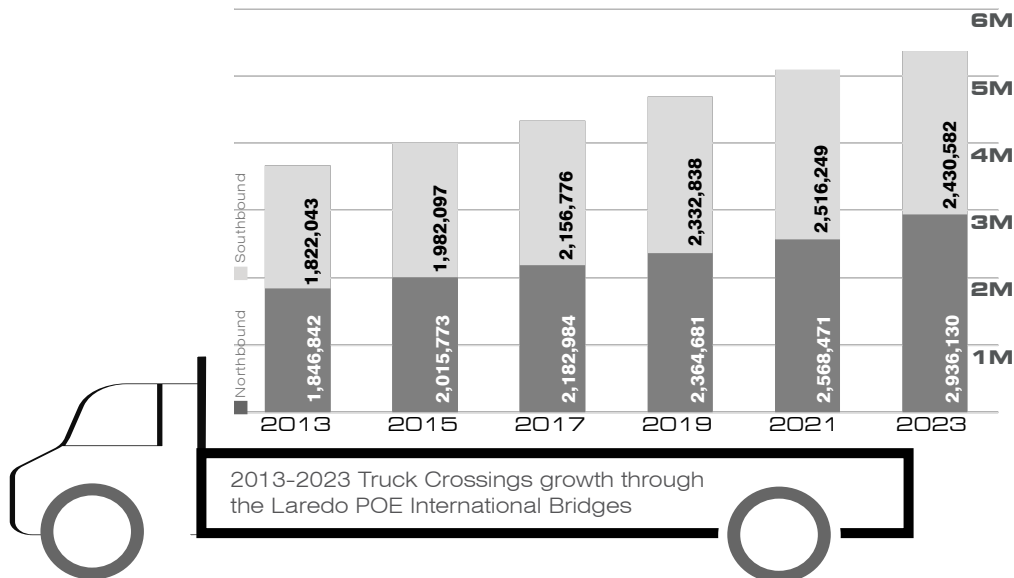
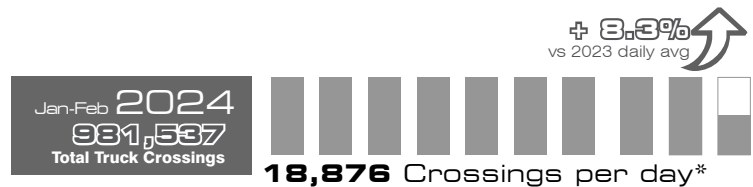
The commercial vehicle metrics tell a compelling story. Truck crossings reached 5.37 million in 2023 and showed an 8.3% increase in daily averages for early 2024 (18,876 crossings per day). Non-commercial vehicle crossings hit 10.3 million in 2023, and daily averages rose 13.4% to 32,026 crossings in early 2024.

Pedestrian traffic demonstrates similar vitality, with 4.43 million crossings in 2023 and a 12.2% increase in daily averages for early 2024 (13,620 crossings). These figures reflect both the commercial and human aspects of cross-border integration.

Additionally, our **comparison of daily average crossings** offers valuable insights into how people and goods move across the border using Laredo's bridges.



* The daily average is estimated by considering a six-day workweek standard, which spans from Monday to Saturday



Trade Dynamics

The symmetry between northbound and southbound traffic - particularly in commercial crossings - indicates balanced trade flows. The data shows 2.93 million northbound and 2.43 million southbound truck crossings in 2023, reflecting the two-way nature of supply chain integration.

The steady growth in all categories over the decade, with particularly strong momentum in recent years, suggests deepening economic and social ties between the United States and Mexico. The increasing traffic volumes have been accommodated without significant disruption, demonstrating the effectiveness of border infrastructure investments.

Broader Implications

The comprehensive growth across all crossing types underscores Laredo's role as a multifaceted gateway, serving both commercial and community needs. The recent acceleration in crossing volumes suggests that U.S.-Mexico integration continues to deepen, driven by both economic and social factors.

These trends validate the strategic importance of continued investment in border infrastructure and suggest that Laredo's position as a crucial nexus for U.S.-Mexico relations will only strengthen. The data also highlights the need for ongoing capacity expansion and technology adoption to maintain efficient operations amid growing demand.

May 2024: Evolution of Laredo's Rail and Air Cargo Trade

OVERVIEW

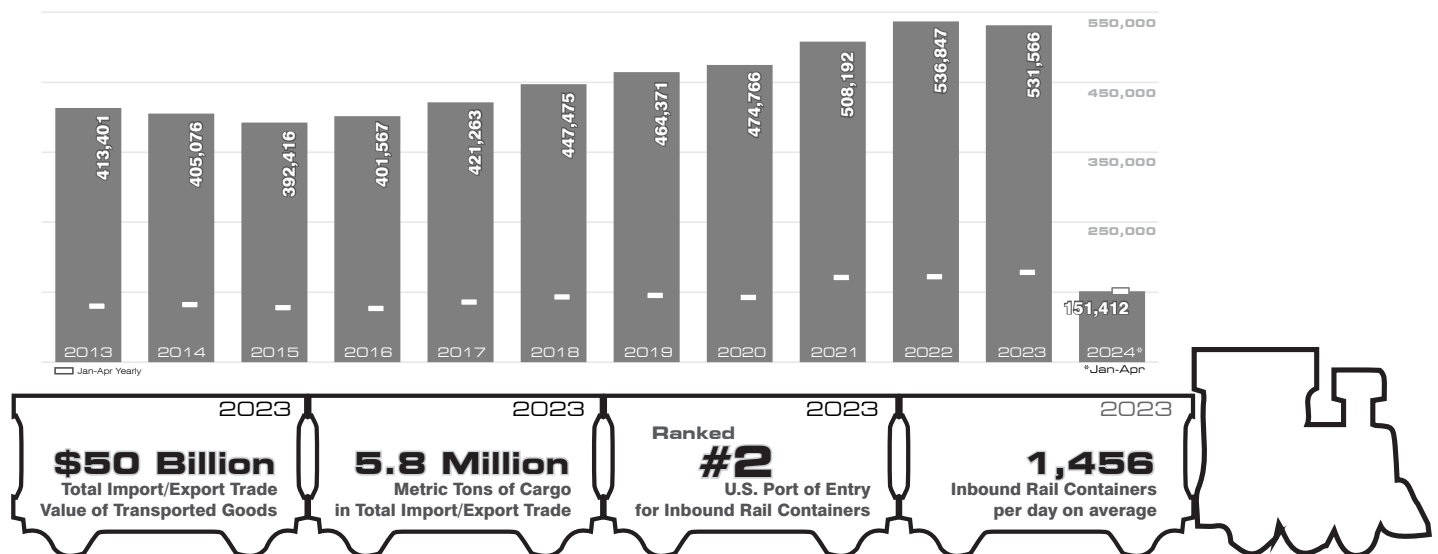
The May edition explores a decade-long examination of Port Laredo's rail and air cargo operations, offering insights into the diversification of cross-border trade infrastructure. Through careful analysis of inbound rail containers and trade values, the data reveals how different transportation modes complement each other in facilitating U.S.-Mexico commerce.

This comprehensive look at multimodal trade flows demonstrates Port Laredo's evolution from a primarily truck-based port to a sophisticated operation handling significant rail and air cargo volumes. The trends from 2013 to 2023, coupled with early 2024 data, show steady growth in rail container traffic and strategic development of air cargo capabilities.

This month's edition focuses on **Port Laredo's Rail and Airport** trade.

Our **10-year** timeline reveals the changes in **inbound rail containers**, alongside key facts about import values and rankings.

Port Laredo Yearly Inbound Rail Containers



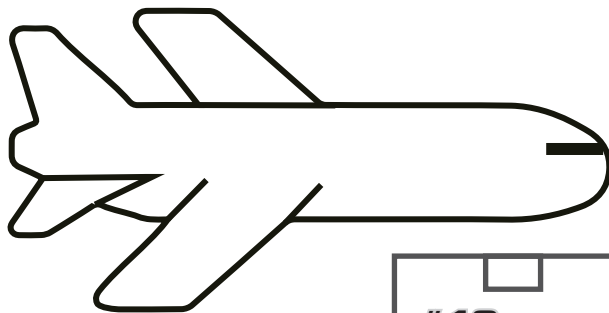
May 2024: Evolution of Laredo's Rail and Air Cargo Trade

Key Elements and Data Points

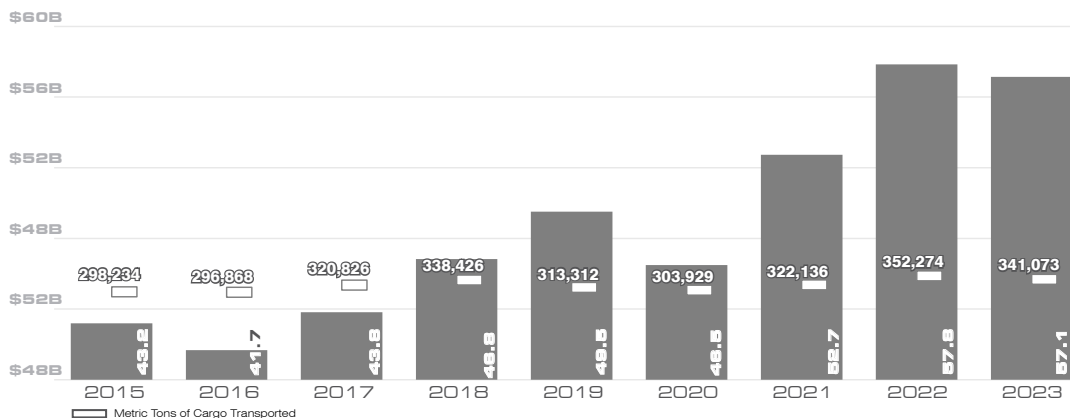
Rail operations show remarkable growth, with inbound containers averaging 1,456 per day in 2023, positioning Laredo as the second-ranked U.S. port of entry for rail containers. The total import/export trade value of goods transported by rail reached \$50 billion, with cargo volume hitting 5.8 million metric tons, demonstrating the increasing importance of rail in cross-border commerce.

The air cargo analysis reveals steady development, with total import/export trade values showing consistent growth over the past decade. The facility's ranking as #40 in total all-cargo landed weight underscores its emerging role in specialized trade. Early 2024 data shows promising growth, with \$13.7 billion in total trade value and 80,158 metric tons of cargo in just the first quarter.

This month's analysis also includes a decade-long look at **Port Laredo's yearly air cargo** import and export values and important facts about air cargo trade.



Port Laredo Yearly Total Import/Export Trade Value by Air



Source: U.S. Bureau Of Transportation Statistics, U.S. Census Economic Indicators Division, City of Laredo Airport Department, faa.gov

May 2024: Evolution of Laredo's Rail and Air Cargo Trade

Trade Dynamics

The rail container timeline illustrates a steady upward trajectory from 2013 to 2023, with notable acceleration in recent years. This growth pattern suggests increasing adoption of rail transport for cross-border trade, likely driven by efficiency gains and environmental considerations. The data shows particular strength in northbound movements, reflecting the flow of manufactured goods from Mexico to U.S. markets.

Air cargo operations, while smaller in volume, show strategic specialization in high-value, time-sensitive goods. The decade-long trend in air cargo values demonstrates consistent growth, with occasional fluctuations reflecting broader economic cycles. The facility's development represents an important diversification of Port Laredo's capabilities, offering traders more options for moving goods across the border.

Broader Implications

The expansion and maturation of rail and air cargo operations at Port Laredo reflect the evolving needs of U.S.-Mexico trade. The significant investments in multimodal infrastructure demonstrate a long-term commitment to facilitating efficient cross-border commerce, while also providing alternatives that can help reduce congestion on roadways and lower transportation costs.

These developments position Port Laredo for continued growth in an era where supply chain resilience and modal diversity are increasingly valued. The complementary nature of rail, air, and truck operations suggests a well-planned approach to infrastructure development, ensuring that Port Laredo can accommodate varying types of cargo and meet the diverse needs of cross-border traders.

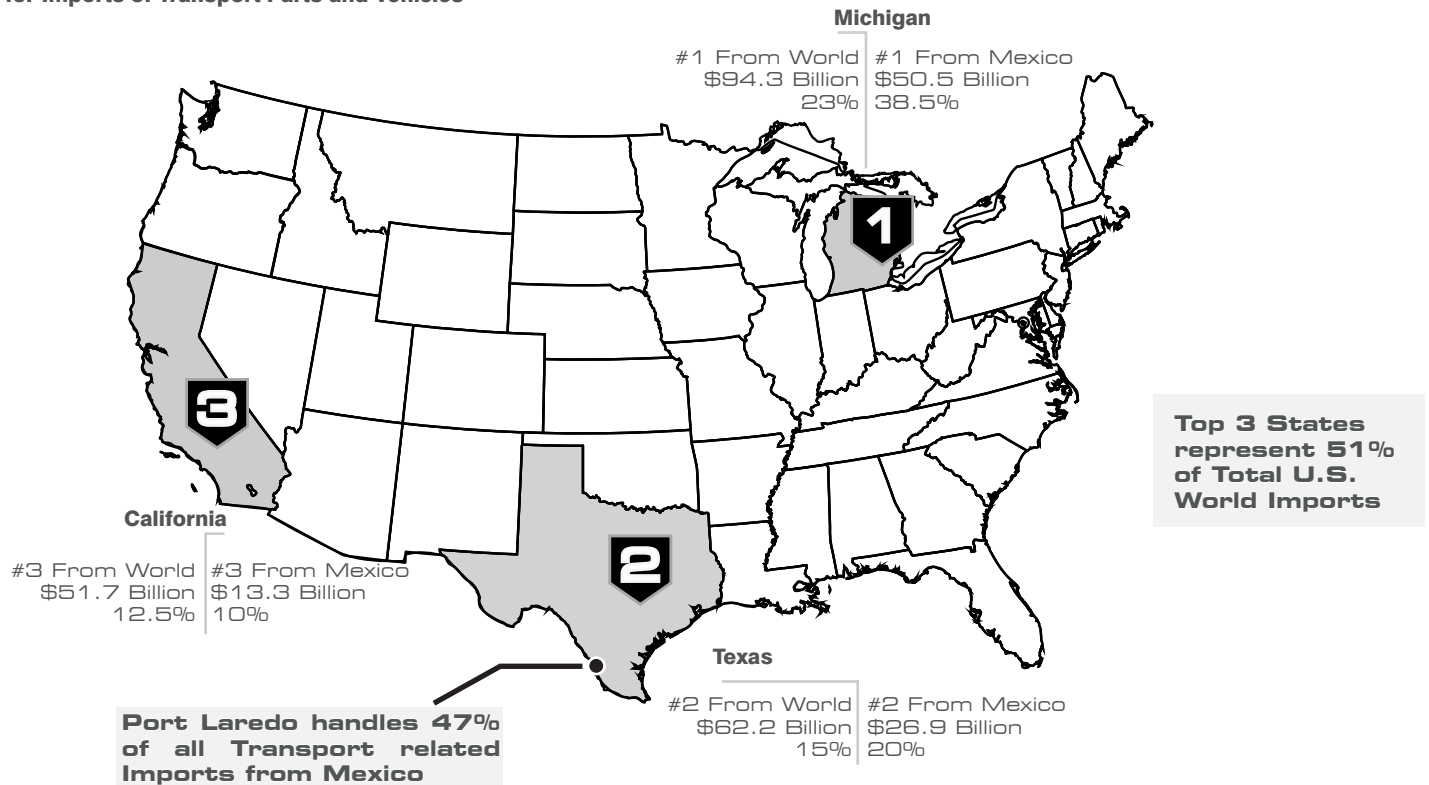
June 2024: U.S.-Mexico Transportation Equipment Trade Integration

OVERVIEW

The June edition examines the intricate web of transportation equipment trade between the United States and Mexico, revealing a deeply integrated cross-border manufacturing ecosystem. The analysis showcases how three U.S. states - Michigan, Texas, and California - have emerged as dominant players in this sector, collectively handling 51% of total U.S. global imports and 69% of imports from Mexico in this category.

This trade relationship demonstrates remarkable concentration, with Port Laredo serving as the primary gateway, processing 47% of all transport-related imports from Mexico. The data reveals a sophisticated supply chain network where Mexico's northern states have developed specialized manufacturing clusters that align closely with U.S. automotive and transportation equipment demands.

2023 TOP U.S. STATES for Imports of Transport Parts and Vehicles



June 2024: EU.S.-Mexico Transportation Equipment Trade Integration

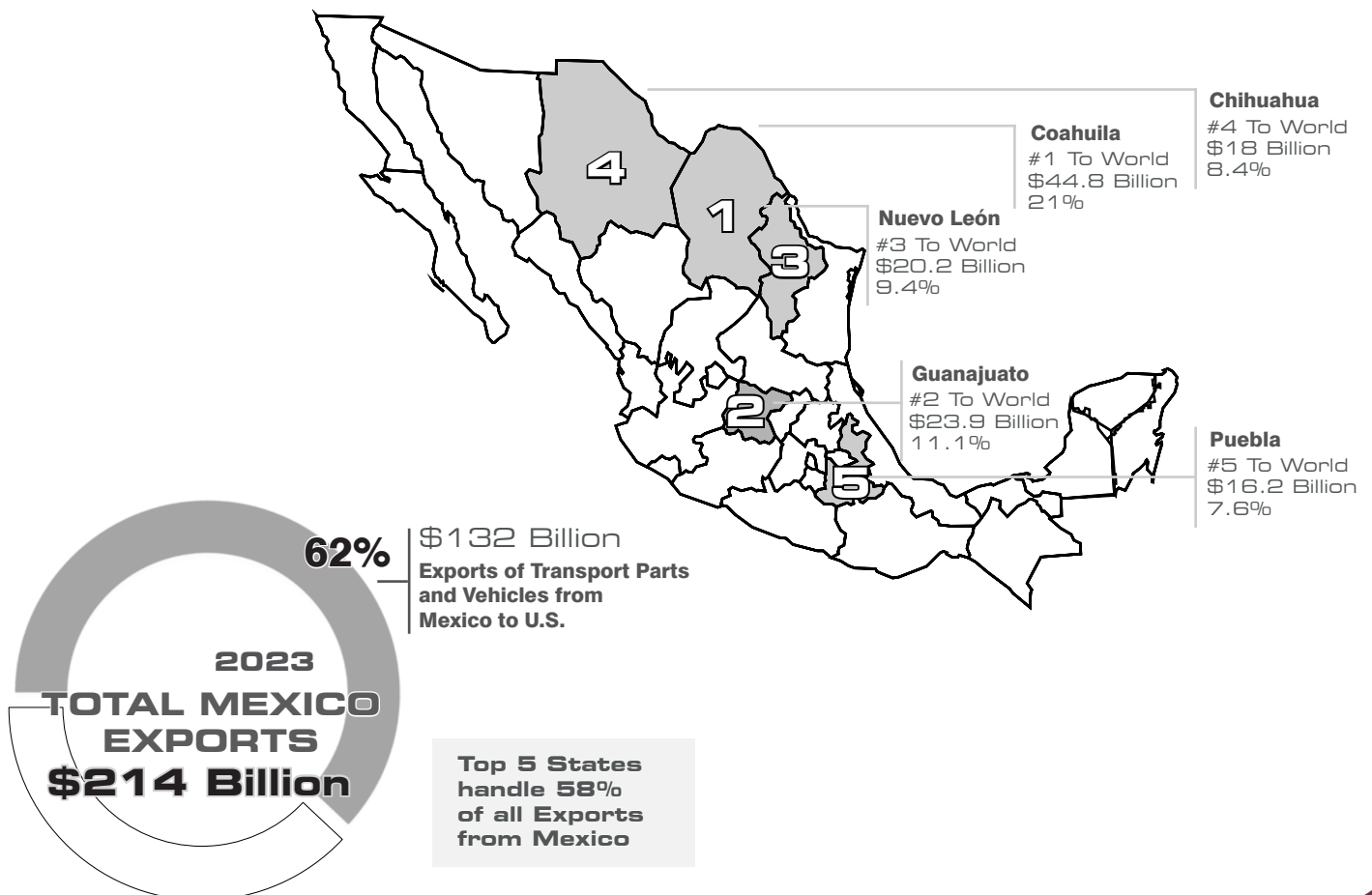
Key Elements and Data Points

The scale of this trade relationship is substantial, with U.S. total imports of transport parts and vehicles reaching \$412 billion in 2023, of which Mexico accounts for \$132 billion (32%). Michigan leads U.S. states with \$94.3 billion in global imports, followed by Texas (\$62.2 billion) and California (\$51.7 billion). The concentration of trade through these states underscores the geographic efficiency of the North American automotive supply chain.

On the Mexican side, five states lead exports, handling 58% of all transport-related exports. Coahuila leads with \$44.8 billion (21% of Mexico's total), followed by Guanajuato (\$23.9 billion), Nuevo León (\$20.2 billion), Chihuahua (\$18 billion), and Puebla (\$16.2 billion). This geographic distribution highlights the clustering of automotive and transportation equipment manufacturing in Mexico's industrial heartland.

2023 TOP MEXICO STATES

for Exports of Transport Parts and Vehicles



Trade Dynamics

The data reveals a highly specialized trade corridor, with Port Laredo emerging as the crucial link in this supply chain. It handles nearly half of all transport-related imports from Mexico. This concentration through a single port of entry demonstrates both the efficiency of established trade routes and the potential vulnerability of having such a concentrated flow through one gateway.

The bilateral trade patterns show strong regional specialization, with Mexico's northern states forming a manufacturing belt that closely integrates with U.S. automotive clusters. This geographic alignment minimizes transportation costs and facilitates just-in-time manufacturing processes, creating a highly efficient cross-border production network.

Broader Implications

The concentration of transportation equipment trade through specific states and ports highlights both the strengths and potential vulnerabilities in the U.S.-Mexico trade relationship. While the current system demonstrates remarkable efficiency, the heavy reliance on specific trade corridors suggests a need for infrastructure redundancy and capacity expansion to ensure supply chain resilience.

The deep integration of U.S.-Mexico transportation equipment manufacturing underscores the strategic importance of maintaining and enhancing cross-border trade infrastructure. As both countries continue to invest in electric vehicle production and next-generation transportation technologies, this trade relationship will likely become even more critical for North American industrial competitiveness.

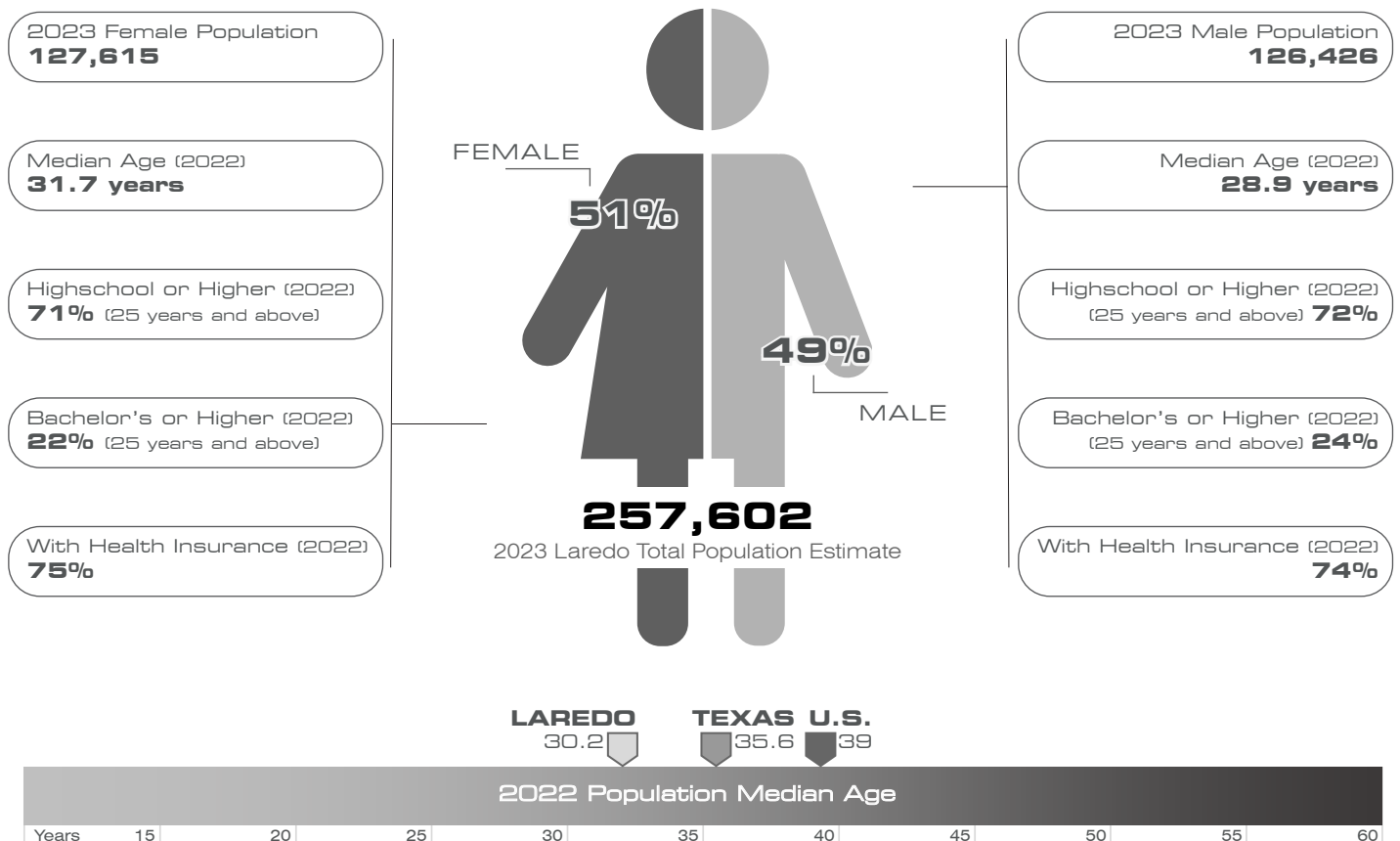
July 2024: Port Laredo's Demographic Foundation

OVERVIEW

The July edition provides a comprehensive demographic analysis of Port Laredo, examining the human capital that powers the nation's top port of entry. With a total population of 257,602 in 2023, Laredo presents a unique demographic profile that combines a relatively young workforce with growing educational attainment, reflecting its role as a dynamic international trade hub.

The analysis reveals a city whose population characteristics are distinctly shaped by its position as a major trade gateway, with demographics that differ notably from both Texas and national averages. This unique profile helps explain the port's success in handling complex international trade operations while highlighting areas for potential workforce development.

This month's edition explores the demographics behind Port Laredo, the top U.S. port of entry, examining the workforce and population that drive its success in international trade.



Key Elements and Data Points

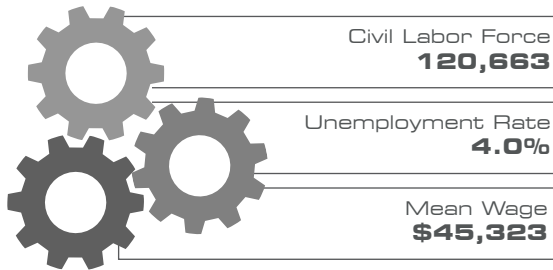
The workforce data shows a civil labor force of 120,663 with a competitive unemployment rate of 4.0%. The mean wage of \$45,323 reflects the diverse range of trade-related employment opportunities in the region. The city's household metrics provide additional context, with 74,380 total households maintaining an average household income of \$60,928 and a 79% population above poverty level.

Educational attainment shows steady progress, with 71% of females and 72% of males aged 25 and above having achieved a high school education or higher. Bachelor's degree attainment reaches 22% for females and 24% for males, indicating room for growth in higher education. Health insurance coverage remains a challenge, with 75% of females and 74% of males having coverage.

Our analysis includes workforce numbers and health insurance coverage trends, providing a complete panorama of the city's demographic makeup.

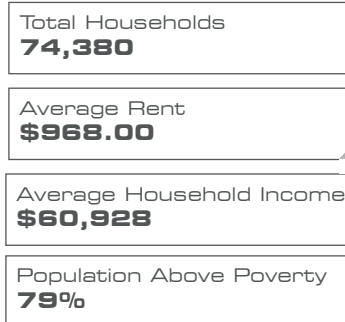
2023 WORKFORCE

Laredo, MSA / Webb County



LAREDO HOUSEHOLDS

2018-2022



These figures help us understand Laredo's current situation and how it has changed in recent years.

Trade Dynamics

The population's age structure reveals a notably younger workforce compared to state and national averages. Laredo's median age of 30.2 years contrasts with Texas (35.6) and the U.S. (39.0) figures. This younger demographic suggests potential advantages in workforce adaptability and long-term economic growth prospects.

The gender distribution shows a nearly balanced population (51% female, 49% male), though with some differences in median age (31.7 years for females versus 28.9 for males). This balance, combined with similar educational attainment levels between genders, suggests equitable workforce participation opportunities in the trade sector.

Broader Implications

The demographic profile of Laredo presents both opportunities and challenges for its role as a major trade hub. The younger population offers potential for workforce development and adaptation to evolving trade technologies, while educational attainment levels suggest a need for continued investment in higher education and specialized trade-related training.

The city's demographic characteristics underscore the importance of developing targeted workforce development strategies that can leverage its young population while addressing challenges in areas such as healthcare coverage and income levels. As Port Laredo continues to grow in importance for U.S.-Mexico trade, these demographic factors will play a crucial role in determining its long-term success and capacity for innovation in international trade facilitation.

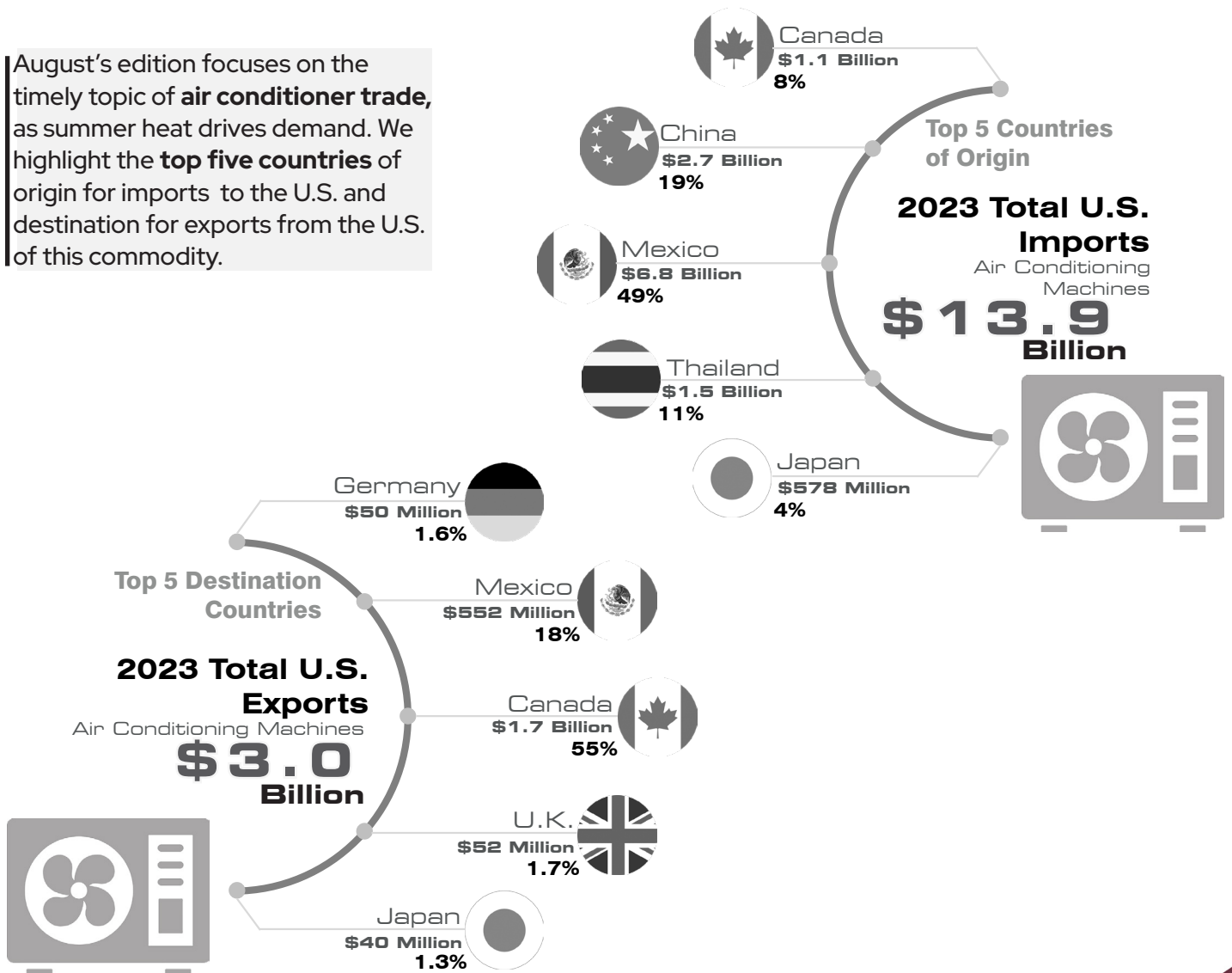
August 2024: Air Conditioner Trade Flows

OVERVIEW

The August edition examines the seasonal dynamics of air conditioner trade, revealing significant patterns in U.S. import and export relationships during peak demand season. The analysis shows a stark contrast between import and export values, with U.S. imports (\$13.9 billion) substantially exceeding exports (\$3.0 billion) in 2023, highlighting the nation's role as a major consumer of air conditioning equipment.

Port Laredo emerges as a crucial gateway in this trade sector, handling 81% of U.S. imports from Mexico and 80% of exports to Mexico. This concentration of trade flow through a single port underscores the efficiency of established supply chains and highlights the strategic importance of maintaining robust infrastructure at key border crossings.

August's edition focuses on the timely topic of **air conditioner trade**, as summer heat drives demand. We highlight the **top five countries** of origin for imports to the U.S. and destination for exports from the U.S. of this commodity.



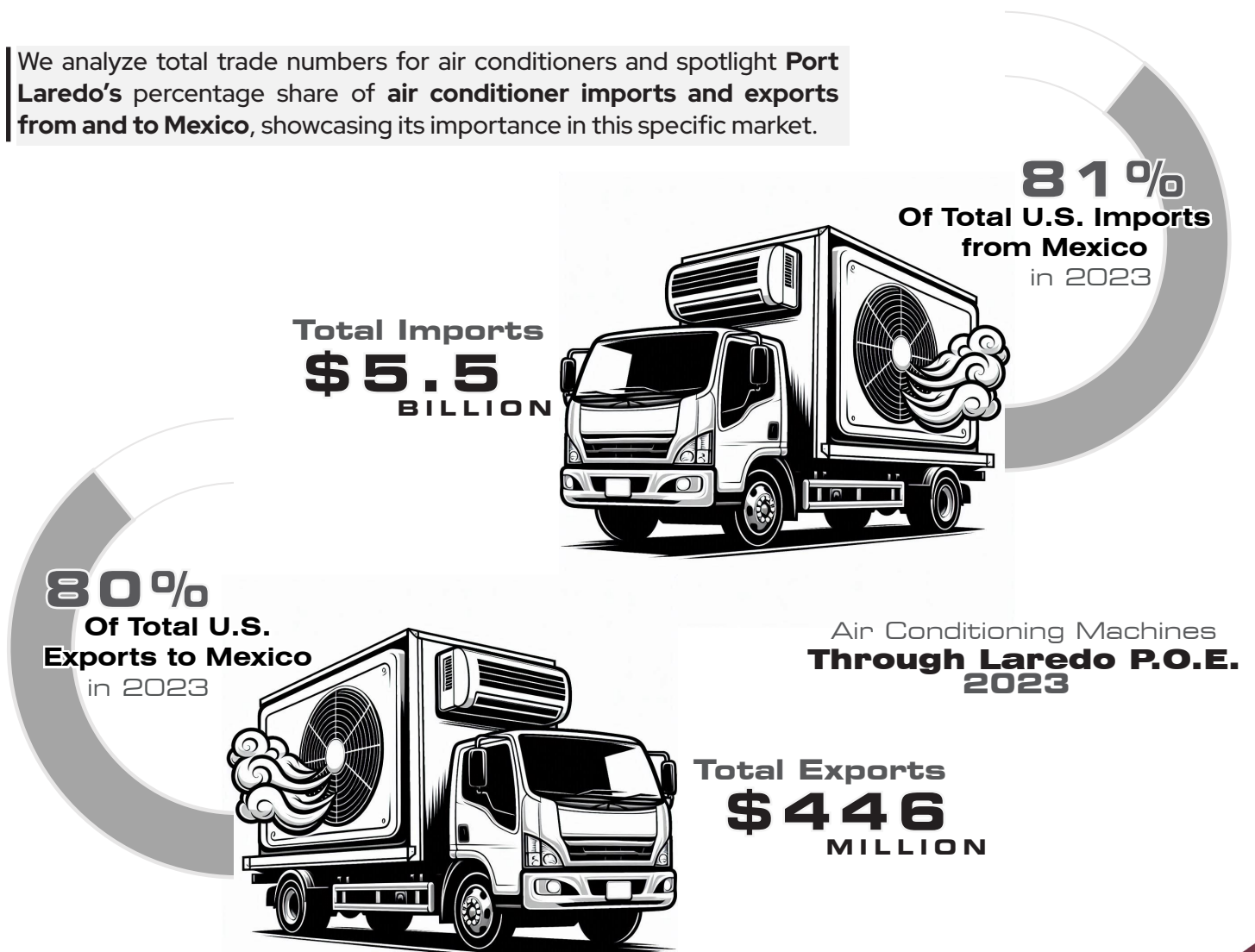
August 2024: Air Conditioner Trade Flows

Key Elements and Data Points

Imports are led by five countries, with China leading at \$6.8 billion (49% of total imports), followed by Mexico (\$2.7 billion, 19%), Thailand (\$1.5 billion, 11%), Canada (\$1.1 billion, 8%), and Japan (\$578 million, 4%). This distribution reflects a diverse supply chain strategy while maintaining strong regional partnerships within North America.

Export patterns show a different concentration, with Canada receiving the majority at \$1.7 billion (55% of total exports), followed by Mexico (\$552 million, 18%), and smaller shares going to Germany, the U.K., and Japan, each accounting for less than 2% of exports. The total export value through Port Laredo reached \$446 million, while imports through the same port totaled \$5.5 billion in 2023.

We analyze total trade numbers for air conditioners and spotlight **Port Laredo's** percentage share of **air conditioner imports and exports from and to Mexico**, showcasing its importance in this specific market.



August 2024: Air Conditioner Trade Flows

Trade Dynamics

The significant disparity between import and export values suggests a strong domestic demand for air conditioning equipment that domestic production alone cannot satisfy. The heavy reliance on Asian manufacturers, particularly China and Thailand, indicates the region's competitive advantage in production scale and cost efficiency.

The role of Port Laredo in facilitating U.S.-Mexico air conditioner trade is particularly noteworthy, with the port handling over 80% of bilateral trade in this sector. This concentration suggests highly optimized supply chains and specialized handling capabilities for this type of equipment at the port.

Broader Implications

The trade patterns in air conditioning equipment reflect both the globalized nature of manufacturing and the importance of regional trade partnerships. While Asian countries lead the import market, the significant trade flows through Port Laredo demonstrate the continuing importance of near-shoring and regional manufacturing integration.

The seasonal nature of air conditioner demand adds complexity to supply chain management, requiring efficient port operations and logistics networks to handle peak season volumes. The concentration of trade through Port Laredo suggests potential opportunities for infrastructure investment and capacity expansion to support growing bilateral trade in this sector.

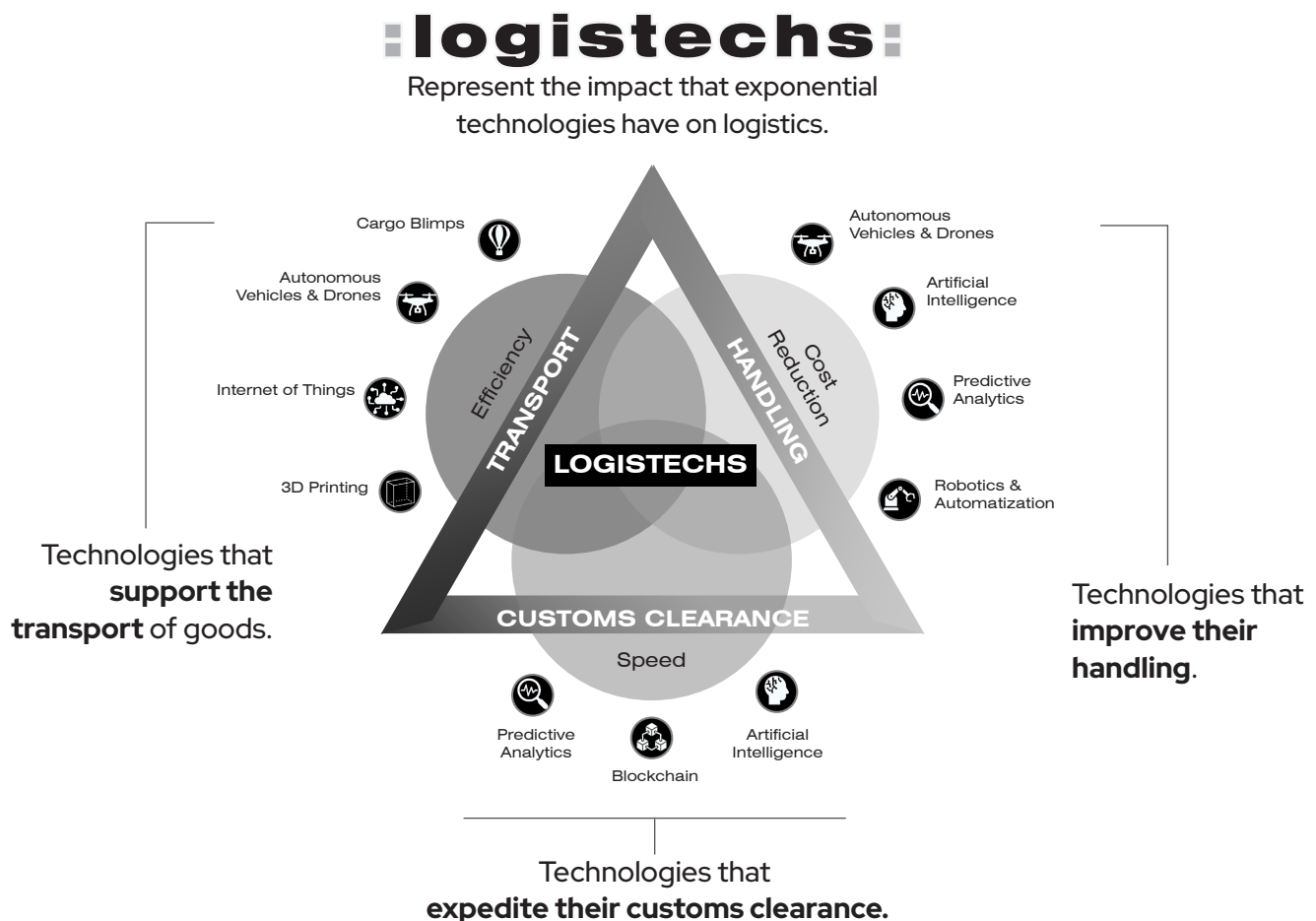
September 2024: The Rise of Logistechs in Supply Chain Management

OVERVIEW

The September edition introduces and explores the concept of “Logistechs” - the convergence of exponential technologies and logistics that is revolutionizing supply chain management. This analysis examines how emerging technologies are transforming three critical areas of international trade: transport support, handling improvement, and expedited customs clearance.

Integrating technologies such as artificial intelligence, the Internet of Things (IoT), and blockchain is creating unprecedented efficiencies in supply chain operations. This technological evolution represents a fundamental shift in how international trade operations are conducted and managed, with measurable impacts on accuracy, cost reduction, and processing speed.

In this edition, we examine the impact the **latest technology advancements** have had in the field of **supply chain logistics** and how we created a new term: **Logistechs**.



September 2024: The Rise of Logistechs in Supply Chain Management

Key Elements and Data Points

IoT implementations in smart warehouses have achieved remarkable results, with 99.9% improved accuracy and 25% enhanced operational efficiency. In the realm of artificial intelligence, supply chain systems can now forecast daily demand for 400 million products, resulting in \$1.6 billion in transportation and logistics savings.

Predictive analytics has demonstrated significant impact on risk management and document processing, with 40% improved accuracy in risk detection and 60% improved trade document processing. These improvements span transport, handling, and customs clearance processes, creating a more integrated and efficient supply chain ecosystem.

SUPPORT TRANSPORT



Internet of Things



IoT Smart Warehouses

99.9% Improved Accuracy

25.0% Improved Operational Efficiency

IMPROVE HANDLING



Artificial Intelligence



Supply Chain A.I.

Forecast Daily Demand of
400 Million Products

\$1.6 Billion Savings in transportation and logistics

EXPEDITE CLEARANCE



U.S. Customs and Border Protection

Predictive Analytics



Shipment Predictive Analytics

40% Improved Accuracy of Risk Detection

60% Improvement processing of trade documents

September 2024: The Rise of Logistechs in Supply Chain Management

Trade Dynamics

The implementation of Logistechs creates a three-pronged approach to supply chain optimization: technologies that support transport (including autonomous vehicles and 3D printing), technologies that improve handling (featuring AI and robotics), and technologies that expedite customs clearance (incorporating blockchain and predictive analytics).

The integration of these technologies is creating new synergies across the supply chain. For example, IoT devices in smart warehouses communicate with AI-driven logistics systems, while blockchain technology ensures secure and transparent customs documentation, creating a seamless flow of goods and information.

Broader Implications

The emergence of Logistechs represents a paradigm shift in international trade operations, promising to reduce costs, increase efficiency, and enhance reliability across supply chains. The demonstrated improvements in accuracy and operational efficiency suggest that investment in these technologies will become increasingly critical for maintaining competitive advantage in global trade.

Adopting these technologies also has implications for workforce development and infrastructure investment at major trade hubs like Port Laredo. As these systems become more sophisticated, there will be a growing demand for skilled workers who can manage and maintain these integrated technological solutions while ensuring their effective implementation across international borders.

October 2024: U.S. Corn Export Dynamics

OVERVIEW

The October edition examines the United States' position as the world's leading corn exporter, focusing particularly on its strategic trade relationships. With total worldwide corn exports reaching \$13.65 billion in 2023, the analysis reveals the concentrated nature of U.S. corn trade, where 76% of exports flow to just four countries: Mexico (\$5.5 billion), Japan (\$2.1 billion), China (\$1.6 billion), and Colombia (\$1.1 billion).

The data highlights the particular importance of the U.S.-Mexico corn trade relationship. Port Laredo emerges as a crucial gateway, handling 32% of U.S. corn exports to Mexico. This concentration through a single port underscores the efficiency of established agricultural trade routes while highlighting the strategic importance of maintaining robust border infrastructure.

This month's edition examines the vital role of corn in U.S.-Mexico trade relations, highlighting America's position as the world's leading corn exporter.



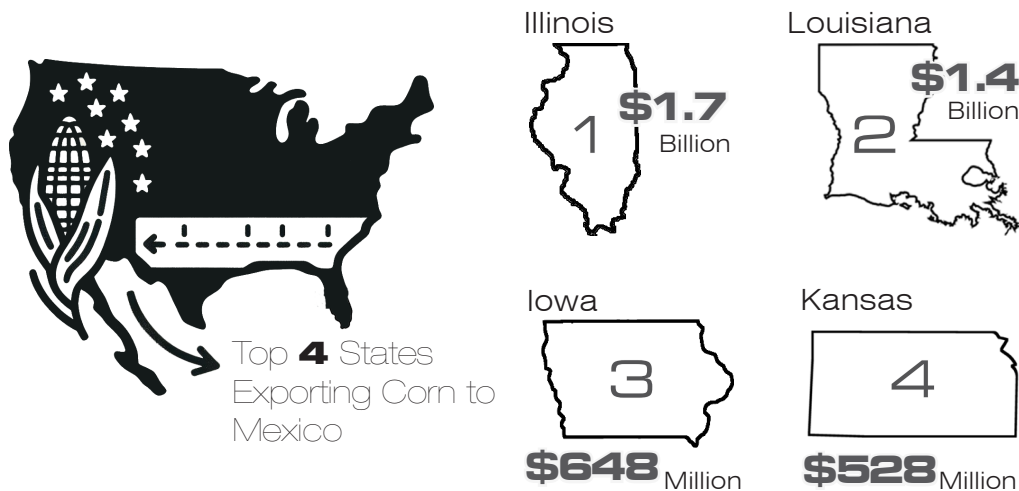
Source: U.S. Census Bureau: Economic Indicators Division, Images: Bing Image Creator, <https://www.worldstopexports.com/corn-exports-country>

October 2024: U.S. Corn Export Dynamics

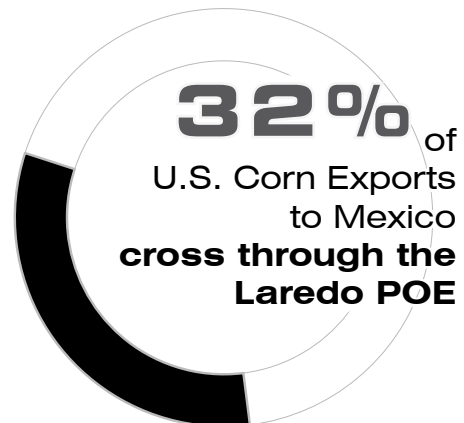
Key Elements and Data Points

Four states control U.S. corn exports to Mexico: Illinois leads at \$1.7 billion, followed by Louisiana (\$1.4 billion), Iowa (\$648 million), and Kansas (\$528 million). This geographic concentration reflects the efficiency of established agricultural supply chains and the importance of river transport infrastructure in facilitating grain exports.

The broader international distribution shows Mexico as the primary destination, accounting for approximately 40% of total U.S. corn exports. This relationship is particularly significant given Mexico's position as a major food processor and the interconnected nature of North American agricultural markets.



Our analysis also explores key corn-exporting states and showcases Port Laredo's strategic importance, as it facilitates nearly one-third of U.S. corn exports to Mexico.



Trade Dynamics

The concentration of exports through specific states and ports reveals the optimization of agricultural logistics networks. The Mississippi River system plays a crucial role, as evidenced by Louisiana's strong export numbers, while the land route through Port Laredo demonstrates the importance of efficient border crossings for grain transport.

Port Laredo's handling of nearly one-third of U.S. corn exports to Mexico highlights the port's specialized capabilities in agricultural commodity movement. This significant share suggests well-developed infrastructure and expertise in handling bulk grain shipments across the border.

Broader Implications

The United States' position as the world's leading corn exporter has significant implications for global food security and trade relations. The strong bilateral trade with Mexico underscores the deep integration of North American agricultural markets and the importance of maintaining efficient cross-border trade infrastructure.

The concentration of trade through specific states and ports suggests opportunities for infrastructure investment and capacity expansion, particularly given the strategic importance of corn exports in U.S.-Mexico trade relations. The data also highlights the potential vulnerability of having concentrated export routes, suggesting the need for continued diversification of transportation options.

OVERVIEW

The November edition explores the dynamic logistics ecosystem of “Los Dos Laredos” - the twin cities of Laredo, Texas, and Nuevo Laredo, Tamaulipas. This unique cross-border region has emerged as the premier U.S.-Mexico trade corridor, handling an impressive 39% of total bilateral trade, valued at \$313 billion of the \$799 billion total U.S.-Mexico trade in 2023.

The analysis reveals a sophisticated logistics network powered by over 100,000 workers across both cities. This network encompasses more than 450 freight forwarders, 400 customs brokers, and 520 trucking companies. This robust infrastructure has helped establish the region as the top U.S. port of entry, accounting for 6.3% of total U.S. world trade (\$320 billion).

Key Elements and Data Points

The scale of operations is remarkable, with 5.84 million truck crossings recorded in 2023. The region’s infrastructure includes 11 industrial parks and 36 maquiladora plants, supported by over 42 million square feet of warehouse and logistical space. Recent development continues with \$1 billion invested in new construction between 2022 and 2024.

The workforce data shows significant specialization, with Laredo employing 35,800 workers in logistics and manufacturing, while Nuevo Laredo contributes 70,275 workers in similar sectors. This combined workforce of over 100,000 demonstrates the region’s role as a major employment hub in cross-border trade.

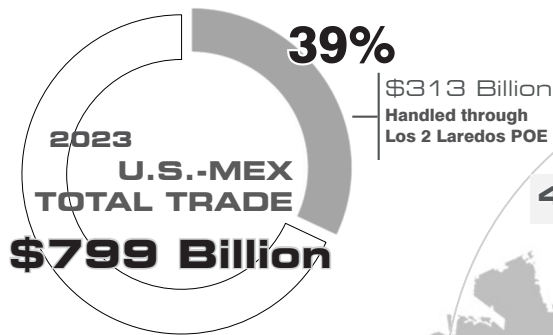
November 2024: Los Dos Laredos - A Premier Trade Corridor

In this edition, we explore the dynamic **logistics ecosystem of Laredo, Texas, and Nuevo Laredo, Tamaulipas**, showcasing how this cross-border region has emerged as the premier U.S.-Mexico logistics and trade corridor.

LOS 2 LAREDOS

U.S.-MEXICO PREMIER LOGISTICS & TRADE CORRIDOR

Top U.S. POE accounting for **6.3%** of Total U.S.-World Trade **\$320 Billion** 2023



+42 Million & Logistical SqFt Warehouse & Logistical Space

2022-2024 **\$1 Billion** invested in new construction

450+ Freight Forwarders

Laredo U.S.A

35,300 Logistics & Manufacturing WORKFORCE

Rio Grande River - Rio Bravo

400 Custom Broker Licenses

2023 Top Port in Mexico handled **24%** of Total Trade Operations **+5.2 Million**

70,275 Logistics & Manufacturing WORKFORCE

Nuevo Laredo MEXICO

11 Industrial Parks

36 Maquiladora Plants

Trucking Companies **520+**

5.84 Million Truck Crossings 2023

Our analysis highlights the area's impressive logistics **workforce of over 100,000** that encompass **450+ freight forwarders**, **400 customs brokers** and **over 520 trucking companies** that power nearly 40% of all U.S.-Mexico trade.

Trade Dynamics

The region's success is built on complementary strengths across the border. Nuevo Laredo handles 24% of Mexico's total trade operations, processing over 5.2 million transactions in 2023. Meanwhile, Laredo's status as the top U.S. port of entry reflects its crucial role in facilitating north-south trade flows.

The presence of hundreds of freight forwarders, customs brokers, and trucking companies creates a comprehensive logistics ecosystem that can handle diverse cargo types and complex supply chain requirements. This concentration of specialized services providers enhances efficiency and promotes continued growth in trade volumes.

Broader Implications

Los Dos Laredos's success as a trade corridor demonstrates the power of cross-border cooperation in creating efficient trade infrastructure. The region's significant investments in physical infrastructure and human capital suggest continued confidence in its role as a crucial link in North American supply chains.

The region's development as a comprehensive logistics hub, with extensive warehouse space and specialized workforce, positions it well for future growth in U.S.-Mexico trade. However, this concentration of trade flows also highlights the importance of continued infrastructure investment and workforce development to maintain competitive advantage and operational efficiency.

December 2024: Natural Gas Trade Flows and Infrastructure

OVERVIEW

The December edition examines U.S. natural gas exports, encompassing liquefied propane and both liquefied and gaseous natural gas, which reached a substantial \$62.0 billion in 2023. The analysis reveals a diversified export market with the top five destination countries accounting for 48% of total exports, demonstrating both the global reach of U.S. natural gas trade and its strategic importance in international energy markets.

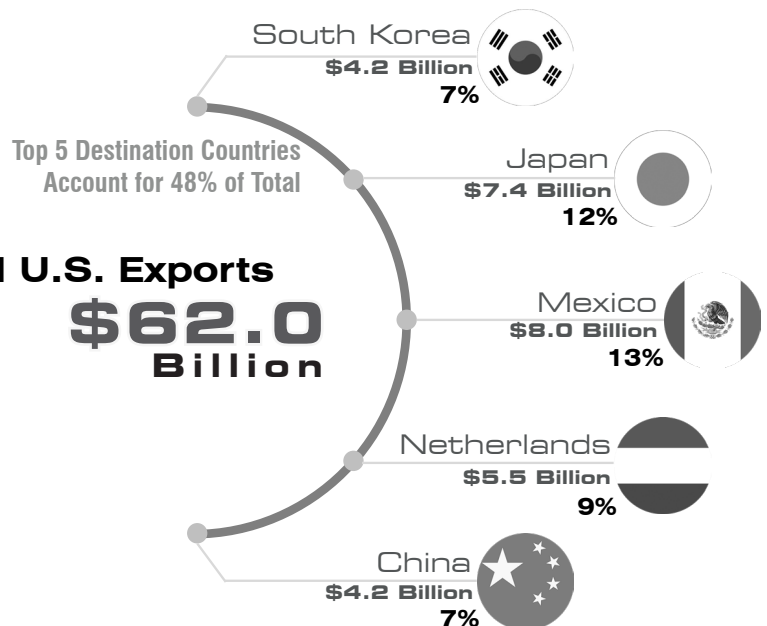
The data highlights Texas's dominant role in this sector. Ninety percent of U.S. natural gas exports to Mexico originate from the state. This concentration reflects both Texas's natural gas production capacity and its well-developed export infrastructure, including multiple ports of entry along the U.S.-Mexico border.

Closing the year 2024, our December's edition focuses on **natural gas exports***. We highlight the **top five countries** of destination for exports from the U.S. of this vital resource.

* Liquefied Propane, Natural Gas (Liquefied & Gaseous)



2023 Total U.S. Exports
Natural Gas*
\$62.0
Billion



December 2024: Natural Gas Trade Flows and Infrastructure

Key Elements and Data Points

The top five export destinations show a balanced distribution, with South Korea leading at \$8.0 billion (13%), followed by Japan (\$7.4 billion, 12%), Mexico (\$5.5 billion, 9%), and both the Netherlands and China at \$4.2 billion (7% each). This distribution reflects a strategic mix of Asian, European, and North American markets.

Six key ports along the U.S.-Mexico border handle the majority of natural gas exports. Hidalgo, Texas, leads at \$2.13 billion (26.4%), followed by Houston (\$1.21 billion, 15.1%), El Paso (\$1.17 billion, 14.6%), Brownsville (\$978 million, 12.2%), Otay Mesa (\$600 million, 7.5%), and Laredo (\$575 million, 7.1%).

We analyze total trade numbers and spotlight **Port Laredo's** percentage share of **natural gas* exports to Mexico** as well as emphasize the state of **Texas' importance** in this specific market.

Top U.S. Ports for Natural Gas* Exports to Mexico

- | | | | |
|---|---|---|--|
| 1 | Hidalgo, TX
\$2.13 Billion, 26.4% | 4 | Brownsville, TX
\$978 Million, 12.2% |
| 2 | Houston, TX
\$1.21 Billion, 15.1% | 5 | Otay Mesa, CA
\$600 Million, 7.5% |
| 3 | El Paso, TX
\$1.17 Billion, 14.6% | 6 | Laredo, TX
\$575 Million, 7.1% |



December 2024: Natural Gas Trade Flows and Infrastructure

Trade Dynamics

The data reveals diverse transportation methods. Twenty-five percent of Mexico's natural gas imports (\$2.0 billion) are moved via marine vessels, highlighting the importance of pipeline and maritime infrastructure in facilitating this trade. The dominance of Texas ports in handling these exports underscores the state's crucial role in the U.S.-Mexico energy trade.

The geographic distribution of export flows shows a strategic balance between land-based exports to Mexico and marine exports to Asia and Europe. This diversification helps maintain market stability and ensures supply chain resilience across different transportation modes and routes.

Broader Implications

The substantial value of U.S. natural gas exports highlights the country's growing role in global energy markets and the strategic importance of maintaining and expanding export infrastructure. The diversity of destination markets suggests opportunities for further growth and indicates the need for continued investment in pipeline and maritime export capabilities.

Texas's dominant position in natural gas exports to Mexico, coupled with the distributed network of border crossing points, demonstrates the importance of maintaining multiple export routes. This infrastructure redundancy helps ensure a reliable energy supply and suggests opportunities for targeted infrastructure investments to support growing export volumes.

Conclusion:

A Year of Trade Insights - Patterns, Progress, and Prospects

As we conclude this year-long journey through the landscape of U.S.-Mexico trade, several compelling narratives emerge from our monthly analyses. The twelve editions of Crossing Paths have documented not just statistics and trends but the evolution of a trading relationship that grows more sophisticated and integrated with each passing month.



The year's analyses reveal distinct yet interconnected themes. We began in January by examining seasonal trade patterns through Valentine's Day commodities, demonstrating how consumer demands drive international logistics. By February, we witnessed a historic milestone as Mexico became the United States' top trading partner, a development whose significance echoed through subsequent months' analyses. March and April focused on Port Laredo's infrastructure and operations, documenting its rise to become America's leading port of entry and examining the vital pulse of its bridge crossings.

The middle months explored specialized trade sectors: May's analysis of rail and air cargo development, June's deep dive into transportation equipment trade, and July's demographic examination of the workforce powering these operations. August through October showed the diversity of traded goods - from air conditioners responding to seasonal demands to corn highlighting agricultural trade flows.

November's comprehensive look at "Los Dos Laredos" as a premier logistics corridor provided context for December's examination of the natural gas trade, bringing our analysis full circle to the energy infrastructure supporting this entire trading ecosystem.

Conclusion:

Key Themes and Future Outlook

First, the growing sophistication of border infrastructure and operations. From Port Laredo's multimodal capabilities to the integration of "Logistechs," we've seen how technology and infrastructure investments transform cross-border trade. The port's handling of diverse cargo types - from fresh roses to industrial equipment - demonstrates remarkable operational flexibility.

Second, regional economic integration is deepening. Whether examining automotive parts, agricultural products, or energy resources, our analyses consistently revealed the intricate supply chains binding U.S. and Mexican industries. The concentration of trade through specific corridors, particularly Port Laredo, highlights the efficiency of these established patterns while also suggesting areas for future development.

Third, the human dimension of trade. Our July demographic analysis and November's exploration of Los Dos Laredos reminded us that behind the statistics are communities whose livelihoods depend on and contribute to cross-border commerce. The workforce development and educational attainment patterns we observed speak to the ongoing evolution of border communities.

Looking ahead, these analyses suggest several areas for continued attention: the need for sustained infrastructure investment to handle growing trade volumes, the importance of technological adoption to maintain competitive advantage, and the critical role of workforce development in supporting trade operations.

This compilation serves not just as a historical record but as a foundation for understanding future developments in U.S.-Mexico trade. By documenting both broad trends and specific trade patterns, we provide stakeholders at all levels—from policymakers to business leaders to community members—with insights to inform their decisions and strategies.

Conclusion:

Key Themes and Future Outlook

The story of U.S.-Mexico trade is one of continuous evolution, marked by both challenges and opportunities. Through Crossing Paths, we've sought to make this complex narrative accessible and actionable, demonstrating that international trade is not merely about moving goods across borders but about building bridges between economies, communities, and cultures.

As we look to the future, the patterns and insights revealed through these analyses suggest that the U.S.-Mexico trade relationship will continue to deepen and evolve. Understanding these dynamics through data-driven analysis remains crucial for navigating the opportunities and challenges ahead. In this spirit, Crossing Paths will continue to serve as a vital resource for all those seeking to understand and participate in the ongoing story of North American economic integration.



TEXAS CENTER

FOR BORDER ECONOMIC & ENTERPRISE DEVELOPMENT

TEXAS A&M INTERNATIONAL UNIVERSITY

2024 CROSSING PATHS:

Insights into U.S.
International Trade

2024



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