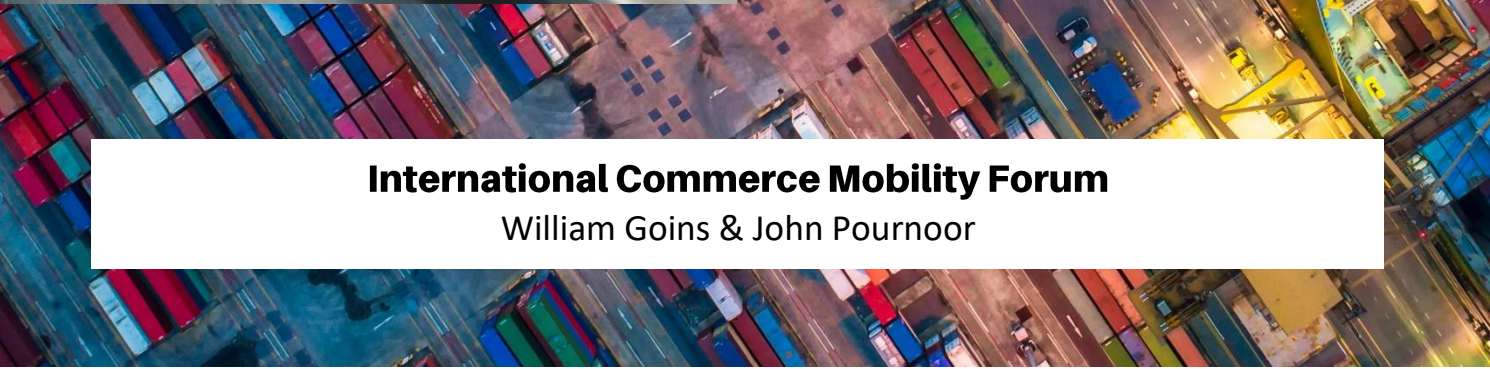




**Bridge
Minnesota's
Export Supply
Chain
Transportation
Gaps**



International Commerce Mobility Forum
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Minnesota and Global Supply Chains

The state of Minnesota's Gross State Product (GSP) was \$412 billion in 2022. For our state to be successful, digital, and physical trading routes must be effective and efficient. Only then shall we be attractive to businesses to bring jobs to Minnesota as we compete to be the preferred destination for investments.

A part of our \$412 billion in economic activity is due to consumption within our state, while some is due to Minnesota products finding their way to markets within the U.S., and the rest is exported to other countries worldwide. About \$27.2 billion or 6.6% of State's GSP was exported beyond U.S. borders. Minnesota's major trading partners are Canada and Mexico thanks to USMCA trade agreement. Europe, Germany, Japan, and China rank high on the list.

The key strategic question for Minnesota is whether our state's logistics infrastructure is adequate and whether added investments are required. Traditionally, market forces have been allowed to organically transform supply chains. However, if additional infrastructure (roads, ports, air, rail, pipeline) is required, then state or federal government support is essential, as these types of infrastructure are built through purely public or public-private partnerships.

Identifying Minnesota's Logistics Needs

It is important to find and address bottlenecks in Minnesota supply chains. For instance, today Minnesota lacks direct air routes for exports. Minnesota's international exports must be taken to an airport or seaport for transit to other countries by truck. In the case of Europe, a key target market for Minnesota

companies, air transport of high value goods our medical device manufacturers, must go to Chicago by truck to be palletized and loaded for air transport to Europe. The longer shipments are in transit, the longer it takes for customers to take delivery and pay Minnesota businesses. Shortening Minnesota's logistics and transportation routes reduces the amount of money a Minnesota business has tied up in inventory-in-transit and helps their bottom line. Investors in Minnesota take this critical element into account as they make decisions to locate operations in Minnesota.

Data-Driven Minnesota Infrastructure Investment

Tracking movement of goods and services are vital to deciding logistics bottlenecks. While for exports a company must file customs declarations and therefore there is a data trail to sort out exports by product class and by destination, for interstate and intra-state transport no such declaration is required, and data is harder to come by. Yet all this data collection is essential to make prudent investments in various transport options to assure Minnesota remains competitive. Minnesota Department of Transportation is gearing up to launch an excellent initiative quantifying the movement of freight into and out of Minnesota. Till that project generates results, action can be taken to bridge current glaring supply chain gaps like the Minnesota-to-Europe gap.

The Minnesota-Chicago Supply Chain Corridor

It is important we understand the volume and value of finished and semifinished products and high value raw materials of our various industries, in transit between MSP and Chicago O'Hare daily/nightly for shipment to international destinations. By doing so we can then begin to look at other improved supply chain and transportation options. We understand that some data and information is owned by individual companies, some by research organizations, and some by international freight forwarders to name a few. This data can provide insights into reducing the reliance on truck movement between MSP and Chicago. We believe this has the potential to supply savings for our manufacturers, reduce damage from shipment/transit handling, reduce

the cost of trucking, and improve our sustainability profile by reducing emissions from trucks currently serving these geographic areas. We believe that now is the time to study the return of an international air commerce/cargo hub and corridor to the MSP Airport or region which we lost after the Northwest Airline acquisition.

Other Minnesota Options

Other options include the use of Rochester International Airport, (RST) 78 miles away. While a future study is needed, RST could become the key freight/commerce airport for this Region much like the way Rockford, Ill. (RFD) is becoming a full-service air freight airport supporting Chicago O'Hare. This possibility could allow MSP to focus on passenger traffic expansion for many years into the future. A future key question could be the explore transit options and connectivity between MSP and RST airports to support the movement of high-value, time-sensitive raw materials, work-in progress and finished goods.

Scenario Planning & Analysis

We believe we need to gather quantitative and qualitative data to enable the determination of how much international air freight is moving via truck to an airport for transit. We need to know if the volume and value of products shipped can support one, three or more flights a week between MSP and a major air freight airport located in the Golden Logistics Triangle of Europe (made up of Amsterdam, Paris, and Frankfurt). An example could be the rapidly developing Liege Airport, (LGG), in Belgium.

Other key questions could include: Will companies, high-value shippers, and freight forwarders be willing to share their international air freight data? Can assurances be provided for protection of this data? Can this data be anonymized and then shared? This information can be gathered via surveys, in partnership with our chambers of commerce, from their members.

Recommendations for Minnesota's Supply Chain Revitalization

We have described the needs of current Minnesota industry and a requirement to attract future industries to Minnesota. Presidential Executive Order 14017, America's Supply Chains, set a series of steps in motion including billions of dollars available to the states to create more resilient supply chains. We have a once-in-a-generation opportunity to evaluate our needs and upgrade our logistics links with the rest of the world to not only help our businesses thrive but attract new business to Minnesota. This is an especially important task with the reshoring megatrend taking hold in the U.S with the CHIPS Act. We recommend:

1. Form an Analytics Resource Team

Form a volunteer Analytics team to be ready to lend support exploring existing data, however imperfect, and offer some granular detail on the trading routes that will reduce the number of days Minnesota exports will be in transit to reach their destination. Engage industry and academia. The team can be activated by a mechanism determined by the International Mobility Forum.

2. Pilot 1: Explore Minnesota-Liege, Belgium Route as a Rapid Export Route to the European Union

Liege, Belgium is expanding its aviation footprint. Explore either MSP or RST airports can be used to ship Minnesota-made products to their European destination, reducing the days of inventory tied up in transit for our businesses.

3. Pilot 2: Explore Minnesota-Liverpool, UK Route as a Rapid Export Route to the UK and the EU

With the emergence of a new study of Duluth to Liverpool, UK shipping, due to the possibility of open navigation throughout the year in the Great Lakes, explore this option for feasibility of reaching the UK market and the European Union market.

Summary

To attract businesses to invest in Minnesota, the state must provide competitive transportation options. As our State's economic output moves increasingly to high value products, our businesses need faster transportation and supply chain options to one of their key markets, Europe. Instead of trucking international air freight first by truck to Chicago, we can save time, reduce costs, improve economic competitiveness, and improve transportation carbon footprint by creating a direct air freight corridor between Minnesota and Europe. This requires a public-private-academic effort to drive the establishment of these economically important export links.

MINNESOTA EXPORT STATISTICS

Department of Employment and Economic Development



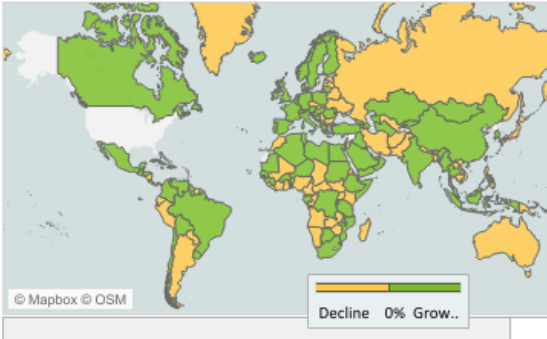
First, choose to view quarterly or annual data. Then, choose a time period. Hover over map or bar charts for more information. In the last chart below, choose a country to view detailed data.

1. Choose Quarterly or Annual Data
 Annual

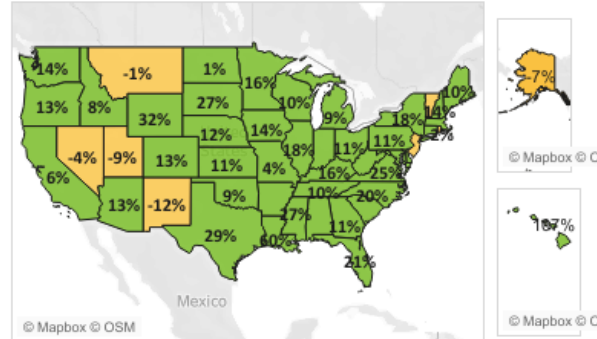
2. Choose a Time Period
 2022

2022 MN Exports: **\$27.3B** MN Change (%): **16%** U.S. Change (%): **18%**

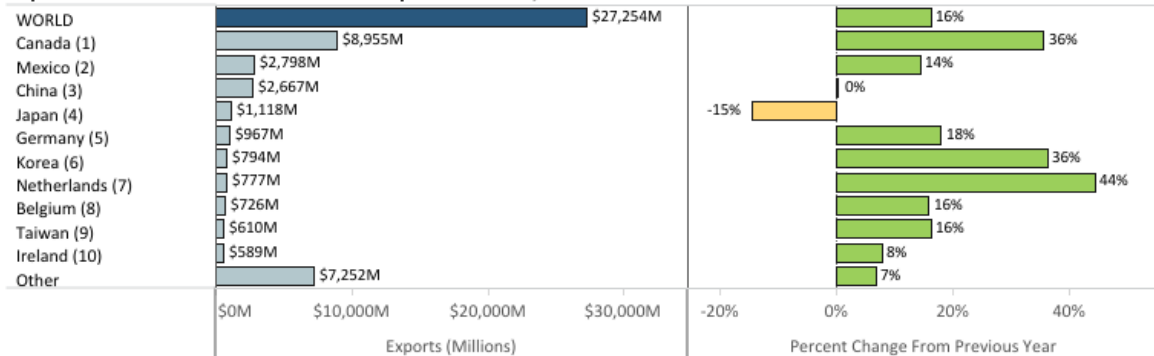
Export Growth Trends, by Country, 2022



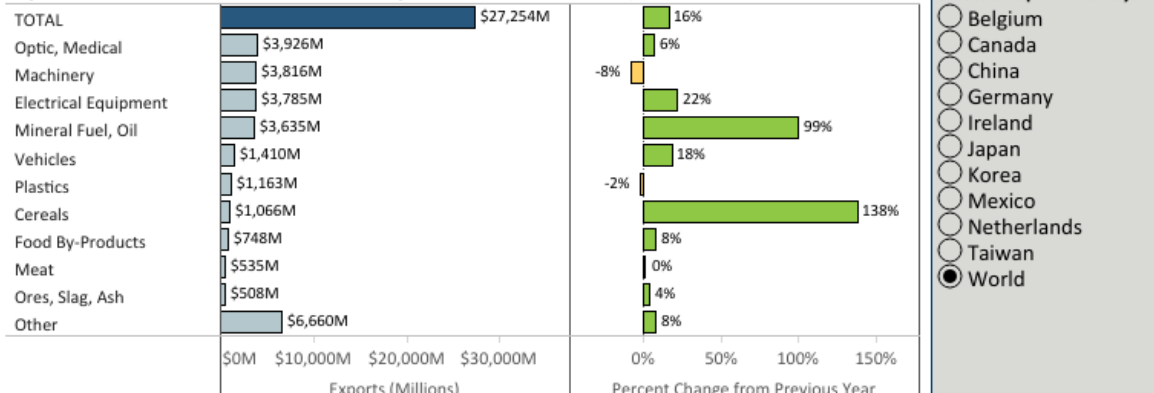
Export Growth Rates, by State, 2022



Exports and Trends for Minnesota's Top 10 Markets, 2022



Exports and Trends for Minnesota's Top 10 Products to World, 2022



Note: Some percentage changes may be omitted from charts when they exceed 400% (or are less than -400%) to reduce chart distortion.
 Data Source: Harmonized Tariff Schedule, Origin of Movement Export Series from Census Bureau, U.S. Department of Commerce, accessed from USA Trade Online (Census Bureau) and Trade Data Monitor (TDM).