

Key Learnings from 2019 McMaster Forum Process

MITL FORUM – JUNE 17, 2020

PRESENTED BY: MARK FERGUSON



2019 PROCESS FOR HAMILTON-NIAGARA

- 3 pillars emphasized (data, infrastructure, policy) in relation to supply chains
- Other key themes: agri-foods, e-commerce and export diversification
- 24 organizations interviewed in early 2019
 - 9 shippers
 - 5 carriers/3PL
 - 3 “Hub” Organizations
 - 4 government
 - 3 associations
- March 27th, 2019 Forum event at McMaster
- Release of final materials in late April

Strategic Supply Chain Knowledge Development in the Hamilton-Niagara Area


April 2019

PRIMARY ISSUES EMERGING

- Concern about high costs in the supply chain
- Shortages(drivers, pilots) and dependencies with regulatory
- Congestion
 - Road (major highway, regional and local)
 - Rail for some (scarce railcars)
- Concern about dated/insufficient infrastructure on different fronts
- Border: flow of information sometimes lagging the flow of goods
- Tight markets for distribution and fulfilment space

KEY TAKEAWAYS

- The need to focus on collaboration and the fostering of a collaborative environment
- An integrated and multi-modal focus and strategic orientation
- Education on several topics:
 - Supply chain careers
 - Exporting
 - Value of infrastructure
- Finding ways to fund the planning process for new infrastructure
- Enhancing SME development via e-commerce, exporting and export diversification
- Harnessing emerging technology and the power of data and data sharing



Better Understanding the Supply Chains of Niagara Region Firms

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OUTLINE

- Findings
- Traits of firms and freight movements they originate
- Supply Chain Delays/Stresses
- Costs in the Supply Chain
- Outsourcing and its Relevance
- Exporting and Export Diversification
- Evaluation of Select Improvements for Supply Chains

BACKGROUND

Exploring Goods Movement and Export Diversification for Niagara Region Firms

- Extensive, wide-ranging on-line survey instrument to gather information on many supply chain aspects (collaborating with Niagara Region)
- Associated report (mitl.mcmaster.ca)

<http://mitl.mcmaster.ca/portfolio/exploring-goods-movement-and-export-diversification-niagara-region-firms>

- Niagara region firms that originate shipments/goods movement
- 103 complete responses and 98 partial responses (Pre-COVID)
- Median completion time 30 minutes

March 2020

MAIN FINDINGS

1

High Costs

Logistics elements emerge as a significant cost of doing business and worry is expressed about high levels of these costs in the supply chain.

2

Traffic

Traffic Congestion (especially in the GTA) is rated as the most important area for improvement but firms are opposed to “pricing” solutions.

3

International Connections

Niagara Firms more internationalized on the sourcing side than on the revenue side but a lesser difference for manufacturing.

4

Outsourcing

Along with e-commerce adoption, outsourcing logistics appears as a strong differentiating variable. Firms that master it appear more accomplished.

5

Export Diversification

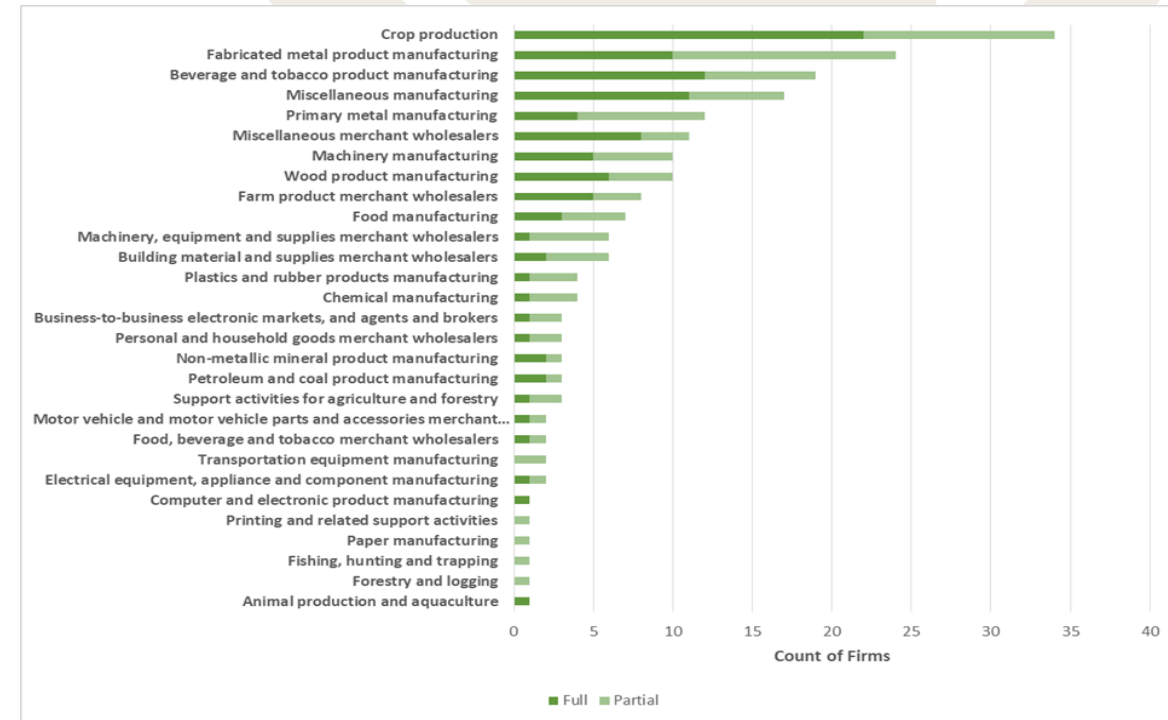
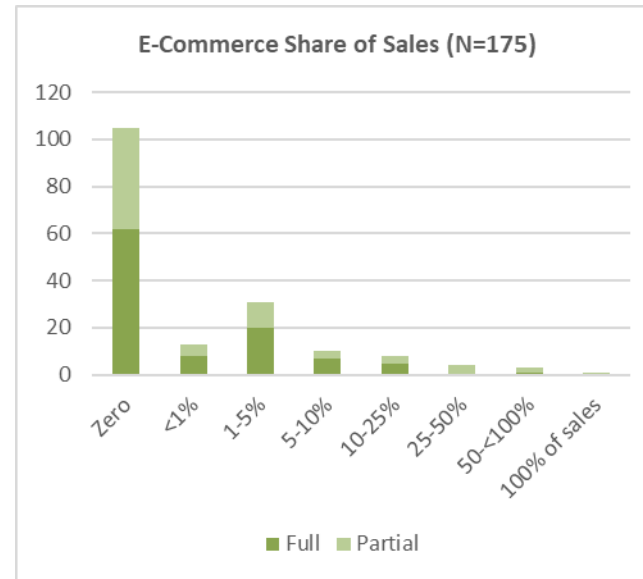
Those that have done ED are more optimistic about it and have a higher opinion of what it can do for a firm.

6

Intangibles

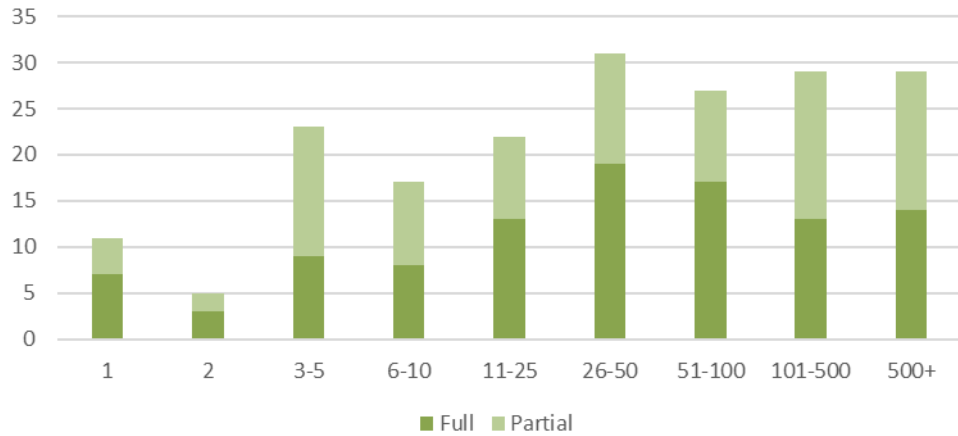
SMEs are prevalent and may rely on a few key leaders. Ambition and momentum matter in developing and extending supply chains.

LARGELY SME ORIENTED FIRMS

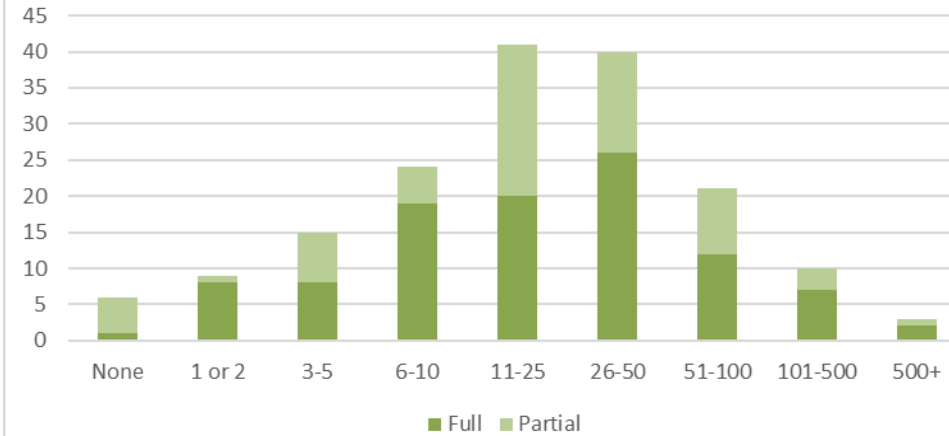


PRODUCT LINES AND SUPPLIERS

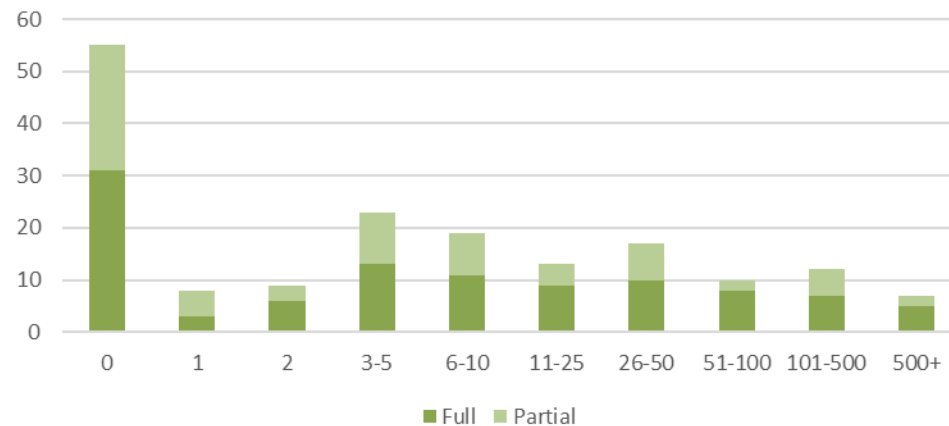
Number of Product SKUs (N=194)



Total Number of Supplier Firms (N=169)

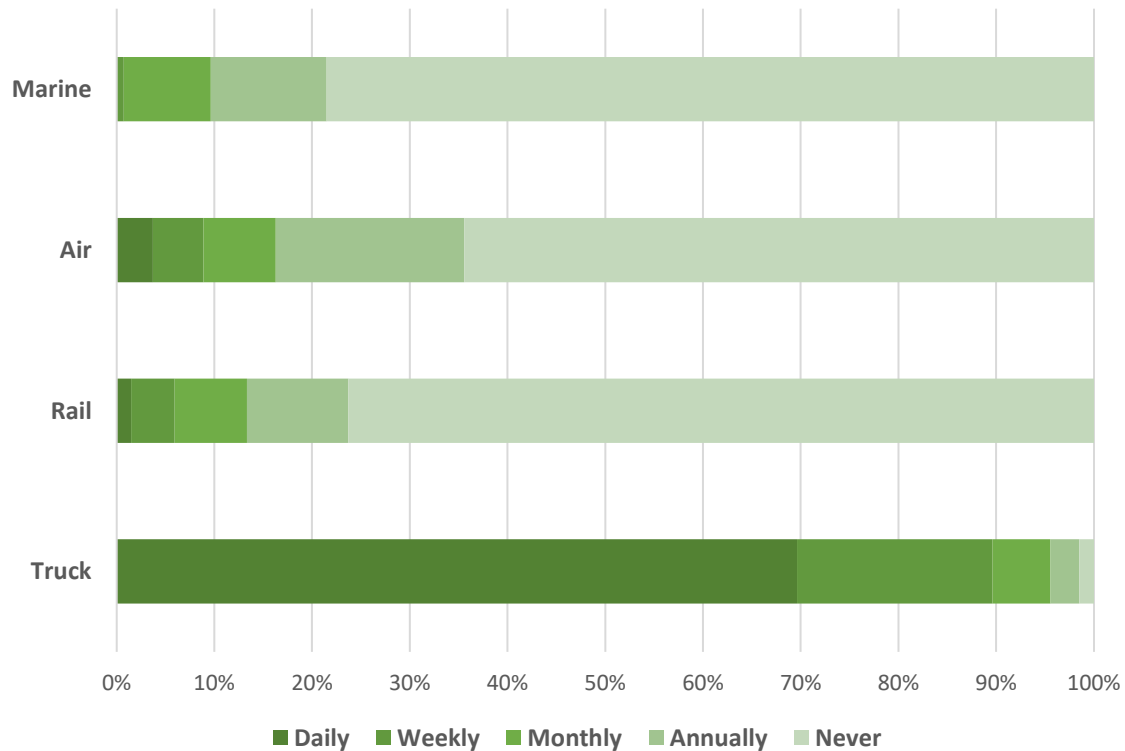


Number of Export SKU's (N=173)

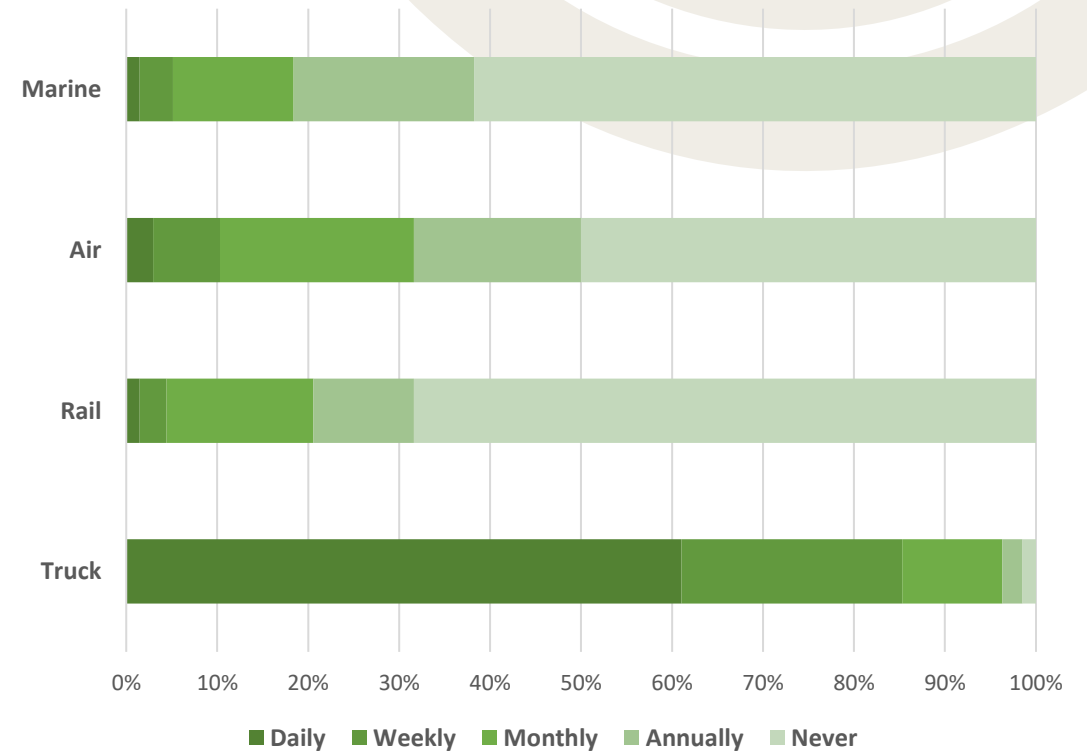


FREQUENCY OF OUTBOUND & INBOUND MOVEMENTS

Best Description of Frequency of Outbound Movements
by Mode



Best Description of Frequency of Inbound
Movements by Mode



RANKING OF DELAY TYPES

Road Congestion Associated with GTHA

Road Congestion within Niagara Region

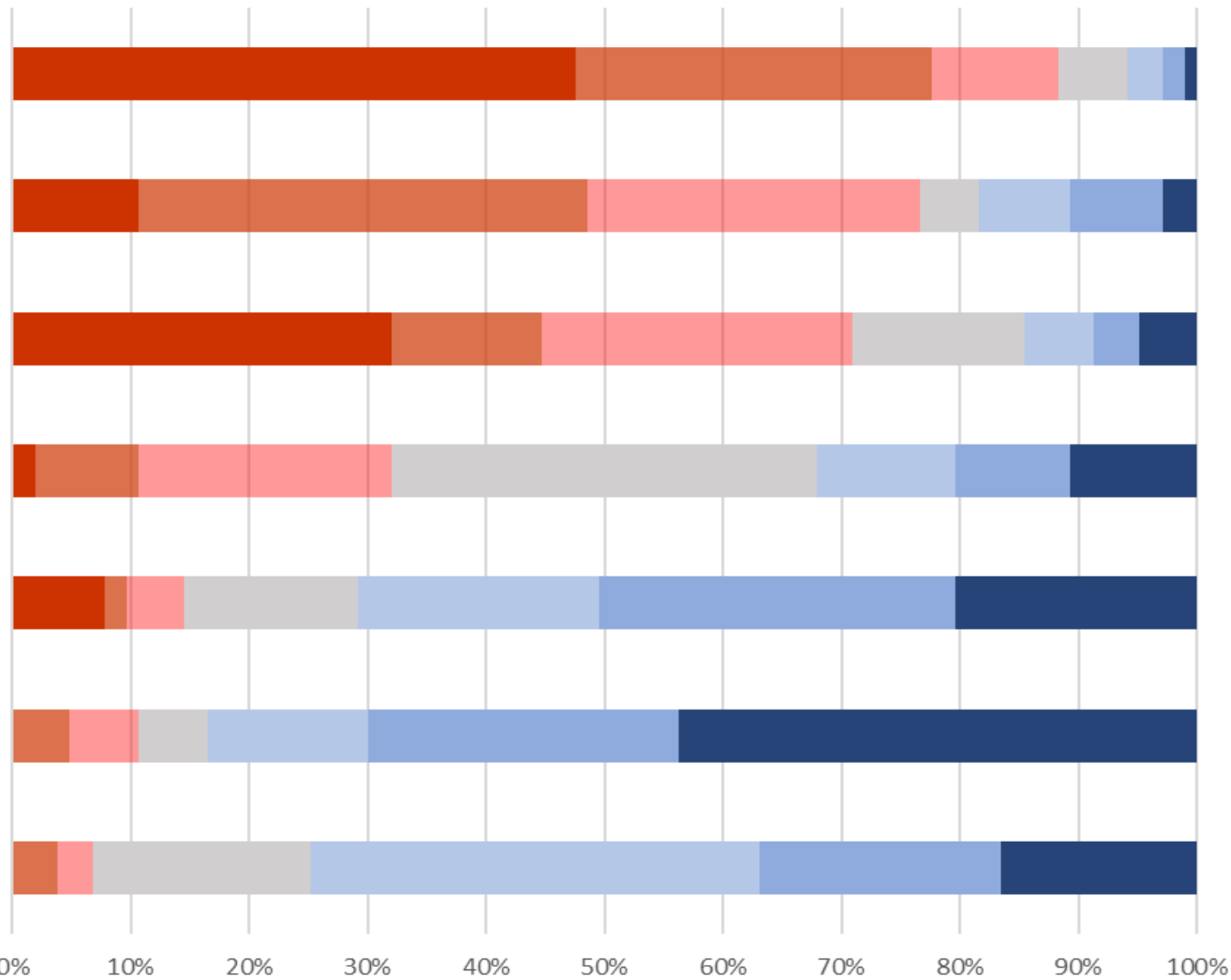
U.S./Canada Border

Connections between modes

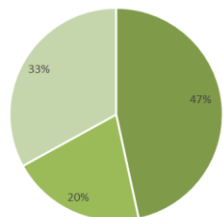
Rail-Oriented

Marine-Oriented

Air-Oriented



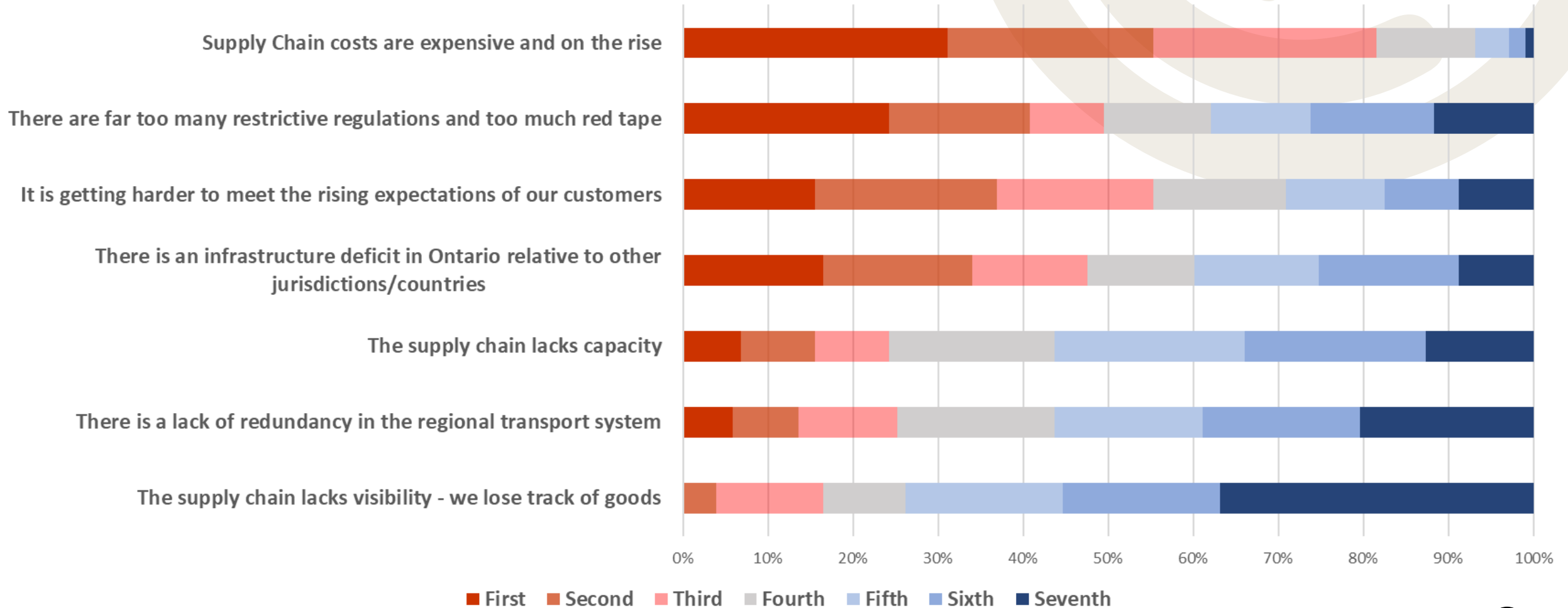
On average, does your firm expect to spend more than 30 minutes to cross the Canada/U.S. Border?



■ Yes ■ No ■ Not sure/Not applicable

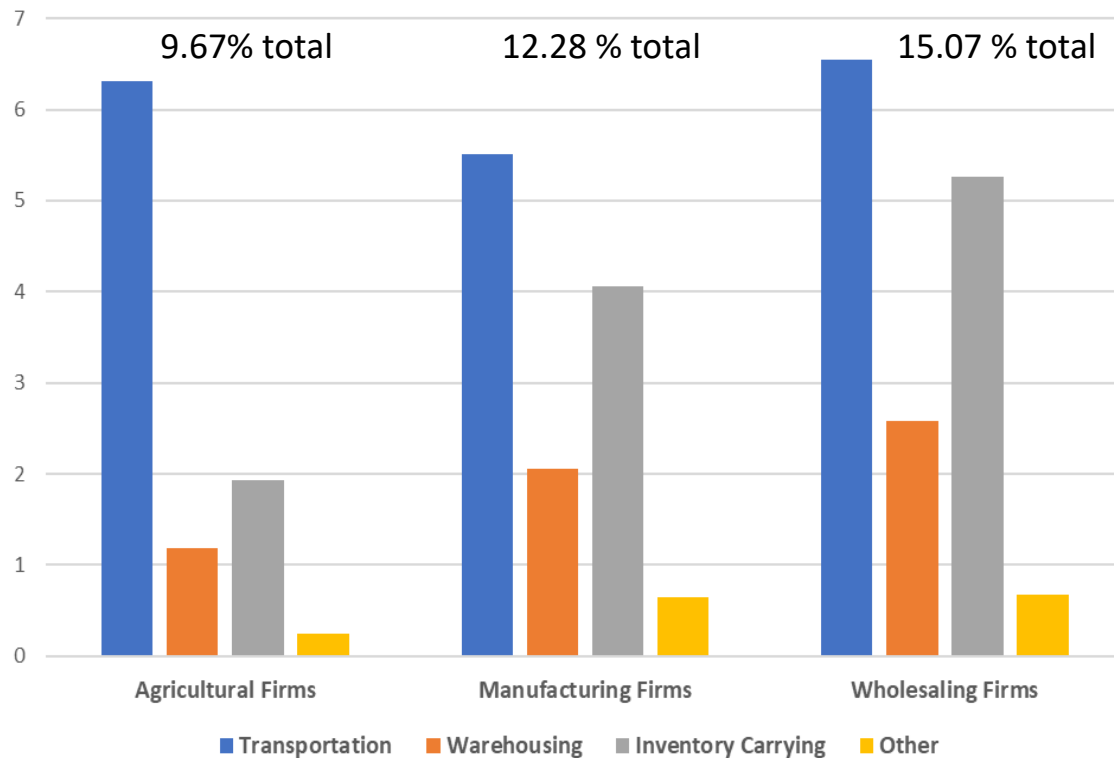
■ First ■ Second ■ Third ■ Fourth ■ Fifth ■ Sixth ■ Seventh

RANKING OF STRESSES ON THE SUPPLY CHAIN

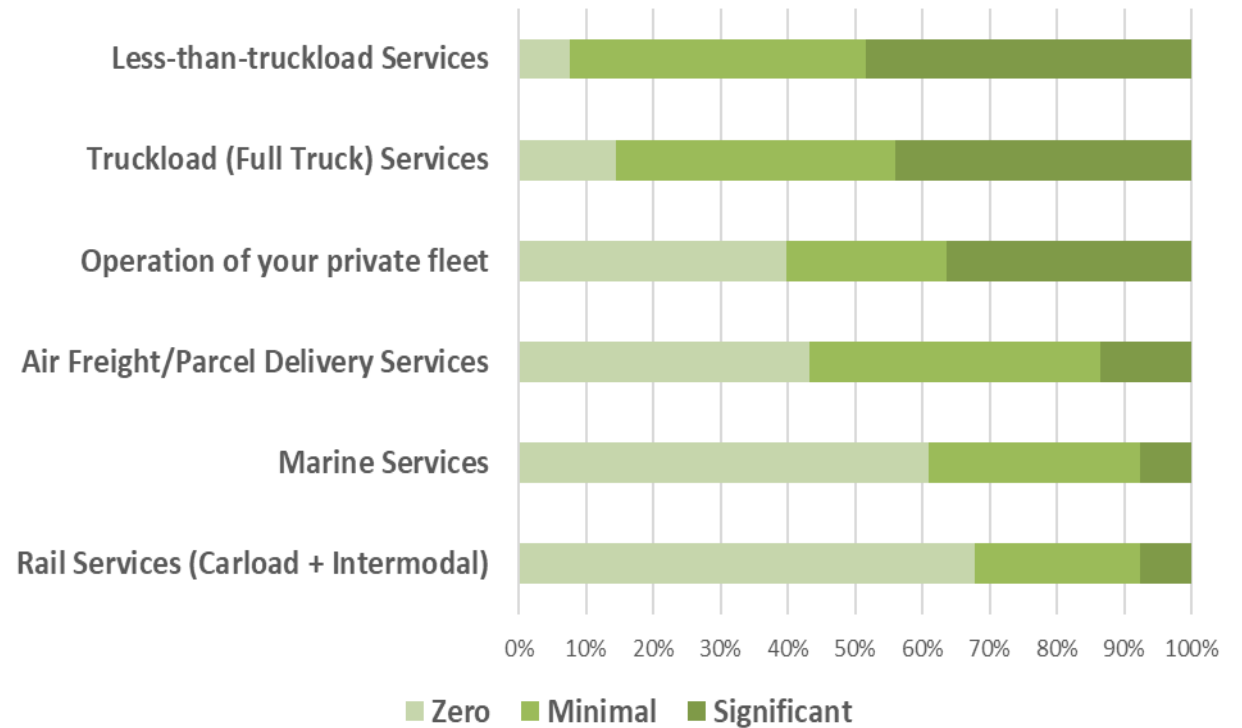


LOGISTICS COST ELEMENTS

Average Logistics Costs as % of Revenue

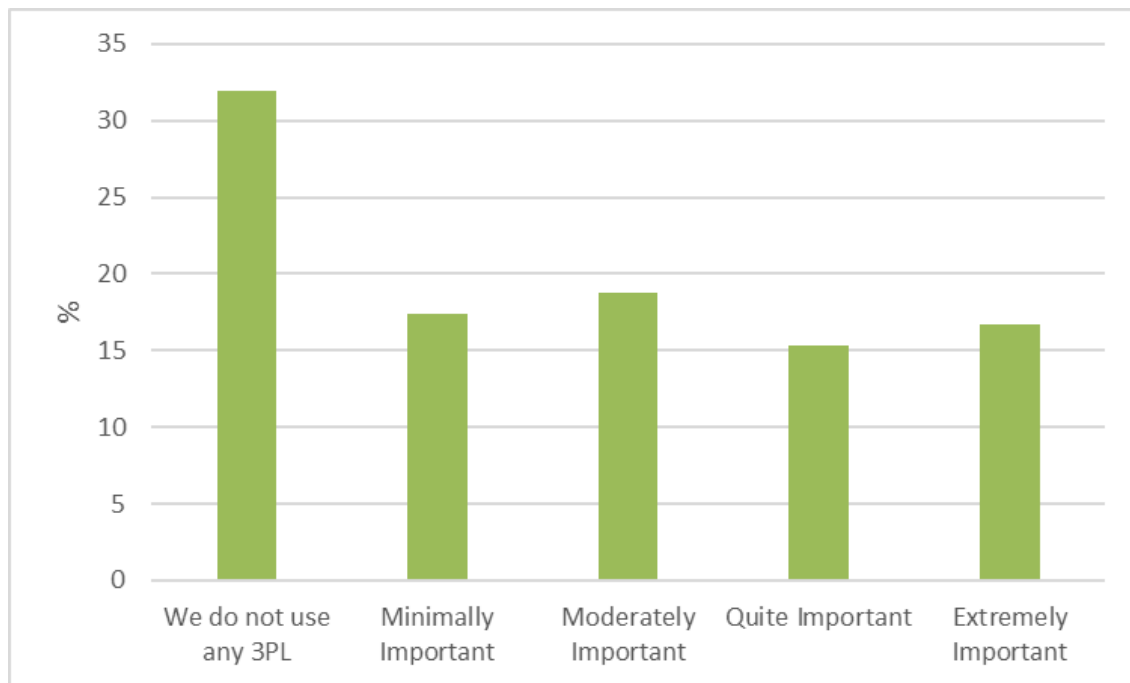


Qualitative assessment of expenditures on transportation services

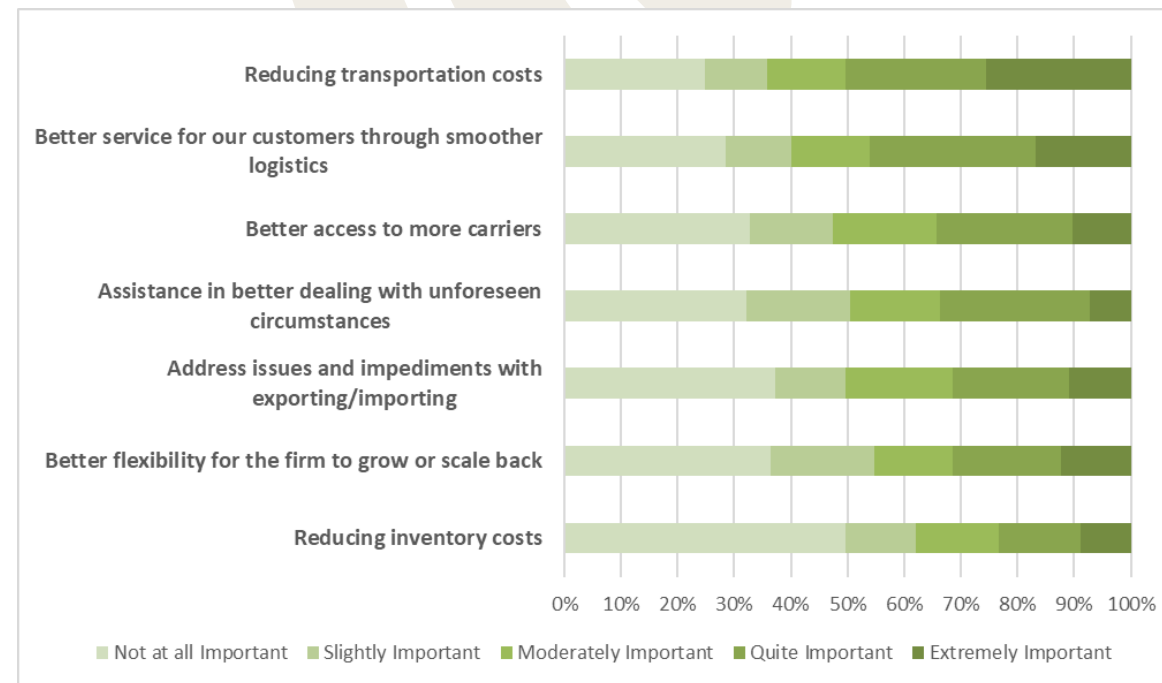


OUTSOURCING (THIRD PARTY LOGISTICS)

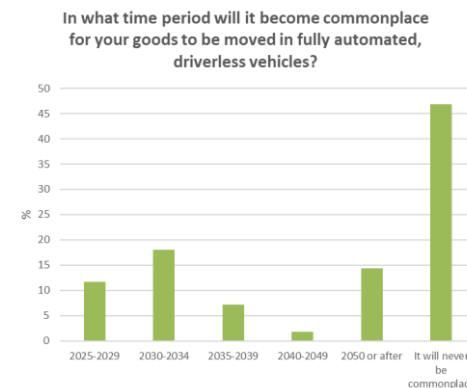
Importance of 3PL to Niagara Firms



Importance of 3PL Benefits



A separate multivariate analysis by MITL on Niagara data shows that appreciation of 3PL value-added is linked positively to openness to emerging autonomous technologies: Adoption via Outsourcing.

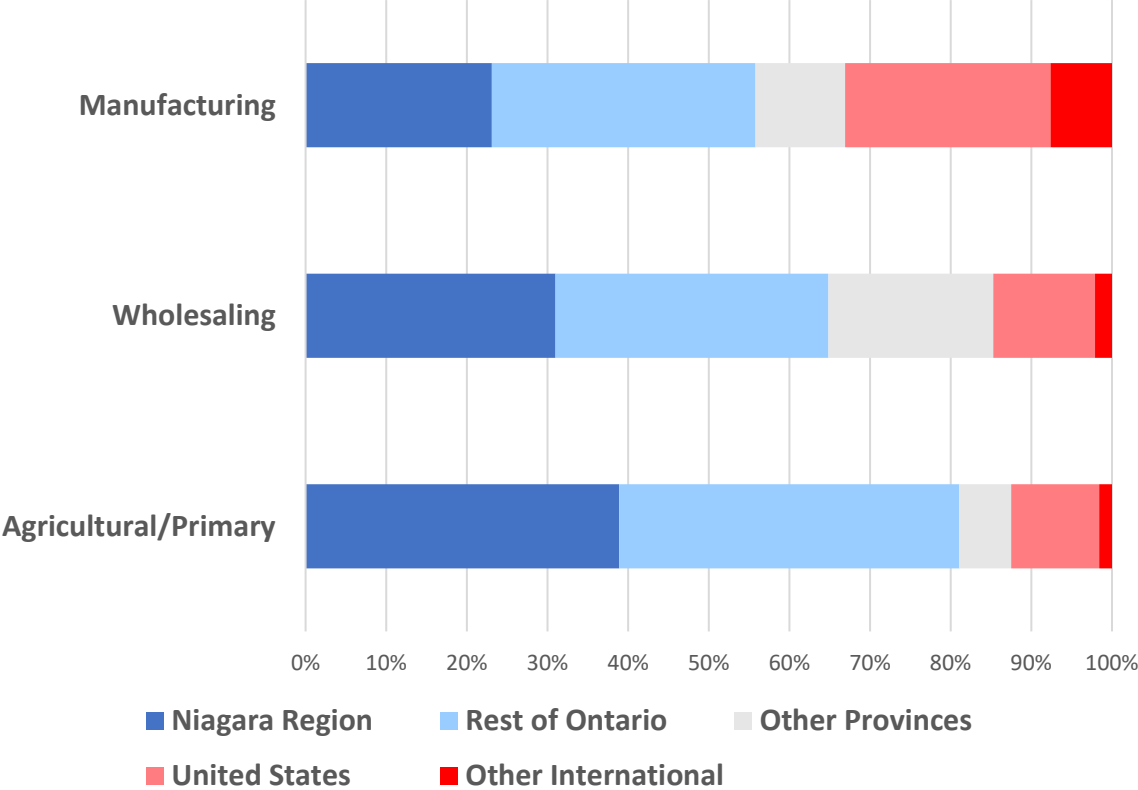


GEOGRAPHICAL PATTERNS OF REVENUES & INPUT EXPENDITURES



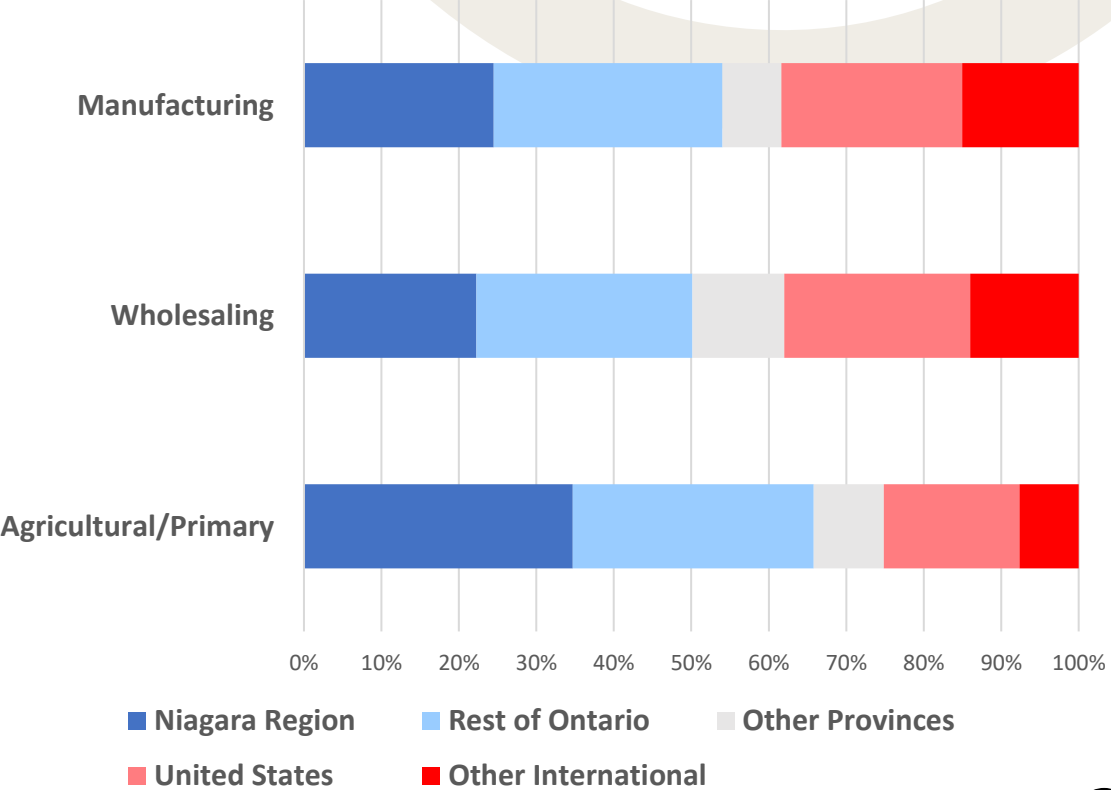
Where Outputs Go

Revenue % Distribution by Firm Sector (N=162)



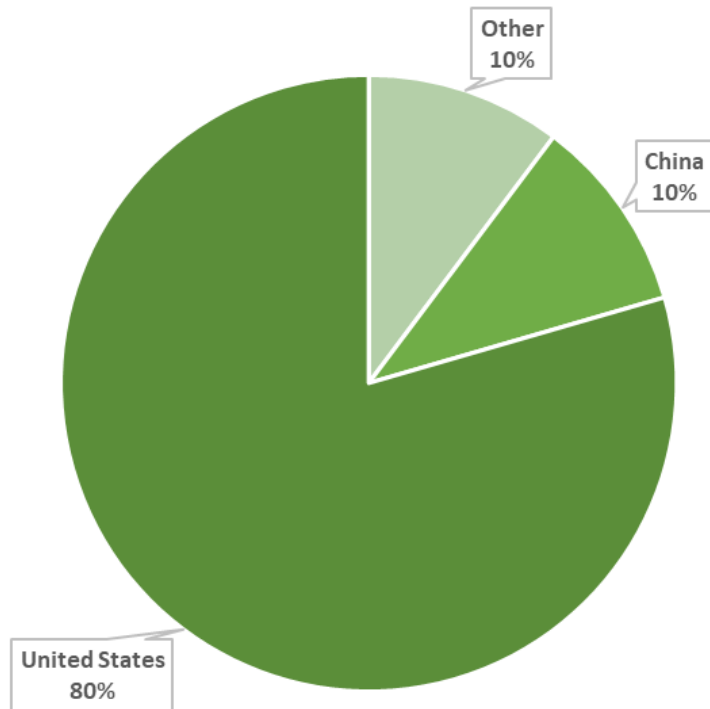
Where Inputs Come From

Input Expenditures % Distribution by Firm Sector (N=150)

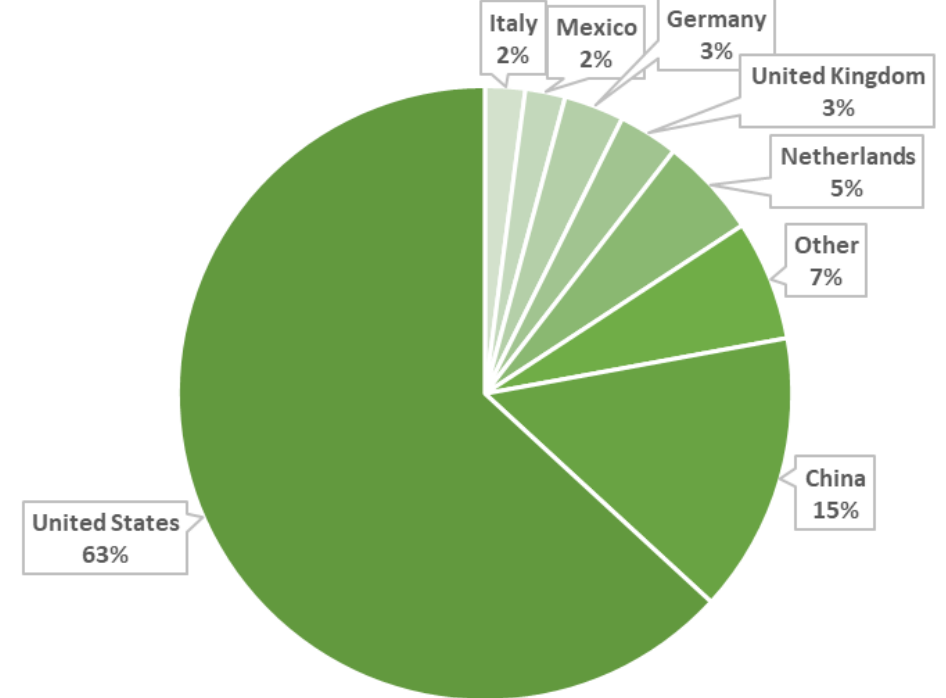


TOP RANKED EXPORT AND IMPORT COUNTRIES FOR NIAGARA FIRMS

Mentions as Top-Ranked Export Destination (N=78)

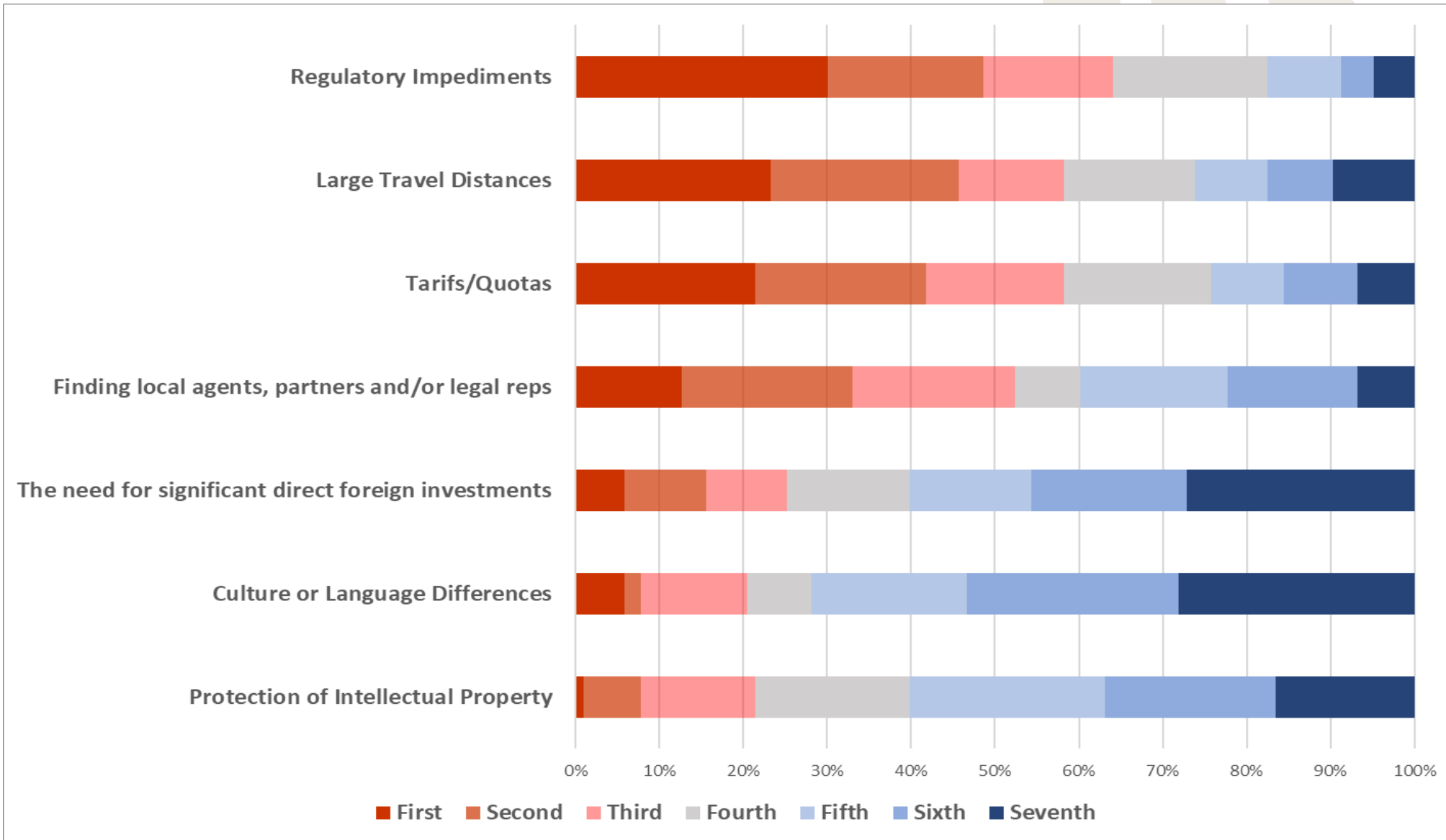


Mentions as Top-Ranked Importing Source (N=95)



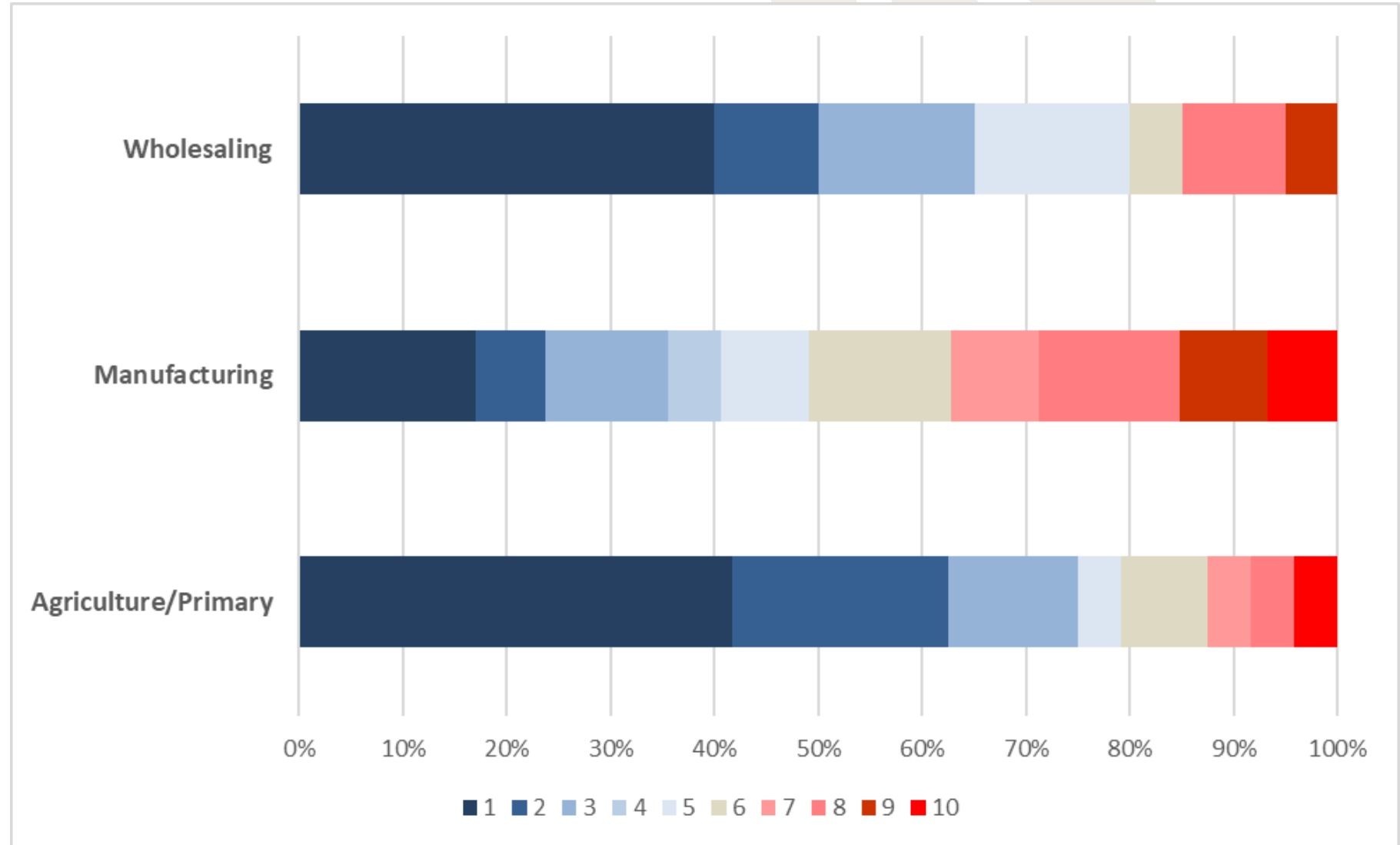
More diversified on the import side

RANKING OF CHALLENGES TO EXPORTING BEYOND THE UNITED STATES

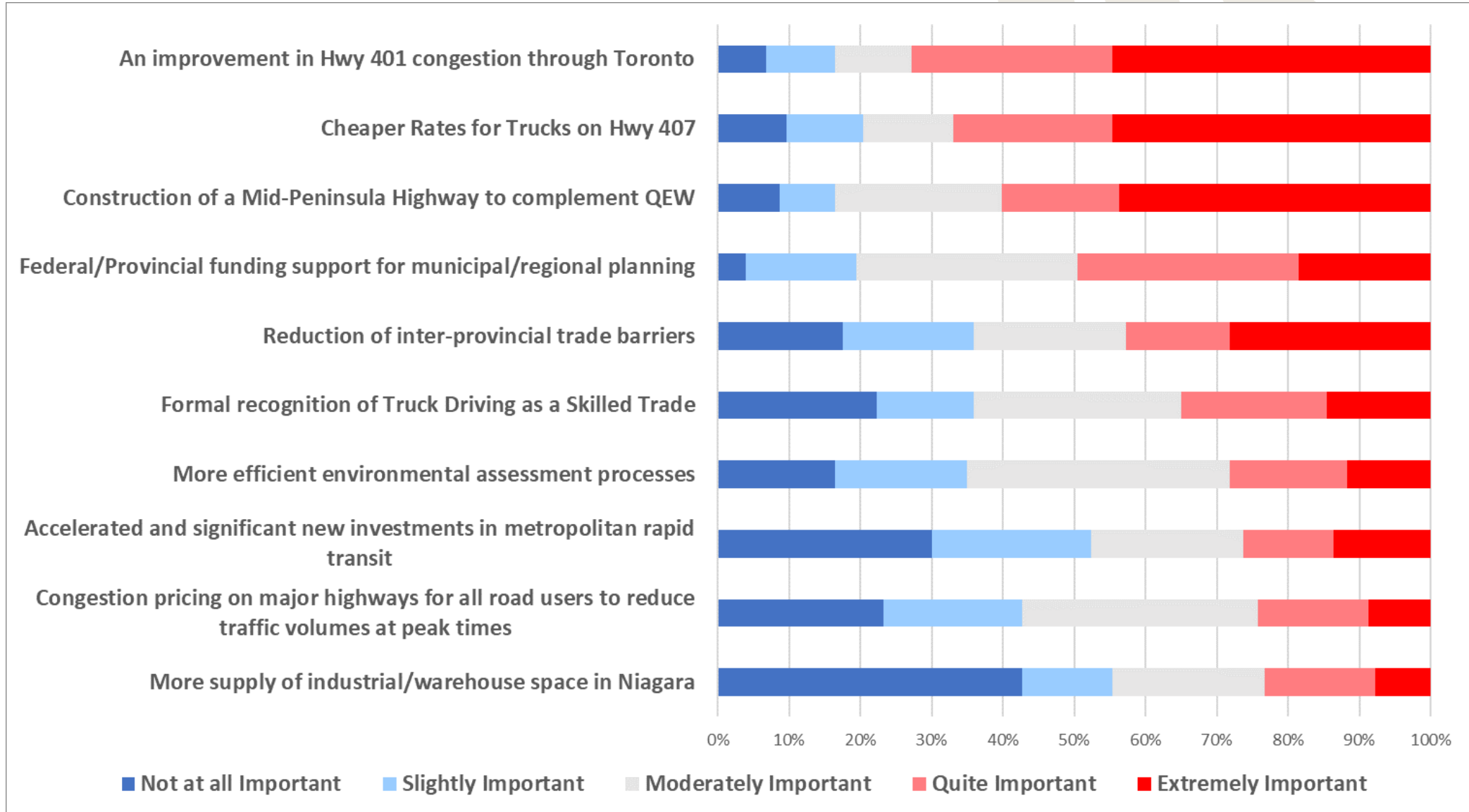


ASSESSMENT OF POTENTIAL TO EXPORT BEYOND THE UNITED STATES

- 1 – “no potential on the horizon”
- 10 – “massive potential and opportunity”
- How do “export diversified” firms differ?
 - More outsourcing
 - Less Private fleets
 - Less “parochial” viewpoints
 - More diversified use of modes
 - More optimism



ASSESSMENT OF POTENTIAL SUPPLY CHAIN RELATED IMPROVEMENTS





THANK YOU



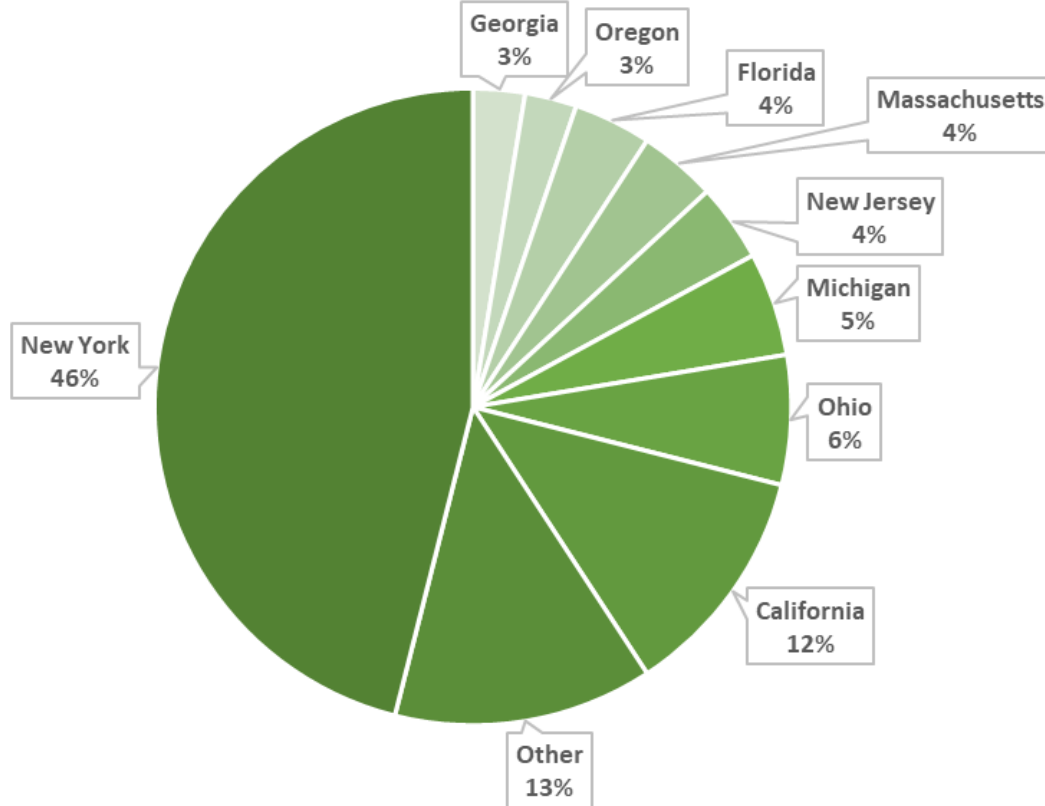
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[HTTP://MITL.MCMASTER.CA/](http://MITL.MCMASTER.CA/)

TOP RANKED EXPORT AND IMPORT U.S. STATES FOR NIAGARA FIRMS

Mentions as Top-Ranked Exporting Destination (N=76)



Mentions as Top-Ranked Importing Source (N=81)

