

# Supply Chain Developments and Implications

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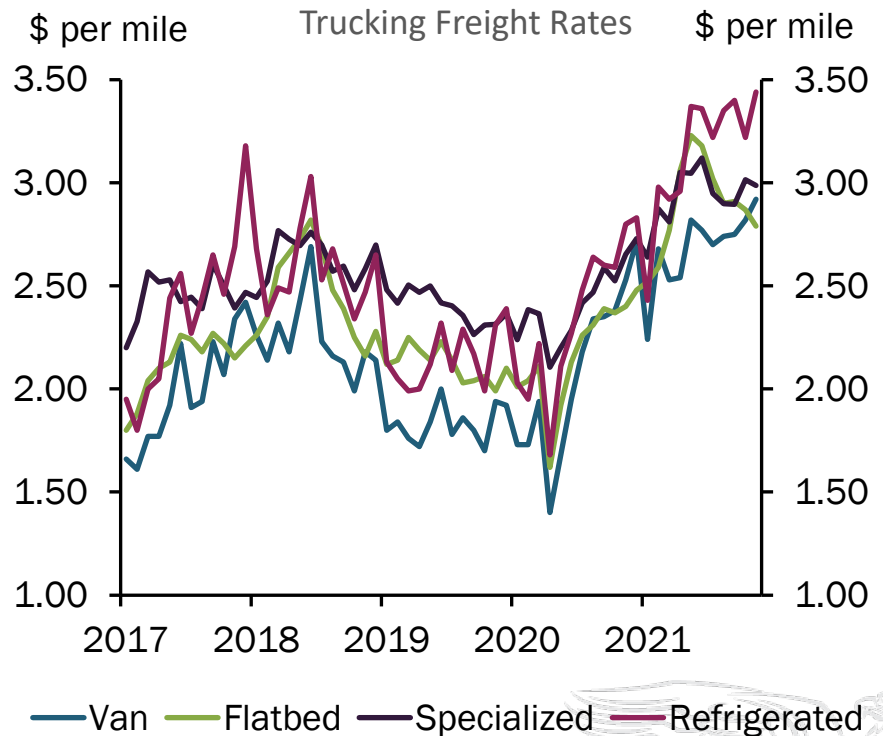
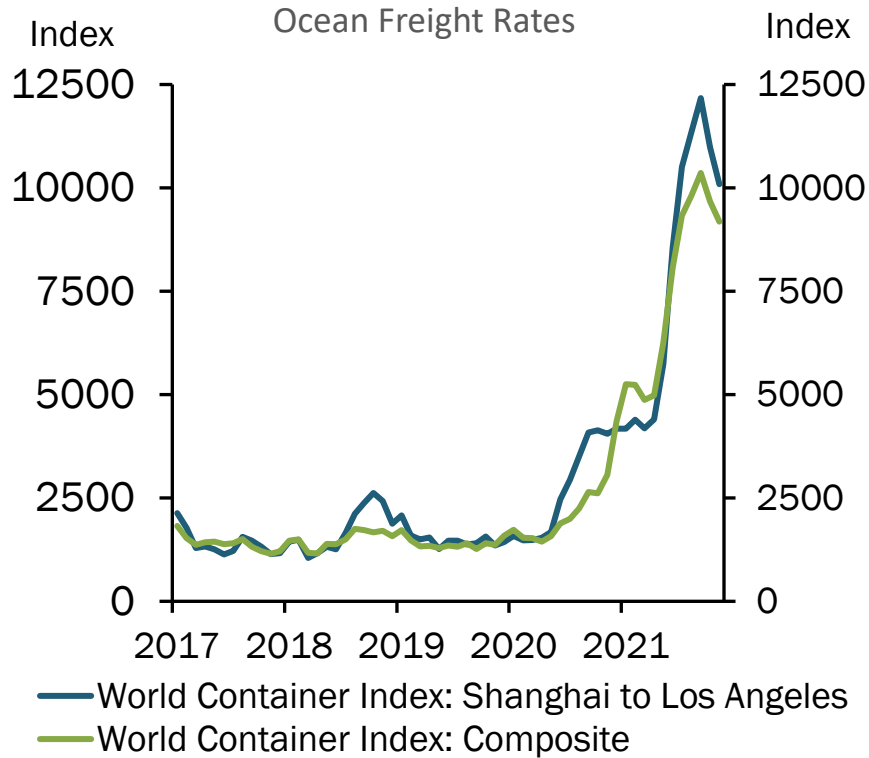


## Outlook themes

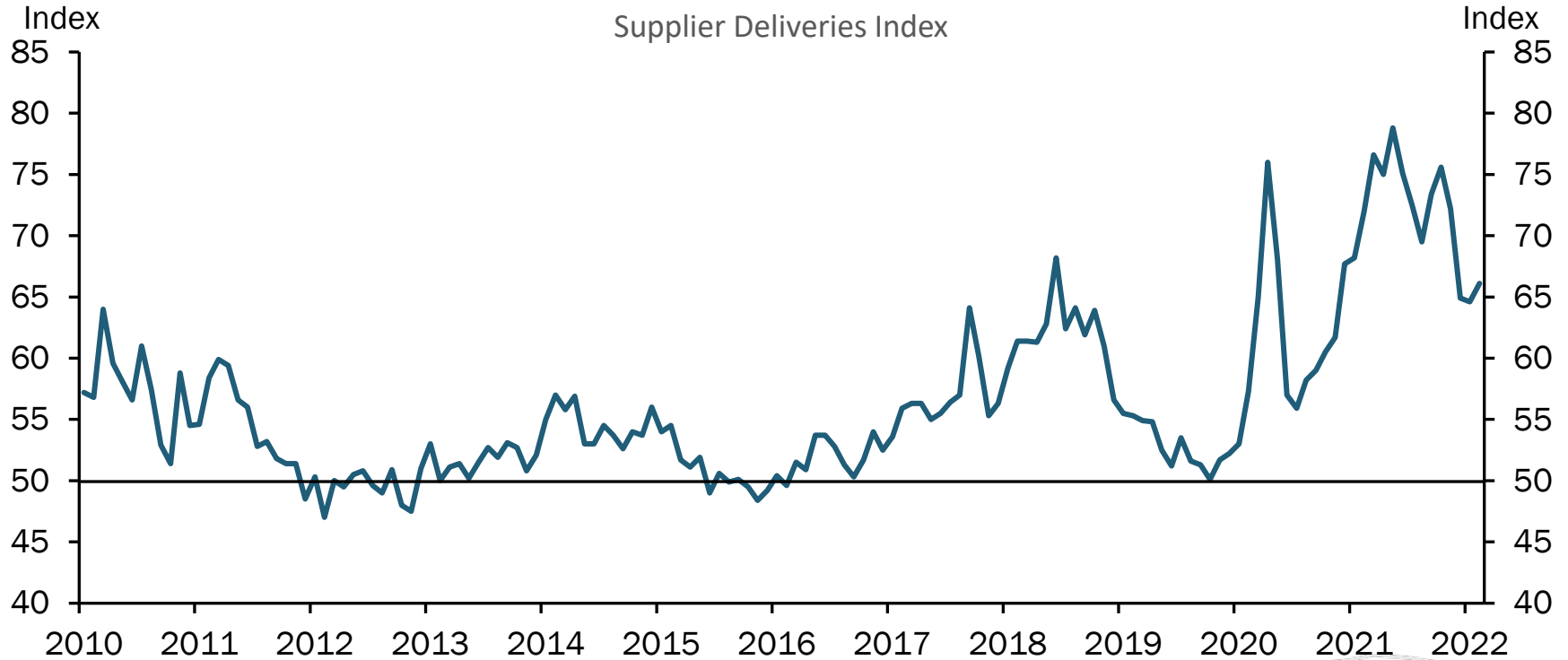
- Supply chain disruptions have proved to be persistent cost pressures, which have delayed effects on inflation
- Logistics disruptions span transportation modes, add both cost and delays and are affecting most industries
- Despite their ubiquity, global supply chain disruptions have varying implications for regional economies due to differences in the types of goods being sourced
- Many businesses report that they are altering procurement and inventory management strategies to alleviate supply chain pressures over the medium- to long-term



# Transportation costs increased significantly across most modes



# In addition to higher costs, businesses are experiencing delays

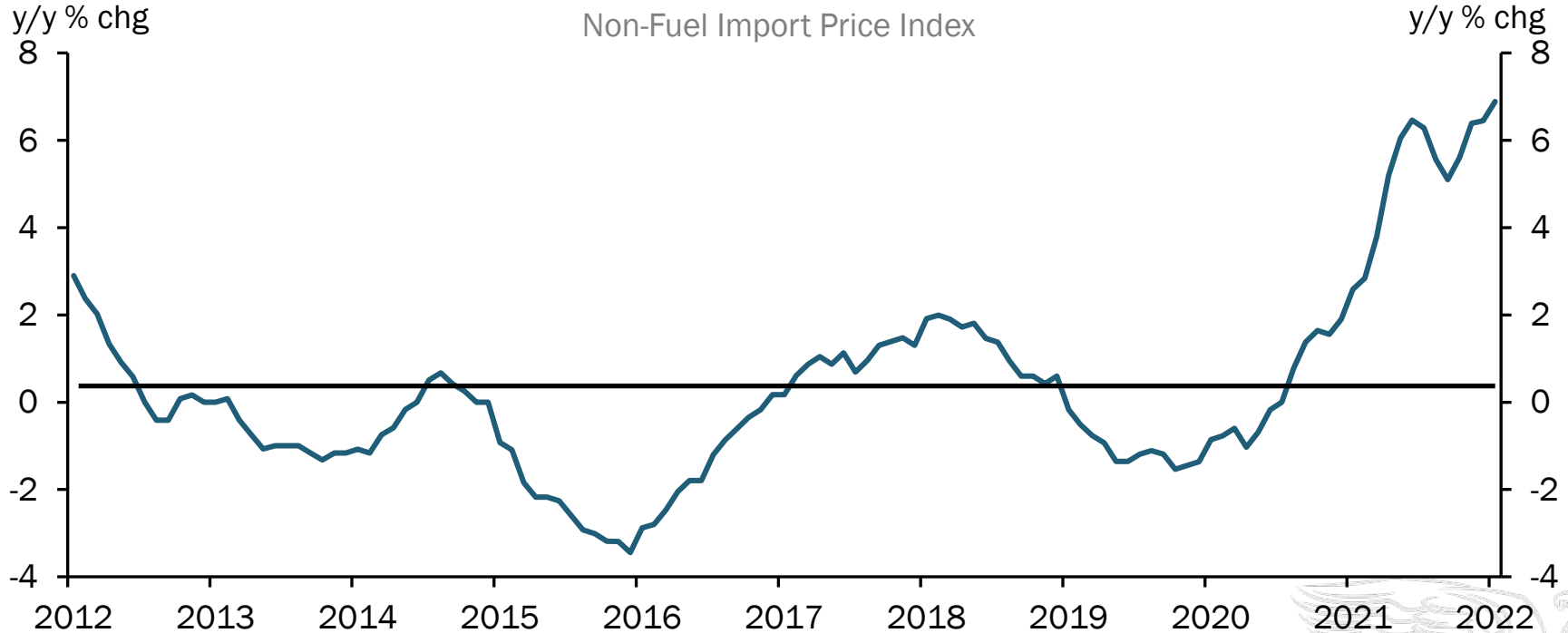


Sources: ISM, Haver Analytics

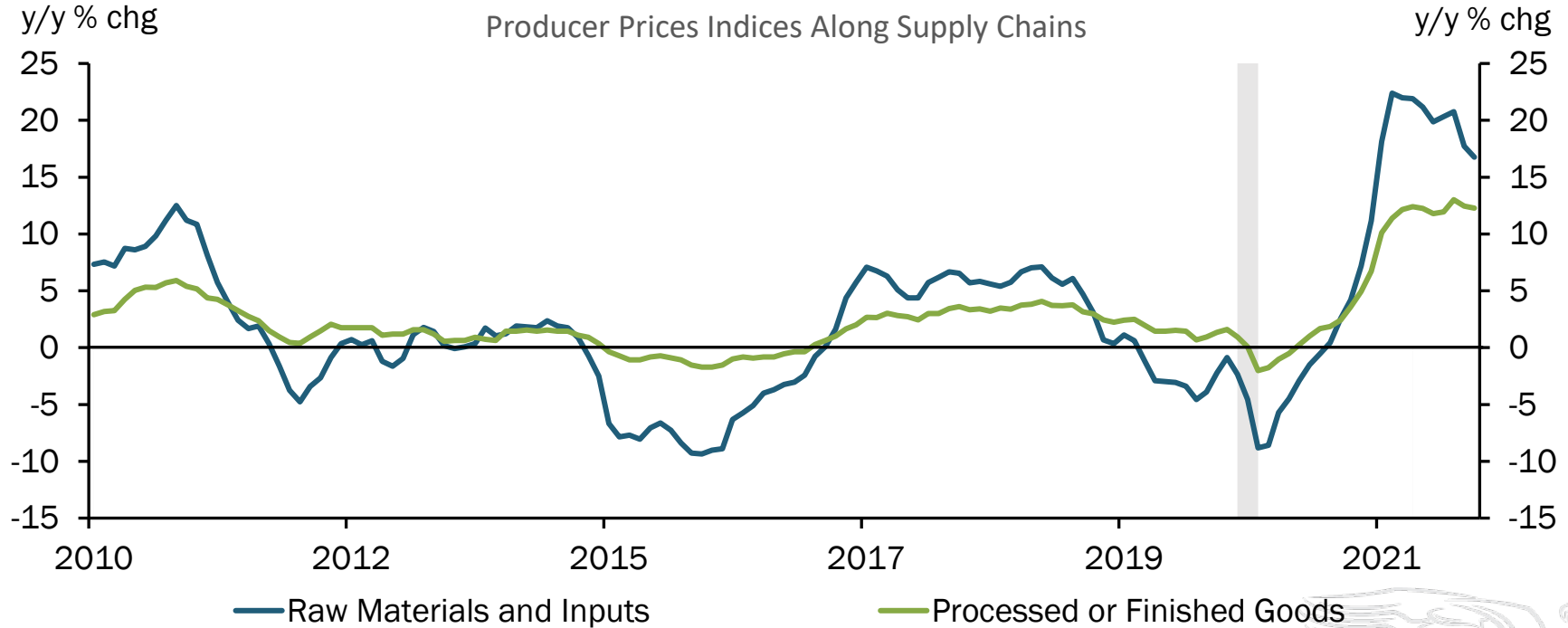
Note: A supplier deliveries index above 50 percent indicates slower deliveries and below 50 percent indicates faster deliveries.



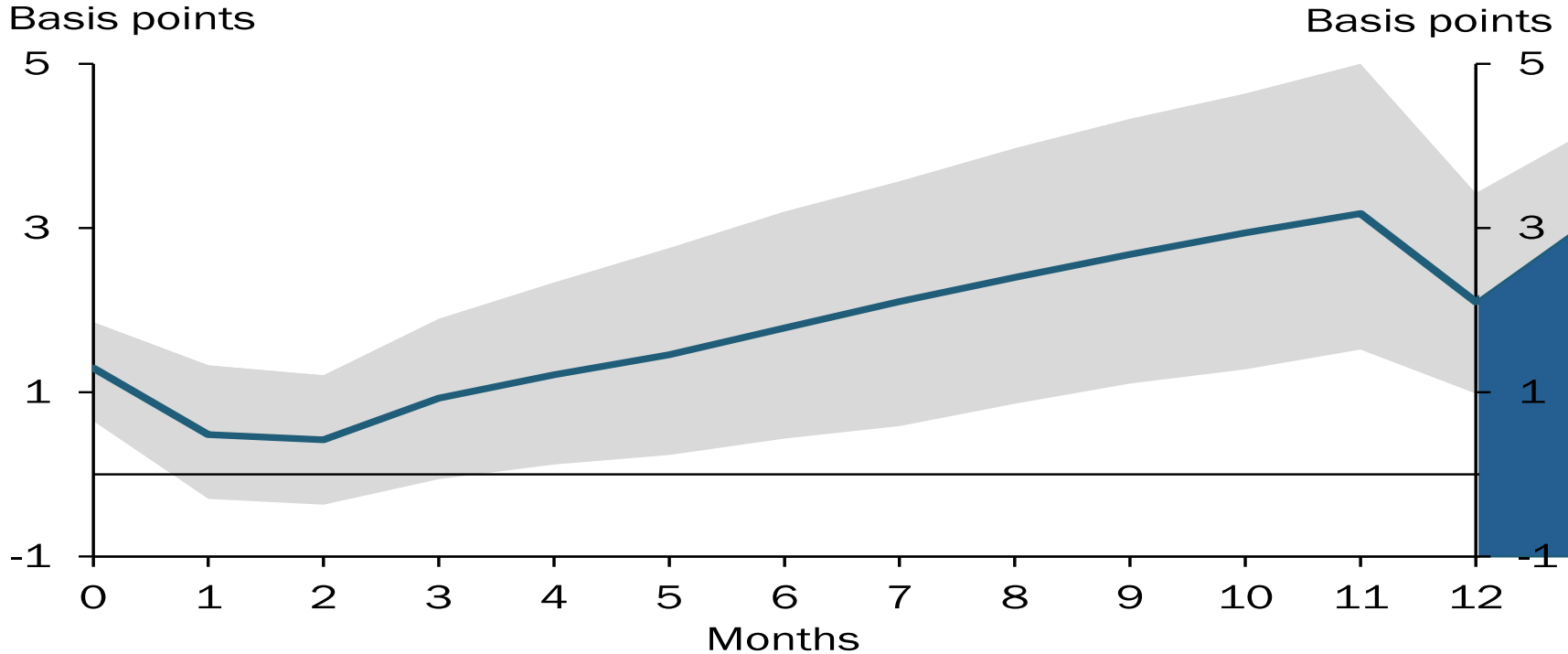
# Strong import demand is contributing to higher prices for imported materials, whereas these costs were a drag on inflation in recent history



# Over the last several months, growth in the cost to purchase and procure key inputs has grown faster than selling prices charged to consumers

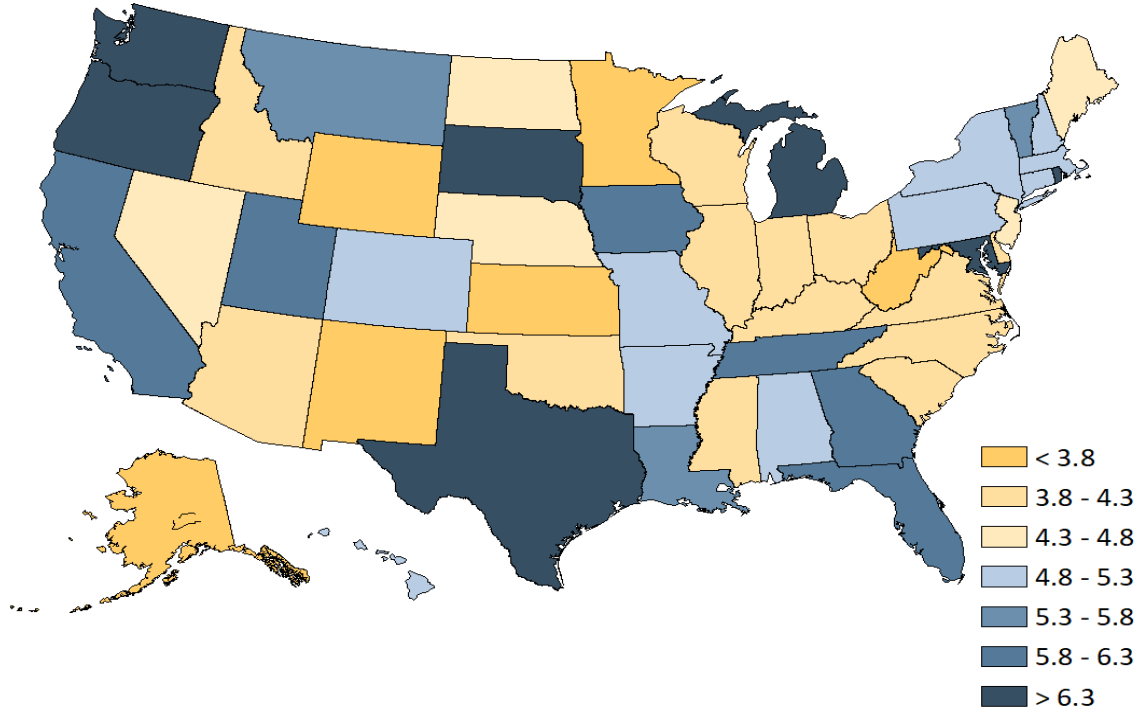


# Higher shipping costs pass through to U.S. core inflation incrementally over the span of several months



Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Chicago Mercantile Exchange, Energy Information Administration, Harper Petersen & Company, Haver Analytics, Thomson Reuters Eikon, and authors' calculations.

# State economies differ in how they respond to rising costs for imported inputs based on their local industry composition

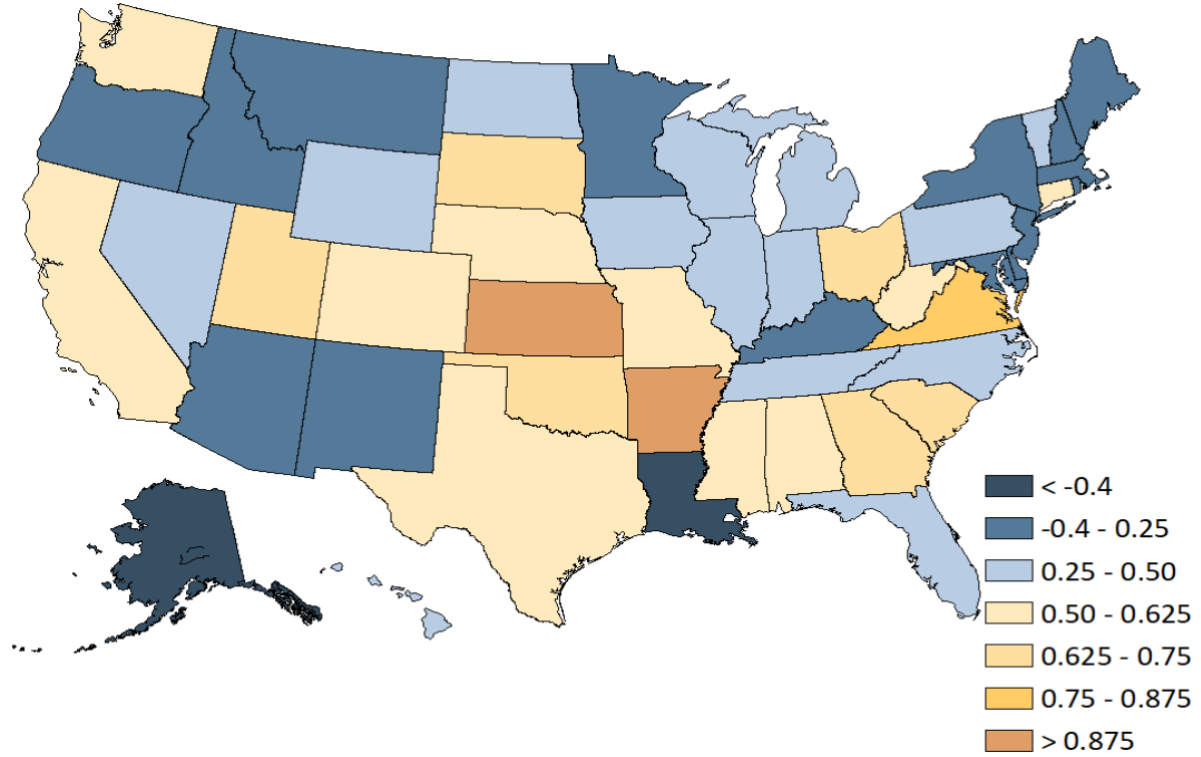


Source: Sly and Soderbery (2022)

Note: The import demand elasticities are estimated for all non-oil imports into each state.



# In 2021, total global shipping costs grew faster in the Tenth District



Sources: U.S. International Trade Commission, U.S. Census Bureau, and authors' calculations  
 Notes: Total freight charges and import values are calculated excluding petroleum imports. Values illustrated in map are percentage point changes in total shipping costs as a share of total imports.

