CRAFTING NARRATIVE TALES THROUGH VISUALIZATION

US Census Bureau | Economic Indicators Division

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Keywords:

Visualization, Data Processing, Dashboard Development

Summary:

The Census Bureau publishes immense amounts of data related to the US economy. This data is published in formats that are hard to digest for data users, hence the need for a better template to showcase data. The goal of the project is to create a visualization template through **Tableau** that can be **repeatable** for different sectors. The dashboard that was created was based on **automotive** data and will be extended to other sectors in the future.

Crafting Narrative Tales Through Visualization

Economic Indicators Division
U.S. Census Bureau
Alyson Plumb — Team Lead

coding it forward >

United States™ Census Bureau

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BACKGROUND

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- The US Census Bureau's Economic Indicators Division produces monthly and quarterly data
- This data provides timely information regarding economic performance to inform data users, which helps them make **policy decisions**, **business investments**, **etc**.

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OBJECTIVE

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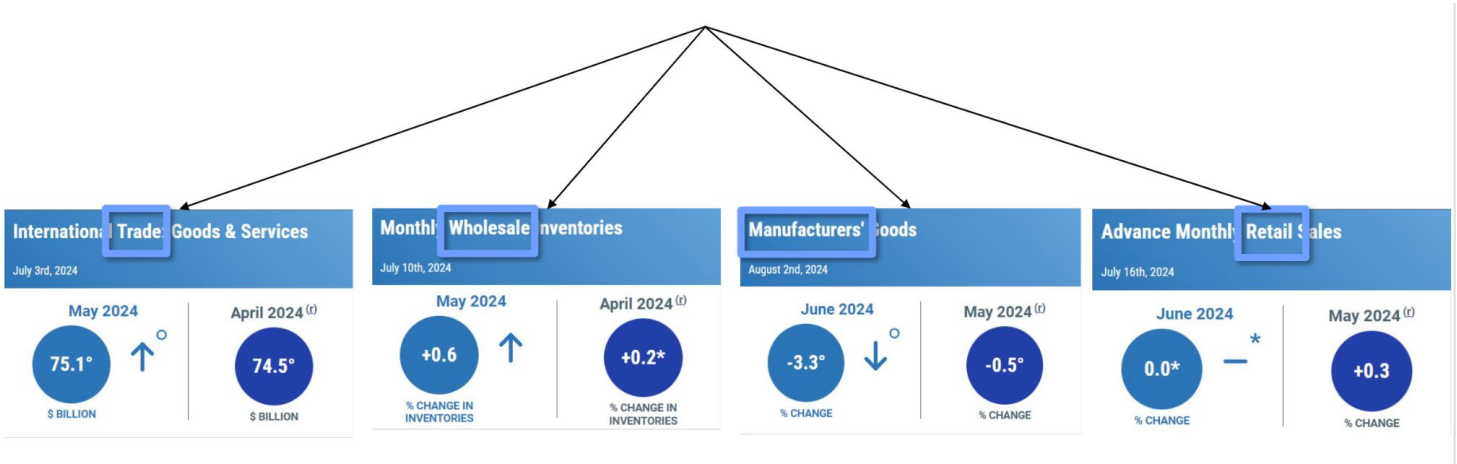
- High-level data is highlighted for indicators, but sector details require data users to research and explore the detailed publication (data source).
- We are looking to <u>combine</u> topical data across multiple sectors



Source: U.S. Census Bureau Economic Indicators Briefing Room (https://www.census.gov/economic-indicators/)

The goal is to create a visualization template through **Tableau** that can be **repeatable** for various sectors and ultimately published on the Census website.

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SOURCE DATA

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SOURCE DATA

- Economic Indicators and Selected Series Data **(2018-2024):**

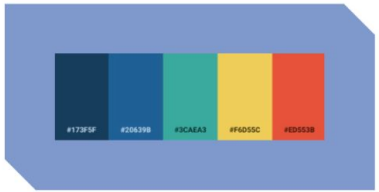
Manufacturing	International Trade	Retail	Wholesale	Services
Inventory – Motor Vehicle and Parts	Automotive Imports	Inventory – Motor Vehicle and Parts Dealers	Inventory – Motor Vehicle and Motor Vehicle Parts and Supplies	Revenue – Automotive Repair and Maintenance
Value of Shipments – Motor Vehicle and Parts	Automotive Exports	Sales – Motor Vehicle and Parts Dealers	Sales – Motor Vehicle and Motor Vehicle Parts and Supplies	
		Sales – New/Used Car Dealers		
		Monthly State Retail Sales – Motor Vehicle and Parts Dealers		
		Quarterly E-Commerce Sales – Motor Vehicle and Parts		

Note: All data included in the visualization is previously published. For more information on the source data and methodology, please refer to source websites: – International Trade, Quarterly Services, Monthly Retail Trade, Manufacturers' Shipments, Inventories, & Orders, Monthly Wholesale Trade, Monthly State Retail Sales, Quarterly Retail E-Commerce Sales

FINAL PRODUCT

FINAL PRODUCT

1 **Color: Utilize colors to enhance visuals**

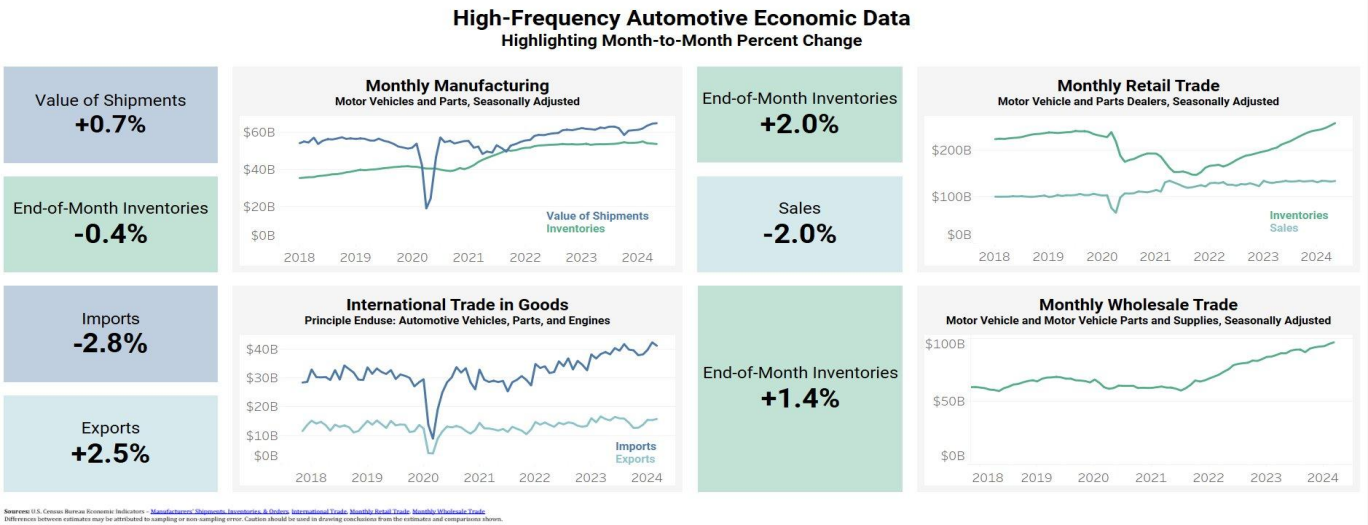


3 **Graph: Create visually exciting graphs**

2 **Text: Provide context for the data**

4 **Layout: Arrange contents in an understandable manner**

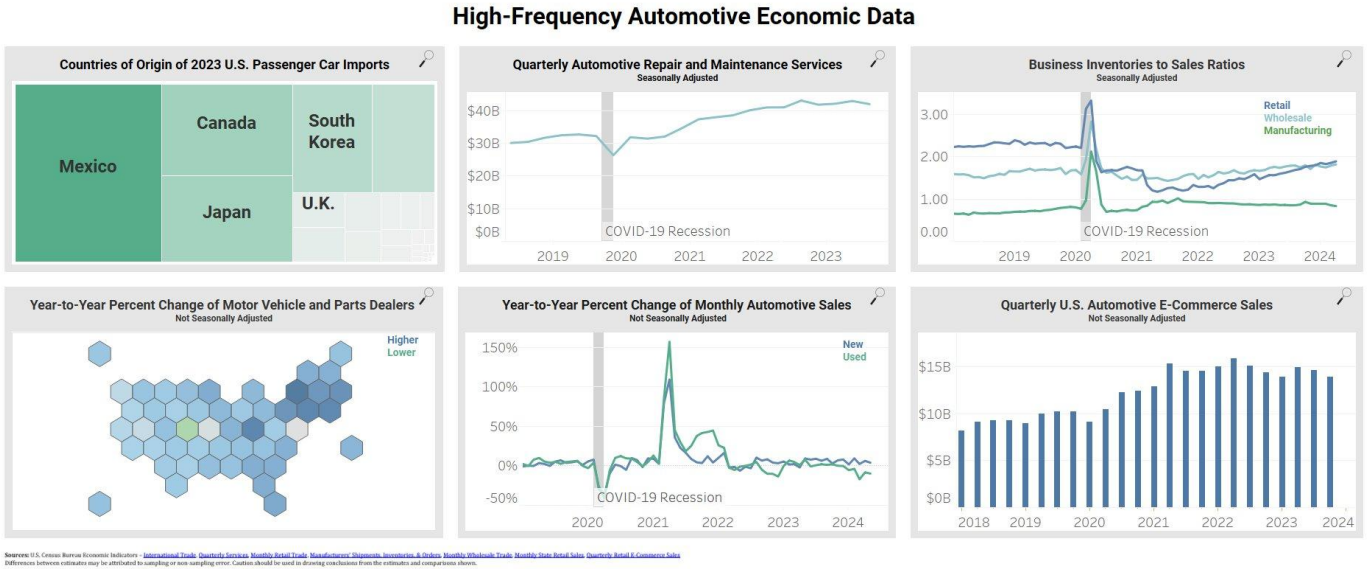
DASHBOARD



Page 1

Sources: U.S. Census Bureau Economic Indicators – International Trade, Quarterly Services, Monthly Retail Trade, Manufacturers' Shipments, Inventories, & Orders, Monthly Wholesale Trade, Monthly State Retail Sales, Quarterly Retail E-Commerce Sales Differences between estimates may be attributed to sampling or nonsampling error. Caution should be used in drawing conclusions from the estimates and comparisons shown.

DASHBOARD



Page 2

Sources: U.S. Census Bureau Economic Indicators – International Trade, Quarterly Services, Monthly Retail Trade, Manufacturers' Shipments, Inventories, & Orders, Monthly Wholesale Trade, Monthly State Retail Sales, Quarterly Retail E-Commerce Sales Differences between estimates may be attributed to sampling or nonsampling error. Caution should be used in drawing conclusions from the estimates and comparisons shown

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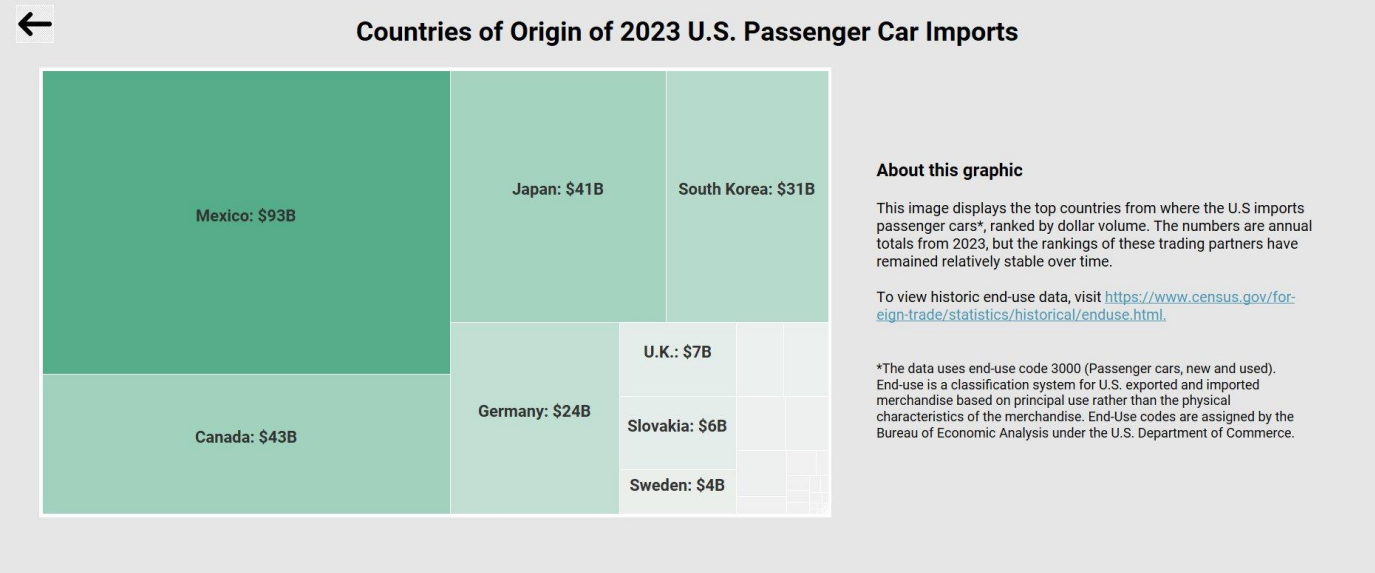

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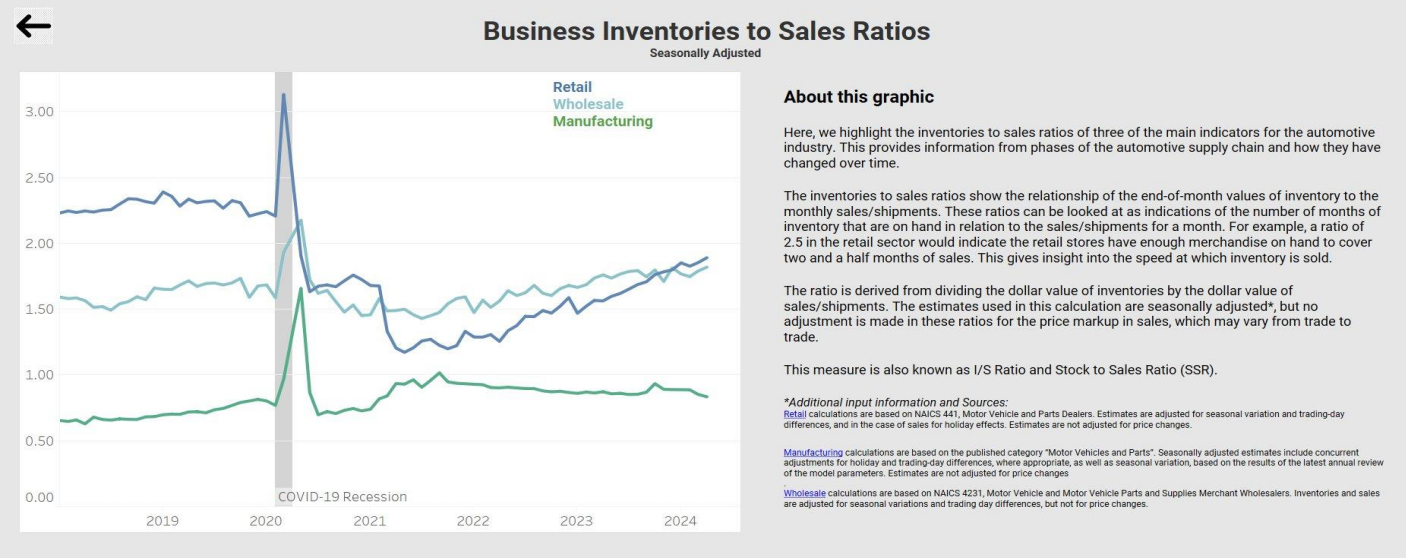
Source: U.S. Census Bureau International Trade

DASHBOARD



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Sources: U.S. Census Bureau Economic Indicators - Monthly Retail Trade, Manufacturers' Shipments, Inventories, & Orders, Monthly Wholesale Trade

NEXT STEPS

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NEXT STEPS

Next Steps:

- Gather feedback for potential improvements to layout and design
- Use this visualization template to summarize other industries such as clothing, gas, housing, etc.
- Automate a data processing pipeline to pull and publish data directly from Census API
- Eventually, this dashboard would be published on the Census website for data users to get a more in-depth understanding of published data

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THANK YOU

Coding it Forward Team: Yuyang Zhong, Cassie Rubio, and Ariana Soto
Census Team: Alyson Plumb, Rebecca Weaver, Rachel Butler, Jeffrey McHugh, and the Auto Visualization Team