

Adding Revenue to the County Business Patterns

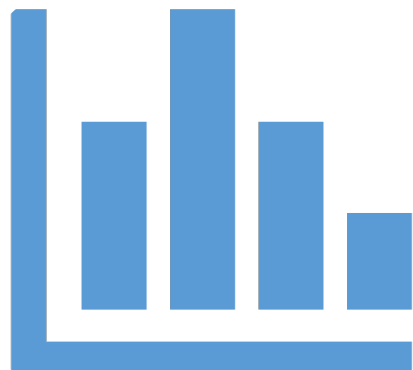
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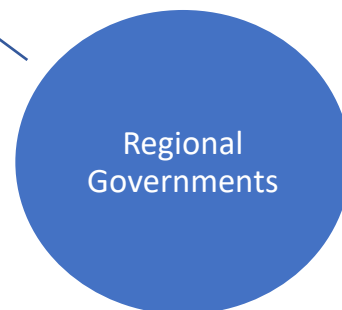
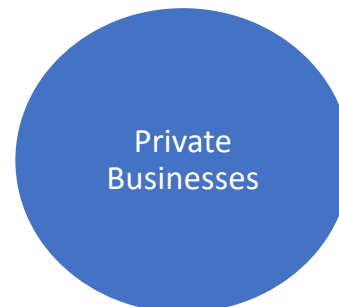
Economy-Wide Statistics Division

Context: County Business Patterns (CBP)

CBP provides annual statistics for businesses with paid employees at a detailed geographic and industry level.



- Bureau of Economic Analysis (BEA)
- Bureau of Labor Statistics (BLS)
- Small Business Agency (SBA)
- Census



- State
- Local
- Congressional Staffers

Users	Purpose
Federal Agencies	<p>BEA, BLS, SBA, etc.: Determine employee concentrations and trends by industry; develop industry size standards.</p> <p>Census: CBP is an input source for other products like the Statistics of U.S. Businesses (SUSB), the Business Dynamics Statistics (BDS), Survey of Business Owners (SBO), and Annual Survey of Entrepreneurs (ASE).</p>
Private Businesses	Analyze market potential, measure the effectiveness of sales and advertising programs, set sales quotas, and develop budgets.
Government Officials	<p>State and Local Governments: Assess business changes, develop fiscal policies, plan for future policies and programs.</p> <p>Congressional staffers: Influence policy making decisions and inform constituents of district economic conditions.</p>

Issue: County Business Patterns lacks Revenue Data

Why is this an issue?

- Revenue is a foundational metric of the economy. It is key in understanding productivity and value in the market.
- Currently users of CBP use payroll to approximate revenue.
- CBP is bypassed in favor of other products that have revenue data

Challenges for adding revenue to CBP:

- Missing Data
 - No Establishment level revenue data for MUs
- Outliers and Unreliable Data
- Structural differences in revenue measures across data sources for certain industries

Current Status of Adding Revenue to CBP

Single Units (SU)

- ALL states are within 10%
- 15/17 of sectors are within 10%
 - Mining (21)
 - Holding Companies (55)
- 75% of NAICs4xState combinations are within 10%

Multi Units (MU)

- 44/51 state codes are within 10%
- 21/22 of sectors are within 10%
 - Mining (21)
- 55% of NAICs4xState combinations are within 10%

Objective: Use Annual Survey Data to Add Revenue to CBP

Analyze

- Determine how and if annual survey data can be used.
- Examine Single Unit (SU) and Multi-Unit (MU) separately.
- Look for revenue matches within 10%.

Transform

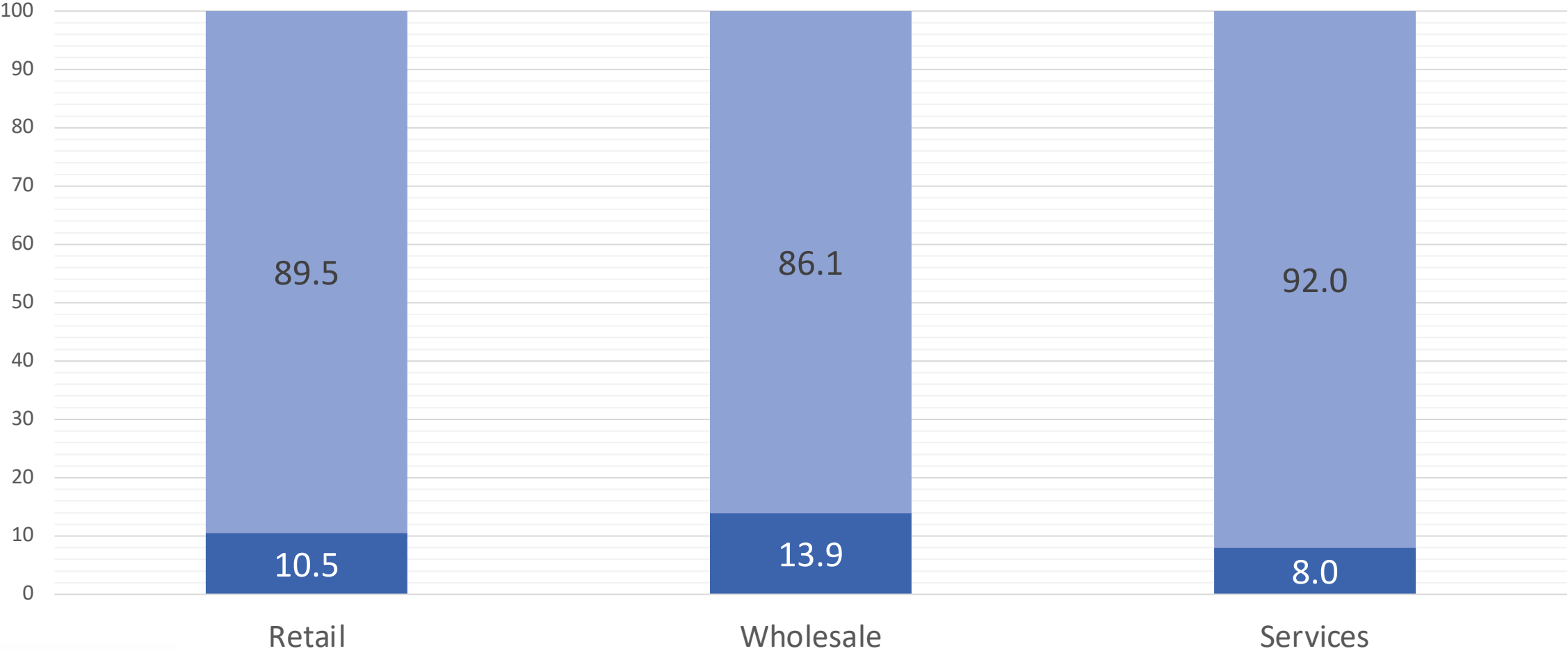
- Create establishment level targets for the pipeline.
- Establishment = Alpha X NAICs_6

Integrate

- Work with the rest of the team to incorporate the new targets into the pipeline.

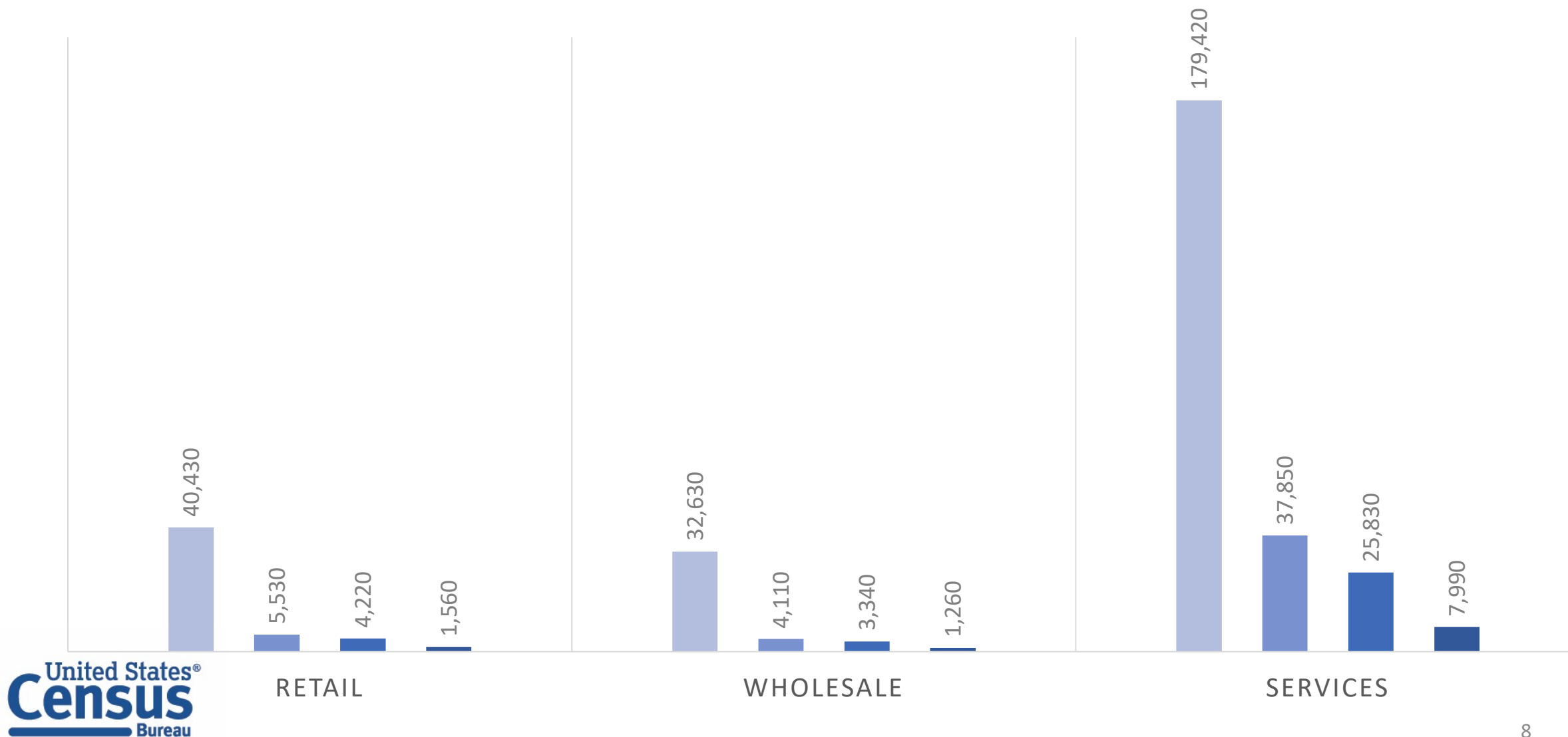
Total SU Revenue Across Industry

■ Unaccounted for Revenue Data ■ Acounted for Revenue Data

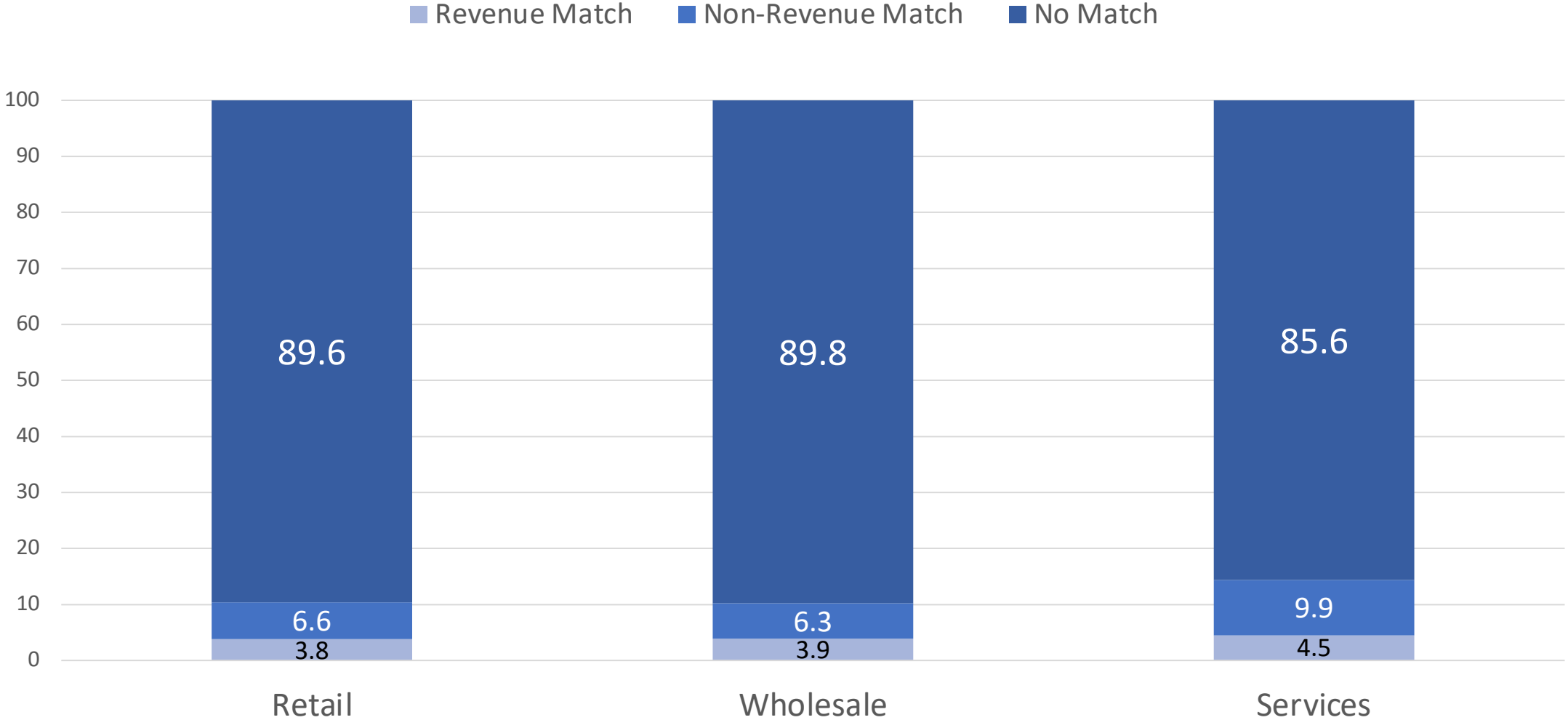


MU RECORD COMPARISON

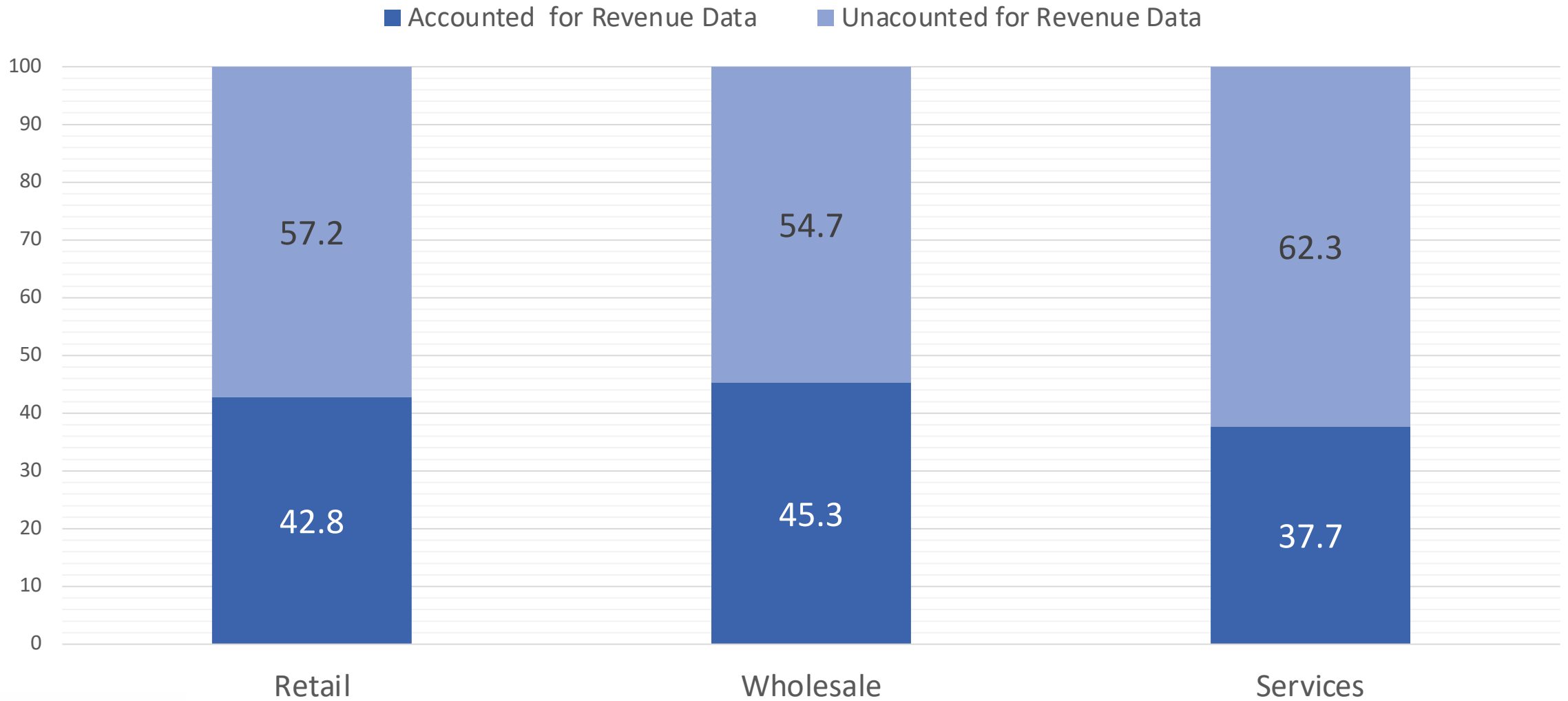
■ Admin Records ■ Survey Records ■ Matches ■ Revenue Matches



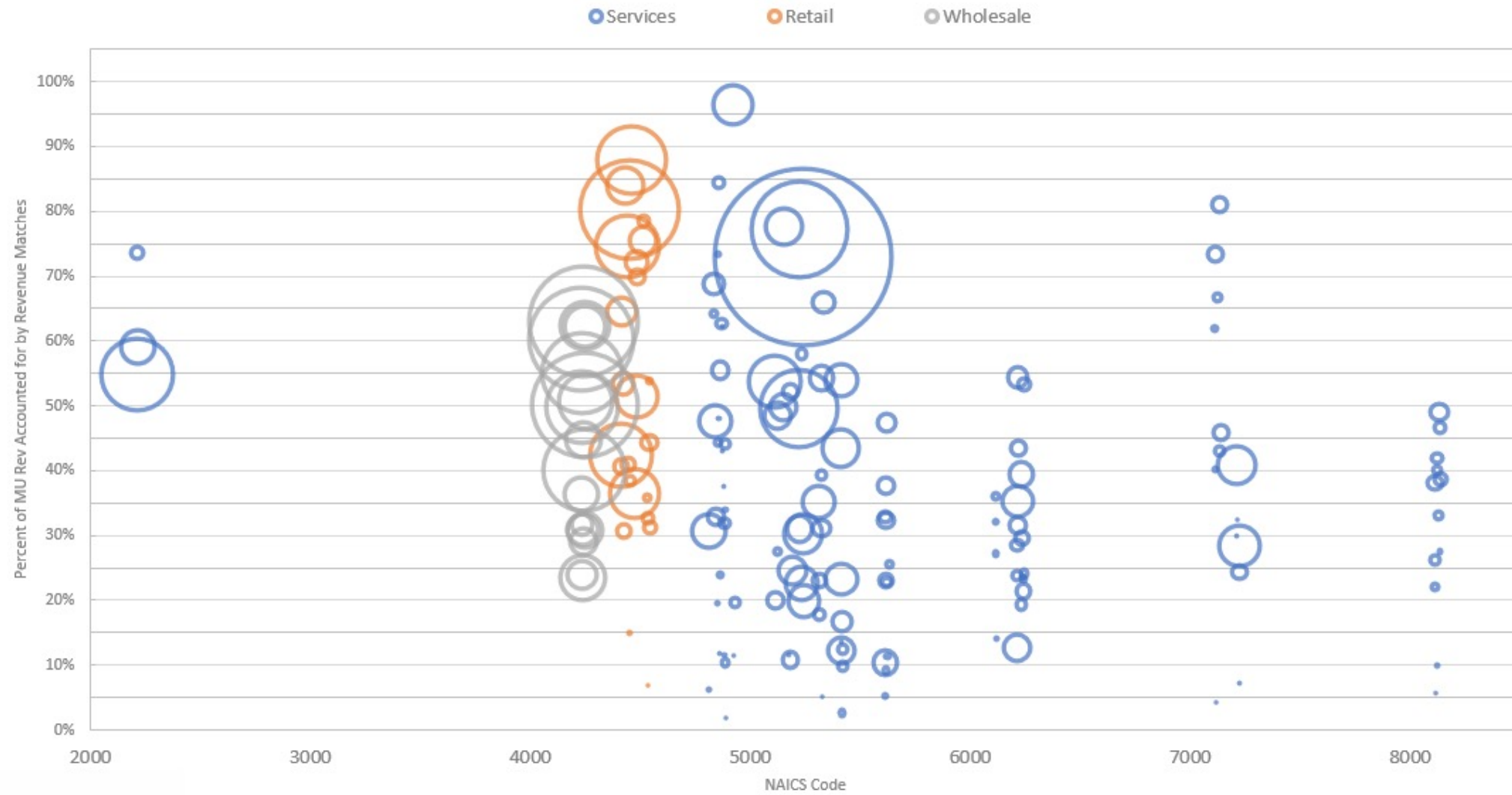
MU Matches



Total MU Revenue Across Industry



Accounted for MU Revenue by NAICS 4



Benefits of Survey Integration

Before

- No imputation benchmark to compare revenue estimates to in non census years.

After

- With annual survey data we have on average accurately accounted for 41.9% of the MU revenue across services, retail, and wholesale.

Deliverables

- In depth analytics assessing the quality and usability of the survey data.
- Isolated, quality survey data that can be integrated into CBP pipeline.
- Optimized script that can generate above insights for other surveys.



Next Steps

- Integrate useable survey data into existing CBP pipeline.

