Union Effectiveness in the Trade, Transportation and Utilities Sector

BINGHAMTON UNIVERSITY
STATE UNIVERSITY OF NEW YORK

A look at the effect of union representation on wage and benefits growth

By: Nathaniel Thomas

Introduction

The Trade, Transportation & Utilities (TTU) super-sector is the quiet engine of the U.S. economy, employing everyone from truckers and dockworkers to warehouse pickers and cashiers, yet it rarely features in wage and union debates dominated by manufacturing or tech. Recent high-profile organizing drives, Amazon's Staten Island warehouse vote and West Coast port strikes, have revived questions about whether unions still move the needle on pay in these essential but overlooked industries.

Central Investigative Questions

Does a higher share of workers covered by union contracts still translate into better pay within today's TTU industries? If so, which subsectors gain the most, and which show little to no union dividend?

Methods

I compiled annual union-coverage rates and compensation metrics (hourly total compensation, wage cost, and benefit cost) for each TTU subsector from BLS series spanning 2006-2024. A simple multivariable OLS model regressed each pay measure on union coverage while controlling for calendar year to net out inflation and broad productivity trends. Coefficient β_1 estimates the pay change associated with a one-percentage-point rise in union coverage; p-values ≤ 0.10 were treated as evidence of meaningful union impact.

Regression Details

$$ValueMeasure_t = \alpha + \beta_1 \cdot UnionCoverage_t + \beta_2 \cdot Year_t + \varepsilon_t$$

Union Coverage is the percentage of workers whose jobs are covered by a collective-bargaining agreement, so $\beta 1$ estimates the dollar change in wages, benefits, or total compensation that accompanies a one-percentage-point rise in coverage, holding the passage of time constant. The Year term, entered as a simple numeric trend, absorbs inflation, productivity growth, and other secular forces; its coefficient $\beta 2$ therefore represents the average annual pay drift unrelated to unions. Goodness-of-fit was assessed with R2 (all above 0.88), and t-tests on $\beta 1$ used a 10 % significance cutoff to flag subsectors where union density still exerts a statistically meaningful pay effect.

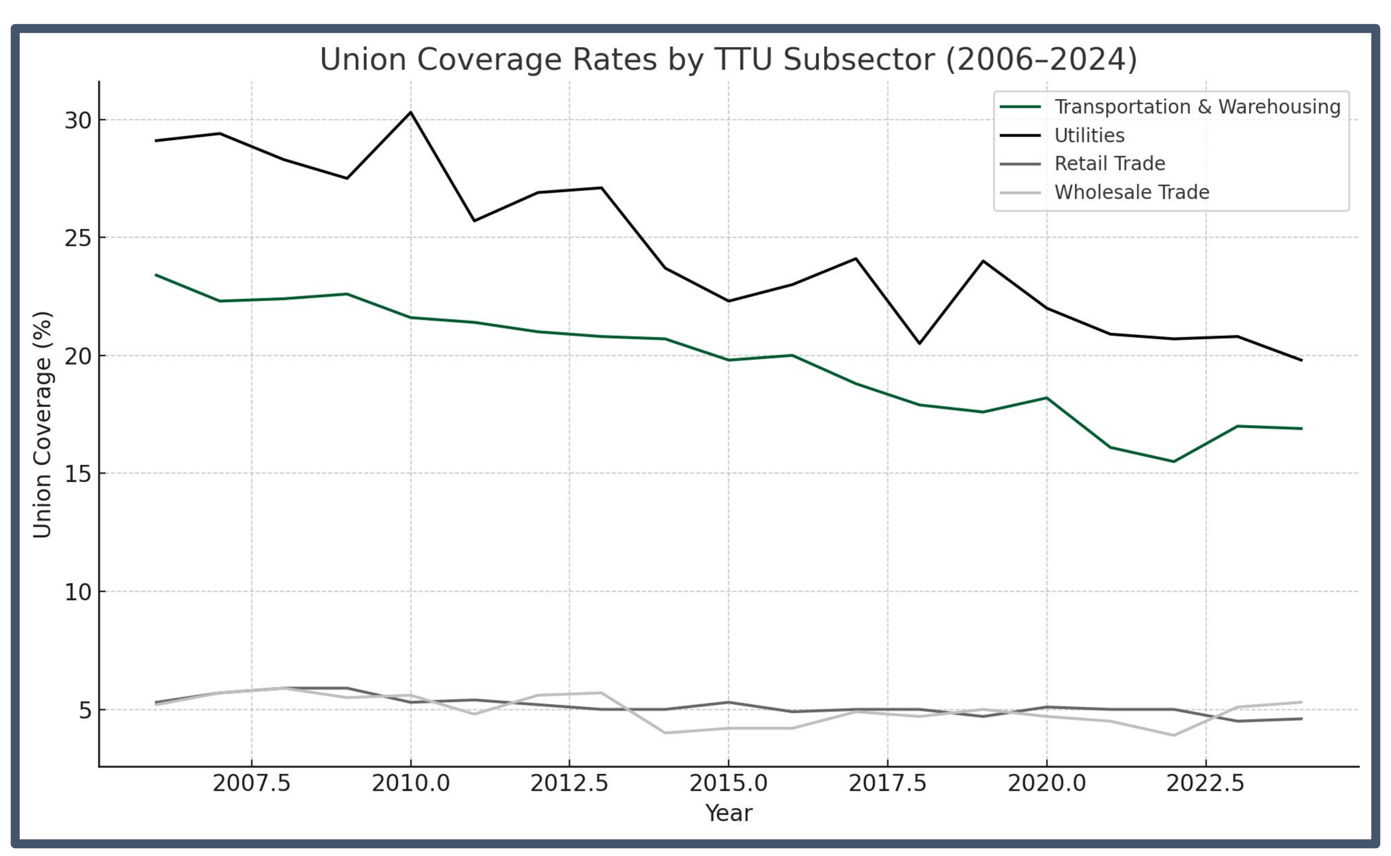
TTU Sectors Explained

Transportation & Warehousing moves people and goods by air, rail, road, water, and pipeline while storing and handling freight in warehouses and distribution centers. Utilities generate, transmit, and distribute electricity, natural gas, water, steam, and sewage services, operating capital-intensive networks under heavy regulation. Retail Trade sells merchandise directly to the public, both in stores and online, acting as the final step in the supply chain with high customer turnover and thin margins. Wholesale Trade buys goods in bulk from producers and resells them to retailers or other businesses, adding value through large-scale storage, logistics, and specialized market knowledge.

Amazon warehouse workers outside the National Labor Relations Board.
Photo by Joe Piette

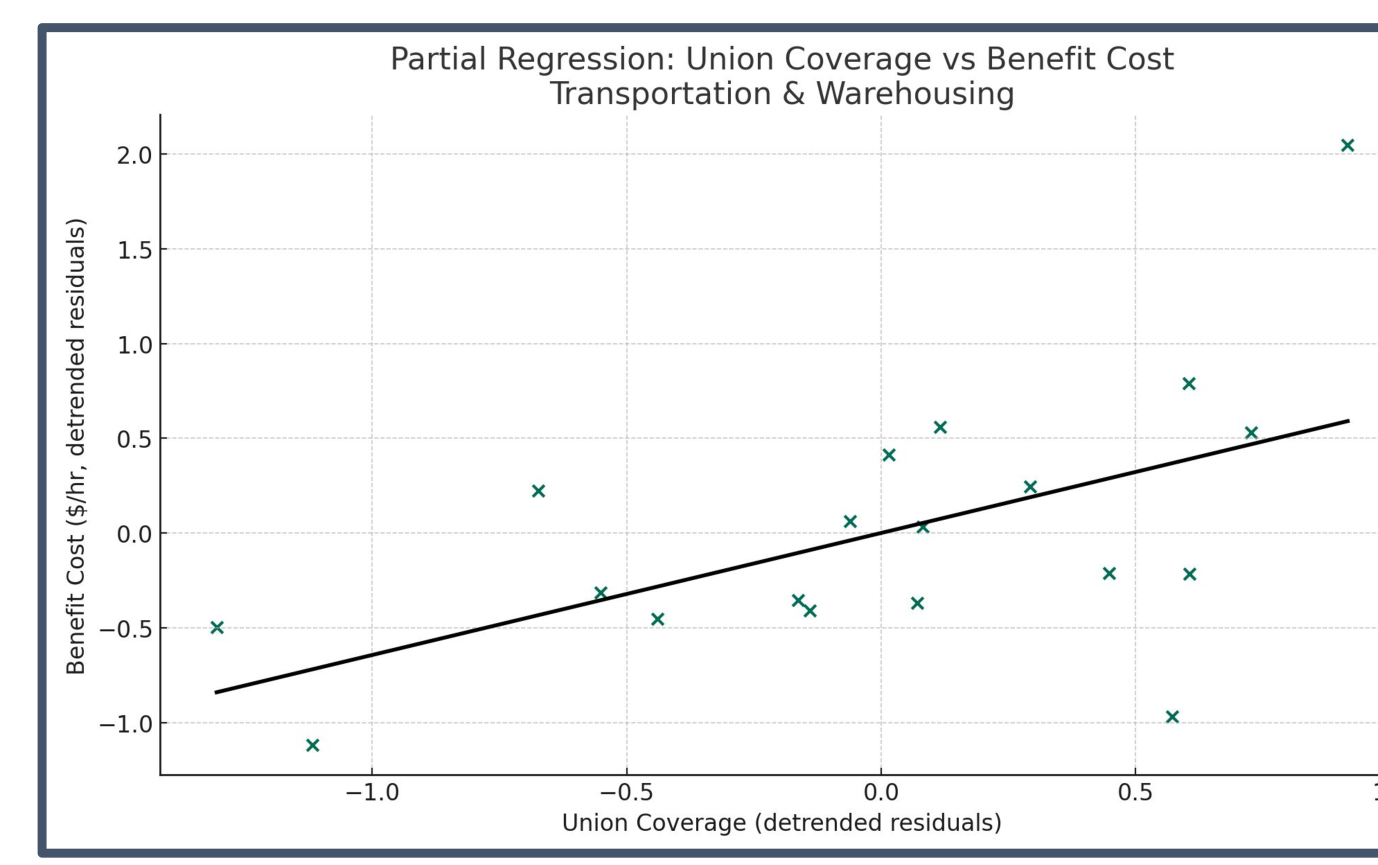
Results

Transportation & Warehousing is the lone subsector where unions remain statistically influential: a one-point coverage boost links to a \$0.64 rise in hourly benefits ($p = 0.016$) and modest gains in wages and total compensation. Utilities show strong pay growth overall, but union coefficients are small and not significant, implying regulation and capital intensity, not bargaining power, drive earnings. Retail Trade exhibits virtually no union effect; low density and high turnover swamp bargaining leverage. Wholesale Trade posts moderate positive coefficients, yet p-values above 0.17 keep the findings below the study's significance threshold, underscoring how thin union presence limits impact even when effect sizes look sizable



This chart tracks the percentage of workers covered by union contracts across the four major TTU subsectors. While coverage has steadily declined in Transportation & Warehousing and Utilities, it has remained consistently low in Retail and Wholesale, underscoring key structural differences in organizing potentia

Dockworkers at the Bayport Container Terminal in Seabrook, Texas.
Mark Felix/AFP via Getty Images



This chart isolates the relationship between union coverage and benefit cost after removing the effects of time. The upward slope confirms, all else equal, higher union presence is significantly associated with higher employer spending on worker benefits