

Analyzing the Impacts of Warehousing Growth in Rural Pennsylvania

Moira Conway
Kutztown University

October 12th, 2025

Alison Conway

Owen Smith, Katherine Lovelidge, Sophia Harris, Becky Hawk, Kutztown University



Introduction



Analyzing the Impact of Warehouse Development in Pennsylvania

By: Moira Conway, Rebekah Hawk, Katherine Lovelidge, Owen Smith, Sophia Harris, Kutztown University of Pennsylvania; and Alison Conway, Independent Consultant.

Abstract: Pennsylvania has recently emerged as a center of warehousing development on the East Coast. New distribution facilities can provide economic benefits, but also present challenges for surrounding communities. Using Geographic Information System (GIS) analysis of publicly available data, stakeholder outreach, and media analysis, this project evaluates the impacts of warehouse growth in the state and uses six case study counties to explore employment trends, traffic impacts, and other community changes, such as land use and population, over the last 10 years. Results demonstrate growth in the number of warehouses and warehousing jobs, growth in collisions involving smaller commercial vehicles, and specific community concerns in rural areas. In addition, average labor income and the share of total value added by direct employment in general warehousing jobs are both higher in rural counties than in urban counties. These results will help inform land-use, transportation, and economic development policies at local and state levels.

Keywords: warehousing, e-commerce, rural Pennsylvania



Goal

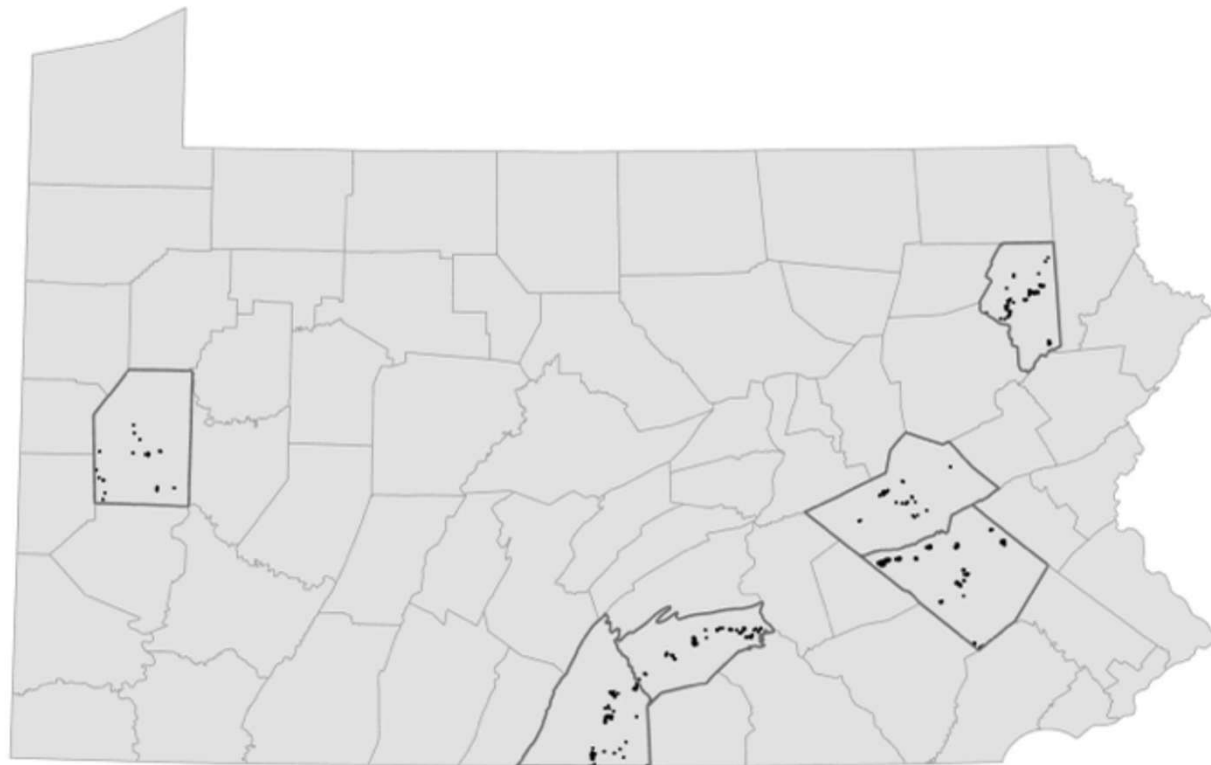
Relying on both quantitative analysis of publicly available data sources and qualitative evaluation of media reports and original interviews with county stakeholders, this report seeks to analyze various economic impacts, transportation safety, and community of warehousing development in rural Pennsylvania. The results of this report can help inform policy decisions related to warehousing growth.

Methods

An aerial photograph of a large industrial or commercial facility. The facility consists of several long, low-profile buildings with light-colored roofs, surrounded by a large parking lot filled with cars. The facility is situated in a flat, open area with some fields and a road in the foreground. In the background, there are rolling hills and a small town or village.

- Statewide analysis
- Six case study counties:
 - Berks
 - Butler
 - Cumberland
 - Franklin
 - Lackawanna
 - Schuylkill Counties

Warehouses in Case Study Counties



50
Miles

□ Case Study Counties
■ Warehouses
■ Pennsylvania

An aerial photograph of a large industrial complex, likely a warehouse or distribution center, featuring several long, rectangular buildings with light-colored roofs. The facility is situated in a rural or semi-rural area with open fields and a road intersection visible in the foreground. The background shows a hazy landscape with distant hills and some residential or commercial buildings.

Data Sources

- Establishments and jobs: QCEW data, 2014-2023
- Tax, Market Value and Assessment: Pennsylvania Department of Community and Economic Development
- Collision Data: Pennsylvania Department of Transportation's Crash Download Map
- Case Study Warehouses



Methods: Quantitative

The following trends were examined:

- Changes in warehouse establishments and workers employed in this sector, as well as warehouse-related transportation industry sectors.
- Warehouse employment impact on the state's economy.
- Environmental impacts of warehouse activity.
- Market value, assessed value, total tax revenue, and real estate tax revenue in municipalities with and without warehouse development.
- Collision frequencies involving e-commerce-related vehicles.



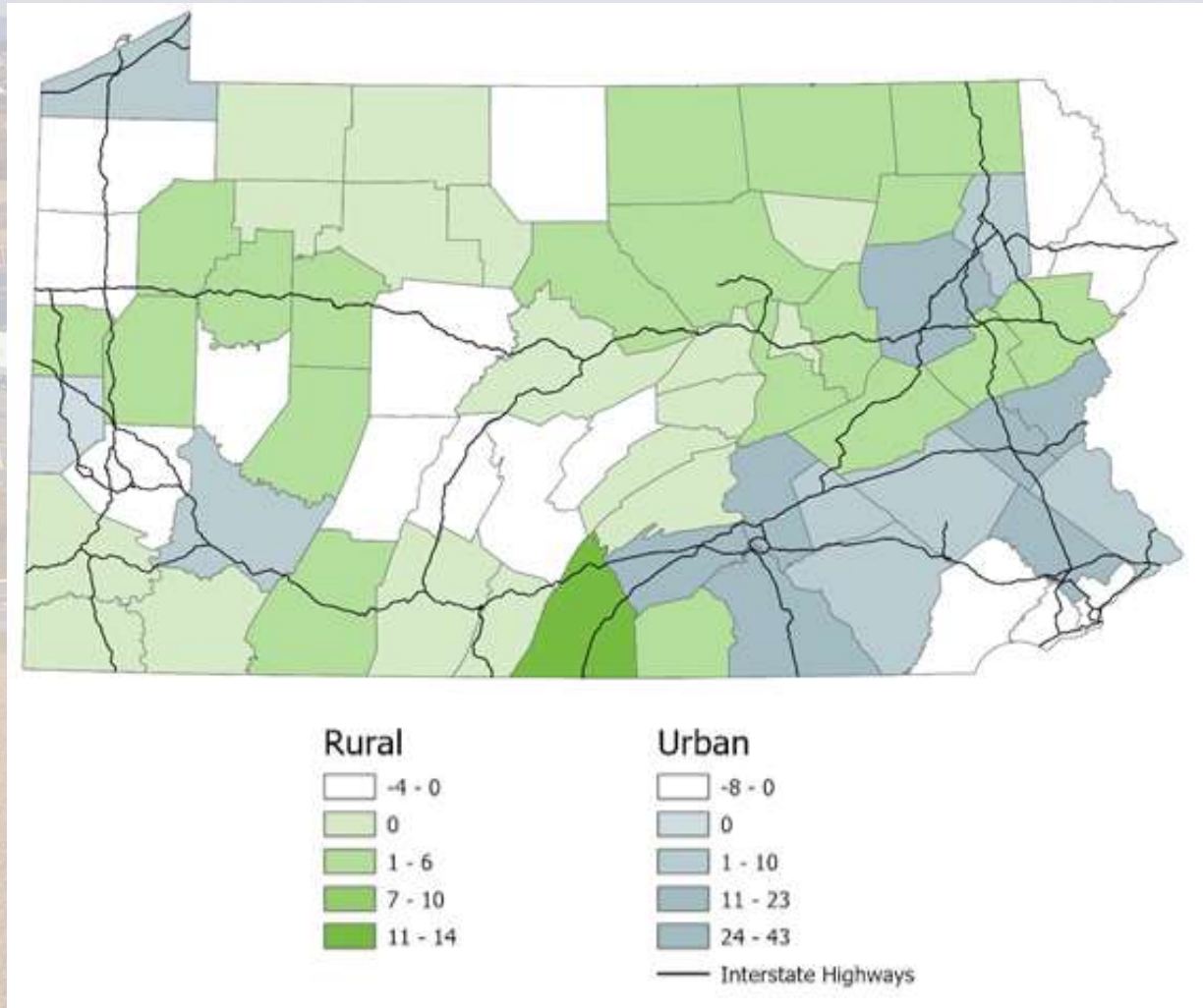
Methods: Qualitative

- News Media:
 - 439 news articles published between January 1, 2014, and December 31, 2023, by local news sources were reviewed
- Structured Stakeholder Interviews
 - Structured interviews were conducted with a total of eight individuals

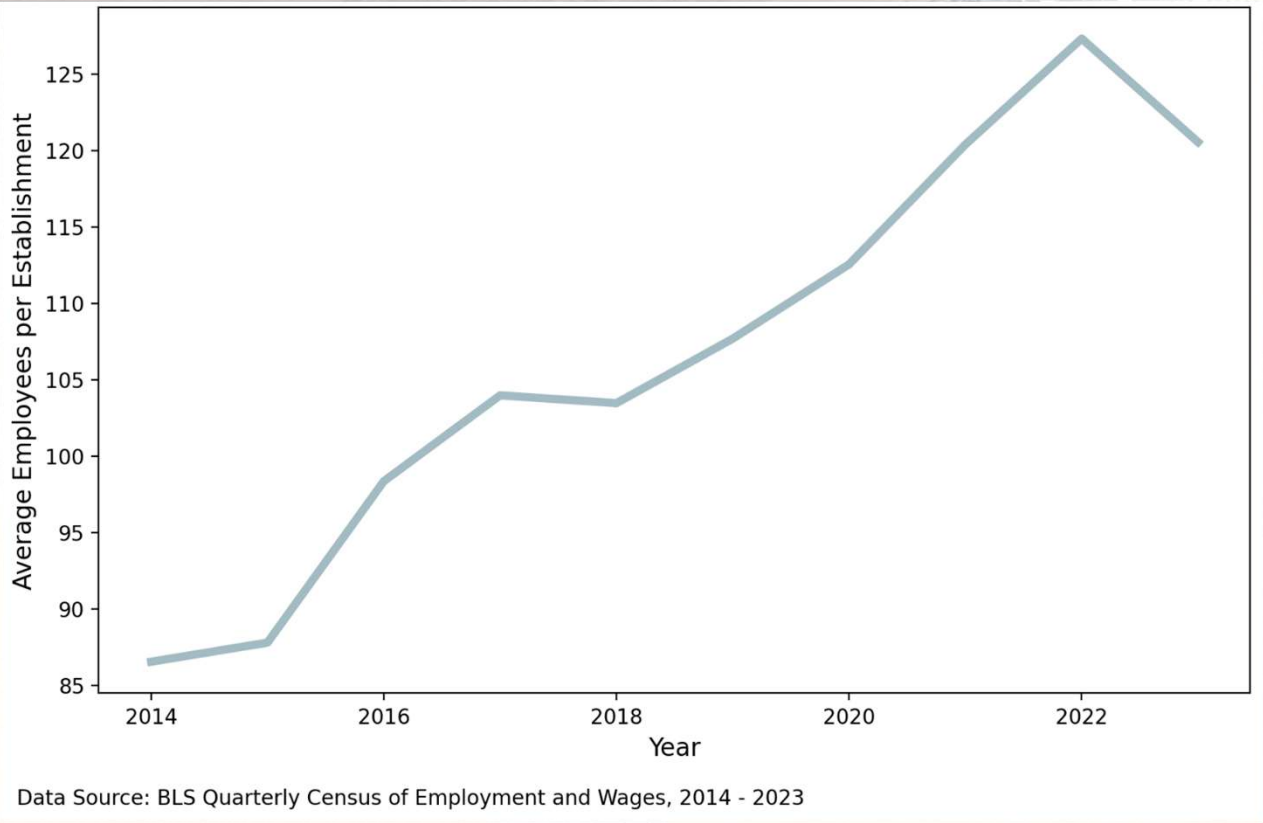
An aerial photograph of a large industrial or commercial development. The central focus is a large, rectangular building with a blue roof and white walls, surrounded by a paved parking lot. A multi-lane road intersects with a single-lane road at a T-junction. The surrounding area consists of open fields and some distant buildings. The sky is overcast.

Findings: Economic Quantitative Analysis

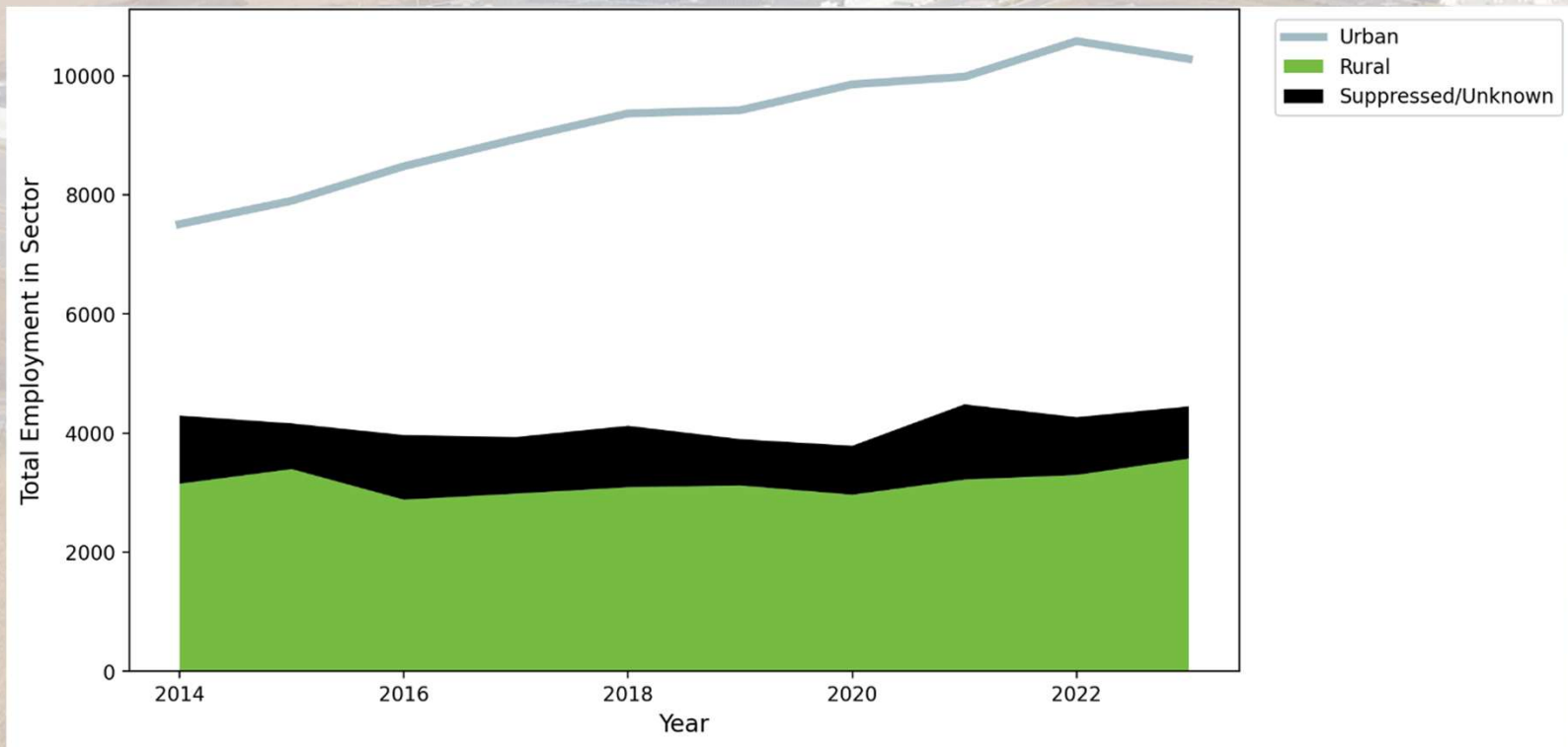
Net Change in Establishments 2014-2023



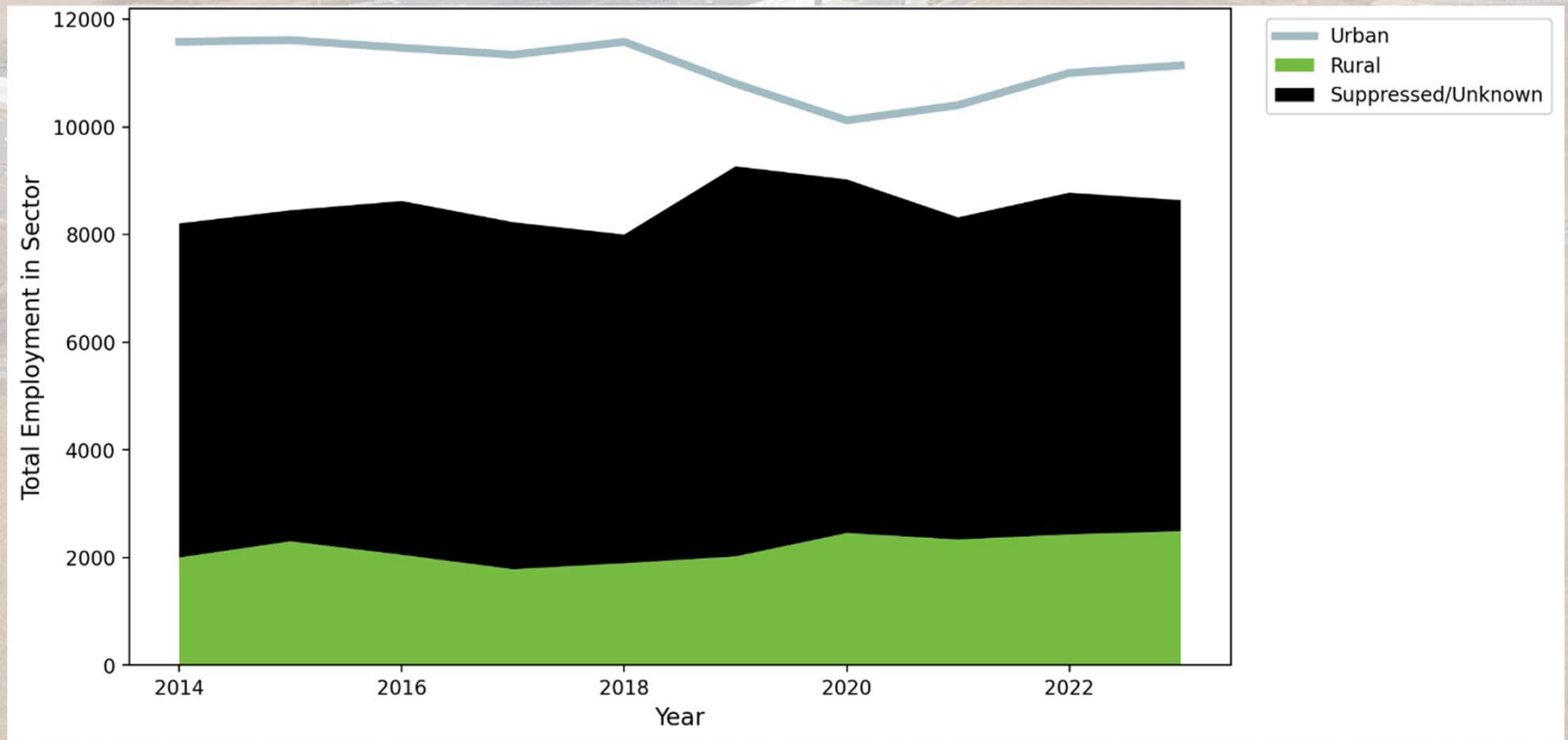
Employment per Establishment in General Warehousing (NAICS 493110)



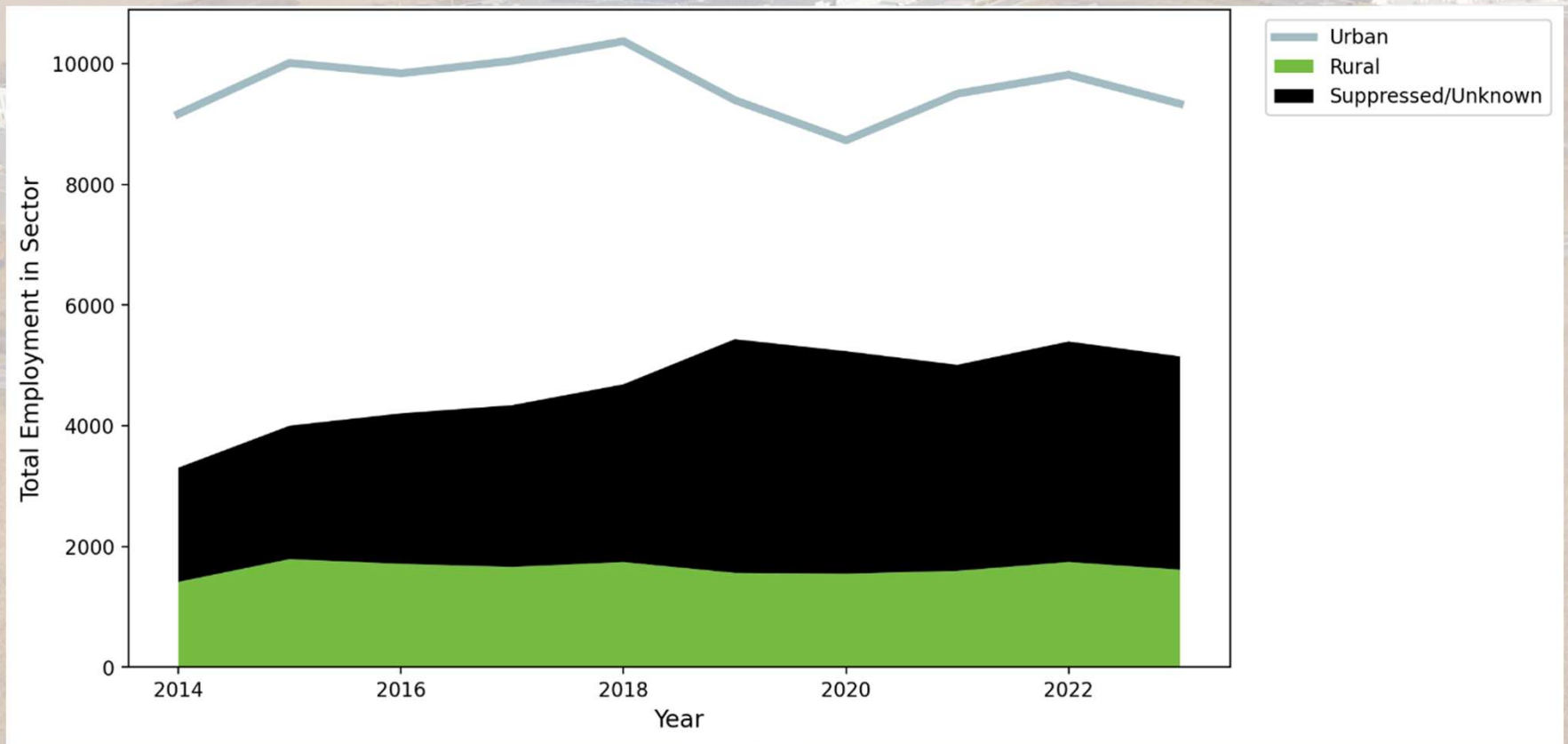
Employment in Local Trucking



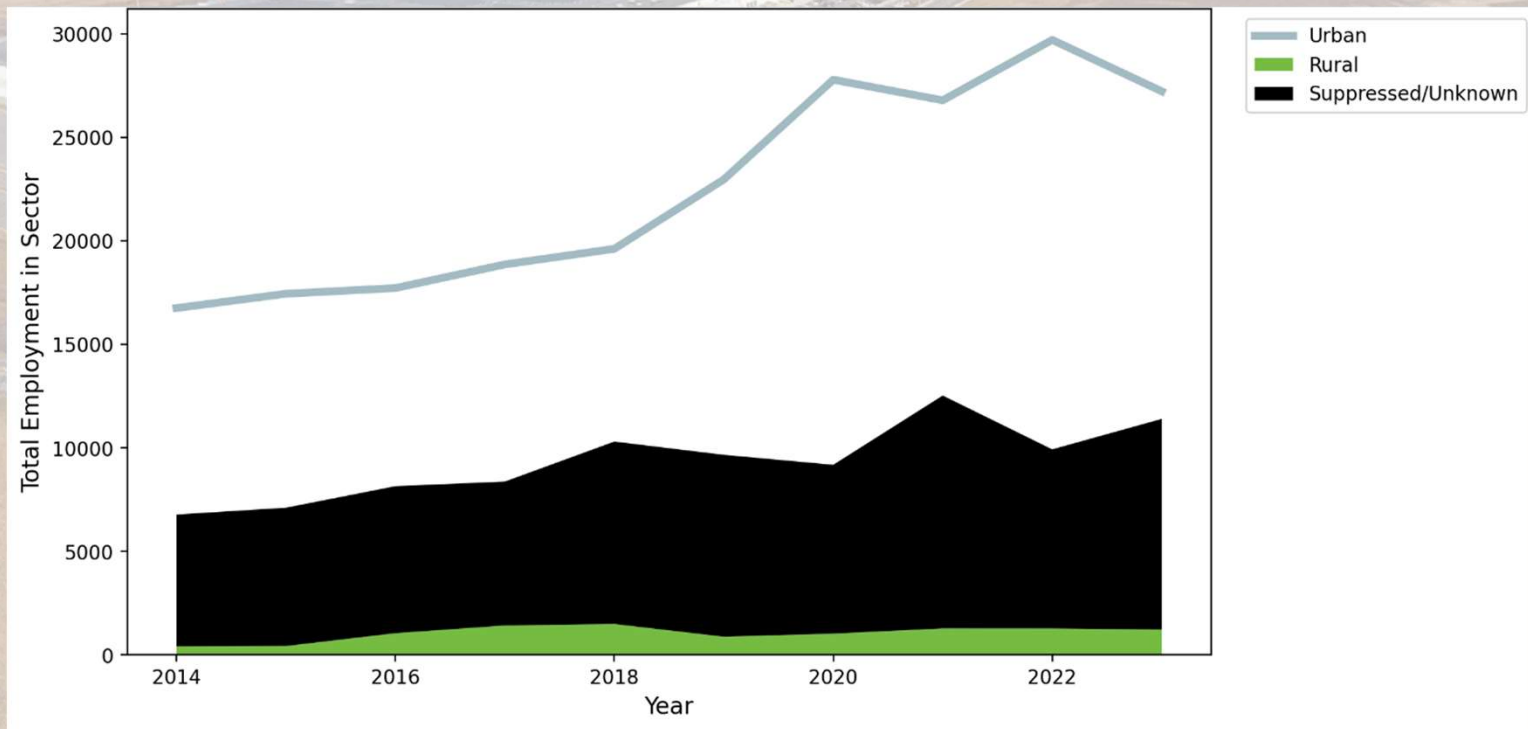
Employment in Long-Distance TL Trucking



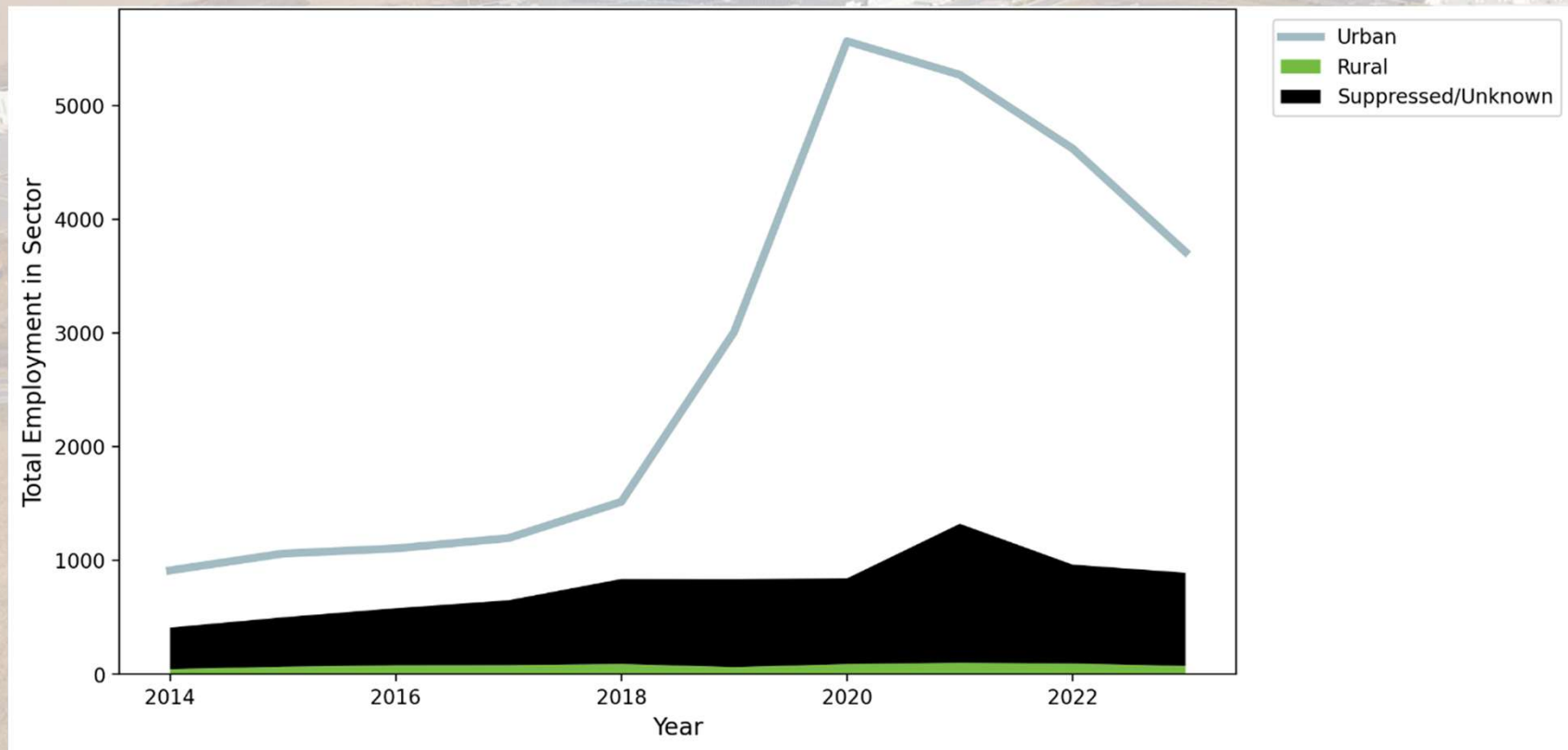
Employment in Long-Distance LTL Trucking



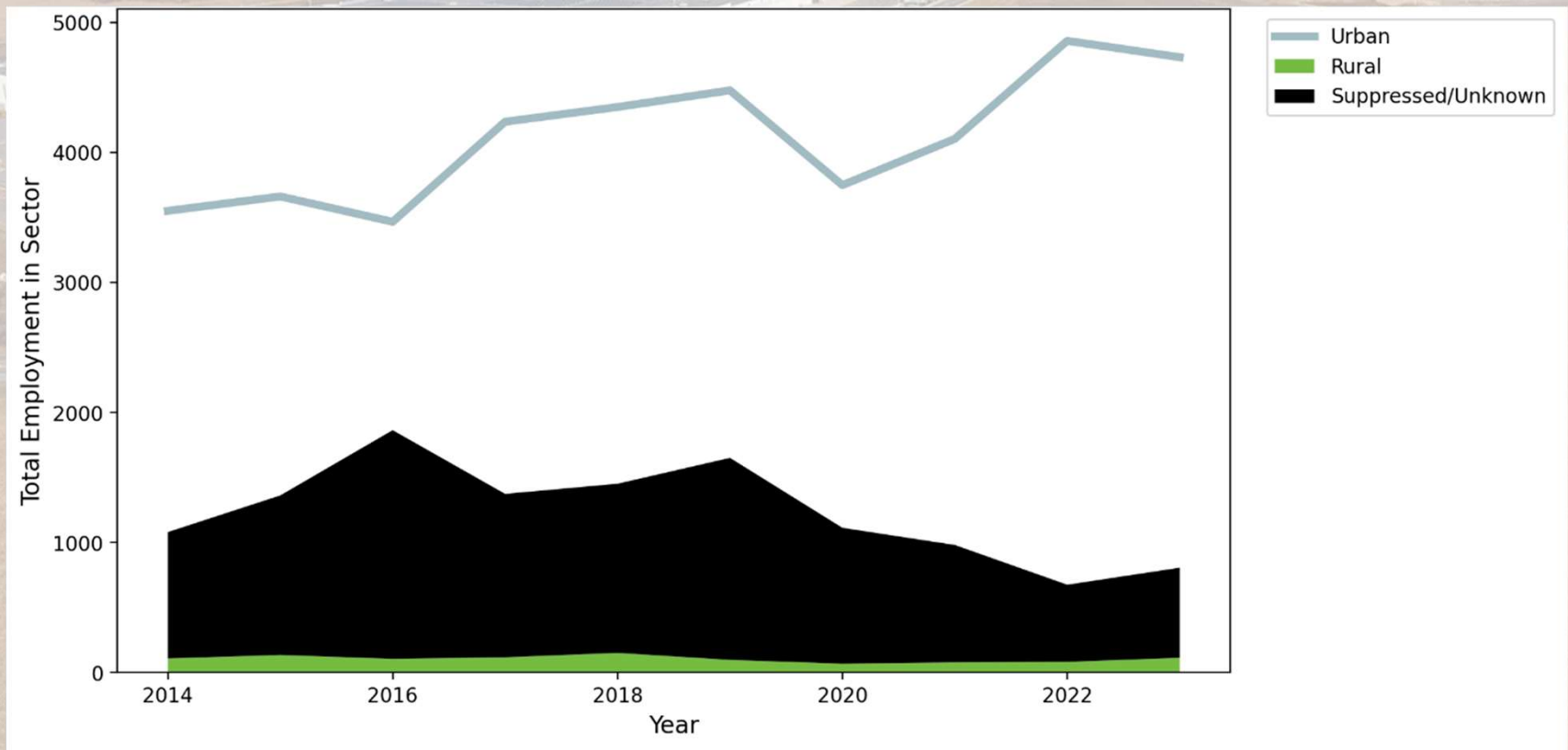
Employment in Courier and Express Delivery Services



Employment in Local Messenger and Local Delivery



Employment in Freight Transportation Arrangement



Market Value and Assessment Data

Assessment

County	5 Year- All Municipalities	5 Year- Warehouse	10 Year- All Municipalities	10 Year- Warehouse
Berks	6.44	24.20	9.98	31.36
Butler	5.80	7.34	10.78	10.88
Cumberland	7.12	12.23	11.59	19.53
Franklin	8.09	9.63	12.99	15.18
Lackawanna	5.51	9.15	6.40	9.51
Schuylkill	6.36	13.28	8.98	18.56

Market Value

County	5 Year- All Municipalities	5 Year- Warehouse	10 Year- All Municipalities	10 Year- Warehouse
Berks	23.05	57.77	32.14	79.14
Butler	23.67	20.82	48.68	31.69
Cumberland	15.07	20.54	26.11	36.48
Franklin	18.65	21.92	23.64	26.97
Lackawanna	23.99	31.64	36.71	46.53
Schuylkill	21.21	29.71	25.94	36.20

Total Tax and Real Estate Tax Data

Total Tax

County	5 Year- All Municipalities	5 Year- Warehouse	10 Year- All Municipalities	10 Year- Warehouse
Berks	18.25	28.86	33.16	53.54
Butler	15.89	14.23	35.95	43.73
Cumberland	19.73	24.86	44.87	73.30
Franklin	18.14	22.14	43.21	48.55
Lackawanna	17.43	14.62	34.69	35.84
Schuylkill	25.03	12.22	39.35	40.83

Real Estate Tax

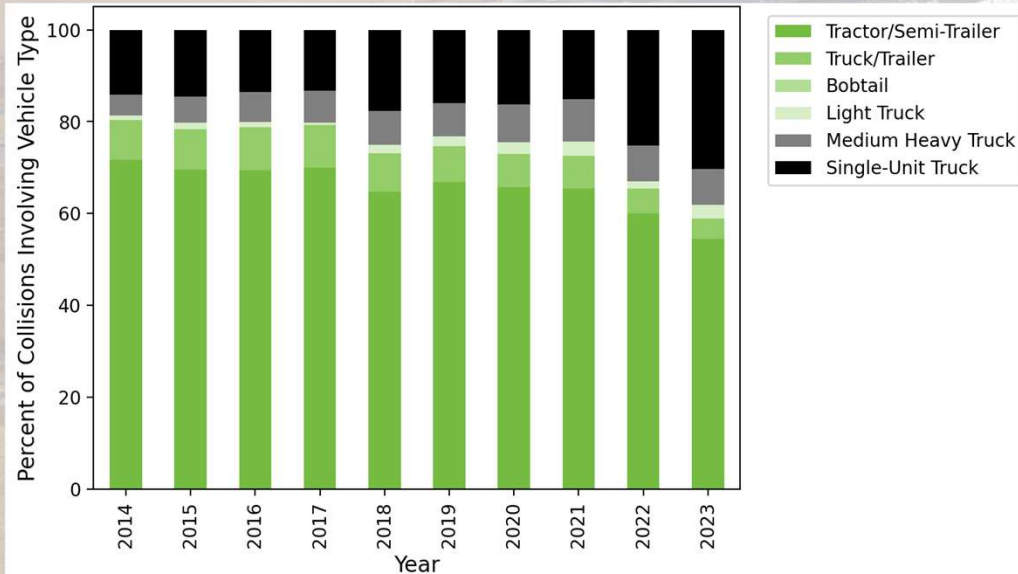
County	5 Year- All Municipalities	5 Year- Warehouse	10 Year- All Municipalities	10 Year- Warehouse
Berks	28.91	24.22	49.58	37.65
Butler	31.54	10.07	58.97	28.49
Cumberland	15.75	21.68	73.30	103.68
Franklin	13.30	19.95	25.72	33.13
Lackawanna	6.09	11.42	18.45	23.09
Schuylkill	26.15	18.28	38.82	59.73

Economic Impact Analysis: Implan

- Statewide:
 - 107k jobs in the General Warehousing sector,
 - 21k jobs are supported by supply chain activity related to General Warehousing
 - 36k jobs are supported through the spending of wages from General Warehousing and other related supply-chain activities.
- The average Labor Income for warehouse jobs in rural counties is higher than in urban counties. However, the average Labor Income for jobs across all sectors supported by Indirect and Induced activities is significantly lower in the rural counties compared to the urban counties.
- A higher share of the total jobs supported in rural counties (compared to urban) are in Transportation occupations. Rural transportation jobs provide a higher average salary compared to urban jobs in the same sector.
- Salaries paid for jobs requiring advanced education (e.g. Math and Computers, Engineering) provide significantly lower salaries in the rural areas compared to the urban areas.
- The share of total value added by direct employment in General Warehousing jobs (vs. Indirect and Induced jobs in other sectors) is much higher in rural counties compared to urban counties.

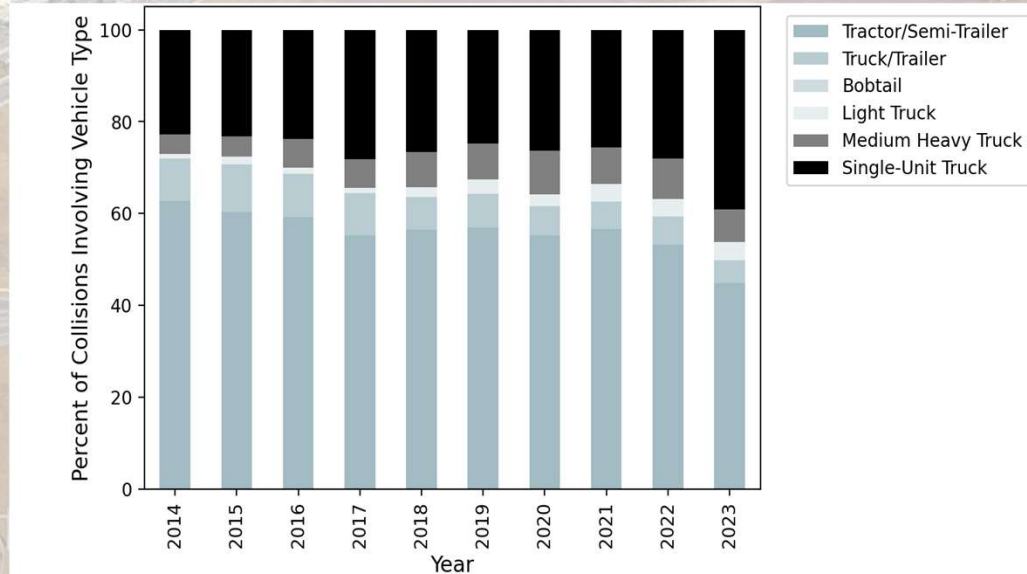
Traffic Analysis: Collision Trends

Rural Counties



PennDOT Crash Download Map, 2014 - 2023

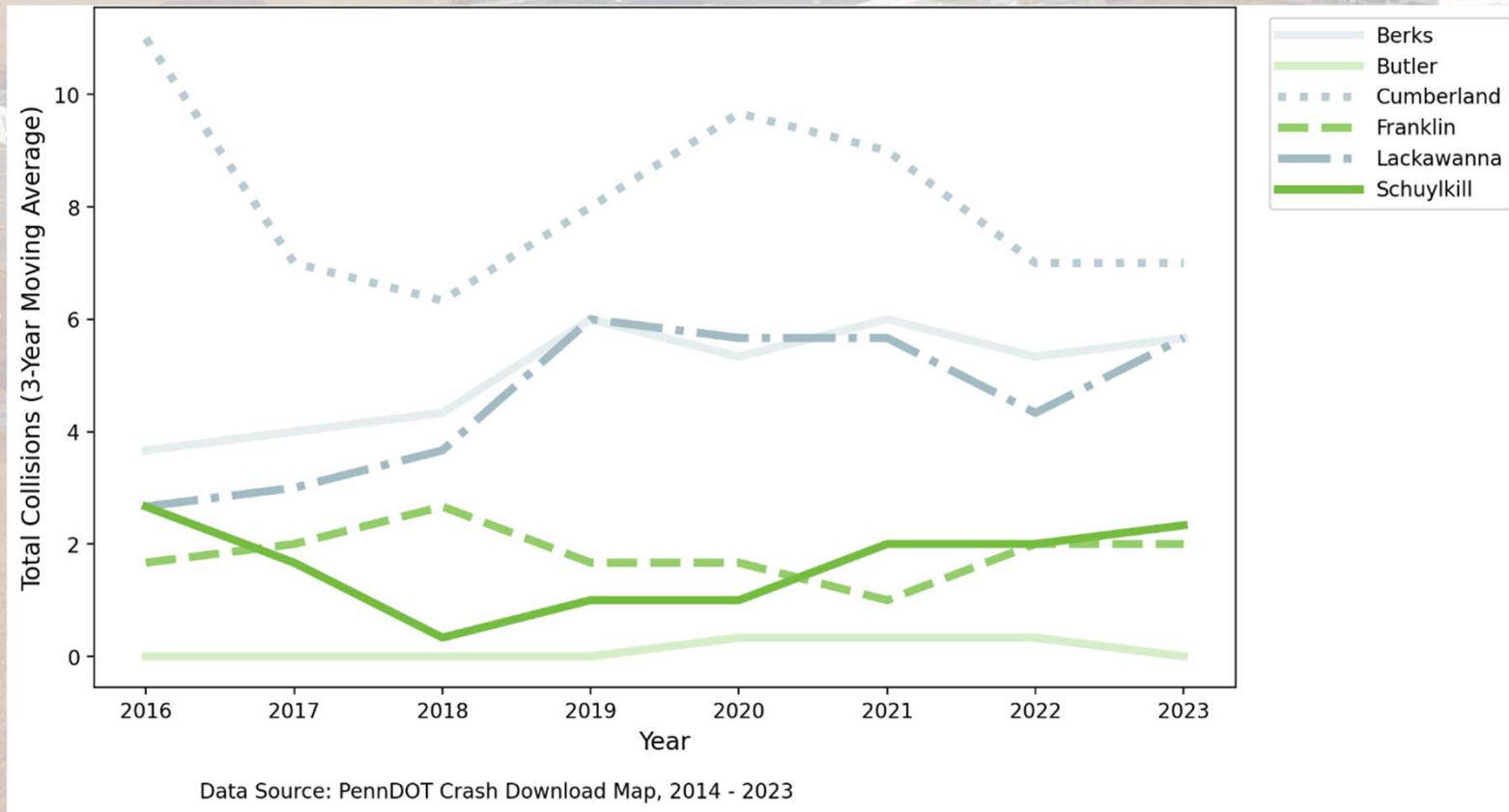
Urban Counties



Data Source: PennDOT Crash Download Map, 2014 - 2023

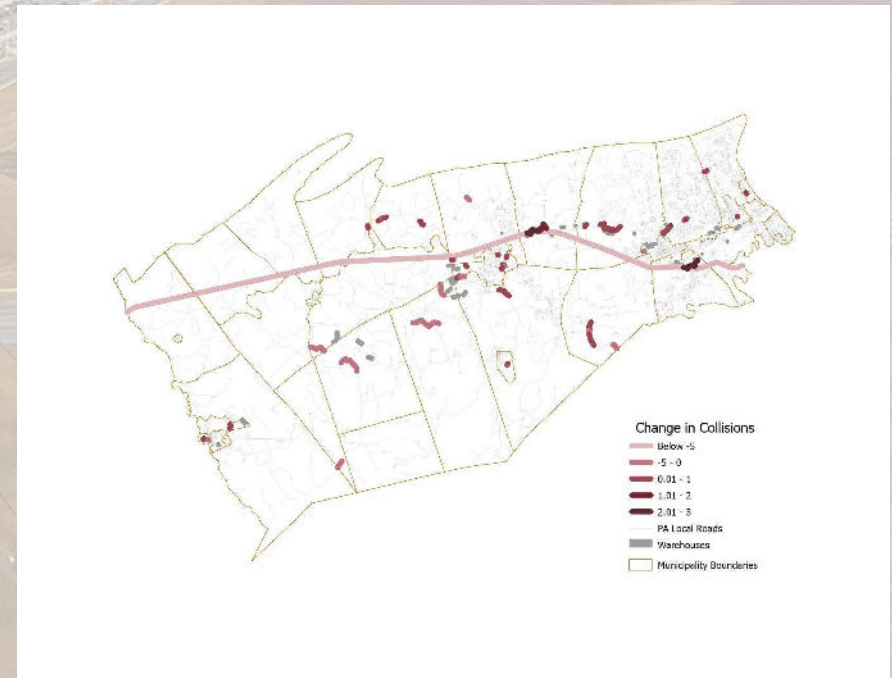
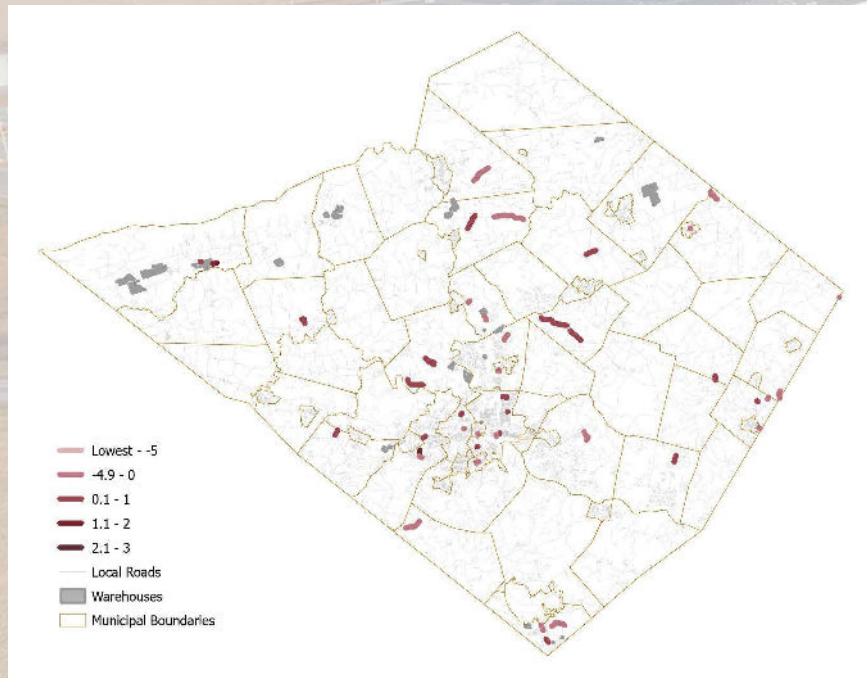
Traffic Analysis

Total Collisions Occurring on Local Roads



Traffic Analysis

Five Year Change in Collisions



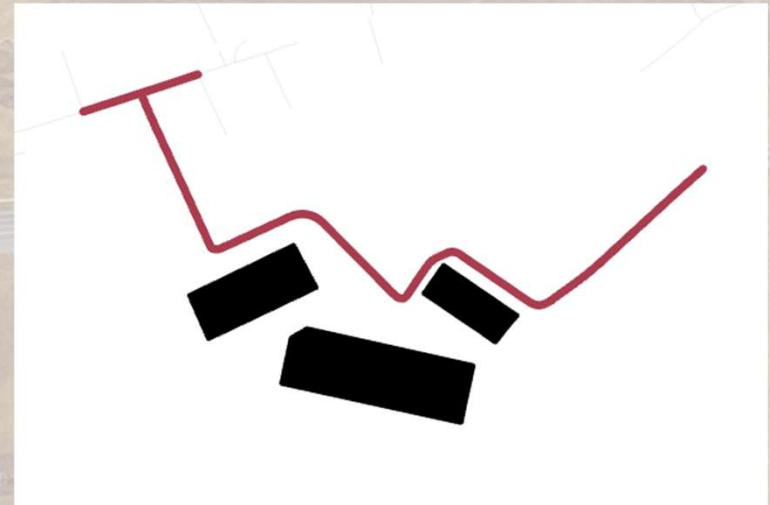
Traffic Analysis

Five Year Change in Collisions

- I-76 and Route 15



Frye Drive



Warehousing Concerns and Benefits Identified for All Counties

Concerns	Benefits
Loss of Agricultural Space	Tax Benefits for Local School Districts
High Employee turnover	Other Tax Benefits
Warehouse vacancies	Use of Tax Incentives
Growing infrastructure Costs	Jobs
Air, Noise and Light Pollution	
Odors caused by warehouse and construction	
Increased development	
Truck Parking	
Growing traffic	
Safety issues, such as fires	
Use of tax incentives	
Environmental concerns- stormwater runoff	



Policy Considerations

- Municipal cooperation and best practice policies
- Further study is needed to identify the broad impacts of tradeoffs occurring between warehousing jobs and jobs in other sectors in rural areas
- Tax incentives such as abatements can successfully promote development, but may limit tax revenue benefits, at least in the short term
- Road impacts are less when warehouses are located close to those major roads.
- Need to prepare for traffic mitigation early in the development process on local roads.
- Better data is needed to identify warehouse location, size, and time built.

Acknowledgements

- Project supported by a Center for Rural Pennsylvania grant
- Berks County Planning Commission- David Hunter, Ashley Showers, Beth Burkovich
- Cumberland County Planning Commission- Kirk Stoner, Steve Hoffman
- Franklin County Planning Commission- Quentin Clapper and Steve Thomas
- KU Student Research Assistants: Owen Smith, Katherine Lovelidge, Sophia Harris, Becky Hawk

An aerial photograph showing a large, modern industrial or commercial building complex with a blue roof and white walls. The building is situated in a rural area with rolling hills in the background. A multi-lane road with a roundabout or interchange is visible in the foreground, leading to the building. The surrounding landscape consists of brownish fields and some distant structures.

Questions?

See our report at the Center for Rural Pennsylvania website under Publications.

conway@kutztown.edu