Economic Impacts of Warehouse and Distribution Centers in New Jersey

A New Supply Chain Partner Report











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In collaboration with NAIOP New Jersey Commercial Real Estate Development Association and the Shipping Association of New York & New Jersey









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I am pleased to present a new study by the Center for Advanced Infrastructure and Transportation (CAIT) at Rutgers University. The study was conducted for NAIOP, the Commercial Real Estate Development Association, in partnership with the Shipping Association of New York and New Jersey. This report highlights the significant role that New Jersey's logistics industry plays in the state's economy and prosperity.

The new report examines the economic impact of warehouses and distribution centers already operating in New Jersey. These facilities are vital to strong supply chains for the state and beyond. The report finds that warehouses and distribution centers in New Jersey annually support:

- Nearly 764,600 direct jobs in New Jersey are in these buildings
- More than 1,350,000 total (direct and indirect) jobs in the State
- Over \$112.8 billion in personal income
- More than \$295.8 billion in business activity
- More than \$33.8 billion in federal, state, and local tax revenues. Local and state tax revenues account for nearly \$11.3 billion, and federal tax revenues for almost \$22.6 billion.

As cargo volume and port efficiency grow, these warehouses and distribution facilities will continue to adapt. New and redeveloped facilities will help ports remain strong, stable economic drivers. They will ensure a steady flow of goods and services throughout the state and region.

When state and local leaders shape infrastructure, land-use, or development policies, it's vital to emphasize the critical connection between these decisions and economic outcomes.

In the weeks and months ahead, NAIOP NJ, the Commercial Real Estate Development Association and our supply chain partners will work to share this information with a broader audience. Our goal is to help New Jersey's elected officials and media understand the real impact of these critical assets on the state and beyond.

Please share this information with state and local official to encourage discussions to raise awareness of the economic importance of warehouses and distribution centers in New Jersey.

Sincerely,

Dan Kennedy, MCRP, PP

CEC

NAIOP NJ, the Commercial Real Estate Development Association

Executive Summary

People and businesses throughout New Jersey and the surrounding region depend on a steady flow of goods and services to support their everyday lives and operations. Supply chains - the networks that move products from where they are made to where they are needed - make that possible.

Warehouses and distribution centers play a crucial role in maintaining efficient and effective supply chains. Although New Jersey is one of the smallest states in the nation by land area, it has long served as a vital hub for the distribution of goods.

While many people may notice the industrial buildings along New Jersey's highways and railways, some may not realize how many people work in these facilities or how much economic value they generate for the State. This report quantifies the total square footage and workers in New Jersey's warehouses and distribution centers and the ongoing economic value generated by these operations for the State.

The report documents the vital role and significant economic value that New Jersey's warehouses and distribution centers contribute to the State:

As of the end of 2024, New Jersey had1:

- Almost 1.02 billion SF of warehouses and distribution centers with
- Nearly 956 million SF of these buildings were occupied at the end of 2024.

The occupied warehouses and distribution centers in New Jersey annually support:

- Nearly 764,600 direct jobs in New Jersey in these buildings
- More than 1,350,000 total (direct and indirect) jobs in the State
- Over \$112.8 billion in personal income
- More than \$295.8 billion in business activity
- More than \$33.8 billion in federal, state, and local tax revenues, with local and state tax revenues of nearly \$11.3 billion and federal tax revenues of almost \$22.6 billion



The analysis is the first *Supply Chain Partner Report* undertaken in conjunction with the 2025 Economic Impact Assessment of the New York- New Jersey Port Industry. The Center for Advanced Infrastructure and Transportation (CAIT) at Rutgers University undertook this Supply Chain Partner Report on behalf of the Shipping Association of New York and New Jersey and with the substantial input, collaboration, and support of a knowledgeable senior executive advisory committee assembled by NAIOP New Jersey.



¹ CBRE Fourth Quarter of 2024 Market Reports were used, along with the Fourth Quarter of 2024 report from NAI James E. Hanson for Sussex County and part of Warren County.

Introduction

This report quantifies the total square footage and workforce of New Jersey's warehouses and distribution centers, as well as the ongoing economic value that these operations generate for the State. The analysis represents the first *Supply Chain Partner Report* conducted in conjunction with the **2025 Economic Impact Assessment of the New York-New Jersey Port Industry**.

The Center for Advanced Infrastructure and Transportation (CAIT) at Rutgers University undertook this Supply Chain Partner Report on behalf of the Shipping Association of New York and New Jersey and with the substantial input, collaboration, and support of a knowledgeable senior executive advisory committee assembled by NAIOP New Jersey. The methodologies used are detailed in the Report and Appendices. The Advisory Committee members, which included major industrial real estate developers, agents, building occupiers, and engineering firms, are listed in the Appendix.

Why this Report was Undertaken

New Jersey is the most densely populated state in the Nation, a title that the State has held for decades.² Furthermore, New Jersey is centrally located within the largest consumer market in North America, bordered by several of the nation's other most densely populated states.

The residents and businesses in New Jersey and the surrounding region must be provided with goods and services to support their daily lives and operations. Supply chains – the way goods move from sourcing through production and then distribution to their end users – are the means of providing what is needed.

Warehouses and distribution centers play a vital role in maintaining efficient and effective supply chains. Although New Jersey is one of the smallest states in the nation by land area, it has long served as a key hub for the distribution of goods. These industrial facilities are visible throughout the state; however, the activities that occur within them—as well as the number of workers employed and the economic value they generate—are often less apparent.

Quantifying the square footage of warehouses and distribution centers in New Jersey is relatively straightforward. However, quantifying the number of workers in New Jersey's warehouses and distribution centers is a more complicated task.

Estimating the number of workers in warehouses and distribution centers must consider several factors. For example, the activities that take place in these industrial buildings can vary considerably, which affects the number and type of workers needed. In addition, the number of workers in these buildings can vary based on the number of shifts used; whether the workers are full-time, part-time, contract, or seasonal; and the type of work that they do.

Governmental datasets³ may also not fully capture the total number of workers on-site because of who employs them, such as retail or wholesale firms, logistics companies, and/or employment agencies. Each of these business types has its own classification in government data sets.

This analysis uses published reports, fieldwork, engineering information, and the extensive knowledge of the Advisory Committee to develop a consensus estimation of the number of workers in New Jersey's warehouses and distribution centers.

Once the number of workers in New Jersey's warehouses and distribution centers was ascertained, CAIT undertook the additional quantification of the ongoing economic value generated by these operations using the same economic impact model developed for the 2025 Port Industry analysis.

² According to the US Census, New Jersey has a population of 9.5 million people in 2024, averaging about 1,292 persons per square mile. The only geographical area in the US that exceeds this density is the District of Columbia. https://www.census.gov/popclock/embed.php?component=density

³ For example, the workers in the buildings who are covered by unemployment insurance may be categorized in the North American Industry Classification System (NAICS) under retail, wholesale, warehouse, logistics companies, employment services, etc. Workers who are not covered by unemployment insurance, such as contract workers, may not be captured by these datasets.

Definitions

The Association for Supply Chain Management (ASCM) defines **warehousing** as "encompasses the activities related to receiving, storing, and shipping materials to and from production or distribution locations." ASCM also notes that **distribution centers** "differ from a typical warehouse because they also offer value-added services like product mixing, order fulfillment, cross-docking, and packaging." ⁵

This analysis categorizes warehouses and distribution centers based on the functions undertaken within the buildings as well as the number of shifts typically involved. Both factors significantly affect the number of workers in the building. The size of the building is not considered – the functions and number of shifts described below can take place in a range of building sizes.

The following three categories of buildings are used:

- <u>Transload and Storage Operations</u>: These operations consist of buildings where bulkier products, such as lumber, paper, and steel, are transloaded from one form of transportation to another. In addition, this category includes buildings where the primary function is storage with little or no value-added activities performed. In general, these buildings have a small workforce.
- Distribution Operations: These operations consist of buildings where the storage, distribution, and value-added activities take place. This is where products are handled after production has taken place and are on their way to their end users. Value-added activities include assembly, picking and packing, cross docking, and customization. Operations may consist of single or two shift operations over four or more days. A third minimal swing shift may also take place at night. Some additional workers may be used during peak periods. Some e-commerce operations fall into this category as they may involve only one or two shift operations. Examples can include white-glove last-mile services and delivery stations that operate only one or two shifts.
- 24/7 Operations: This category consists of buildings where three shifts are typically working multiple days or every day of the week. Additional workers are used during peak periods such as the holiday and back-to-school seasons. Examples can include three-shift e-commerce, food and pharmaceutical fulfillment operations.



⁴ https://www.ascm.org/topics/warehousing/

⁵ Ibid

Warehousing and Distribution Center Square Footage in New Jersey

For consistency with the 2025 New York-New Jersey Port Industry Economic Impact Assessment, the total and occupied square footage (SF) for New Jersey at the end of the fourth quarter of 2024 is used in this analysis. The square footage information comes from publicly available market reports.

This square footage information is limited to warehouses and distribution centers. It does not include production facilities or data centers. The data reflects buildings of 20,000 SF and greater. Based on information from Advisory Committee members, last-mile delivery operations are generally larger than 20,000 SF.

Please note that the information includes all the counties in New Jersey except for Atlantic, Cape May, Cumberland, and Ocean. Publicly available data consistent with the sources used was not available for these four counties.

As of the end of 2024, New Jersey had:6

- Almost 1.02 billion SF of warehouses and distribution centers with
- Nearly 956 million SF of these buildings occupied at the end of 2024.

New Jersey has over one billion square feet of warehouses and distribution centers.

On-Site Workforce

This analysis estimates that nearly 764,600 workers were employed on-site in New Jersey's occupied warehouses and distribution centers at the end of 2024.

Nearly 764,600 workers were employed in New Jersey warehouses and distribution centers in 2024. The extensive professional knowledge of the Advisory Committee, along with published reports and field research, informed the development of consensus assumptions regarding the distribution of New Jersey's warehouses and distribution centers across the three categories, as well as the average number of workers per thousand square feet within each category. The assumptions are summarized in the figure below.

Consensus Assumptions of Building Operations and Workforce

| Type of Operation | Percentage of Total New Jersey Square Footage | Average Number of Workers Per 1000 SF |
|-------------------------------------|---|---------------------------------------|
| Transload/Storage | 25% | .2/1000 SF |
| Distribution | 50% | .5/1000 SF |
| 24/7 Fulfillment & Other Operations | 25% | 2/1000 SF |

The number of workers per thousand feet used is conservative – it is lower, according to Advisory Committee members, than the ranges of on-site workers provided in the New Jersey Department of Transportation, Institute of Traffic Engineers, and New Jersey State Planning Commission guidance.

⁶ CBRE Fourth Quarter of 2024 Market Reports were used, along with the Fourth Quarter of 2024 report from NAI James E. Hanson for Sussex County and part of Warren County.

The on-site workforce calculation considers the total occupied square footage in the State, the distribution of New Jersey's warehouses and distribution centers across the three operational categories outlined above, and seasonal hiring patterns.

The per-thousand-square-feet figure refers to the workforce inside the buildings and generally excludes truck and delivery drivers who transport shipments to and from these facilities. These drivers are part of the indirect jobs generated by warehousing and distribution operations.

Ongoing Economic Value Generated

In the State of New Jersey, the warehouses and distribution centers occupied in the State as of the end of 2024 annually support:

- Nearly 764,600 direct jobs in New Jersey in these buildings
- More than 1,350,000 total jobs in the State
- Over \$112.8 billion in personal income
- More than \$295.8 billion in business activity
- More than \$33.8 billion in federal, state, and local tax revenues, with local and state tax revenues of nearly \$11.3 billion and federal tax revenues of almost \$22.6 billion

The economic impact assessment estimates the total ongoing impacts for New Jersey, which are defined to include:

New Jersey's warehouses and distribution centers support more than 1,350,000 total jobs and generate more than \$33.8 billion in tax revenues in the State.

Direct - the spending at the site of the economic activity. Direct effects are the focal point of an impact analysis. In this analysis, this refers to the warehouses and distribution centers in New Jersey.

Indirect - the purchases of goods and services by suppliers. By definition, the first round of indirect impacts includes the purchase of supplies and services that are required to produce the direct effects. Subsequent purchases of supplies and services generate other rounds of indirect impacts. Such purchases continue to ripple through the New Jersey economy.

Induced - the purchases (of such items as food, clothing, personal services, vehicles, etc.) that arise, in turn, from the increase in the aggregate labor income of households.

The **total economic impact** consists of the direct, indirect, and induced effects. **Ongoing** means that the impacts generated by New Jersey's warehouse and distribution centers continue each year, subject to industry changes.

The significant value generated highlights the critical role of New Jersey's warehouses and distribution centers in the State's economy. In addition, New Jersey has long served as a vital hub for production and distribution at the state, regional, national, and global levels, a role that remains critically important today and as we move into the future.



Appendix A: Advisory Committee Membership

This analysis would not have been possible without the knowledge, experience, and thoughtful input of the Advisory Committee. The organizations represented on the Committee were:

- CBRE
- Crow Holdings
- Cushman & Wakefield
- Greek Real Estate Partners
- Jones Lang LaSalle
- Langan
- NAI Hanson

- NAIOP New Jersey Chapter
- NAIOP Research Foundation
- Prologis
- PS&S
- T&M Associates
- The Shipping Association of New York and New Jersey



Appendix B: Background on the Economic Impact Methodology

This Supply Chain partner report uses the New Jersey State portion of the multi-region model (MRIO) constructed for the 2025 Port of New York and New Jersey Economic Impact Assessment. The model was built on an IMPLAN platform for this analysis. The version of the IMPLAN platform used is based on 2018 economic data with outputs generated in 2020 dollars. Given the unique characteristics of the inflation that has occurred since 2020, dollar figures for this analysis were separately updated to 2025 dollars using the National Producer Price Index for Transportation and Warehousing, the overall National Producer Price Index, and the Consumer Price Index for the New York-Newark-Jersey City, NY-New Jersey-Pennsylvania Region.

The IMPLAN model includes economic data, enables multi-regional and county-level assessments, and is used by public agencies throughout the US, including transportation authorities in the New York-New Jersey region.

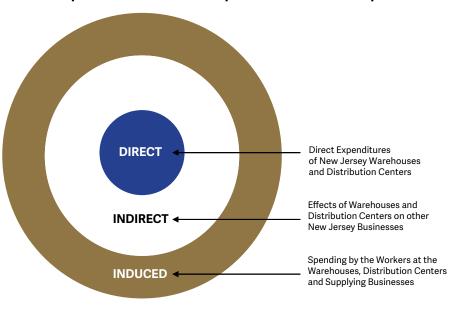
Multi-Regional Input-Output models (MRIO) capture the economic impacts occurring in several connected economic regions, along with "trade flows." Trade flows are defined as the purchase of goods and services among each of the identified regions. In addition to the trade flows, the models consider and reflect the purchase of goods and services from sources outside the identified regions. These leakages reduce impacts. For example, some suppliers and workers may come from outside of New Jersey. The impacts associated with these expenditures accrue to the locations outside of the State rather than to New Jersey.

Definitions

The economic impact assessment estimates the total impacts, which are defined to include:

- **Direct** the spending at the site of the economic activity. Direct effects are the focal point of an impact analysis. In this analysis, these are the New Jersey warehouses and distribution centers.
- Indirect the purchases of goods and services by suppliers. By definition, the first round of indirect impacts includes the purchase of supplies and services that are required to produce the direct effects. Subsequent purchases of supplies and services generate other rounds of

Components of Total Impact and the Multipliers



indirect impacts. Such purchases continue to ripple through the New Jersey economy.

■ **Induced** - the purchases (of such items as food, clothing, personal services, vehicles, etc.) that arise, in turn, from the increase in the aggregate labor income of households.

The total economic impact consists of the direct, indirect, and induced effects as shown above.

The economic measures included in this analysis are:

- **Employment Effects** Jobs generated or supported, including:
 - Direct employment: onsite full- and part-time equivalent jobs or jobs in the initial Industry/ business development.
 - Total employment: The total number of full-time equivalent jobs (direct, indirect, and induced) generated in each of the geographically defined regions.
- Business Activity/Income Effects Business activity represents the value of industry production. In IMPLAN, these are annual production estimates for the year of the data set, expressed in producer prices. For manufacturers, this would be sales plus/minus change in inventory. For service sectors, production = sales. For Retail and wholesale trade, output = gross margin and not gross sales.
- Personal Income Effects Includes all forms of employment income, including Employee Compensation (wages and benefits) and Proprietor Income.
- State and Local Tax Effects defined as revenues collected by state and sub-state governments. The taxes include employee, personal, proprietor, business, household, and corporate taxes.
- Federal Tax Effects defined as revenues collected by the federal government from corporate income, personal income, social security, and excise taxes.

Background on Input-Output Analysis

Input-output (I-O) modeling is among the most accepted means for assessing economic impacts. The approach provides a concise and accurate means for articulating the interrelationships among industry sectors. I-O modeling focuses on the interrelationships among sectors in an economy. Within the I-O model, the economy of an area is mapped in a table, with each industry listed across the top as a consuming sector (or market) and down the side as a producing sector.

The basic framework for I-O analysis originated over 250 years ago when François Quesnay published "Tableau Economique" in 1758. Quesnay's "tableau" graphically and numerically portrayed the relationships between sales and purchases of the various industries of an economy. More than a century later, his description was adapted by Leon Walras, who advanced input-output (I-O) modeling by providing a concise theoretical formulation of an economic system (including consumer purchases and the economic representation of "technology").

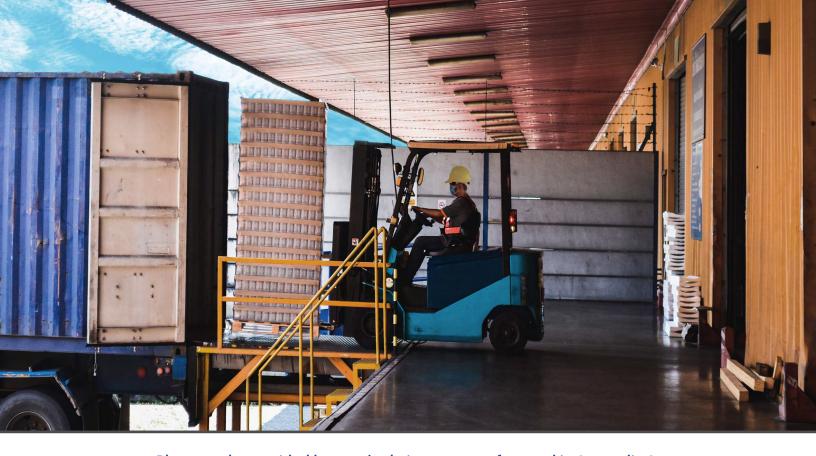
Wassily Leontief greatly advanced Walras's theoretical formulation and was awarded the Nobel Prize in 1973. Leontief first used his approach in 1936 when he developed a model of the 1919 and 1929 U.S. economies to estimate the effects of the end of World War I on national employment. Recognition of his work awaited wider acceptance and use of the approach. This meant the development of a standardized procedure for compiling the requisite data (today's national economic census of industries) and enhanced capability for calculations (i.e., the computer). The federal government immediately recognized the importance of Leontief's development and has been publishing input-output tables of the U.S. economy since 1939.

The models can be quite detailed. The current U.S. and IMPLAN models have more than 400 sectors. This level of detail provides a consistent and systematic approach, as well as a more accurate means for assessing the multiplier effects of changes in economic activity.

I-O Analysis makes several key assumptions. First, the information used to create an input-output model is for a given point in time. The information in the model reflects a "snapshot" of the technical requirements and industry relationships at a specific moment. Because of this, input-output models are regularly updated.

Regional input-output models, such as the one used in this economic impact assessment, need to account for the percentage of the demand for an industry's output or the requirements for a transportation project that can be readily supplied by firms within the specified region. Firms within the specified region may not be able to supply all the products needed. Therefore, goods and services may need to be purchased from outside of the specified region. The default "regional purchase" coefficients within the IMPLAN model were used for this analysis.





Photography provided by supply chain partners referenced in Appendix A.



NEW JERSEY CHAPTER

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