Industrial Market Drivers Study

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Joint study with

CenterPoint Properties®

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Outline

- Motivation
- Objectives
- Methodology
- Key Findings

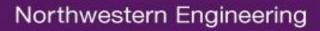CORRELATION IS NOT CAUSATION

BUT IT SURE HELPS

Motivation

Identify and quantify factors influencing industrial space demand in metropolitan areas

Useful to support planning investments in infrastructure, and formulating real-estate development strategies

Objectives

1. Identify the major economic drivers of industrial space demand and develop an index of industrial market health;

1. Assess the extent to which container flows and/or other measures of freight transportation intensity might lead or lag the demand for logistic-industrial space; and

2. Apply the established relations and/ or indices to help identify likely top markets for industrial space demand.

Thesis: *Metropolitan areas with significant intermodal and port related infrastructures offer superior industrial real estate investment opportunities*.

Methodology

- Models were estimated for three measures of demand: *net absorption rate, net absorption, and gross absorption*

- A best model specification was developed for each measure after an exhaustive search through various combinations of variables

- Once final models were completed, markets were ranked based on their potential, and a performance index was developed
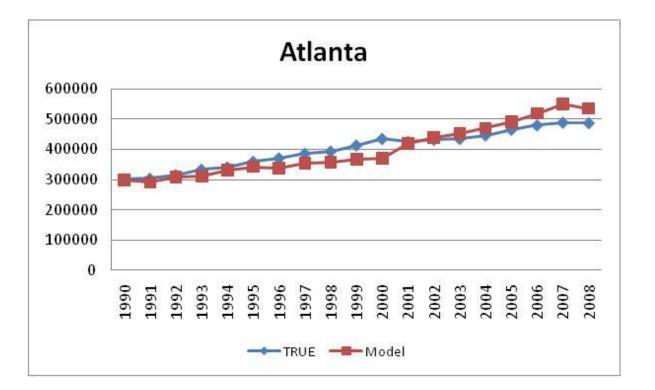
Analysis Results

Gross Absorption Results
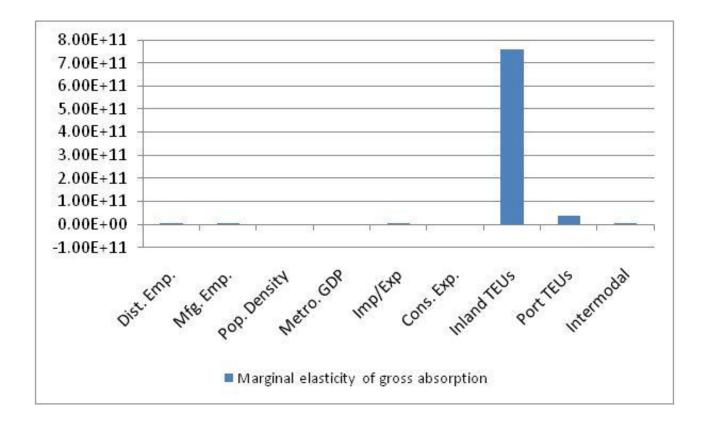
Variable	
Constant	-6.1e+03 (-0.8588)
Distrb. employment	8.1e+02 (19.5102)
Mfg. employment	6.3e+02 (22.6382)
Pop. density	-3.5e+01 (-14.1312)
Metropolitan GDP	3.9e-02 (5.5582)
Metropolitan Cons. Expenditures	1.3e+00 (20.2067)
% Change in Value of U.S. Imports & Exports	1.2e+03 (17.0736)
Inland market TEUs	7.5e+04 (20.5083)
Port market TEUs	8.3e+03 (16.5218)
No. of Intermodal facilities	5.9e+03 (5.7148)
R-squared	0.92118

Example Gross Absorption Plot

The final model specification does well in capturing the gross absorption for the Atlanta region

Gross Absorption Marginal Elasticities

A change in the amount of TEUs exhibit a pronounced effect on market demand

Key Insights

- Macroeconomic, demographic, and transportation variables *can* be used to capture demand for industrial space

- In addition, TEUs have a pronounced effect on demand

- Furthermore, the results imply that the number of TEUs are even more important when considering inland markets such as Dallas and Atlanta

Ranking the Metropolitan Areas

Ranking Methodology

- The final models were used to forecast gross absorption values through the year 2020

- The normalized sum of gross absorption over the forecast period (2009-2020) was then used to rank each market
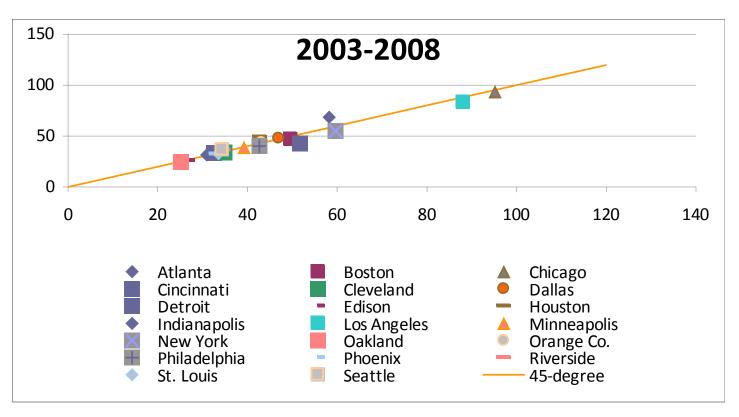
Ranking Results

Rank	Market	Combined
1	Chicago	93.48
2	Atlanta	93.25
3	Los Angeles	74.97
4	Houston	53.10
5	Dallas	47.04
6	Riverside	45.20
7	New York	38.31
8	Orange County	37.28
9	Seattle	37.21
10	Boston	36.55
11	Minneapolis	35.23
12	Detroit	34.00
13	Philadelphia	33.94
14	Phoenix	33.26
15	Cincinnati	32.74

Market Performance Index
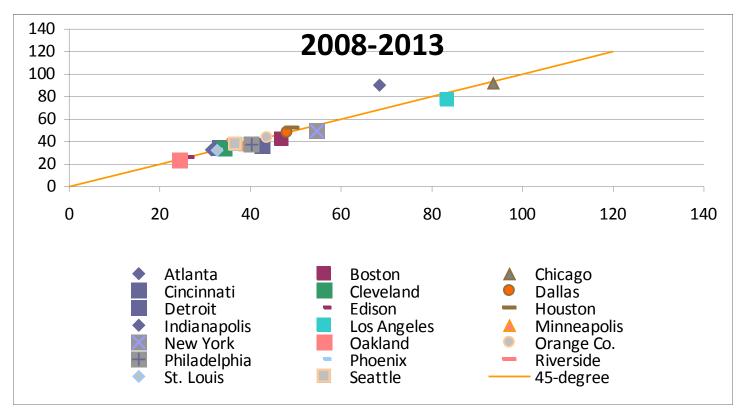
Creating the Index

- Indices of performance for the gross and net absorption models were created

- They allow us to gauge each market's performance relative to the performance of historically stellar markets (e.g. Chicago)

Market Comparisons using the Gross Index

Few markets showed relative improvement over the 2003-2008 period; however, Atlanta stands out.

Market Comparisons using the Gross Index (2)

Likewise, few markets exhibit significant improvement in the forecast period except for Atlanta.

Conclusion

- The results confirm that there is a positive correlation between gross absorption and intermodal activity.

- In addition, macroeconomic and demographic variables strongly correlate with absorption across models.

- Transportation variables such as container flows and the amount of intermodal facilities indicate higher absorption values.

  – This confirms the investment thesis that metropolitan areas that have, or are adjacent to those that have significant intermodal infrastructures offer better investment opportunities.

Acknowledgements

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