

Project Information Form

Project Title:	Warehousing and Distribution Center Facilities in Southern California: The Use of the Commodity Flow Survey Data to Identify Logistics Sprawl and Freight Generation Patterns
University:	University of California, Davis
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Funding Source(s) and Amounts Provided (by each agency or organization):	Caltrans \$90,986.00
Total Project Cost:	\$90,986.00
Agency ID or Contract Number:	Caltrans 65A0527 TO 022 UCD-CT-TO-022
Start and End Dates:	October 20, 2015 – March 31, 2017
Brief Description of Research Project:	<p>This work addresses an important research topic of freight modeling by analyzing the freight patterns, in terms of freight generation and logistics sprawl, of warehouses and distribution centers in Southern California. Specifically, this work analyzes the concentration of Warehouses and Distribution Centers (W&DC) in five counties in Southern California between 1998 and 2014; and explores spatial relationships between W&DC and other industry sectors through centographic and econometric modeling techniques. Furthermore, the authors estimate factors that explain the concentration of W&DC in the area.</p> <p>The work uses both disaggregate and aggregate approaches considering the nature of the information available. For the aggregate approach, the analyses used aggregate establishment, employment and other socio-economic data for different industries, complemented with transportation related variables. Using the Commodity Flow Survey (CFS) Microdata and other Census products, the team estimated disaggregate econometric models to characterize the amount of freight generated by NAICS 493 establishments as a function of economic variables of the establishments (i.e., employment).</p>
Describe Implementation of Research Outcomes (or why not implemented): Place any photos here	International Seminar Presentation (Sept. 5 th , 2017). Presented at Chalmers University, Sweden. The results were of interest to CATENA AB, a logistics and facility development company serving Scandinavia's metropolitan regions (http://catenafastigheter.com/about-us/)



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	<p>The report was recently used as a reference by a team at consulting firm WSP to assess the findings from a traffic impact analysis of a new high-cube warehouse facility commissioned by the Burlington, NJ County.</p>
<p>Impacts/Benefits of Implementation (actual, not anticipated):</p>	<p>The research provides the State of California with planning tools (econometric and statistical models) to monitor and forecast the freight movements associated with warehouse and distribution center facilities. Exploring the distribution patterns of these facilities over time and the spatial concentration and temporal patterns of freight activity in Southern California serves as an indication of the expected trends in other locations such as the San Joaquin Valley. The results can also help the State and planning organizations in the implementation and development of the sustainable freight policy. The models allow estimating the freight movements associated with these facilities and enhance modeling capabilities of various stakeholders.</p>
<p>Web Links</p> <ul style="list-style-type: none">• Reports• Project website	<p>https://ncst.ucdavis.edu/project/warehousing-and-distribution-center-facilities-in-southern-california/</p>