How do planning practitioners address freight transport and logistics sprawl? Case study in Los Angeles

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Main objectives and motivation

My objective is to look at how warehousing and logistics activities are integrated into local and regional policies and planning processes. I am taking Los Angeles as an example, as I have had the opportunity to conduct a first survey there in 2011-2012 (Dablanc, 2014) and I plan a second survey during summer 2015 as I will be staying at the University of Southern California for an academic visit at that time.

There has been an important rise in the number of warehouses and distribution centers in the Los Angeles metropolitan area in the past two decades (Dablanc, 2014), as illustrated by Figure 1 in the Appendix below. Global supply chains and new local consumer markets such as e-commerce require more logistics facilities, and the way these facilities are spatially organized has become a key feature in the general evolution of freight mobility and truck traffic in the region. My question is then: how do local and regional planning practitioners have addressed this “intrusion” of freight transport and logistics activities in their territories?

In one of the few academic studies of local planning and freight issues, Cidell (2011: 832), using the Chicago metro area as an example, looks at how local governments react to the development of freight facilities: “New jobs are welcome, but the low per-acre tax revenues and absence of sales taxes associated with this type of development are often resented.” Looking at how municipalities in Northern California cope with distribution centers, Hesse (2002) also notes a reluctance to attract logistics land uses, even though, according to the surveys he conducted there, most cities do not actually discourage goods distribution firms, even cities with a focus on high technology.

In Los Angeles, attitudes towards warehousing activities seem very varied, with many local governments being positive towards them, as a way of compensating for the loss of manufacturing jobs, especially during the recession (2009-2012). From my first set of interviews and analyses (2011-2012), I had noted the following behaviors from local governments confronted with logistics developments:

- Trying to prevent logistics growth in traditional manufacturing areas.
- Looking at logistics as a way to revitalize declining manufacturing areas.
- Looking at logistics as a strategic sector for accelerated local economic growth.
- Looking past logistics, diversifying industrial developments.
At the regional level, what is striking is that there is no regional coordination on issues of warehouses and logistics sprawl. Land use and building permit decisions are made strictly at the local level (cities and counties). Each government competes with, or criticizes, the other’s strategies. This results in a deficit of attention to regional consequences of decisions regarding logistics sites. Scarce public resources are dispersed in local or redundant projects, such as highway interchanges.

**Topics covered and methodology**

I plan to proceed in the following way.

1) Update the analysis of warehousing developments in the L.A. area made in 2011-2012 (Dablanc, 2014). This includes: 1) Include data from 2009-2014, using the NAICS 493 from the County Business Patterns. 2) Use recent research results from Woudsmo et al. (2015) to clean up the data and eliminate “fake” warehouses, especially self-storage.

2) Implement a series of interviews with local and regional planners and persons of interest. Interviewees will be selected from the typology already defined in Dablanc (2014) from the first set of interviews and analyses in the Los Angeles area in 2011-2012.

**Results expected and conclusions**

Results expected are 1) An update of past research on logistics sprawl indicators for the L.A. area. 2) A better understanding of local governments’ attitudes towards freight issues. And 3) An original typology of local governments based on the nature and level of their interest in and involvement about freight facilities and activities.

Conclusions will be targeted at providing some recommendations. Recommendations will be around the following: how can a more efficient freight and logistics regional planning be implemented? The public and private sectors both need to optimize warehouse locations and distribution networks and improve transportation system performance. Explicit consideration must be given to environmental impacts and quality-of-life concerns. Freight and logistics planning must become a more usual part of planning. At the local level, better freight facility management includes proper warehouse siting and accessibility, adequate infrastructure and the consideration of construction, operation and maintenance costs. At the metropolitan level, comprehensive transportation plans must include freight transport and warehousing siting. Promoting logistics parks and freight villages can also be part of the solution. The inclusion of freight planning would allow geographic areas to examine economies of scale and strategies for increasing the efficiency of logistics and supply chains through better coordination of infrastructure planning and land use decisions. Finally, freight transportation policy would benefit if the policies of metropolitan areas were coordinated at the regional and megaregional scale. An important issue is the employment base, as well as training programs locally or regionally available for warehousing jobs.

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References


Key words
Freight planning, Los Angeles metropolitan area, logistics sprawl

Appendix: logistics sprawl in Los Angeles (Dablanc, 2014)

Figure 1. Maps of the location of warehouses in Los Angeles

The following maps show the location of warehouses in Los Angeles at two different times for each region. The maps demonstrate the decentralization of the location of warehouses that occurred in the recent years. It includes the warehouses (North American Industrial Classification System 493) for each zipcode area.

Los Angeles, 1998-2009
An indicator of sprawl was calculated for the warehouses, as well as for economic activities in general. This technique uses the “average distance of terminals to their barycenter,” a barycenter being the center of gravity of the warehouses in the metropolitan areas. This average distance has increased by 9 km in Los Angeles (from 42 to 51 km). The same sprawl indicator for all establishments (representing economic activities in general) has increased by 0.5 km. This suggests an interesting finding: it means that as logistics activities have decentralized more than economic activities in general, there are more truck-km to connect urban destinations to and from freight terminals. This means that congestion related to truck traffic in Los Angeles metropolitan area has increased because of “logistics sprawl.” A net negative impact of logistics sprawl in terms of truck-kilometers and CO₂ emissions has been demonstrated for the Paris case (Dablanc and Andriankaja, 2011).