

Editorial: Urban Freight, land use planning and public administration strategies

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Abstract. This editorial introduces the special issue on “Urban Freight, land use planning and public administration strategies”. In the first part, it describes the rationale for the special issue and motivates the choice of focusing on land use planning and public administration strategies in the urban freight transportation context. In the second part, the editorial illustrates the specific contributions provided by the research papers included in the special issue showing the diversity of policy questions urban freight entails. It demonstrates how big is the gap between what is needed to provide a well-developed framework for fostering sustainable urban freight and what is actually known.

1 Why this special issue?

Well-being and economic growth are strictly correlated. Cities are the engines of an innovation-based economy where research and new ideas are the core input of production. Urbanisation is becoming synonymous with economic growth. People flock into cities, both in the developed and developing world, since that is where wealth is, where high quality services are available and life standards are comparatively higher than other places. However, one has to acknowledge that growth also produces undesired negative effects. In fact, cities are net importers. They need to acquire consumption/intermediate goods, export production and get rid of waste. In other words, the existence of a city relies on a transportation system providing the necessary services for its functioning. The typical urban transportation system heavily depends on passenger and freight movements by road. While this dependency is, in some cases, less relevant for passenger transport, most of the freight moved in, out, within and through a city relies on motorized road transportation. Trucks and vans are responsible for congestion, polluting emissions, accidents, noise, visual intrusion and stench. All these negative effects are concentrated where many citizens live and, consequently, produce relevant economic (e.g. time lost), environmental (e.g. air quality), and social (e.g. segregation) impacts. Cities, in order to be attractive, sustainable and thriving, need an efficient freight transportation system. Fast changing consumption patterns with the rise of e-commerce and home deliveries also points to another dimension of cities: their need to adapt quickly to economic trends.

Land use planning and public administration strategies potentially have relevant impacts on urban freight transportation, which one has always to remember, is a derived

demand. Developing dense neighbourhoods characterised by high attractiveness, accessibility and sustainability can provide viable solutions to foster sustainable passenger and freight mobility. City shape and functional organisation has strong implications with respect to how much freight is demanded and how its distribution is organised and performed.

Local authorities face daunting challenges in developing tailored intervention policies aimed at stimulating a smart urban development. Acknowledging these challenges, the European Commission has suggested the adoption of the Sustainable Urban Mobility Planning approach, which is one of the most important topics proposed within the Commission's Urban Mobility Package. The Sustainable Urban Mobility Plan considers a city as a single functional urban area and auspices its development in a cooperative fashion across different policy areas, sectors and levels of government assuming an active role for citizens and other stakeholders. The Commission supports the development of Sustainable Urban Mobility Plans through funding instruments and information provision while acknowledging the relevance of local policymaking and in full respect of the subsidiarity principle. It supports the adoption of best practices and finances innovative applied research via dedicated research programs among which Horizon 2020 plays a major role.

2 The papers in this special issue

The papers in this special issue address, from alternative points of view and using different methodological approaches, some of the relevant and critical issues pertaining to land use planning and administration strategies in modern cities with respect to the urban freight sector.

In fact, the first paper of this issue by Lozzi, Gatta and Marcucci titled "European urban freight transport policies and research funding: are priorities and H2020 calls aligned?" investigates the correlation between the policy priorities about urban freight stated at a European level and the provision of research funding. Transport is a shared responsibility between the European Union and the Member States, where the subsidiarity principle applies. Accordingly, the European Commission provides local authorities with support in different areas, including research and innovation funding. This paper aims to assess the linkage and consistency between European policy priorities for urban freight transport and the corresponding calls of the Horizon 2020 Research Programme, created by the European Commission to foster research and innovation. The paper identifies and extrapolates in a comparable format 10 urban freight priority solutions and estimates their degree of correspondence with the Horizon 2020 Work Programmes, using the amount of research funds allocated to each of them as a proxy. Findings show that, generally, the European Commission addresses urban freight transport through a systematic and coherent approach. Moreover, all the identified solutions are covered by at least one Horizon 2020 call, although the extent of the coverage is heterogeneous.

Heitz, Dablanc and Tavasszy with a paper titled "Logistics sprawl in monocentric and polycentric metropolitan areas: the cases of Paris, France, and the Randstad, the Netherlands" delve into the logistic sprawl issue in a comparative fashion. In fact, urban sprawl has been extensively studied with a focus on residential settlements while little attention, so far, has been given to the freight-related part of the issue. The paper explicitly addresses logistic sprawl, which manifests itself via the growth and suburban relocation of warehousing activities. More specifically, it investigates the difference in logistic sprawl between monocentric and polycentric city systems. Literature suggests that logistics activities will gradually migrate to suburbs since land prices rise in central areas. Logistic geography research has mostly focused on monocentric systems and the research question this paper asks is to what extent this also applies to polycentric ones. The paper compares the Paris region in France, representative of a monocentric urban development, with the Dutch Randstad area as a polycentric case. Regional statistics on warehouse settlements in both regions provide a description of changes in concentration since the mid-2000s. The comparison underlines heterogeneous variations. In fact, in contrast to Paris, logistics activities within the Randstad have become more intense in dense areas. The paper suggests that reasons explaining the difference include urban

structure, spatial planning policies, and the existence of large freight hubs such as the port of Rotterdam.

The paper by Larsson and Olsson, titled “Potentials and limitations for the use of accessibility measures for national transport policy goals in freight transport and logistics: Evidence from Vastra Gotaland County” reports on a pilot study investigating the potential to develop accessibility measures to support and follow up policy objectives in the Swedish Context. In fact, while Swedish national transport policy considers freight transport as a facilitator of economic development at all geographical levels, it is also suggested by the Authors that methods and data for business location and transportation are inadequate for following up transport policy objectives. The paper discusses and problematizes the concept of accessibility and its application in concrete measures using several practical examples from Vastra Gotaland County. The paper identifies several potentials and limitations linked to the use of accessibility measures to address freight transport issues. The usefulness of these measures mainly rests on the possible integration of transport and land use, thus asking questions that are more complex and developing better measures while supporting the integration between planning specializations. Limitations largely relate to data availability, quality and the extent to which one can purposely communicate maps/measures to non-experts. Conclusions highlight the centrality of policy and governance context in understanding and using the concept of accessibility and its related measures.

Finally, the paper by de Oliveira, de Albuquerque, Nobrega, Ebias, Gomes and Correa titled “Analysis of Freight Trip Generation Model for Food and Beverage in Belo Horizonte (Brazil)” investigates, in the case of Brazil, the negative consequences of unplanned urban sprawl as well as the lack of adequate transport infrastructure. The paper reports the results of a freight-trip generation model developed for pubs and restaurants in Belo Horizonte (Brazil). Data on goods, frequency, operation time, place of performance of the loading/unloading of goods, establishment size and the number of employees were obtained via a survey based on a structured questionnaire. The estimation of a linear regression allows for investigating the relationship between the number of trips and: i) establishment, ii) number of employees, and iii) operation day of the establishment. The results provide sample classification bands that were analysed together with other geographic data such as demographic data, road network density and socioeconomic data. Findings underline the importance that a mathematic-geographic model for trip generation might have in supporting transportation planning and operation for urban goods distribution. The research also highlights the need for an urban freight mobility plan and dedicated public policies to promote sustainable alternatives for urban goods distribution. Using geospatial analysis, the study produces useful statistics and maps to support decision makers and transportation managers in their discussion about policymaking priorities aimed at fostering sustainable freight logistic operations in Belo Horizonte.

The research papers reported in this special issue show the diversity of policy questions urban freight entails. They show how relevant and important the investigation of land use policies and local administration strategies are, how difficult it is to deal with them and, finally, how big the gap between what is needed to provide a well-developed framework for fostering sustainable urban freight and what is actually known. This special issue represents an attempt to catalyze good research efforts and knowledge creation around critical but under-researched issues in the urban freight sector. Hopefully this attempt will stimulate scholars to engage in other similar projects aimed at pursuing the research goals that the Guest Editors of this special issue had in mind when accepting the challenge of joining forces for this endeavour.