Reference model of local authority cooperation with stakeholders for urban freight transport

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Extended abstract

Objectives and motivation
Freight transport in the city plays an extremely important role, especially for the people who buy goods in shops, workplaces, entertainment centres or order goods to the house. According to D. José and A. V. de Magalhães, urban freight transport (UFT) "includes all the movements of loads that have an origin and/or destination in those areas, as well as inter-city displacements inside metropolitan regions, and those movements that only cross the urbanised area" [De Magalhães, 2010]. In the literature, discussion on urban freight transport relates mainly to a narrow range, such as the optimisation of the group of goods to customers located in the city. There is a need for a holistic approach and interdisciplinary research in the field of freight transport in the city, especially from the perspective of urban management [13]. One of the few examples dealing with the problems of urban freight transport, from the point of view of urban management, is the research carried out by M. Lindholm, Sweden [Lindholm, 2012; Maria Lindholm, 2014]. Freight transport in urban areas results in congestion, air pollution, noise, increased logistics costs and thereby increased prices of products. Effective and efficient freight transport requires the involvement of many stakeholders. There are several stakeholders who are indirectly or directly involved in urban freight transport. Among them we can distinguish [Ballantyne, Lindholm and Whiteing, 2013], [Ruesch and Glücker, 2001], [Stathopoulos, Valeri and Marcucci, 2012], [Quak, 2012]: shippers (sender of goods, consignors), transport companies, consumers/consignees, public administration: local government, and national government.

Unfortunately, the needs and expectations of city logistics stakeholders are usually different [Taniguchi and Tamagawa, 2005], [Tseng, Yue and Tayslor, 2005]. A key role in the area of city logistics, including urban freight transport, is played by local government, which should develop a freight transport plans, including in it stakeholders' expectations [Filippia et al., 2010]. It is the local government, which through different types of regulatory tools, may impose solutions in order to improve the movement of goods and people within the city. However, the effective and efficient implementation of projects related to urban freight transport can be undertaken only in cooperation with other stakeholders.

General description
There are two main purposes of the paper – a theoretical and an empirical one. The empirical aim of this paper is to identify the methods of cooperation between local authorities and other urban freight transport stakeholders in European cities. The theoretical purpose is to develop a reference model of local authority cooperation with stakeholders for urban freight transport. In order to obtain above mentioned purposes the authors will conduct a survey among local authorities in European cities. The survey will be conducted via e-mail with representatives of transport departments. The survey will help to elicit answers to the following questions:

1. What kind of methods of cooperation, formal or informal, between local authorities and other urban freight transport stakeholders occurs mostly in research cities?
2. What are the procedures for formal methods of cooperation?
3. What kind of factors influence formal and informal cooperation between local authorities and other urban freight transport stakeholders?
4. What is the correlation between involving freight transport into long-term planning and methods of cooperation for urban freight transport on the part of local government?
5. What is the correlation between including into organisational structure departments (persons) responsible for freight transport and methods of cooperation for urban freight transport on the part of local governments?

In order to obtain the purposes and answers to the above questions the multidimensional analysis will be applied. Due to the necessity of simultaneous process of collecting various information from stakeholders in the paper the integration of different methods enabling multidimensional analysis will be applied. The integration approach is understood here as a simultaneous use of several methods, such as: correspondence analysis [Andersen, 1997], [Clausen, 1998], [Greanacre, 1998] and logit analyses [Agresti, 2002], [Harell, 2001], [McCullagh and Nelder, 1989]. The correspondence analysis, as a factor method allows the identification of relationships between variables and objects mainly in a graphical form. Logistic regression models are used for explaining qualitative variables depending on the level of exogenous variables (qualitative or quantitative).

Results and conclusions
The conducted research will allow to obtain information on methods of cooperation for urban freight transport in European cities. The authors will try to analyse different factors which may influence the method of local authority cooperation with other urban freight transport stakeholders.

As a theoretical result of the paper will be developed the reference model of local authority cooperation with stakeholders for urban freight transport which will include procedures and tools.

The authors will attempt to develop recommendations that would assist the city authorities in cooperation with stakeholders for urban freight transport.

References


Quak H. J. (2012), Improving urban freight transport sustainability by carriers – Best practices from The Netherlands and the EU project CityLog, Procedia - Social and Behavioral Sciences.


Keywords: urban freight transport; cooperation for urban freight transport; local authority; the multidimensional analysis