



Assessing knowledge and awareness of the sustainable urban freight transport among Swedish local authority policy planners



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ABSTRACT

Sustainable freight distribution is of growing interest for many local authorities in urban areas. Numerous policy measures on urban freight transport have been taken throughout Europe during the last decade. This paper presents the results of a study on the state of urban freight transport policies and planning among Swedish local authorities. Results are compared with existing research in the European context in order to find possible links between the freight transport awareness and the successes or failures of measures addressing urban freight transport issues. A questionnaire sent to all Swedish municipalities was combined with a literature study, to map the state of policy and planning within the freight transport as well as the knowledge and awareness of the area. The importance of adequate knowledge and personnel resources in municipalities as well as communication, information dissemination and knowledge exchange is discussed. The empirical data confirm the lack of coordination, sufficient resources and effective knowledge transfer among stakeholders in urban freight transport.

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1. Introduction

Transportation in urban areas have a highly negative impact on sustainability, and the number of research and demonstration projects of urban mobility has increased. There is a notion that freight transport does not get the same attention as person mobility in the area of transport planning. In research from the last couple of decades, it is often brought up that freight transport is associated with problems that are negative for the urban environment. In response, local authorities introduce restrictions. In Sweden such restrictions are often e.g. environmental zones, weight and length restrictions, and time access restrictions. However, those restrictions can be counter productive, since they sometimes hinder efficient freight transport operations and by that create further problems (Anderson, 2000; Dablanc, 2007; Woudsma, 2001). Furthermore, Allen et al. (2007) describes that one of the problems connected to goods distribution is policy-related.

The distribution of goods in urban areas is connected to the so called “last mile” of the supply chain, and is often the part of the supply chain with the highest costs (Chopra, 2003; Munuzuri et al., 2005). It is therefore of interest, not only for the local authority responsible for emission and safety standards, but also for the transport operator to make this as efficient as possible for economic reasons. Urban freight transport is not only the last mile

of the transport chain, but could also be transport operations going through the urban area without a final destination within the area. Therefore, the definition of urban freight transport used in this paper is from Ogden, 1992, p. 14:

“...being concerned with the movement of things (as distinct from people) to, from, within and, through urban areas”.

The urban freight transport is a major contributing factor to the unsustainability of urban areas. Freight transport accounts for about 40% of the air pollution and noise emissions in the urban areas, even though it only accounts between 10 and 18% of the number of vehicles (European Commission, 2006). But, when it comes to urban areas, it is also important to focus on whether an area is attractive, or a dwelling area, and the issues of congestion, noise and safety (European Commission, 2011). As an indication on the impact that urban freight transport has on society and the urgency to reduce the negative impact, an assessment on external cost can be used. External costs are costs to society and, without publicly enforced policy intervention, they are not taken into account by the transport users. Transport users are thus faced with incorrect incentives for transport supply and demand, leading to loss of welfare (Maibach et al., 2008).

The main reason for authorities to introduce policy measures is to ensure that the traffic in the city do not endanger the citizens health and possibilities to live healthy lives. In Sweden, as in most European countries, the regulations for housing and buildings close to roads and other transportation infrastructure are very clear and regulated by law. This applies particularly to safety

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distances, transportation of dangerous goods, and regulating freight transport during night-time, etc. Air quality standards and acceptable noise levels are also regulated by law and require measures that reduce the traffic intensity in particularly sensitive areas (Stockholms Miljöförvaltning, 2009). Even though freight should be included in transport planning and policy making processes, there is a gap in the plans and strategies concerning the multifaceted area of urban freight transport. Traditionally local authorities focus on public transport, car usage and other modes of transporting persons, while freight transport seems to be somewhat uninteresting (Rodrigues, 2006), and neglected (Sjöstedt, 2007).

Urban freight transport is a complex area for local authorities to consider. It takes a high level of transport system competence to take into account all the different structures of how a logistics system works, the transportation prerequisites, the customer demands, etc., and to incorporate them with other complex systems such as passenger transport and urban structural planning. Since freight transport is highly contributing to harmful emissions together with demands for safety as a prerequisite to ensure the attractiveness of an urban area show that there is an emerging need to highlight freight transport as an important factor in urban planning procedures. Even though freight has been considered in several transport planning projects and incorporated into city planning (Browne et al., 2007), there is still a low interest in freight transport policies. This is exemplified by the Netherlands where even though freight is high on the agenda, over one third of Dutch cities lack a political agenda for freight (Van Duin, 2005). Van Duin (2005) shows that local authorities copy each others' freight measures, in addition they do not share experiences or deal with the fact that different kinds of measures have different impact depending on the urban prerequisites. This illustrates an example of the difficulty in incorporating freight transport issues in strategic planning. Even when local authorities are aware of freight transportations negative environmental impact, there is not enough knowledge of how to deal with the problem in an efficient manner.

Based on this presumed lack of knowledge, the scope of this paper is the situation of Swedish local authorities and the planning process of sustainable transport policies. The purpose of this paper is twofold. Firstly, it is to present the results of a questionnaire study on the state of policy and planning of urban freight transport among Swedish local authorities. Secondly, to compare those results with existing research in a European context in order to find possible links between freight transport awareness and knowledge, and the success and/or failure of measures taken within the urban freight transport area. The paper will first provide a description of urban freight in the European context followed by some details of Swedish prerequisites of freight transport in urban transport planning. Thereafter the methodology used is described followed by the collated results of the questionnaire study. The paper ends with an analysis and conclusion.

2. Freight transport planning at the local authority level

The city is a living environment: It is affected by the persons living and working there as well as shopping, tourism and numerous other factors. Freight transport is a necessity for the city to thrive. As mentioned in the introduction, freight transport is in general handled as a problem in cities, with the effect that the main method of addressing freight transport operations is through regulation and restrictions. This is also indicated in an enquiry performed in the Bestufs Project (2010) where it was concluded that freight transport is not a priority subject in most European cities and the focus is more on public transport and other modes of

transporting people (cars, bicycling, walking, etc.). Ruesch and Glucker (2001) found that 25% of the cities included in the study had no responsible entity for goods transport issues in the city and almost half of the cities had less than one part-time individual employee for the purpose. Considering freight transport in urban areas and their importance for the liveability of an area, it is not possible to stop goods transports entirely. There is, nevertheless, a huge potential for making them more efficient. One underlying reason for the difficulties local authorities have in affecting and steering the outcome of urban freight transport, by, for example policy measures, is that the volume of goods per person to the area will practically be the same since a change to freight transport allowances will not change the consumer behaviour of residents and businesses, and goods still need to be transported to their final location somehow. Dablanc (2007) states that the number of urban goods transports is independent of local urban characteristics. Deliveries of goods will occur in similar ways in different cities regardless of whether a specific logistics system is planned or designed for a certain city. A city is complex with several connected and depending planning systems. Logistics activities are for example very much connected to land use, city planning and energy supply systems. City authorities have the responsibility to ensure that all systems work well together and not counteract.

The local authorities' main responsibility for urban freight transport is to plan policies, regulations, and create prerequisites in order to obtain an urban environment that corresponds to the local vision. The impact of freight transport needs to be reduced but it requires many measures. Technological solutions alone cannot sufficiently reduce the harmful emissions from transportation in urban areas. The only way to ensure more environmentally effective ways of transport is through an integrated package of technological and behavioural policy measures (Hickman and Banister, 2007; Åkerman and Höjer, 2006). May et al. (2008) identified through a study of local authorities a number of barriers and challenges in ensuring sustainable transportation. Lack of revenue support and the lack of public acceptance of certain policy instruments, were two of the identified challenges.

The OECD (2003) set up an expert working group addressing urban freight transport to learn from international experiences with the purpose of identifying what could improve the efficiency of urban goods transport. The expert group collected experiences from more than 50 projects around the world. Among the conclusions and main lessons learned from the OECD study are that few countries have a national policy focused on urban goods transport, and there is a lack of knowledge and awareness both among the general public, government and city planners regarding urban goods transport. In addition, there is a lack of accurate evaluation data (before-and-after data), as well as a long-term perspective. Since the 1980s there have been many EU financed urban freight measures (Zunder and Ibanez, 2004). Urban freight measures could be for example policy initiatives, company driven initiatives, physical infrastructure initiatives and transport reorganisation initiatives (Quak, 2008). The very few successful measures that have been tried in European cities have unfortunately resulted in reduced interest, where many stakeholders think that such projects are futile (Lindholm and Thalenius, 2006; Visser et al., 1999; Quak, 2011; Zunder and Ibanez, 2004).

In order to address transportation in urban areas, and freight transport specifically, it is necessary to involve stakeholders. This is concluded in several projects and guidebooks (May, 2005; Kelly et al., 2008; UBC Commission on Environment, 2007). One example is the Sustainable Urban Mobility Plans (SUMP), that was developed from the Sustainable Urban Transport Plans (SUTP), and has been recommended to be adopted by cities with more than 100,000 inhabitants by the European Commission (Wolfram, 2004). Two European Commission projects were carried on in parallel to develop and test the concept of SUTP: PILOT

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