10th International Workshop on Sustainable Road Freight Transport

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Cities' transition governance practices for sustainable urban freight systems

Introduction

An urban freight system consists of the processes and the operations moving goods in cities and urban areas (Amaya et al., 2021; Kiba-Janiak, 2017). This system is important to consider in the development toward sustainable cities (Macharis et al., 2014). Efforts to develop urban freight systems toward sustainability must acknowledge both the importance of these systems for cities as well as the properties which characterize these systems. A sustainable urban freight system should offer accessibility to freight transport, have externalities below harmful levels to humans and nature, be resource, energy and cost efficient, and contribute positively to the urban environment (Behrends et al., 2008). The development of urban freight systems toward sustainability is, however, hindered by barriers in areas like technical, financial and organizational (Kervall and Pålsson, 2022). Urban freight systems are characterized by their multitude of stakeholders which complicates development of these systems (Taniguchi and Thompson, 2015), as the agendas of stakeholder groups are not aligned (Aljohani and Thompson, 2018; de Carvalho et al., 2019; Boudoin et al., 2014). Stakeholders follow their own priorities (Taniguchi and Thompson, 2015; Butrina et al., 2017) but the combination of their decisions and activities form the system.

A city's unique spectrum of roles in its urban freight system can be used to stimulate change in it (Lindholm and Browne, 2013; Schliwa et al., 2015; Taniguchi and Thompson, 2015), but local authorities often give little attention to freight matters (Kin et al., 2017; Macharis and Milan, 2015). This affects their ability to guide the development of these systems (Lindholm, 2010). In attempts to control the urban freight development officials tend to focus on restrictive measures (Van Duin et al., 2018), often resulting in unintended side effects (Kin et al., 2017; Macharis and Milan, 2015). It is also known that a city is an important freight customer in its urban freight system, a role which could be used to stimulate development, but which tends to be underexploited (Balm et al., 2016). The possibility for a city to take a leading role in the development of its urban freight system toward sustainability through transition- and network-oriented governance approaches seem however less studied.

To address this possibility, this study empirically explores cities' governance practices for sustainable freight transitions using an established transition management framework. The framework enables interactive network-oriented governance approaches where the governing party is facilitating collaboration between public and private stakeholders (Geels, 2019). Addressing complex issues, like urban freight system development toward sustainability, requires methods which combine the strengths of traditional governance approaches into new models (Loorbach, 2010). This increases the chances for society to achieve both its short- and long-term goals. Transition management addresses the development of complex socio-technical systems by a combination of components originating in governance, network, and innovation theory (Klijn and Koppenjan, 2012; Frantzeskaki et al., 2012). The transition of a socio-technical system, like the urban freight system, toward sustainability is from a governance perspective a multidimensional wicked

problem (Kemp and Loorbach, 2003). A transition is the result of many parallel processes and actions of actors who are beyond direct control of the governing party (Kemp and Loorbach, 2003). The transition management framework provides principles for how a governing party, like a city, can act to increase the chances of achieving societal goals, such as sustainable urban freight systems (Loorbach, 2010).

Purpose

The, by transition governance scholars, identified principles for successful governance of the development of complex socio-technical systems, like urban freight systems, combined with scholarly insights about the characteristics of urban freight systems can give new insights about how cities can support the development of these systems toward sustainability. The purpose of this study is to explore how city managements govern their urban freight systems toward sustainability, which types of governance practices they use, why they use these approaches and to relate these empirical results to transition governance theory. Further, the purpose is to investigate how a city's approach affect the perceived transition performance among senior officials in the city.

Method

The study is based on empirical data from six Swedish cities recruited from the Viable cities network, a network of cities which strive for climate neutrality 2030 (Viable Cities, 2023). Cities are selected based on population size (50 000-200 000 inhabitants), the city's regional importance, and freight logistic interest expressed in the network. The size of the cities generates urban freight activities of a substantial volume in these urban freight systems but also makes it possible for respondents to overview the city's governance activities. Additionally, the number of cities in this span of population size is substantial in the Nordic countries, which increases the relevance of the study.

Data are collected in semi-structured interviews with senior officials selected for their insights about the city's governance of its urban freight system.

An analytical framework based on transition governance theory and scholarly insights about urban freight systems is used to build a structure for the interviews and the subsequent analysis of data.

Results

The study is initiated in 2023 and will continue until the end of the year. Indicative results are expected in the autumn. The study is expected to identify governance practices for urban freight system development toward sustainability in Swedish cities and assess how these activities relate to transition governance theories. It is also expected to identify why the approaches were chosen and indicate how the approach affect city officials' perceptions about the city's performance in the transition toward sustainability.

Limitations and implications

The study is limited to Swedish cities of a certain size. Studies in other contexts could reveal other practices used to govern urban freight systems toward sustainability. The results are however, within certain limitations, expected to be relevant and transferable to other cities. City officials and other stakeholders in urban freight systems can use the results of the study as inspiration when designing transition strategies. On societal level the results of the study can give input which enables urban freight system development toward sustainability.

Altogether the study gives possibilities to relate and detect patterns in the relationship between the transition governance approach of cities, the characteristics of the activities from a transition governance perspective and the perception of the cities' transition performance by city officials.

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