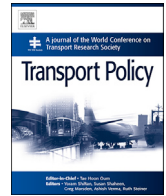


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A function-oriented approach to transport planning in Sweden: Limits and possibilities from a policy perspective

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ABSTRACT

Research on sustainability and transport has paid increasing attention to how the purpose of the transport system is framed, often arguing that there is a need to shift the focus of transport planning and policy from the physical infrastructure to mobility and accessibility. Sweden's national transport policy also has elements of this shift, most noticeable in the so-called four step principle, where the possibility to affect the need for transport and choice of transport mode (step 1) and the possibility to use existing infrastructure more efficiently (step 2) should be considered before large reconstructions (step 3) or new infrastructure (step 4) is chosen as the solution to transport related problems. The aim of this article is to study whether the practical implications of Swedish national transport policy are consistent with the ambitions expressed in the four step principle, with particular focus on the Swedish Transport Administration's (STA) mandate to finance different measures. Based on an analysis of policy documents and semi-structured interviews the main finding of the analysis is that many step 1 and 2 measures do not fall within the financial mandate of the STA. The implementation of the four step principle therefore depends on the commitment among other actors than the STA to implement step 1 and 2 measures. Furthermore, it is concluded that the limits to the STA mandate has consequences for the ability of the STA to engage in collaboration with the actors on which it depends, and that strengthening the STA's mandate to finance a desired function rather than physical infrastructure is likely to increase commitment among other stakeholders to work with these measures. Such a step would imply a different regulatory framework than the current, more in line with "the sustainable mobility paradigm" (Banister 2008) and could contribute to a good accessibility to different amenities at the same time as negative environmental impacts are reduced.

1. Introduction

1.1. Transport policy increasingly focusing on function rather than infrastructure

Over the past decade, the literature on sustainability and transport has paid increasing attention to how the purpose of the transport system is framed (Tennøy, 2010; Pettersson, 2013), often arguing that there is a need to shift the focus of transport planning and policy from the physical infrastructure to mobility and accessibility (e.g. Banister, 2008; Hull, 2008; Litman, 2013). This implies a stronger emphasis on the desired functions or the undesirable problems of the transport system (e.g. improved access to employment, reduced road accidents) rather than the

infrastructure itself. As argued by Banister (2008), we should put the people in the centre instead of the infrastructure. The same line of arguments has been highlighted by Gudmundsson and Höjer (1996), who state that "[...] there are other ways than physical movement to achieve access. This is particularly true in a world where other systems may provide the relevant services electronically with less physical movement of people. It would also be true in a world with more integrated social and urban structure" (Gudmundsson and Höjer, 1996, p. 275).

The idea of managing transport related problems with other measures than physical infrastructure is not new. In the US, for instance, a transport demand management perspective, focusing on how an existing transportation system could be better managed to satisfy increasing travel demand without building more capacity, was introduced in federal urban

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transportation policy already in the 1970's (Meyer, 1999). Whether a wider paradigm shift has occurred or not may be debated, but there are a growing number of examples of how a shift in focus from infrastructure to function has implications on national transport planning in several countries. For instance, Norway developed “concept studies” (“konseptvalgutredning”) which is a required strategic study where different transport solutions are analyzed before investing in infrastructure project over €95 million (Tønnesen, 2015) and “urban environment agreements” (“bymiljøavtal”), which is a strategic measure where the government provides funding to cities to achieve the zero-growth target for car traffic (Norwegian government, 2013). Similar policy developments have also taken place in other European countries through, for instance, Sustainable Urban Mobility Plans (in France called Plan de Déplacements Urbains, and in England Local Transport Plans) (Wefering et al., 2013), where a more function-oriented approach is highlighted.

A similar discussion and transition is taking place in Sweden (Tornberg, 2011). For instance, in 2009 the parliament approved a new set of national transport goals explicitly emphasizing the perspective that the transport system does not have an intrinsic value as such but rather that it is a means to provide accessibility for people and businesses to whatever they need (Swedish government, 2009a). Furthermore, in 2010 the Swedish Road Administration and the Swedish Rail Administration merged into the new Swedish Transport Administration (STA) in order to secure a more multimodal perspective in national transport planning. At the same time the first multimodal plan for investments in national transport infrastructure was produced in contrast to previously separate road and railway plans. Within the newly established STA much effort was put into developing a new identity as “society developers” rather than “infrastructure builders” (STA, 2015a) and a new method for early strategic choices of measures to handle transport related problems (the Strategic Choice of Measures method, in Swedish “åtgärdsvalsstudie”) – SCM – was developed in the first few years of the new agency's existence. The SCM method emphasizes the need for an “unbiased multimodal analysis” prior to a formal physical planning and design phase, based on the “designated function in regional or national system analysis, alternatively in regional public transport supply program or comprehensive land use plan” (STA and SALAR, 2014, p. 9).

These institutional changes in Swedish national transport policy and planning indicate that national transport planning is increasingly dominated by a function-oriented approach, heading in the same direction as the sustainable mobility paradigm outlined by Banister (2008). The actual ambition of transport policy in Sweden to move from what Banister labels “the conventional approach” to an alternative “sustainable mobility” approach may be questioned based on how the transport system is actually developing in practice (Isaksson et al., 2017; Finnveden and Åkerman, 2014; Odhage, 2017). There is, however, a clear emphasis on the principles of an approach characterized by desired functions of the transport system in the institutional changes described above.

1.2. The four step principle as the guiding principle for transport planning in Sweden

A core element of this function-oriented approach in national transport policy in Sweden during the past decades is the statement that national transport planning should be guided by the so-called four step principle. This principle, initially introduced and developed within the former Swedish Road Administration in the 1990's and later established by the parliament as a fundamental principle of national transport planning, stipulates that measures that affect the need for transport and choice of transport mode (step 1) and that lead to a more efficient use of existing infrastructure (step 2) should be considered before large reconstruction measures (step 3) and investments in new infrastructure (step 4). The rationale for leaning on this four step principle is both to achieve efficiency in terms of costs and effects of policy measures, and to contribute to a more sustainable transport sector (Swedish

government, 2016).

The four step principle is perhaps the most explicit indication that national transport planning is shifting focus towards a desired function instead of the infrastructure, especially as the step 1 measures can include a range of measures that has little direct connection to the transport infrastructure (e.g. regional planning, economic instruments, information, ITS, etc.). Despite the formal emphasis on the four step principle in Swedish national transport planning, however, several studies indicate that it has had little practical impact (e.g. SIKÅ, 2005; Odhage, 2012, 2017). For instance, the SIKÅ report stipulates that the four step principle is the infrastructure planning's Potemkin village and that it is something that foremost have had the function to give the public the impression that the planning has been unbiased and comprehensive although this has never been possible or the purpose (SIKÅ, 2005). Odhage (2012) studies six early cases of SCM's and argues that it seems to be difficult to produce genuine alternatives to traditional transport planning measures in these cases, especially step 1 measure, due to the focus on transport rather than accessibility. Furthermore, a study by Fernström et al. (2016) reveals a general lack of routines for how to handle step 1 and 2 measures within the Swedish Transport Administration (STA), while step 3 and step 4 measures have a clear structure and well-established routines for how to be handled, which tends to direct the focus of the STA to the latter.

1.3. Aim and research questions of the article

In the context described above, the aim of this article is to study whether the practical implications of Swedish national transport policy are consistent with the ambitions expressed in the four step principle. The paper is based on a governance framework of analysis and focuses on the main agent of transport policy implementation in Sweden: the Swedish Transport Administration (STA).

The STA is the government agency responsible for national transport planning in Sweden, and consequently it is very much through the STA that national transport policy is implemented. State financing for Swedish transport planning is channeled either through national transport plans which is prepared by the STA and approved by the government, or through 21 regional transport plans, prepared and approved by regional authorities in the 21 counties. The decision on how state funding for infrastructure shall be allocated is thus made by either the national government or regional authorities, but the fundamental policy principles on how these plans should and may use state money is regulated by policy decisions made by the national government in various government bills and assignments, and formalized in government decrees. Furthermore, the actual implementation of these plans is the responsibility of the STA and since parts of the plans are constituted by “pools” of funding designated for certain purposes but not earmarked for specific projects, the STA has a mandate to select measures successively in accordance with what is deemed appropriate by the STA.

The research questions that have oriented this research are:

- What is the STA's mandate to finance measures from the different steps of the four step principle?
- Which implications does this mandate have on a more function-oriented approach to transport planning?

The paper is structured as follows: After having introduced the aim and research questions for the study in this introduction, section 2 presents the analytical framework, followed by the research method in section 3. In section 4, we will present the STA mandate as expressed in formal policy documents and interpreted by the STA, followed by a scrutiny of the implications for the implementation of the four step principle (section 5). Based on the findings in the previous parts, section 6 discusses the potential for an STA's mandate to be based on desired functions rather than facility before concluding (section 7).

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