

Barriers and opportunities to car-use reduction
A study of land-use and transport policy in four
Norwegian cities

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PhD Dissertation

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Abbreviations

CFT: Climate-friendly transport

CUR: Car-use reduction

GHG: Greenhouse gas

ICT: Information and communications technology

NPM: New public management

PP: Policy package

Summary

Reduction of greenhouse gas (GHG) emissions from transport has long been on the political agenda. To effectuate transport change, many policy actors must be coordinated and a range of strategies combined. However, while research has pointed to urban densification, car-regulative measures and strengthening of walking, cycling and public-transport facilities as important, such policy initiatives often meet distinct obstacles. This thesis responds to a call for research on how to facilitate car-use reduction (CUR) in urban areas.

Applying a case-study approach, in-depth studies have been carried out in four Norwegian cities – Trondheim, Drammen, Porsgrunn and Bodø. The main methods used are qualitative interviews and document studies. In addition, insight is sought through the reading of statistics. The four case cities are involved in ongoing large-scale programmes for land-use and transport-system development, so-called *city packages*. These can be seen as policy packages involving governance networks, and are central to the analysis. In all four city packages, there is a tension between whether to facilitate or restrict car usage. This is evident in the inclusion of goals for CUR and the simultaneous targeting of traffic efficiency through road-infrastructure building. However, there are differences between the city packages in terms of economic resources and regulative measures used to facilitate CUR. The case-study approach provided a way to cover contextual conditions important for local decision making. Both structure- and agency-related explanations to the differences have been found.

The issue of CUR impinges on policy actors' interests, mobilising them both for and against policy action. This means that policy outcomes are a result of negotiations between actors holding different interests. Emphasis is therefore placed on understanding how local authorities seek to balance policy for CUR with other experienced needs in urban development. The following main research question is posed:

- How is the integration of car-use reduction in urban development strategies hindered or facilitated by policy actors?

In addition, three subordinate research questions are formulated, one for each article of the thesis. The three articles have different comparative setups, cover different themes and bring up different academic discussions. Still, they feed into the main research question by analysing barriers and opportunities for local authorities in their approaches to CUR.

The main contribution of this thesis lies in its combining of existing research and academic discussions. In article #1, research perspectives on policy packaging are blended with the discussion on the role of national authorities in local policy. In article #2, discussions on effectiveness and democratic aspects of network governance are combined, with a focus on how the relationships between them play out in policy for CUR. In article #3, economy–environment relations are

highlighted by merging the academic discussion on urban entrepreneurialism with that of CUR.

Two critical insights emerge from this thesis. First, it highlights the analytical value of a discussion in which local environmental policymaking is not divided from the management of local economies. To better understand local policy for CUR, issues of urban competition over private and national authority investments, as well as over retail customers and inhabitants, need to be taken into account. Thus, research on climate action cannot be reduced to wish lists of measures to be implemented, also analysis of the local political context are needed. For example, this thesis illustrates how policy supporting CUR is hindered when stakeholders fear that it will negatively influence the competitiveness of a city vis-à-vis its surrounding region. This is evident in both the regulation of parking and urban densification strategies. If such tensions are not resolved, a structured and bold approach to CUR becomes more difficult.

The second main contribution of the thesis is that it highlights a spatial perspective to understand urban climate policy. Also here, the relationship between municipalities within a region and notions of urban competition are relevant. The empirical enquiry gives examples of inter-municipal cooperation to reduce competition-related tensions (and thereby facilitate CUR). However, it also gives examples of initiatives for CUR being blocked due to fear of competition in the region. This illustrates how local policy decisions are influenced by actors and processes on different geographical scales. In line with the multilevel-governance perspective, there is thus a need to step beyond the city itself to understand local climate policy. As CUR highly involves regional dynamics, there is also a need for strong regional governance institutions.

List of articles

The main findings of this thesis are disseminated in three articles:

Article #1: Policy packages and state engagement: Comparing policy for car-use reduction in two Norwegian cities

Author: Anders Tønnesen

Journal *Journal of Transport Geography*

:

Status: Published in *Journal of Transport Geography*, 2015, 46:89-98, available online at:
<http://www.sciencedirect.com/science/article/pii/S0966692315000964>

Article #2: Democratic anchorage and performance: Comparing two network approaches to land-use and transport-system development

Author: Anders Tønnesen

Journal *Local Government Studies*

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Status: Accepted for publication (issue and volume number not yet designated), available online at:
<http://www.tandfonline.com/doi/abs/10.1080/03003930.2014.982110>

Article #3: Urban entrepreneurialism and car-use reduction

Author: Anders Tønnesen

Journal *Planning Theory and Practice*

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<http://www.tandfonline.com/doi/pdf/10.1080/14649357.2015.1026924>

Article 1 and 3 were under revision in the scientific journals when this thesis was submitted. The later published articles 1 and 3, linked to in the table above, are therefore not equal to the ones presented at the end of this dissertation.

Table 1: *Overview of the articles in the thesis*

Article	Title	Case cities	Objective	Empirical basis
1	Policy packages and state engagement: Comparing policy for car-use reduction in two Norwegian cities	Trondheim and Bodø	To highlight how state engagement influences the integration of CUR policy in local-level policy packages	Qualitative interviews Document studies Statistical reading (secondary data)
2	Democratic anchorage and performance: Comparing two network approaches to land-use and transport-system development	Trondheim and Drammen	To assess whether the democratic anchoring of governance networks has any influence on their effectiveness	Qualitative interviews Document studies Statistical reading (secondary data)
3	Urban entrepreneurialism and car-use reduction	Drammen and Porsgrunn	To explore how local authorities seek to balance car-use reduction and economic growth concerns	Qualitative interviews Document studies Statistical reading (secondary data)

1 Introduction

This thesis is based on a research project addressing car-use reduction (CUR) in urban settings. This implies the steering of land-use and transport systems in directions that minimise the need for transport and facilitate a transition to modes other than private car usage. The thesis responds to the longstanding political goal of reducing greenhouse gas (GHG) emissions from transport. Amongst the targets set is the EU goal of reducing at least 60% of GHGs by 2050 with respect to 1990 levels (European Union, 2011). This is a high ambition, especially given that transport is still a growing source of emissions. To effectuate transport change, many policy actors must be coordinated and a range of strategies combined. Important steps to be taken involve compact-city development and the facilitation of walking, cycling and public-transport usage.

The dissemination of this thesis involves three scientific articles. Attention is directed towards the ways in which local decision makers seek to balance CUR with other needs experienced in urban development. Cities provide a particularly interesting case for studying the reduction of GHG from transport. Increasing volumes of urban traffic cause not only problematic congestion, but also environmental issues. It is thus appreciated that future management of urbanisation will occur under conditions marked by severe environmental constraints (Dodson & Gleeson, 2009). Still, with their higher population density and generally shorter distances between dwellings, work and service functions (compared to more dispersed settlements), cities also have great potential for traffic-volume reduction. To Banister (2008) cities are thus made relevant by being the most sustainable urban form in this regard. However, while GHG reduction has been high on the political agenda for a long time, it can be questioned whether the transitions envisaged represent something fundamentally different from the existing system of transport. As Banister (2011) notes, transport change in European cities has been difficult to obtain, despite various schemes to lower emissions. This calls for research on how to facilitate CUR in urban areas. In this thesis, this is accomplished by elaborating on how the integration of CUR in urban development strategies is hindered or facilitated by policy actors.

The city-level focus in questions of GHG reduction from transport is not new. From strategies in Local Agenda 21 in the 1990s (United Nations Conference on Environment and Development, 1992) to more recent initiatives of the European Union (e.g. European Environment Agency, 2013), cities have been identified as important arenas for the implementation of environmental politics (Betsill & Bulkeley, 2007). To serve such a function, the conflicting economic, ecological and political pressures involved in land-use and transport policy must be managed. This has two implications for research: First, studies of climate action cannot be reduced to technocentric models and wish lists of measures to be introduced (Bulkeley & Betsill, 2005). Second, there is a need for studies of local authorities operating under the complex pressures for urban economic growth and national targets for reducing emissions (cf. Hodson & Marvin, 2012). In line with the multilevel-governance perspective, this involves analysis of how environmental politics have been shaped

by forms of governance which stretch across geographical scales (Bulkeley & Betsill, 2005).

Departing from this background, this thesis provides in-depth empirical studies the four Norwegian cities Trondheim, Drammen, Porsgrunn and Bodø. Through these cases, the aim is to analyse barriers and opportunities for local authorities in their approaches to CUR. Essential in this regard is an improved understanding of the social and economic forces shaping cities and their transport systems. Therefore, and in line with a human geographic perspective, the thesis is intended to contribute to a more comprehensive understanding of cities in environmental politics.

2 Research questions, objectives and operationalisation

In line with the worldwide trend, reductions of emissions from transport has been hard to obtain in Norway. Between 1990 and 2012, the country experienced a 30% increase in GHG emissions from road traffic (Statistics Norway, 2014a), despite longstanding ambitions to reduce them. This raises questions of how environmental goals for transport are being handled in local decision making, or as Lombardi, Porter, Barber and Rogers (2011) state, it makes relevant analysis of how sustainability is realised in decision-making settings.

Cahn (2013) describes public policy as public solutions implemented to solve a public problem. The need to reduce car usage in urban settings is one such problem. Moreover, and again following Cahn, policy actors can be described as individuals and groups, whether formal or informal, seeking to influence the creation and implementation of public solutions. In this thesis, the main policy actors discussed are as follows: municipal officers, politicians, business-organisation representatives, city-centre business representatives and public transport actors. Hence, policy actors found both within and outside traditional structures of public administration have been included. In article #2, the term *stakeholder* was used to describe actors with an interest and/or concern in land-use and transport policy. Important to the selection of informants was that they were either directly involved in important urban development processes, in a lobby position in relation to them or affected by them (more details on informant selection are given in section 7.2).

The following overall research question has been formulated:

- How is the integration of car-use reduction in urban development strategies hindered or facilitated by policy actors?

In addition, three subordinate research questions have been developed, each forming the basis for an article, as follows:

- How does state engagement influence the integration of car-use reduction policy in local-level policy packages? (article #1)
- In what ways do democratic anchorage of governance networks influence land-use and transport system development? (article #2)
- How do local authorities seek to balance car-use reduction and economic growth concerns? (article #3)

The overall research question is broad, and there are clear limitations related to the transferability of a study consisting of four cases. Attention is therefore paid to how policy dynamics manifest themselves differently in different contexts. This implies that the findings of this thesis are not necessarily transferable to other cities, even though these may share several characteristics such as city size or political landscape. Still, while bearing this in mind, the dynamics revealed are believed to describe some tendencies which are also relevant to other settings. The application of this study is therefore not just restricted to the four cases.

Local-level CUR policy can be analysed from a variety of angles. A demarcation of both the types of environmental strategies and the factors influencing policy is therefore needed in this thesis. One demarcation is that strategies targeting emissions through technical innovations, for example in relation to fuel or engines, are beyond the scope of this thesis. Instead, the focus is on political strategies aimed at the reduction of traffic volumes. The approach taken is one acknowledging the close connections between land use and emissions from transport (e.g. Banister, 2008; Hull, 2011; Næss, 2006). This makes relevant the integration of land-use and transport planning, as this influences both travel lengths and frequency, in addition to what type of transport is chosen for daily purposes (Figure 1). The underlying rationale is that the more dispersed an urban development pattern is, the less favourable conditions for walking, cycling and public transport will be, resulting in extensive car usage (e.g. Owens & Cowell, 2002). In 1993, important guidelines for coordinated land-use and transport-system development were put forward by the Norwegian national authorities (Ministry of Environment, 1993). These principles have since been repeated and emphasised in central policy documents (e.g. Ministry of Transport, 2009, 2013a). In recent years, national authorities have emphasised so-called *city packages* for land-use and transport-system development in urban regions. All larger urban regions in Norway are now organised through such city packages. Taking departure from the four case cities, city packages represent important objects of study in this thesis.

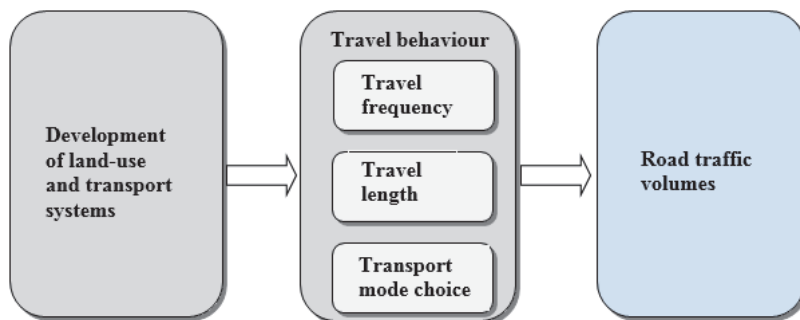


Figure 1: Land use, transport systems and travel behaviour
Source: Modified from Tennøy (2012)

Medalen (2009) defines city packages as large-scale programmes for land-use management and transport-infrastructure investments. While it describes their

purpose, however, this characterisation needs to be broadened in order to cover their full characteristics. First, city packages involve the combination and interaction of different policy measures. The concept of policy packages, defined as ‘the combination of individual policies and measures in order to achieve a certain goal’ (Filipe & Macário, 2013, p. 150)¹, describes this. Second, the forms of cooperation employed must also be highlighted, as city packages imply new ways of working across sectors, administrative borders and spatial levels. This makes relevant the concept of network collaboration, defined here as ‘enduring interactions between a set of interdependent actors in a specific policy field’ (Koppenjan, 2008, p. 700). The Norwegian city packages are thus policy packages involving governance networks (Figure 2). Theoretical contributions from both strands of research are applied in the analysis.

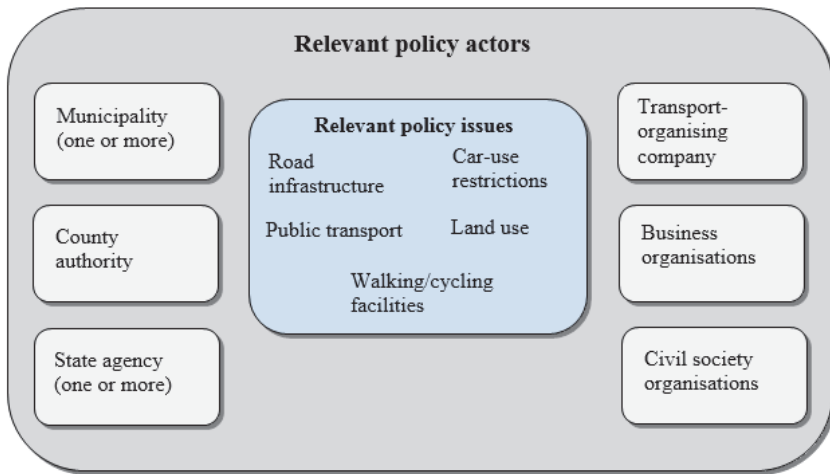


Figure 2: *Relevant policy actors and measures in city packages*

All four case cities are involved in ongoing city packages. These operate in conjunction with the local democratic institutions, where important political decisions are passed through the local city and county councils. Nevertheless, to various degrees, some decisions are made without the involvement of city councils, as illustrated by the empirical cases.

While sharing the overall institutional context of national authorities setting up local level activity to be organised through city packages (Ministry of Transport, 2009), there are clear differences between the four cases under study. Amongst these are differences in the types of strategy applied, the involvement of actors in the networks and access to financing. Figure 2 thus illustrates relevant measures and

¹ For a more extensive definition, see Givoni, Macmillan, Banister and Feitelson (2013).

actors in city packages, not a standardised version applied in all four cases of this thesis. The differences influence how issues of land use and transport are handled. In other words, the ways in which city packages are organised represent important institutional conditions influencing local-level policy. Some of these characteristics facilitate CUR, while others do not. In the following, topics relevant to the operationalisation of the research questions are briefly presented. A more thorough theoretical discussion is given in section 5.

2.1 Policy packaging environmental strategies

Numerous factors influence local decisions on land use and transport, although only some are elaborated on here. One relates to decision makers' challenge when it comes to understanding the relationships between different policy measures in urban settings and how to steer travel behaviour through their decisions. Planners not only require knowledge about the likely consequences of different alternative actions, but must also understand the role of plans and planning processes in societal development (Næss & Saglie, 2000). With urbanisation occurring around the globe, urban systems of unprecedented spatial complexity are emerging (Dodson & Gleeson, 2009). The many challenges found in urban contexts thus place a great responsibility on the shoulders of urban and regional planners (Kourtit, Nijkamp, & Reid, 2014). As Jacobs (1961) stated in the mid-twentieth century, cities present 'situations in which a half-dozen or several dozen quantities are all varying simultaneously *and in subtly interconnected ways*' (p. 446, original italics). In accordance with this, Tennøy (2012) finds a lack of knowledge on how traffic volumes are affected by land-use and transport-system development to be one important explanatory factor for why traffic-increasing plans are generated. This means that the selection of an appropriate combination of policy instruments is amongst the most intricate and important tasks in strategic planning (Vedung, 1998).

Given this complexity, voices have been raised to integrate policy measures into larger policy packages, exemplified in this thesis by the Norwegian city packages. Such policy packages are suggested solutions in situations where the use of isolated policy measures has proven insufficient, or worse, produced unintended negative side effects. One argument for the policy-package approach is thus that a deliberate combination of mutually supportive policy measures may enhance effectiveness (compared to single isolated measures), not least through increasing the likelihood of implementation (Givoni et al., 2013). For instance, unpopular measures like road pricing can be legitimised through their combination with more popular measures like public-transport improvements in policy packages (e.g. Sørensen, Isaksson, Macmillen, Åkerman, & Kressler, 2014). However, while there is a shared understanding of the need for integrated policy, the concept of policy packages and how to organise them remains vague (Givoni, 2014). In clarifying this, it is not sufficient to focus only on relationships between policy measures, but also on the ways in which the national authorities engages in local policy packages. While relevant to the analysis of all three articles, the interrelationship between policy

measures in city packages and their relations with national authorities are particularly emphasised in article #1.

As shown, the Norwegian city packages are not only the combination of measures in a policy-package structure, they also involve network cooperation. The city-package networks, like those studied in this thesis, thus exemplify one arena for negotiations over land-use and transport-system development. The ways in which such governance networks are organised, however, do vary. Among other things, this concerns the involvement of stakeholders and politicians in the networks. The ways in which this is done is within democratic network governance research referred to as the *democratic anchorage* of networks (e.g. Sørensen & Torfing, 2005a). In article #2, two city packages which differ in terms of their democratic anchorages are compared.

2.2 *Balancing growth and environment, competition and cooperation*

The understanding of how local authorities seek to balance CUR policy with other experienced needs is central in this thesis. Notions of urban economic growth and competitiveness in local decision making are thus present in all three articles. Nevertheless, article #3 provides the most in-depth analysis on the topic. The different economic interests involved in land-use and transport-system development are of particular relevance here.

Related to the choice of a transport strategy, there are difficult political choices being made. Priorities have to be determined between the needs of the present population versus those of future generations for travel consumption, the needs of urban dwellers versus those in the suburbs and the needs of car users versus pedestrians, cyclists and public-transport users. In addition, there are different interests between sectors, as well as between public and private actors. This is evident in Flyvbjerg's (1991b) much-cited case study of diverging interests and the exercise of power in a city-centre regeneration project in Aalborg, Denmark. Hence, fundamental conflicts are often embedded in planning processes, causing goal conflicts in which some actors may gain and others may lose from the decisions made (Flyvbjerg, 1998). An important task for sustainability research is therefore to analyse how different policy measures and developmental traits distribute advantages and disadvantages between population groups (Næss, 2012a). In this thesis, with its elaboration on local authorities' constraints and opportunities in relation to CUR, understanding such policy dynamism is essential.

An important part of the enquiry of this study has to do with the ways in which local authorities seek to balance environmental and economic growth concerns in urban governance. While this issue is not new in academic debates (see for example Bulkeley & Betsill, 2005; Gibbs, 1997; While, Jonas, & Gibbs, 2004), there is a need for empirical studies of how urban growth strategies are seen in relation to those of CUR. This is in accordance with Marsden and May (2006) stressing the need to recognise the connections between transport and economic concerns:

[E]conomic development concerns appear to be driving regional and local strategies strongly, and this is a context within which transport and environmental issues need to be resolved. (p. 786)

The present thesis does not claim that CUR strategies should be subordinated to economic growth. When calling for economic and environmental concerns to be viewed in an integrated fashion, it is not suggested that the environment should be collapsed into the economy. Instead, what is emphasised is that an understanding of these connections is central to understanding how national CUR ambitions are being translated into local policy. It is important to understand the many conflicts of interests involved in environmental issues (Lafferty & Hovden, 2003).

One way of studying economic growth strategies of cities is through theoretical perspectives relating to *urban entrepreneurialism*. Here, cities are seen as competing over resources such as specific groups of inhabitants and capital investments. In this way, urban politics plays an important role as a tool for making cities attractive (Harvey, 1989; Jessop, 1998; While et al., 2004). Typically, such strategies involve the remaking of urban environments, often in the city centre. The entrepreneurial perspective thus describes ways in which local authorities have become more oriented towards business, innovation and entrepreneurship. Here, urban entrepreneurialism becomes relevant, in particular for two reasons. First, the entrepreneurial shift not only involves a new orientation of policy, but also new governance forms; this shift is characterised by the emerging use of networks and involvement of private actors in decision making. The city-package network represents one new form of governance. In the four case cities, private actors are involved in the city-package networks to different extents. However, cooperation also takes place outside this network structure. When dominant within an urban setting, these public-private informal arrangements are referred to as *urban regimes* (Stone, 1989). Public-private interaction is the main focus of article #3, but is also involved in the analysis of network cooperation in article #2.

Second, urban entrepreneurialism is relevant, as it suggests that the attractiveness of cities is influenced by how questions of land-use and transport are resolved. In this way, environmental policy may be interwoven with competitive policies to attract both people and capital (Luccarelli & Røe, 2013). Of relevance here is the entrepreneurial notion of *inter-urban competition*, where decision makers continuously seek to maintain or enhance the competitiveness of the 'own city' vis-à-vis other localities (Jessop & Sum, 2000). An understanding of inter-urban competition where the gain of one city is seen as coming at the expense of another has been criticised for being insufficient (Hubbard, 2006). Nevertheless, the cases in this thesis provide evidence of decision makers paying attention to competition across municipal borders in questions of urban development. This is particularly the case in relation to competition over retail trade across municipal borders, materialised in discussions over where to allow for what types of commercial activities (e.g. shopping centres and big box stores at the outskirts of cities) and how to regulate parking at the various retail sites. In this way, the entrepreneurial notion of inter-urban competition attaches a spatial dimension to CUR policy.

In the following chapter 3 a description of the case-study approach and level of analysis is given. Thereafter, in chapter 4, the policy context and the case cities are described. In chapter 5, the main theoretical perspectives applied in this research are outlined. The chapter ends with a discussion of how the theories can be seen in integration. Chapter 6 gives a short presentation of the three articles written as part of this thesis. Here, three subordinate research questions are presented, one for each article, representing the question addressed in that work. A methodology section is given in chapter 7, outlining the procedures for data collection. Also included in this chapter are methodological reflections on the case study approach. In chapter 8, the findings of the three articles are discussed and synthesised.

In chapters 9, 10 and 11 the articles are presented in their full length as they have been submitted to the scientific journals (article #2 is presented in the format in which it has been published²). This involves that they are presented in accordance with the respective journal styles.

3 The case study approach and level of analysis

As described in the introduction, this thesis is based on a study of four case cities. Following Yin (1994), a case study is an inquiry which ‘investigates a contemporary phenomenon within its real-life context’ (p. 13). As Yin states, this is in contrast to an experiment, where the phenomenon under study is deliberately separated from its context to focus only on a few variables. Hence, case studies represent a way of covering the contextual conditions seen as relevant to what is being studied. This contextual approach is also found in Flyvbjerg (2011), who states that ‘case studies focus on “relation to environment”, that is, context’ (p. 301).

The applicability of case studies in exploring how the object of study relates to its surroundings illustrates why it is a frequently used method within human geography. To Sneddon (2009), one characteristic of human geography is exactly how it explores ‘patterns and processes that shape social relations and delineates human interactions with the environment’ (p. 558). Hence, the surrounding geographical area of the four case cities is not treated as a passive background, but is instead integrated into the analysis. Among others, attention is here given to the presence of shopping malls within and outside the municipal border of the case city and the economic position of the city in the larger geographical region.

Dodson and Gleeson (2009) are amongst those who argue for more use of spatial scientific thinking in the analysis of urban policy and practice. In line with this, Bulkeley and Betsill (2005) claim that there is a need to step beyond the local as a frame of reference to understand why moves towards less car use are (or are not) taking place. The implications for research is that the dynamics of the whole urban region needs to be taken into account when studying the land-use and transport policy of a case city. For public officers and decision makers, a regional approach

² Due to this formatting the use of the word search function in the PDF-version of the thesis is made difficult for article #2.

implies coordination across municipal borders, with an acknowledging of growth in mobility being influenced by factors extending beyond the city to its hinterland (Marshall, 1999).

With this background, researchers have suggested a *relational approach to place*, a perspective with implications for how the empirical cases are treated in this thesis. In the relational approach, the plural connections of cities and regions are emphasised (Amin, 2004; Hubbard, 2006; Massey, 1993). This implies an understanding of cities as being nested within a broader spatially interconnected region (Dodson & Gleeson, 2009), as exemplified by their engagement in regional competition over retail trade customers. While much of the literature on relational aspects of place has focussed on larger cities, the approach is also useful for studies of smaller cities like those included in this thesis. As Massey (1993) emphasises, it is impossible to understand the loss of inner city jobs by looking only at the inner city itself. In a similar way, transport policy analysis needs to take the broader geographical region into account. The relational approach not only explains difficulties in reducing traffic volumes, but also suggests strategies for approaching these challenges. For urban decision makers, for example, a relational approach would imply recognition that not all problems are solvable within the municipal borders. Thus, urban governance is understood not only as networks within cities, but also in terms of how policymakers relate to other actors and geographical scales (Hubbard, 2006). This calls for strong regional institutions to reduce car usage.

The relational approach to place shares many similarities with the multilevel-governance perspective. Here, urban actors' response to environmental issues is seen as influenced by processes taking place on other scales (Bulkeley, 2010). Within an urban region, this perspective can be used in the analysis of how neighbouring municipalities are influenced by each other in terms of policy for shopping-mall establishment and parking regulation. The multilevel approach can also be used to analyse interaction between the local and national levels in CUR policy. As such, it describes how cities are implicated in hierarchies of multilevel governance (Hodson & Marvin, 2012). Agency at the city level can thus not be reduced to understanding the variety and coalitions of actors mandated to work on this local scale. It also involves the influence of actors at other geographical levels (Hodson & Marvin, 2010). In this thesis, a choice has been made to focus on the dynamics between actors within the urban region, as well as between these and national authorities.

4 Description of policy context and case cities

Local land-use and transport policy is embedded in a larger administrative and legislative context. In the following, central features of the Norwegian system are addressed before descriptions of the four case cities are given.

4.1 Norwegian city packages

To reach goals for climate-friendly urban development, national authorities have for a long time emphasised the need to coordinate policy measures and actors (see e.g. Ministry of Environment, 1993 and Ministry of Transport, 2009, 2013a). The city-package approach, described briefly in section 2, can be seen as one policy response. City packages represent an agreement between state, regional and local authorities over land-use and transport-system development. The role of national authorities in city packages is both to set requirements for the use of integrated policy measures and to facilitate a joint understanding amongst the parties involved concerning challenges, goals and relevant policy measures (Ministry of Transport, 2009). In accordance with Stead (2008), the goal of such an integrated approach then becomes to avoid contradictory or redundant policy measures, as well as to promote synergies and consistencies across sectors.

The four city packages studied in this thesis were established between 2008 (Trondheim) and 2013 (Porsgrunn), although preparatory governance structures were in action before the packages were formalised. With fieldwork carried out in 2011, this means that also the policy discussions leading up to the formalised city packages were important in the data collection. Moreover, land-use and transport policy to reduce car usage require a long timescale, making it better to conduct a comprehensive evaluation of the city packages' effects on traffic volumes at a later stage. With this in mind, the analytical focus is on the chosen strategies and reasoning behind them in light of predominant research on how to facilitate CUR.

City packages are carried out in all larger urban areas in Norway. They can be described according to three dimensions – their network structure, their use of policy measures and their financing. The *network-structure* dimension describes the type of actors participating (Figure 2). In all four city packages reviewed in this thesis, the municipal and regional levels are represented, as well as one or more state agencies (Table 2). In addition, public transport actors, organisations and representatives of business participate to various degrees. Network characteristics also describe *how* the different actors are involved, as they may hold more or less influential positions. This is what Hay and Richards (2000) point to when they distinguish between the *network core* and *periphery*, where actors positioned in the former hold a more prominent role in the network. Participation in the steering committee of a network would exemplify actors being placed in the absolute network core. In article #2, links between governance-network structure and the policy process carried out are discussed.

Table 2: City-package organisation

	Central network partners
Trondheim	<ul style="list-style-type: none"> • One municipality • County authority • One state agency: road authority
Drammen	<ul style="list-style-type: none"> • Five municipalities • County authority • County governor • Three state agencies: road, rail and coast authorities
Porsgrunn	<ul style="list-style-type: none"> • Three municipalities • County authority • Two state agencies: road and rail authorities
Bodø	<ul style="list-style-type: none"> • One municipality • County authority • Two state agencies: road and rail authorities

The *measure* dimension of the Norwegian city packages relates to the type of policy measures being applied. Examples of relevant measures are restrictions on land use to promote urban densification, regulation of traffic through toll roads and parking, improvements in public-transport services, improvements for walkers and cyclists and improvements in road facilities (Figure 2). The city packages studied in this thesis all make use of these types of measures, but vary in the emphasis placed on them in terms of the economic resources and regulative measures used. However, it is worth noting that the city packages involve efforts to improve conditions for both users of climate-friendly transport and car drivers. The reduction of car usage is thus only one among several city-package goals; another typically relates to traffic efficiency. As such, city packages use a *goal catalogue* representing the diverse and potentially conflicting goals of interventions (Vedung, 2006).

The *financing* dimension describes the combination of financial sources on which the Norwegian city packages are based. Among these are toll-road revenues, contributions from the network partners and governmental financing. In terms of the latter, two sources will be described briefly. The first is the *National Transport Plan*, a governmental plan for future transport projects which is published every fourth year. Municipalities strive to be included in this plan, as it allows for and in various degrees finances transport investments. The 2009 plan stated that city packages were to be increasingly emphasised (Ministry of Transport, 2009), sending a clear message about how to organise local-level activity. It was also emphasised that the national authorities would be particularly receptive to those policy packages showing strong efforts to reach national climate goals. In this way,

national authorities made an explicit connection between policy-package performance and disbursement of governmental funding³.

The second governmental source is the *Reward Programme*. Here, cities and urban regions are rewarded based on efforts and plans to strengthen public transport and implement restrictive policy instruments against car use (Ministry of Transport, 2013b). The arrangement can be seen as a contract-based agreement between national authorities and city-package networks. The latter commit to implement a set of measures in order to receive a granted sum of governmental resources. Amongst the case cities, Trondheim, Drammen and Porsgrunn have all been involved in Reward Programme agreements with national authorities. Bodø, on the other hand, does not qualify for the arrangement due to its smaller population size. This difference is discussed in article #1, where the strategies and financing of the city packages in Trondheim and Bodø are compared.

4.2 *The Norwegian legislative and advisory framework*

The Planning and Building Act⁴ is the primary legislative framework to ensure inclusion of environmental consideration in the planning of Norwegian towns and settlements (Kleven, 2011). This means that new projects, regeneration of existing structures and long- or short-term strategies influencing land use or transport are all to be handled in accordance with the requirements of this law. The environmental aim of the law is stated in the overall goal, which is to ‘promote sustainable development to the benefit of individuals, society and future generations’ (Planning and Building Act, § 1-1). Amongst other things, this is sought by emphasising cautious land use and requiring environmental considerations in solutions for transport.

An important aspect of the Planning and Building Act is its delegation of power between the tiers of government. With decision making in questions of land use delegated to the local level, national environmental ambitions depend on the implementation of local strategies. Due to this distribution of authority, Saglie and Harvold (2010) describe the Planning and Building Act as a toolbox which local authorities can take into use in various ways. However, while the local level has been delegated authority, the Planning and Building Act contains important procedures and requirements aiming for consistency between local activity and national policy. One aspect of this is the demand for local planning to remain in accordance with national defined goals. For the transport sector, national climate goals are defined in the National Transport Plan (Kleven, 2011).

A second element is the right of governmental or regional bodies, as well as other municipalities, to object to any proposed municipal plan (Planning and Building

³ In the National Transport Plan published in 2013, the Ministry of Transport (2013) presented a further development of the city-package arrangement. Here, the new *Integrated City Environment Agreements* were described as involving increased financing and closer cooperation between national authorities and selected urban regions in questions of land use and transport.

⁴ The current version was published in 2008.

Act, § 5-4). In such cases, the municipal plan is not valid before the contentious issue has been resolved (Lund-Iversen, Hofstad, & Winsvold, 2013). If the negotiations become locked and no solution is obtained, a decision is ultimately made at the ministry level.

Another approach by which national authorities can influence local-level activity is through so-called *Concept Studies*. The authorities require these to be carried out prior to all projects worth more than €95 million. They are needed not only for transport-infrastructure projects, but also for other types of building projects and large-scale investments. For the city packages under study in this thesis, Concept Studies are typically performed by the Public Road Administration. The reports elaborate on different transport solutions, typically by presenting 3–5 concepts. Strong emphasis on road building to encounter future transport challenges is likely to be at the one end of the continuum and strong emphasis on facilitating walking, cycling and public transport usage at the other. The advantages and disadvantages of each concept are discussed before one is recommended. The Concept Studies are not financial arrangements like the National Transport Plan or the Reward Programme, but their recommendations have ramifications for local political decisions. It is worth noting that, similar to goals for city packages, environmental goals are not the only ones considered in Concept Studies.

4.3 Description of the case cities

The Norwegian urban system shares many characteristics with those of other European countries, although the agglomerations and hierarchies exist on a much smaller scale (Dale, Selstad, & Sjøholt, 2002). When this thesis refers to larger Norwegian cities, this is relative to the Norwegian context.

Trondheim is located in the middle of Norway (Figure 3). With 182 000 inhabitants, it is the third-largest city in the country. It is also the centre in a region of 10 municipalities with a population of 275 000⁵. In terms of population, Trondheim is among the fastest growing Norwegian cities, having experienced 18% growth in 2004–2014 (Statistics Norway, 2014b)⁶. In terms of politics, Trondheim has lately been led by the social democrat party. This was also the case both when the city package was established in 2008, and in 2011 when fieldwork was carried out for the present research.

⁵ Defined by the municipalities in a regional network called the Trondheim Region.

⁶ All demographic descriptions in section 4.3 are based on Statistics Norway (2014b).



Figure 3: *Location of the case cities*

Source: The Norwegian Mapping Authority

Drammen is situated 45 km south-west of Oslo. With a population of 66 000 inhabitants, the municipality is the 10th largest in Norway. It is the most populated in a region of five, with a total population of 160 000⁷. Still, *Drammen*'s closeness to the capital city Oslo implies that it is not a dominant city in the larger region. In terms of population, *Drammen* experienced a growth of 17% in 2004–2014, placing it at the higher end in comparison with other larger cities in Norway. Politically, the city has lately been conservative-led, and this was also the case when the policy package was established in 2010 and during the fieldwork in 2011.

Porsgrunn is located 140 km south-west of Oslo and has a population of 36 000. Thus, the municipality is the 23rd largest in Norway. It is part of a region of four municipalities with a population of 106 000⁸. *Porsgrunn* and a larger city, *Skien*, are the dominant cities in the region. With a distance of only 8 km between the two

⁷ Defined by the municipalities participating in the city-package cooperation (original name: Buskerud City).

⁸ Defined by the municipalities of *Porsgrunn*, *Skien*, *Siljan* and *Bamle*.

city centres, they are part of the same urban system, with a shared labour and housing market. In terms of population growth, Porsgrunn and Skien have been at the lower end over the last decade compared to larger cities in Norway. In 2004–2014 Porsgrunn experienced a population increase of 7%. Politically, the social democrats hold a strong position in Porsgrunn. They were also in power both during fieldwork in 2011 and when the city package was passed in 2013⁹.

Bodø is located in northern Norway, where population density is low. With 50 000 inhabitants within its municipal border, it is the 14th largest city in Norway. Bodø is the centre of a region of nine municipalities, with a total population of 80 000 inhabitants¹⁰. In terms of population growth, Bodø is at the higher end compared with other larger cities in Norway, with an increase of 16% in 2004–2014. Politically, over the last decade, Bodø has been social democrat-led. This was also the case at the time of fieldwork and when the city package was passed, which both occurred in the first half of 2011. However, the municipal election later the same year put the conservative parties in power.

5 Theoretical framework

This thesis highlights the importance of political action at the city level to decrease GHG emissions from transport. With this point of departure, the applied theories and empirical research are used to elaborate on factors which either enable or hinder local decision makers. Here, policy outcomes are seen to stem from local authorities seeking to balance a whole range of interests and stated needs.

The thesis takes a point of departure from the dualistic relationship between structure and agency. There are endless cycles of structural conditions influencing social interaction, which again lead to structural elaboration (Archer, 1995). Take, for example, urban development in one of the case cities, Drammen. As described in articles #2 and #3, changes in the last two decades have made this city stand out as an example of positive urban development in a Norwegian context. This relates in part to structural characteristics, with the wider region of capital city Oslo becoming more attractive. However, agency is also found, as evident in the collective action of key actors in Drammen. The relationship between structure and agency is further relevant in relation to cooperation in governance networks, with a particular focus on city-package networks in this thesis. Marsh and Smith (2000) see networks as structures both facilitating and constraining agents. For example, city-package networks are structured by national authorities through financial and advisory arrangements; however, the actions of the network participants are not determined by these governmental arrangements. Moreover, the governmental arrangements are also continuously changing (for an example of the changes occurring the city-package structure, see note 3).

⁹ The social democrats were also in power when a preparatory governance network, drawing up the lines for the city package, was established in 2009.

¹⁰ Defined by the municipalities in a regional network called the Salten Regional Council.

With this as an important backdrop to understand local CUR policy, several theoretical perspectives are applied in the analysis, as presented in the following sections.

5.1 Integrated land-use and transport-system development

The reduction of GHG emissions from transport can be approached through a wide set of strategies. One addresses initiatives targeting reduced emissions through technical innovations, for example, those related to fuel or engines. Change is needed in this regard, as 96% of EU transport still depends upon oil and oil products (European Union, 2011). The EU therefore sees improved vehicle technology as a key to lowering transport emissions. Another type of technical solution is found in information and communications technology (ICT), as this provides the opportunity to replace travel with ‘at-home activities’ (Banister, 2008).

While technical improvements are important, the application of a wider set of strategies is necessary to reduce transport emissions. Questions of CUR cannot be reduced to the development of ICT and green technology alone. Volumes of transport and the development of transport infrastructure also relate to debates on noise, congestion and fragmentation in urban landscapes. A suggested strategy, along with technical solutions, thus seeks to reduce traffic volumes, and herein lies the focus of this thesis. Two types of strategies which can be applied are those that 1) facilitate transport-mode change and 2) reduce the need for transport. In reality, the two strategies strongly overlap in questions of urban development.

Strategies seeking transport mode change target a reduction in private car usage by helping people to switch to walking, cycling and public transport. Typical measures are infrastructural improvements in walking and cycling lanes which make them safer, more comfortable and more accessible. There are also examples of motivational campaigns, exemplified by an experiment in Norway where distribution of free bus tickets and cycling gear were found to strengthen use of these transport modes (Strand, 2008). In addition, in Norway, the quality of public transport has been found to positively influence the share of travellers using it (Kjørstad & Nordheim, 2005; Nordbakke & Vågane, 2007). Such improvements will target issues of price and comfort, for example, with reduced fares and the provision of new busses, trams and metros. Also relevant are the number of departures and the extension of public transport routes, as distance to public transport stops and frequency highly influence usage (Norheim, Kjørstad, Frizen, Nesse, & Haug, 2011). The four city packages studied in this thesis all involve strategies for walking, cycling and public transport usage.

While the strategies above all describe improvements in public or non-motorised forms of transport, increased usage of these modes also results from strategies which make car usage less attractive. This can be done by increasing the cost or hardship of using cars for daily purposes. An example of this is regulation of parking. To Marsden (2006), well-designed parking policies can contribute to lowering transport emissions, while poorly designed schemes can have the opposite effect. In a Norwegian study, the municipalities saw regulation of parking as an

important tool to reach local climate goals (Hanssen, Aretun, Fearnley, Hrelja, & Christiansen, 2014). Thus, regulation of the cost of and access to parking represents a way of influencing travel behaviour and reducing car use. However, it is relevant here that control over parking lots in urban areas is shared between public and private actors. This means that local authorities only partially control central measures to reduce transport emissions.

Toll-road payment exemplifies another type of measure increasing the economic cost of daily car usage. Over the last three decades, the share of toll-road financing of roads in Norway has steadily increased (Norheim, Nilsen, & Frizen, 2013). This illustrates that toll-roads are not only set up to regulate volumes of traffic, but also to finance improvements in road infrastructure. Of relevance to this thesis is the Norwegian Road Act (§ 27), which allows for toll-road income to be used for more than just road projects. The Act states that funds can also be used for public transport infrastructure (and public-transport operation if linked to a plan for a coordinated urban-transportation system). These legislative stipulations are fundamental to the financing and organisation of Norwegian city packages. In this way, toll-road payment becomes part of larger policy packages. The extent to which such policy packages reduces traffic volumes will depend, amongst other things, on what types of other measures are used and whether the price of passing through is set high enough to reduce car usage. Examples of schemes considered radical are the *congestion charging* arrangements found in Stockholm and London (see e.g. Isaksson & Richardson, 2009; Livingstone, 2004; Richardson, Isaksson, & Gullberg, 2010; Sørensen et al., 2014; Vonk Noordegraaf, Annema, & van Wee, 2014)¹¹.

The second type of strategy focussed on for traffic-volume reduction is a reduction in the need for transport through land-use planning. This implies that urban development, through planning and political decisions, can be steered in the direction of fewer car trips, and that the car trips that are made will be shorter on average (Tennøy, 2012). Herein lies an acknowledgment of the close connections between land use in urban areas and the travel behaviour of the people living and working there. This interrelationship between land use and patterns of travel has a lot to do with proximity and accessibility (Tennøy, Hoff, Loftsgarden, & Hanssen, 2009). This implies that car use increases when travel distances increase and when the availability of public transport decreases (Strømmen, 2001; Vågane, 2006).

In line with this, urban densification – as opposed to urban sprawl – has been emphasised by researchers advocating transport change (Banister, 2011; Næss, 2006, 2012b; Newman & Kenworthy, 1989; Tennøy, 2012). This type of approach has been linked to the term *compact-city development*, a concept with roots in Jane Jacobs' influential book, *The Death and Life of Great American Cities* (1961). One of the central studies in this regard is Newman and Kenworthy's (1989) large quantitative comparative study of gasoline usage in cities worldwide, showing how usage decreased with the density of the urban structure. Although this bivariate

¹¹ With congestion charging, a tougher pricing mechanism is used to reduce traffic compared to more traditional toll-road schemes.

analysis only concerns the relationship between density and gasoline usage, other studies have confirmed the dynamics involved. Among these, Næss (2012b) concludes from a literature review of 30 Nordic studies that more climate-friendly patterns of travel have been found in dense cities¹².

The approach recognises that the denser a city or an urban region is, the shorter the average distance between origins and destinations will be. The distances between dwellings, workplaces and service facilities thereby become smaller compared to those in a more spread-out urban structure. The dense city also produces conditions favourable for public transport, with a larger potential for customers along the routes and strong nodal points for busses, trams and metros, facilitating interconnections for travellers. Further, a dense urban structure produces less favourable conditions for car usage, where typical characteristics are narrow streets and lower availability of parking compared to less densely developed areas (Marshall, 1999; Næss, 2012b). The dense city thus represents a strategy for both shifts in transport mode and reduced transport needs. However, without going into depth on this topic, it should be mentioned that the compact-city approach is contested in sustainability discussions. Amongst the concerns is whether green space can be preserved in urban settings of high densification (e.g. Jim, 2004¹³). In addition claims have been made that the negative environmental effects from suburban sprawl are exaggerated (Bruegmann, 2005) and that the de facto transport-energy effectiveness of compact cities has been overestimated (Breheny, 1995).

Related to the idea of compact-city development is the strategic location of dwellings, workplaces and service functions. From this perspective, CUR depends on the localising of the various functions of the city in ways that minimise transport needs. The Dutch *ABC principle* represents a planning tool for putting this idea into practice (Verroen, Jong, Korver, & Jansen, 1990)¹⁴. Applying such principles, local authorities can steer the location of dwellings, public services, workplaces and enterprises in ways which minimise the need for private car usage. However, this puts strong demands on urban planning: Reducing transport emissions to any significant degree is unlikely under weak planning regimes (Hickman, Hall, & Banister, 2013).

The findings of Engebretsen and Christiansen (2011) support this type of integrated planning initiative. Studying travel behaviour in larger cities in Norway, they reveal that a denser population, higher concentration of workplaces and service functions and closer distance to the centre of an area result in a higher share of people walking or travelling by public transport for daily purposes. In this way, the urban form

¹² See also Næss, Røe and Larsen's (1995) study of travel patterns in residential areas of Oslo.

¹³ See also Hofstad (2012) for a discussion of the balancing of economic, social and environmental goals in compact-city development.

¹⁴ In the ABC system, land areas are divided into categories in accordance with their availability via car, public transport, cycling and on foot (Næss, 2011). Following this principle, enterprises which attract many people should be located in areas easily accessed by climate-friendly modes of transport and difficult to reach by car (A-areas). Enterprises which are visited by few people but require good access for cars should be located in more peripheral areas (C-areas). The B-areas are between the A- and C-areas in terms of number of visits and need for car access.

influences the consumption of travel by determining the distances between locations where activities are carried out, and by favouring some types of travel over others. However, as Næss (2012b) notes, an emphasis on the influence of urban form does not mean that travel behaviour is not affected by personal characteristics relating to age, gender, values, social obligations and so on. It is outside the scope of this thesis to engage with the wide range of factors influencing travel behaviour.

5.2 *Policy packaging environmental strategies*

The quality of the transport system influences how people choose to travel, in the sense that changes within one mode of transport may affect usage of another. Take road-capacity projects for example, where the long-term effect of enlargements may contradict what was intended. Set up to reduce congestion in urban areas, road expansion can inadvertently make congestion worse. This occurs because increases in capacity reduce the time cost of travel, in turn resulting in increased travel volumes (Nolan & Lem, 2002¹⁵). Therefore, to reduce car usage, an understanding of how the different modes of transport work in relation to each other is important. In this vein, a competitive relationship between the modes of transport has been suggested by researchers (Mogridge, 1997; Strand, Næss, Tennøy, & Steinsland, 2009). Here, an improvement in one type of transport will not necessarily lead to more frequent use; instead, the potential for change is influenced by whether there are any changes occurring within the other types of available transport at the same time. This implies, for example, that public transport improvements will not necessarily lead to more customers if car usage has simultaneously been made faster, cheaper or more comfortable.

The theoretical strand of *critical realism* is well suited for analysis of transport dynamics, as described above. Here, it is postulated that objects and actors may have the power to act in a certain way without necessarily doing so (cf. Sayer, 1992). The outcome is seen as a ‘complex compound effect of influences drawn from different mechanisms, where some mechanisms reinforce one another and others frustrate the manifestation of each other’ (Danermark, Ekström, Jakobsen, & Karlsson, 2002, p. 56). In line with this perspective, effective CUR strategies will not only include improvements in public transport vehicles or the provision of more departures. Rather, public transport also needs to be made attractive by simultaneously making car usage less attractive. Increasing the cost of driving, such as through parking fees and toll-road payment, exemplifies a strategy to potentially decrease the attractiveness of car usage. Another example is prioritising lanes for public transport, as seen in one of the case cities, Trondheim. Here, two of the lanes on a main urban road became public transport lanes in 2008. Articles #1 and #2 highlight this as an important component of Trondheim’s CUR strategy, as well as a highly contested measure at the local level.

To address CUR, integrated approaches to land-use and transport-system development are needed. It is such an integration of climate-friendly transport

¹⁵ The study of Nolan and Lem describes the transport dynamics of highways.

improvements combined with cautious land-use and car-use restrictions which characterises forerunner cities (Marsden & Rye, 2010). In operationalised form, Tennøy (2012) thus suggests the following integrated aims for climate-friendly urban development:

1. To impose or encourage land-use as urban densification rather than sprawl, and to locate new structures in a car-independent fashion;
2. To impose physical and fiscal restrictions on road traffic;
3. To improve public-transport services; and
4. To improve conditions for walking and bicycling.

One way of carrying out such an integration is through policy packages, exemplified by the Norwegian city packages in this thesis. All four city packages studied here combine land-use and transport policy. Here, the combination of measures in larger policy packages is intended to employ synergies and avoid contradictions (Givoni, 2014). However, in contrast to Tennøy's (2012) suggested approach, the four policy packages in this thesis also include the building of road infrastructure.

There is also a mediating aspect of policy packages, and within the transport sector, they have been used to handle conflicts of interest (Tuominen, Tapio, Varho, Järvi, & Banister, 2014). In this way, policy packages serve a function of balancing the treatment of transport modes, geographical areas and groups of users (May & Roberts, 1995). Among others, they are intended to ease implementation, for example, of car-restrictive measures. This aspect of policy packaging has been empirically illustrated by Sørensen et al. (2014), who find that the combined deployment of carrot and stick measures in policy packages are amongst the factors facilitating implementation. Here, the use of revenues from toll-road payment for public transport services or new road infrastructure is found to be a legitimising factor. This illustrates how unpopular measures are being legitimised when they finance more popular ones in policy packages (van der Doelen, 1998). A similar dynamic is illustrated by Norheim et al. (2013), who comment on why a strong increase in toll-road taxes in Oslo did not result in higher levels of public oppositions. Reasons for the acceptance were found in what people 'got back' in terms of various transport-facility improvements. Reflecting on enabling factors of the policy package in London (which involves congestion charging), the former mayor, Ken Livingstone (2004), emphasised the need to deliver the scheme quickly so that its benefits as soon as possible could be experienced by the inhabitants. With car-restrictive means, local authorities may thus end up in a position where they strive to rapidly show the inhabitants what is obtained with the 'new' income.

5.3 Network governance

The term governance has been used to describe situations where 'decision making and implementation take place in networks of public, private, and semiprivate actors' (Edelenbos, Steijn, & Klijn, 2010, p. 46). To Sørensen and Torfing (2005a), the notion of a sovereign state governing through laws and detailed regulations in a

top-down manner is replaced by an understanding of governance based on interdependence, negotiations and trust. This is not to say that state institutions have been replaced or rendered meaningless; instead, the claim is that although traditional forms of top-down government remain, public governance is increasing influenced by unelected decision makers (Ward, 2003) and through policy networks (Sørensen & Torfing, 2009). Business actors' deep involvement in questions of urban development and state agencies' and public-transport operators' involvement in Norwegian city-package networks illustrate this. Urban entrepreneurialism, described in section 5.4, is in part characterised by these changes in governance.

Network governance can be defined as 'a stable and horizontal coupling of autonomous but interdependent actors working in a self-regulating manner for the realisation of public purpose' (Sørensen & Torfing, 2005b, p. 15). The element of interdependency in this definition does not mean that the network parties agree on all issues being handled, nor does network cooperation mean that all members are equal in terms of authority and resources (Sørensen & Torfing, 2007). Indeed, the members may not even agree upon what the goal of the network should be. Nevertheless, they share an interest in the societal issues being addressed and an understanding that it is better to participate in the network than not to do so.

In the context of this thesis, the network dimension of governance is highly important in understanding the Norwegian city packages. However, it should be mentioned that there are different conceptions of the term *governance*, with another strand using it to describe various styles of coordinating action (e.g. command, competition and cooperation), and not the emergence of networks specifically (Güntner, 2011). Perspectives from both are relevant to this thesis, as the city packages under study represent a network formation which the national authorities seek to influence through different coordination tools.

The emergence of network governance is closely related to public-sector changes over the last decades. Central in this regard is the rescaling of the state, with enhanced governance roles at the local and regional levels (Macleod & Goodwin, 1999). In line with a 'less state – more market' paradigm, this has, for example, resulted in increased use of toll-road schemes in transport projects. The state restructuring has also been related to an ideology of local administrations better suited to tailoring politics to the economic and social conditions of their geographic areas (Docherty, 2004). Hence, researchers claim that local authorities have become important for achieving international agreed environmental policy (Gibbs & Jonas, 2000). This is exemplified by Norwegian municipal authorities taking central positions in relation to city packages (see Ministry of Transport, 2009). However, as mentioned by Bulkeley (2010), climate change also illustrates a field of policy in which the state seeks to engage. In relation to city packages, this is done through governmental advisory and financial arrangements. Still, as emphasised in article #1, this state engagement is a geographically uneven affair, with different cities provided with different economic resources and institutional arrangements. In this sense, the government delegates responsibility to reduce car use differently between Norwegian cities.

5.3.1 *Public-sector fragmentation*

Changes within public management involve fragmentation and the increased use of market regulation in the provision of public goods and services. These changes have come in accordance with a neoliberal quest for market regulation and implementation of new public management (NPM). Among the results are privatisation of public enterprises, contracting out of public services and deregulation and commercialisation of public-sector institutions (Sørensen & Torfing, 2007). This general change process is also evident in the land-use and transport sectors in Norway. The use of city packages can be seen as both a symptom of and a suggested solution to the fragmentation within public management.

Five examples from Norway illustrate fragmentation relevant to the topic of this thesis. First, there are various public agencies representing branches of transport, with sector-specific agencies for coast, air, railroad and road travel. Second, there is a division between municipality, county and national authorities in terms of the types of roads for which they are responsible. Third, in terms of land-use policy, this is a responsibility delegated to municipal authorities (see section 4.2). Changes have nevertheless occurred in recent years, with planning initiatives increasingly coming from private actors instead of from the public planning authorities (Falleth & Saglie, 2012; Saglie & Harvold, 2010). Fourth, fragmented responsibility is evident in the regulation of parking, in the sense that a mix of public and private actors control parking lots in urban areas (Hansen, 2002). Fifth, as the final example mentioned here, fragmentation is found in the organisation of public transport (see e.g. Olsen, Krogstad, & Aarhaug, 2012)¹⁶.

There are challenges related to both the NPM reforms and the emergence of governance networks in public policy. Amongst the challenges addressed are those of coordination and system integration during times of privatisation, deregulation and fragmentation (e.g. Hull, 2008; O'Sullivan & Patel, 2004; Sørensen & Longva, 2011). Others problematise the distribution of power between public authorities and private actors. To Hajer (2003), private institutions have increased their power at the local level, with political action taking place next to or across state institutions. On this basis, he concludes that policymaking often occurs in an institutional void where there are 'no generally accepted rules and norms according to which policy making and politics is to be conducted' (p. 175).

While governance forms and fragmentation tendencies vary across contexts, the abovementioned researchers draw a picture of the political and administrative landscape in which decisions concerning CUR are to be made. This means that multiple actors affect land-use and transport-system development through their decisions. The many stakeholders and interests involved are seen in this thesis as posing a challenge to the integrated CUR strategies described in section 5.2. The

¹⁶ For example, with different responsibilities for planning, purchasing and operating public transport.

way in which the policy actors are organised into networks is thus highly relevant. In this thesis, much attention has been paid to cooperation in relation to the established city packages. Article #3, however, takes a wider approach, focussing on the forms of cooperation between municipal and business actors as well. This makes relevant the term *urban regime*, which describes ‘the informal arrangements by which public bodies and private interests function together (...) to make and carry out governing decisions’ (Stone, 1989, p. 6). While many different actors are involved in urban development, they must be dominant to be considered a ‘regime’. Stone (1993) sketches four types of urban regimes, where the *development regime* is most relevant to the issues discussed in article #3¹⁷. Linking private investment to public action, these regimes are primarily concerned with changing use of land to promote growth.

5.3.2 *Horizontal and vertical coordination*

From one perspective, the emergence of city packages can be seen as resulting from national authorities’ emphasis on the city-package approach to local transport-system development (Ministry of Transport, 2009, 2013a). Local-level network formation thus emerges from *vertical coordination*, or ‘the coordination by a higher-level organisation or unit of lower-level actors’ actions’ (Bouckaert, Peters, & Verhoest, 2010, p. 24). However, they can also be seen as more local responses to society’s increasing complexity (Vabo, Røiseland, & Nyseth, 2011). In this vein, network cooperation has been suggested for handling *wicked problems*, that is, problems relying on elusive political judgement for resolution (Rittel & Webber, 1973). The wicked dimension of environmental projects relates to the challenge of reconciling the different values of the many actors involved (Edelenbos et al., 2010). Negotiations over land-use and transport-system development exemplify this.

When organisations or units on the same hierarchical tier within government are coordinated, this is referred to as *horizontal coordination* (Bouckaert et al., 2010). In the studied city packages, this is evident in the various degrees of cooperation between several municipalities and state agencies. In this sense, the city packages imply a mix of vertical and horizontal coordination; they are founded on local needs and products of national authorities’ desire to coordinate local activities.

The mentioned multilevel-governance perspective is useful to the study of both vertical and horizontal coordination, as it emphasises how environmental policy is shaped by forms of governance stretching across geographical scales (Bulkeley & Betsill, 2005). In this way, the perspective offers a way of analysing the motivation of policy actors (Späth & Rohrer, 2012). In relation to vertical coordination, it provides a way of analysing relationships between the local and national levels in questions of CUR. Thereby, the multilevel-governance perspective sheds light on how decisions made locally are influenced by actors and processes at the national

¹⁷ The others are maintenance regimes, middle-class progressive regimes and regimes devoted to lower-class opportunity expansion.

level (see sections 4.1 and 4.2 for governmental arrangements relevant for the steering of city packages, see also Fotel and Hanssen, 2009, showing varying meta-governance forms in Nordic countries). As for horizontal coordination, the multilevel-governance perspective is relevant to the analysis of how the policy of one municipality is influenced by that of a neighbouring one, for example in questions of parking and establishment of large shopping malls (drawing customers from the whole region). For two of the case cities, this is reflected in the organisational structure of the policy package in which they participate: Drammen and Porsgrunn are part of inter-municipal networks, and their city packages exemplify the building of umbrella institutions for collective action (referred to by Hubbard, 2006, as *upscaling*).

5.3.3 *Effectiveness and democratic aspects of network governance*

Among the rationales behind governance networks is that they are seen as viable mechanisms for implementing policies (Kenis & Provan, 2009). However, with the central role of networks, a second and related debate has emerged. This concerns the democratic aspects of network governance (Sorensen & Torfing, 2005a). This strand of research makes clear that if networks are to be understood as legitimate solutions, not only does their effectiveness need to be taken into account, but also their democratic credentials (Aarsæther, Nyseth, & Bjørnå, 2011). This was in 2.1 referred to as the democratic anchorage of networks. The involvement of actors affected by the policy intervention is a central aspect here. In this way, democratic network theory shares many similarities with collaborative planning approaches (see e.g. Innes & Booher, 2010). In the latter perspective, the inclusion of stakeholders is not only a treated as normative necessity, but is also seen as providing better governance processes (Edelenbos et al., 2010).

The comparison of city-package networks in this thesis reveals differences in organisational structure. While this issue is dealt with in all three articles in this thesis, the subject of democratic anchorage is the focus of article #2. Here, network structures in Trondheim and Drammen are compared, by taking departure in the works of Sørensen and Torfing (2005a, 2009), Nyseth (2008), Edelenbos et al. (2010) and Aarsæther et al. (2011). The network in Trondheim is characterised by tight cooperation between a small set of actors, while that in Drammen demonstrates broad network inclusion. Highlighting relationships between democracy and effectiveness, this thesis raises the question of how the democratic anchorage of governance networks influence land-use and transport-system development.

5.4 *Urban entrepreneurialism*

The last theoretical direction of particular relevance to this thesis is urban entrepreneurialism. This describes ‘the introduction of growth-oriented policies and new organisational modes within local governments’ (Dannestam, 2008, p. 279). It thus represents both an orientation of policy and a change in organisational

structure. This provides a connection to the governance theories presented in 5.3, as local authorities can enter entrepreneurial governance networks to promote urban economic growth (Nyseth, 2008). Therefore, this section on entrepreneurialism can be seen as one feature of the more overall descriptions of network governance described above.

Urban entrepreneurialism perspectives have in this thesis been used to study public-private cooperation in urban-development processes and the ways in which local authorities seek to facilitate economic growth through urban policies. More specifically, cooperation between city-centre business and local authorities have been emphasised, given that shopping in the city centre, rather than at outlying malls, is one way to reduce car use. There may thus be supportive effects between CUR and entrepreneurialism in such cooperation: GHG emissions are reduced when urban sprawl is avoided, and enterprises and customers remain in the city centre. However, in article #3 it is also pointed to several elements of entrepreneurialism hindering CUR policy. Examples of difficulties at the municipal level were, 1) to control estate development, 2) to reject the opportunity of capital investments (in situations where they conflicted with CUR goals), 3) reluctance of interfering to strongly with private property rights (also the case for national authorities) and 4) blockage of CUR initiatives through fear of inter-urban competition. This illustrates the danger of CUR policy working when in line with wider economic considerations of cities, but likely to suffer otherwise (Marshall, 1999).

David Harvey's (1989) classic article *From Managerialism to Entrepreneurialism* is central to the academic discussion on urban entrepreneurialism. Here, Harvey claims that a shift had occurred in urban governments, making them more innovative, risk taking and market oriented. As such, local authorities are seen as having reformulated policy to achieve economic competitiveness (Dannestam, 2008). This makes the notion of inter-urban competition central to entrepreneurialism, illustrating the geographic dimension of urban policymaking. This implies that local authorities are concerned with the construction of different sorts of lures aimed at bringing capital into town (Harvey, 1989). Of relevance to the subject of this thesis is that the strategies of land use and transport are deeply involved in how authorities seek to make cities attractive. For example, city centres can be made more appealing by using policy measures to reduce the traffic volumes in the urban core. However, as shown in article #3, there is a selectivity involved in the greening of urban governance (While et al., 2004). This means that city strategies may promote some aspects of green urbanism, such as designed parks, while downplaying other attributes which are not so easily marketed, like GHG emissions (Luccarelli & Røe, 2013).

City-centre regeneration is a typical example of entrepreneurialism. Here, urban areas are developed for prestige office uses, dwellings, consumption and recreation. The rationale behind this is to make the core attractive by creating an appealing urban atmosphere (Löfgren, 2000). Another typical entrepreneurial strategy is the 'talking up' of cities, where 'promoters of entrepreneurial cities will adopt an

entrepreneurial discourse, narrate their cities as entrepreneurial and market them as entrepreneurial' (Jessop & Sum, 2000, p. 2289). There is thus a discursive side to urban entrepreneurialism, where urban actors use narratives of past failures to give meaning to current problems (Jessop, 1998). An example of this is the exposing of urban qualities combined with narratives of entrepreneurial strategies as the response to past challenges of congestion and traffic pollution, as evident in the case city of Drammen. Relationships between CUR and urban entrepreneurialism are the particular focus of article #3, which highlights local strategies and public-private negotiations over retail trade, an issue involving both environmental and economic concerns.

5.5 *The compatibility of the theories*

The challenges which urban planners face and try to solve cross disciplines. This requires the use different theories in planning (Næss, 2012a). For a similar reason, it is also necessary to employ different theoretical approaches in this thesis. In fact, it is in the combination of existing academic discussions that the theoretical contribution of this thesis lies. Emphasis is thus placed on the exploratory strength of case studies (Gerring, 2004), an exploration founded on existing research.

Røe (2000) calls for an approach that combines theoretical and empirical research. This is what Sayer (1992) describes as theoretically informed concrete research. This means that in concrete qualitative research, the events and objects under study are examined through a lens of prior theoretical research. To Sayer, observations are neither theory-neutral nor theory-determined, but instead theory-laden. The interplay between theoretical and concrete empirical research can thus be seen as dialectic, with researchers claiming that they should be conceived as a continuum (e.g. Asheim & Haraldsen, 1991). This leads to the suggestion that empirical research can be both theoretically informed and theoretically informative (Macleod & Goodwin, 1999).

Different types of theory have been employed in this thesis to serve different purposes. The two main purposes for the use of theory is to understand 1) transport dynamics and 2) policymaking in questions of land use and transport. Previously conducted research has influenced all stages of the research process, including both theoretical work and empirical studies based on these theoretical understandings (see Figure 4). To facilitate reading, and given that a clear-cut demarcation is difficult in many cases, the term *existing research* will hereafter be used to describe both.

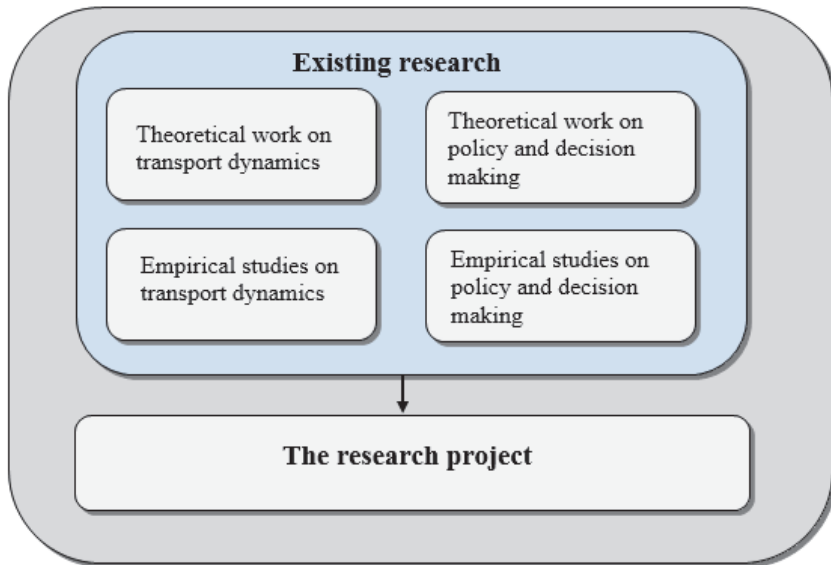


Figure 4: The use of existing research in this thesis

5.5.1 *Transport-dynamics research*

Theory describing the transport dynamics has been central to the empirical enquiry. There are few purely theoretical works on transport (Tennøy, 2012)¹⁸. However, the philosophy of science theorising of critical realism can be used to study underlying mechanisms involved in transport. Relevant in this regard is the claim that outcomes depend on a number of contingent conditions (Buch-Hansen & Nielsen, 2005; Danermark et al., 2002)¹⁹. For example, CUR does not automatically follow from public-transport improvements. If road-infrastructure projects simultaneously makes it faster and more convenient to drive private cars, there may be no effect from the improvements within public transport (as described in 5.2). This requires an approach to transport-system development where the different modes are seen in integration. Critical realism is one amongst several perspectives useful to analyse transport dynamics, and not all of them will be described here. One which should be mentioned, however, is the approach of Urry (2004), who applies a more sociological perspective to explain the persistency of the car system, as well as the technical-economic, policy and social transformations which may change transport.

¹⁸ Among the exceptions, Tennøy (2012) notes, is Downs' (1962) abstract discussion on relationships between road capacity and travel behaviour.

¹⁹ In this view, a given mechanism will not always be activated and it does not always contribute to the same outcome.

Also useful for this thesis are empirical studies of transport dynamics, including aggregate quantitative studies describing relationships between land use and transport (e.g. Engebretsen & Christiansen, 2011; Newman & Kenworthy, 1989), as well as empirical studies on relationships between road capacity and transport patterns (e.g. Cairns, Hass-Klau, & Goodwin, 1998; Nolan & Lem, 2002). Altogether, this existing research has been essential when it comes to identifying beneficial CUR strategies and contradictions in local policy. It illustrates the importance of theorising relationships between transport modes in studies of policy.

In line with Lund (2005), the choice of research problem was based on existing research on land use and transport. It also informed the selection of cases, providing an understanding of why city packages were suited for analysing CUR policy. Similarly, existing research shaped the interview guides. Therefore, the informed understanding of CUR made clear the relevance of the research questions for local organising and decision making.

Acquaintance with existing research enabled questions to be followed up in the interviews when contradictions were revealed and it further enabled critical reading of policy documents. It was also involved in the analysis of the interview data, where the qualitative data processing tool NVivo was used (see section 7.2). Here, the segments of text within each interview were coded under a set of categories defined by the researcher. For example, the category 'Integrated land use and transport' was informed by existing research, and so were the judgements of text sequences to be coded under it. Existing research on land use and transport has thus been important throughout this thesis, as it sketches a picture of what CUR looks like.

5.5.2 Research on policy and decision making

The second type of existing research applied in the thesis is broad. In general terms, it encompasses theoretical reflections and empirical studies on policy and decision making, including obstacles and opportunities in urban governance. These research perspectives are described in section 5, so only three brief examples will be given here.

First, theoretical discussions drawing attention to how implementation of environmental policy is shaped by forms of governance stretching across geographical scales are important throughout the thesis (Bulkeley & Betsill, 2005). This is often referred to as the multilevel-governance perspective (see section 3). Here, it is used to capture how local agency involves influence at higher geographical levels (Hodson & Marvin, 2010), as evident in the interaction between local and national authorities. This is also applicable to analysis of the different spatial interest involved in CUR policy, for example in regulation of retail trade (discussed in article #2 and #3 in particular).

Second, theoretical discussions on the role and functioning of governance networks (e.g. Innes & Booher, 2010; Sørensen & Torfing, 2009) and empirical studies on governance forms (e.g. Edelenbos et al., 2010) have been important. Together, such

research has provided knowledge on cooperation between urban actors. Third, theoretical discussions on the role of cities in capital accumulation (e.g. Harvey, 1989; Jessop, 1997, 1998) are combined with empirical studies on urban development strategies (Sum & Jessop, 2000; Ward, 2003).

Existing research on policy and decision making has influenced all phases of this dissertation. For example, research on cooperation in governance networks makes relevant a selection of case cities involved in city packages. In this way, the case selection is theoretically informed. It is also informed by how questions about hindrances and opportunities in practical decision making have been asked. Last to be mentioned here, it has influenced the setup of analytical categories. An example of this is the NVivo category 'Urban competition', which was made relevant by existing research pointing to its influence on CUR policy.

6 Presentation of articles and subordinate research questions

As described above, the aim of this thesis is to analyse barriers and opportunities for local authorities in their approaches to CUR. In addressing this, a main research question was formulated; this is intended to cover all of the analyses and perspectives of this thesis (see section 2). In addition, three subordinate research questions were formulated, one for each article. In the following, the aim, research question and findings of each article are briefly presented. Key contributions from the articles are summarised in Table 3.

Article #1: Policy packages and state engagement: Comparing policy for car-use reduction in two Norwegian cities

This article compares two city packages, one in Trondheim and one in Bodø. While similar in several ways, there are clear differences between the two policy packages in terms of their choice of strategies and access to financing. These differences are considered to provide better chances for the future achievement of CUR goals in one city package compared to the other. Analysing the strategies applied and the reasoning behind them, the article highlights relationships between the local and national level in relation to city packages. The following question is asked:

- How does state engagement influence the integration of CUR policy in local-level policy packages?

In the analysis, relationships between measures in policy packages are emphasised. Both city packages involve conflicting measures, as evident in their inclusion of CUR measures while new road infrastructure is simultaneously built. However, the counter-strategies intended to mitigate this are stronger in monetary and regulatory terms in Trondheim than Bodø. The city packages' different setups are explained by highlighting the different levels of state engagement, institutionally and financially, in relation to the two city packages. In this way, state engagement in CUR is shown to be a geographically uneven affair, with national authorities having delegated a clearer responsibility to Trondheim than Bodø to reduce car usage.

Article #2: *Democratic anchorage and performance: Comparing two network approaches to land-use and transport-system development*

This article compares two governance networks working with land-use and transport-system development through city-package structures. The first has Trondheim as the sole municipal member and is characterised by a few, highly coordinated members. The second, of which Drammen is a member, has a much larger network structure involving a broad range of actors. The networks are termed the Trondheim Network and the Buskerud Network. Informants involved in both city packages emphasise their chosen model as beneficial to obtain more climate-friendly patterns of transport in the future. The aim of this article is to add to discussions on relationships between the democratic anchorage of networks and performance. Here, performance is analysed in light of CUR, which is one goal of the city packages. Building on theories of democratic network governance, attention is paid to two types of democratic anchorage; stakeholder involvement and political anchorage. The article poses the following research question:

- In what ways do democratic anchorage of governance networks influence land-use and transport-system development?

It discusses the advantages and disadvantages of both network models by applying a broad set of criteria to evaluate performance. The Trondheim Network, which has the lowest stakeholder involvement and thus the smallest network structure, has in some senses come farthest. It implements measures quickly and uses extensive resources for public transport improvement. On the other hand, the Buskerud Network does not exhibit an equal implementation rate or resource use, but has shown strong efforts to mobilise and coordinate a wide set of actors. Both approaches involve important elements for reducing emissions from transport, specifically the efficiency and toughness of the Trondheim Network and the inclusiveness of the Buskerud Network.

Article #3: Urban entrepreneurialism and car-use reduction

This article takes two contemporary developments influencing urban governance as points of departure. First is the increasing attention to the steady growth in emissions from transport and the building of dense cities to reduce traffic volumes. Second, the article considers the growing attention of local government to *entrepreneurial politics*, or the introduction of growth-oriented urban policies at the local level. While academic debates have addressed the balancing of environmental and economic concerns in urban governance, empirical studies on the relationships between CUR and urban entrepreneurialism are still needed. Studying two cities, Drammen and Porsgrunn, the article asks the following:

- How do local authorities seek to balance car-use reduction and economic growth concerns?

Focussing on local strategies and public-private negotiations concerning retail trade, the contribution of the article is threefold. First, local decision makers'

dilemmas involving CUR with a concomitant pursuit of economic growth are examined by highlighting the conflicting spatial interests involved in CUR policy, as when geographical areas are prioritised (e.g. the city centre vs. the outskirts). Second, as evident in different municipal authorities regulating where to locate retail trade within an urban region, and private actors regulating parking lots at existing shopping sites, the multiple scales of governance operating in and around cities are illustrated. Third, the article shows how urban-system differences between the two case cities influence local policy strategies. This in turn demonstrates the spatial dimension affecting relationships between CUR and entrepreneurialism. It is concluded that an understanding of the pressures working both for and against environmental policy within an urban region is of vital importance when it comes to achieving CUR.

Table 3: *Key contributions of the three articles*

Article	Case cities	Key contribution
1	Trondheim and Bodø	<p>Adding to existing theory by connecting the academic discussion on policy packaging with that on governance and state engagement in local policy making.</p> <ul style="list-style-type: none"> • State engagement in relation to CUR is a geographically uneven affair; cities are delegated different responsibility to reduce transport emissions. • Stronger state engagement in one of the cases allows for a higher share of resources for other purposes than road building and the use of tougher regulative measures. • Different relations between local and national levels influence how policy packages are constructed and their likely ability to obtain long-term CUR.
2	Trondheim and Drammen	<p>Adding to existing theory by connecting academic discussions on effectiveness and democratic aspects of network governance. Attention to how the relationships between them are played out in CUR policy.</p> <p>The discussion on trade-offs between effectiveness and democratic network governance needs to take into account the following:</p> <ul style="list-style-type: none"> • Immediate results are not the only ones networks produce and are not the only ones relevant to CUR. • Some aspects of democratic network governance enhances operational effectiveness, while others do not.

3	Drammen and Porsgrunn	<p>Adding to existing theory by connecting academic discussions on CUR and entrepreneurialism.</p> <ul style="list-style-type: none"> • Conflicting spatial interests involved in policy for CUR illustrate local authorities' challenges in balancing economic and environmental concerns. • The multiple scales of governance operating in an around cities requires a perspective beyond the local to understand policy for car-use reduction. • Urban-system differences between the two case cities influence local policy strategies. This in turn illustrates the spatial dimension affecting relationships between entrepreneurialism and CUR.
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7 Methodology

As described in the introduction, this thesis is based on studies of four Norwegian case cities. The main methods applied were qualitative interviews and document studies. In addition, insight was sought through the reading of statistics. In the following, the first section describes the use of case methodology, and then the different methods are presented. Finally, methodological reflections are presented.

7.1 Case as methodology

Within the four empirical cases of this thesis, particular attention is paid to the networks and processes of the ongoing city packages. Given the overall goal of providing new knowledge about how to facilitate CUR at the city level, emphasis is placed on understanding the local reasoning behind land-use and transport-system development. From this follows the main research question concerning how the integration of CUR in urban development strategies is hindered or facilitated by policy actors. In the three articles, the cases are used in different ways to elaborate on barriers and opportunities for local authorities in their approaches to CUR. While this theme is the backbone of all of the articles, it is covered from slightly different angles within them. Nevertheless, each case serves a specific purpose within the overall aim of the thesis. In each article, two cases are compared, each with its own empirical foundation, based on its own logic for comparison and posing a unique research question. This approach bears some similarities with Yin's (1994) notion of multiple case design, in the sense that each case serves a specific purpose within the overall scope of the research project. However, the cases were not included from a prediction at the outset that they together would provide similar or contrasting results, as in Yin's multiple case design. They are similar in some dimensions and different in others. Still, in addition to finding out what is unique about a case, the case-study approach is used to say something more general about CUR (cf. Gerring, 2004).

By defining what the case is a case of, Hofstad (2012) claims, one simultaneously says how far-reaching the results of the case study are. Applied to this thesis, the cases here are all examples of cities working on the integration of land-use and transport-system development. While the three articles cover this theme from different angles and through specific subordinate research questions (one for each article), they all feed into the main research question. Hence, the articles have different comparative setups and cover different themes (state engagement in policy packages in article #1, effectiveness and democracy in article #2 and entrepreneurialism in article #3). Together they allow this thesis to add to existing research with more general findings on local-level obstacles and opportunities in CUR policy.

The cases were not selected using a most similar/most different logic. In studies of policymaking in urban settings, there are challenges when it comes to employing such idealised types (Pierre, 2005). In accordance with a *relational approach* to case studies (Ward, 2010), the comparison of cases in each article is thus based on whether they pose interesting questions to one another. With policy processes studied comparatively, improved understanding of public choices in specific settings can be developed (Young, 2006).

Gerring (2004) sketches two extremes to illustrate the ontological position of case study research. On one hand, there is an ideographic universe, characterised by such uniqueness between the units that nothing can be learnt about one unit by studying another. On the other, there is a nomothetic extreme, where all units of a given type are perfectly comparable. In both instances, case study inquiries are rendered meaningless. Thus, case studies hold a position between the ideographic and nomothetic extremes. In accordance with Gerring's (2004) view, the analysis across cases in this thesis is based on their variance in some dimensions of theoretical interest. Hence, the selection of cases is based on their resemblance to one another in some dimensions and differing in others.

On the one hand and starting with the similarities, all four cities are involved in city packages, and all of these have declared goals of reducing car use through integrated policy approaches. This implies that land-use and transport-system development is on the political agenda in the four case cities. Further, it means that work is being carried out within a shared institutional context represented by a legislative and advisory framework of national authorities. All four cases are also urban municipalities, which facilitates comparison.

On the other hand, the differences are central in the comparisons within the articles, and were in part involved in the case selection. In article #1, variance is found in levels of state engagement in relation to the city packages of Trondheim and Bodø (Table 4). In article #2, there is variance in the network governance structures of the city packages of Trondheim and Drammen. Finally, in article #3, the main difference considered is urban-system variations between Drammen and Porsgrunn, both in relation to neighbouring municipalities and the capital city of Oslo. In all three articles, there is thus variance seen as relevant to the analysis of car-use reduction. In article #2, with such distinct differences in network structures being

analysed, there is also an element of *maximum variation* logic in the case selection (Flyvbjerg, 1991a), in turn enabling comparison of variance in governance structure (Marsden & May, 2006).

Table 4: *Variance focused on in the three articles*

Article	Case cities	Variance of interest
1	Trondheim and Bodø	State engagement in city packages
2	Trondheim and Drammen	Network structure
3	Drammen and Porsgrunn	Urban system characteristics

7.2 Qualitative interviews

Semi-structured interviews were conducted in relation to all four empirical cases. In total, 54 interviews were carried out, with more or less an equal number of interviews for each case (see Appendix 1). They were mostly conducted in 2011. The interviews were done face-to-face and were mostly carried out at the workplace of the informant²⁰. Two interviews (one in Trondheim and one in Drammen) were carried out with two informants participating upon the informants' request. Although only there were only two participants, these interviews bear characteristics of those of focus groups, which requires an adaptation of interview techniques (see e.g. Hay, 2000)²¹.

Informants in this thesis were public officials, politicians, representatives of business organisations, business actors and public transport actors (Table 5; see also Appendix 1 for more details). A general interview guide was developed, but some modifications were made to accommodate slight differences in questions posed to the informant groups. In the semi-structured interviews, follow-up questions were asked when relevant. While some of these 'new tracks' provided important knowledge, emphasis was placed on covering all of the themes set up in the guide within the timeframe of the interview.

²⁰ Four interviews were carried out via telephone.

²¹ In article #2 these two are treated as focus-group interviews, giving a minor different number of interviewees.

Table 5: Overview of informants

Informant type	Description	Fully transcribed	Total number
Municipal officers	Public officials in the municipal administration of the case city	12	15
Business representatives	Employees in organisations representing businesses	5	6
Politicians	Politicians in power and the opposition	5	5
Youth representatives	Five youth politicians		5
City-centre business actors	Actors involved in city-centre retail trade	4	5
County administration representatives	Public officials in the case city's county	4	4
Municipal officers in neighbouring city/town	Public officials in cities/towns neighbouring the case city	1	4
Public transport actors	Actors involved in the planning and purchasing of public transport services	3	3
Other		2	7
Total		36	54

With the agreement of the informants, all interviews were recorded using an MP3 recorder. Thirty-six of them were transcribed, word by word in their full length, by the researcher. Such transcription is time consuming, and for this reason, a decision was made not to transcribe all interviews. The transcribed interviews constitute the core interview material in this thesis. Emphasis was therefore placed on transcribing an equal number of interviews from each case (9). For the remaining interviews, briefer notes taken during the sessions and the recordings provided sources for analysis. The transcribed interviews, together with the recordings and notes, were used in a process of going back and forth between theory and empirical data. In some cases, this also led to contacting informants again for clarification or to pose a limited set of follow-up questions. The transcribed interviews were returned to the informants upon request, and were not systematically disseminated. Had they

been returned systematically, informants could have clarified their responses if needed. However, this would also have posed a risk in that some respondents might have sought to modify quotes to project their 'own' city in a better light. The decision not to return all of the interviews was made on the rationale that a concentrated effort to generate correct, full-length transcriptions would reduce misunderstandings and any lack of clarity in the text. The interviews were handled in accordance with the information sent to the informants beforehand, as well as with the procedures reported to the Norwegian Data Protection Official for Research.

After the transcription, the 36 interviews were loaded into the qualitative analysis software programme called NVivo. Here, they were coded according to a set of defined categories. An example of this is the coding of all informant quotes relating to parking policy. After this point, analysis could either depart from generated reports showing what all informants said about parking, or what informants within one case city said about this issue (see also discussion on NVivo categories in section 5.5).

Central to the selection of informants was that they were considered to have insight into the local reasoning behind land-use and transport-system development. Selection was based on participants being well informed and possessing knowledge that is not publicly accessible (Andersen, 2006). The intention with the interviews was to generate an in-depth understanding of the pressures influencing urban decision making, and in this way, illustrate challenges and opportunities decision makers face when it comes to reducing GHG emissions from transport. In some instances, the relevance of the informant's knowledge was indicated by his/her job title, while in others, more contextual knowledge was required for participation. Thus, in addition to strategic selection based on function, there was also an element of the snowball method involved, where informant knowledge led to the selection of new informants.

One basis for selecting informants was their strong involvement in the ongoing city-package processes. The interviewees included municipal public officers (planners, advisors and urban development directors), leading politicians and public-transport actors (see Table 5). To secure a regional perspective, one county representative and one public officer from a neighbouring municipality were interviewed for each case city. The informants were selected on the grounds that they were considered capable of providing insight into the local reasoning behind land-use and transport-system development. Most informants in this study belonged to this group of informants. Meanwhile, a few youth representatives were included due to their position as outsiders, at more of the receiving end of the policy being implemented. Representatives of business organisations and city-centre business actors illustrated a middle position, as actors partly (and varying between the four cases) involved in the city packages²². The underlying logic was to not only engage with actors with

²² In article #2, business actors are referred to as holding a position as outsiders. This description concerns representatives of city-centre shopping which do not have formal membership in the city-package networks.

strong involvement in the city packages, but also to interview some with a certain distance from the phenomenon under study (cf. Andersen, 2006).

7.3 Document studies

Different types of documents were studied. First, municipal plans and theme reports provided insights into goals, strategies and how challenges and opportunities were perceived locally. Typically, these were policy documents addressing issues of land-use and transport planning, including housing strategies and the regulation of retail trade. These were themes which were also covered by the second type of document, which were research and consultant reports. In several instances, these had been requested and financed by the partners involved in the city-package cooperation. The third source of document was policy agreements, either between the partners involved in the city-package cooperation or between these partners and national authorities. The agreements of the Reward Programme exemplify the latter; these describe the requirements for annual governmental disbursements to be paid. This type of document not only provided insight into the strategies applied, but also into how coordination across sectors and municipalities was sought. The last type of policy documents comprised governmental legislative and advisory texts, which provided insight into national goals and how the authorities seek to influence local-level land-use and transport policy. Finally, newspaper articles were used to elucidate debates on urban development and transport.

7.4 Statistical sources

As a secondary data source, statistics from Statistics Norway have been used²³. This bureau has the overall responsibility for producing statistics in the country. Covering a wide spectrum of societal fields and making statistics available through a web portal²⁴, the bureau has been an important source of information. Statistics on GHG emissions were used to project developments within the transport sector. Demographic aspects were covered through population statistics, an issue which is important in the planning of urban land use and transport. Population statistics (together with statistics on unemployment) were also used to provide more general contextual information about the cities. Statistics on retail trade were included to identify both the economic position of the city-centre vis-à-vis other shopping localities within the municipality and the economic position of the case city within its county. Finally, statistics on land use were used to uncover changes in population density, an issue with relevance to compact-city development.

Land-use statistics exemplifies the benefits of having access to secondary data both during the interviews and in in the analysis phase. When city-centre densification was highlighted in local policy documents or by the informants, statistics on land use throughout the municipality enabled an understanding of the consistency of the

²³ The statistical sources described below have not all been in all three articles.

²⁴ See <https://www.ssb.no/statistikkbanken>.

densification policy. In other words, densification of city centres may occur at the same time as there are increasing developments on the city outskirts. In this way, statistical data were used for triangulation.

An additional data source which was employed, but to a lesser extent, is the *Norwegian Travel Survey*. This survey, published by the Institute of Transport Economics, provides detailed information on travel length, purpose of travel and choice of transport mode. It is carried out every fourth year, with the last registration dating back to 2009. Since changes in land use and transport require long-term strategies, the travel survey was used to a limited extent to analyse whether the city packages had led to changing patterns of travel (which nevertheless is not an overall ambition of the thesis). In addition, because the last registration was in 2009 –before several of the city packages were passed – the use of this source has been limited in the analysis.

7.5 *Validity and reliability*

7.5.1 *Validity*

As the political context is locally mediated (Nyseth, 2009), both governance network structures and policy outcomes are seen as being influenced by a number of local factors. Still, the ambition of this thesis is for the four empirical cases to offer lessons to cities in different contexts seeking to reduce car usage (cf. Hodson & Marvin, 2012). Hence, while the processes and dynamics described here may have varying manifestations in different contexts, they are nevertheless thought to describe tendencies which are also relevant in other settings. Thus, although the context is restricted to Norwegian land-use and transport policy, the application and relevance of the results are wider.

To Gerring (2004), the aim of case studies is to perform intensive studies of a single unit in order to shed light on broader classes of units. This raises the question of whether it is possible to generalise from case studies, and if so, what such generalisations should look like. One response is given by Yin (1994), who states that the method of generalising for case studies is *analytic generalisation*. Yin's suggestion is not to try to select 'representative' cases; instead, the researcher should try to generalise findings to theory. Fittingly, he exemplifies analytical generalisations from Jacobs' book *The Death and Life of Great American Cities* (1961); as described in section 5.1, this work is central to the understanding of urban settings in this thesis. Although Jacobs focusses on the case of New York City, the topics presented cover broader theoretical issues of urban planning. In this way, it has contributed to theory building both in itself and by inspiring new empirical inquiries (Yin, 1994).

To Pierre (2005), comparison between cases is seen as opening the way for identification of shared patterns. Such comparison is also central to Mjøset (2009), whose approach represents the so-called *contextualist position*. Here, explanation of single cases is emphasised by means of comparison with other cases. The dual purpose of this strategy is 'better specification of the original case *and* development

of *contextual generalisations*. But these generalisations emerge through the analysis of specificities' (p. 48, original italics). If many researchers ask the same questions with reference to similar sets of data and other empirical investigations, Mjøset explains, the result is the development of a *local research frontier*. Therefore, this thesis can be seen as a contribution to the local frontier of case studies concerned with the integration of land-use and transport-system development to reduce car usage.

This implies that findings, hypotheses and use of theories have been tested throughout the course of the work and discussed at meetings and conferences involving both fellow researchers and practitioners. In addition, all three articles have undergone peer-review processes in international scientific journals. In this way, premises have actively been tested and further developed throughout the course of the research.

The testing of assumptions is also integrated in the interview situation. This includes the testing of both own assumptions and the assumptions underlying the descriptions and assessments of the informant. Here, prior knowledge – what Lund (2005) refers to as *knowledge space* – is essential, as it gives a basis for testing research results (see also the discussion on this in section 5.5). In line with this, Andersen (2006) suggests an approach to the qualitative interview, where subjective data are combined with a sceptical perspective on what is to be considered trustworthy presentations of reality. This, he claims, constitutes a middle position between the positivist approach, where reliability is threatened by the lack of standardisation in interviews and the extreme social constructivist position, where the interviewer and the informant together creates an understanding of reality.

7.5.2 *Reliability*

The methods researchers use and the interpretations they invoke influence the outcome of research (Hay, 2000). This implies that some characteristics of the object under study are highlighted, while others are overlooked (Fossåskaret, 1997). While this set some clear premises for how to understand research, procedures must be applied to ensure high scientific quality in the collection and handling of data.

The concept of *reliability* describes the ideal of making it possible for other researchers to obtain the same results if a similar design is followed. The main research technique applied to strengthen the reliability of the data in this thesis was triangulation (cf. Hay, 2000), both in terms of using multiple sources (e.g. different types of informants or policy documents) and using multiple methods (among these secondary statistical data). The importance of the latter became apparent in an interview in the early stages of fieldwork. Here, an informant explained that she saw it as beneficial to participate in the study because it would provide an opportunity to present the municipality in a positive way. Thus, a danger arose of informants' projection of the municipal environmental strategies as stronger than they are in reality. As a result, methodological reliability concerns may become entwined with the place-marketing strategies and urban discourses described in

sections 2.2 and 5.4. Informants holding back information or seeking to project a beautified presentation of a phenomenon is well-known within qualitative interviews (Andersen, 2006). Therefore, triangulation along with knowledge obtained from existing research has been important throughout the work involved in this thesis.

7.6 *Methodological reflections*

In the following, four methodological concerns will be discussed as described below.

7.6.1 *Selection of informants*

The method of selection, where most of the interviews reflected the opinions and experiences of those involved in the policy packages, raises a methodological concern of bias toward local elite representation, with only the view of a limited group being reflected. In addition, as described above, there is a danger of such informants holding an interest in positive projections of the ongoing city-package processes. Nevertheless, the choice of demarcation was made to sharpen the focus of the thesis. In addition to the use of theory and data to enhance the quality of the interviews, it should also be mentioned that 3–5 municipal officers were interviewed in relation to each empirical case. While all were involved in the city-package process, their roles differed, as did their position within the municipal administration. This contributed to different perspectives on the city packages and not only the view of top leaders. Moreover, given the broad character of land-use and transport-system development, many actors are involved one way or the other. To strengthen the comparison, emphasis has been placed on interviewing the same types of informants in relation to the four cases. Nevertheless, due to differences between the cities and their governance structures, the number and type of informants are not completely equal (for details see Appendix 1).

A second concern relates to the selection of informants positioned more loosely in relation to the city-package networks. As described, central informants in this group were youth representatives, city-centre business representatives and representatives of business organisations²⁵. The inclusion of this group was based on their reflection of other perspectives on the city-package processes compared to those of the most deeply involved informants. The informants of this group also reflected perspectives of those affected by the policy packages. However, only some of the many affected by city-package policy were interviewed. Among those not included in interviews are civil society-organisations and inhabitants. There are good reasons for including these groups of informants in studies of climate policy. The argument for not doing it here is that the thesis is a study of the policy level, giving priority to actors operating within the city-package structure or potentially holding a lobby

²⁵ The participation of business organizations in the city-package cooperation varied between the four empirical cases.

position in relation to it. To the extent that perspectives of inhabitants are covered, this is done through, for example, politicians and municipal officers reflecting on inhabitants' expectation in relation to land use and transport, and through the reading of local newspaper articles. To conclude, the handling of large urban development processes in this thesis has required strict demarcation of its focus.

A third concern in informant selection relates to the emphasis on one case city in situations where the city package is inter-municipal in its organisation. This is not an issue for article #1, since the city packages in Trondheim and Bodø involve only one municipality. In article #3, Drammen and Porsgrunn are part of inter-municipal city packages. Still, the main focus of the article is on the two cities, where the city-package cooperation forms an important backdrop to policy formulation. In article #2, however, the inter-municipal city package involving Drammen is compared with the single-municipality network involving Trondheim. The interviewing of many informants from Drammen in a network of an inter-municipal character thus poses a methodological concern.

Several factors mitigate this imbalance. First, among the informants, there were also actors with a regional role, such as county authorities and public transport operators. In relation to both Trondheim and Drammen, these gave voice to the smaller municipalities surrounding the two cities. Particularly important in this regard were the county authority informants, who had a central function of representing all municipalities within the administrative borders of the county. Second, in relation to both Trondheim and Drammen (as well as the other two cases), an interview was carried out with a public officer from a neighbouring municipality. In sum, all of the informants contributed to nuancing the picture and provided valuable information. Moreover, the selection is also justified because the focus of the study is not on the rightfulness of claims between municipalities. It is, for example, outside the scope of this thesis to make assumptions about what is or is not fair in conflicts between municipalities over parking regulations or shopping-mall establishment. Instead, the focus is on analysing the reasoning behind the city-package structures and the policy measures applied.

7.6.2 Knowledge at outset and case selection

A fourth concern relates to the researcher's level of case-specific empirical knowledge in the early stages of the dissertation. Gerring (2008) emphasises variation in key variables of interest as central to the selection of cases. In this thesis, the case cities do vary in terms of important variables, and this is a central basis for comparison in the articles. However, while some of this variation was clear at the outset of the dissertation, and was thus part of the selection of cases, other types of variation became clear after rounds of data collection and analysis. For example, it was already evident how the city packages varied in terms of access to national funding for transport infrastructure development. The selection of cities was thereby based in part on this differential access. There was also a prior understanding that the cities held different positions in their respective geographical regions, with two being particularly dominant in terms of population size and

location of workplaces in relation to their surroundings. However, other types of variation, such as different uses of policy measures, differences in policy performance and differences in network structures were not clear at the time of case selection. In relation to this last point, article #2 was developed through new knowledge about network differences between Trondheim and Drammen. In this way, the comparative setup in the three articles of this thesis is more a result of going back and forth between theory and empirical findings than of advance knowledge about all relevant differences at the beginning of the dissertation. Similarly, the relevance of retail trade in negotiations over CUR became clearer throughout the work, resulting in emphasis being placed on this dimension of policy.

8 Synthesis of the articles

How transport in cities is managed will highly influence the global outcome on climate change. While the reduction of car usage has been high on the agenda for years, change has so far proven difficult. As a result, the thesis responds to a call for research on how to facilitate CUR in urban areas. The main research question concerns what influence of policy actors facilitates or hinders the integration of car-use reduction in urban development strategies. Each article has its own setup for case-city comparison and covers different themes through distinct subordinate research questions (one for each article). Still, they all address barriers and opportunities for local authorities in their approaches to CUR. Therefore, an ambition of this thesis lies in the analysis of the local policy context to contribute to a more comprehensive understanding of cities in environmental politics.

A strong basis for the empirical enquiry is theory on land-use and transport-system dynamics. Core elements here are the close relationships between land use and transport patterns, and the ways in which changes within one transport mode may result in different uses of other ones. These relationships illustrate, for example, how land-use policy must include not only densification in the city-centre, but also the outlying areas, if CUR is to be facilitated. Likewise, the effects of public transport improvements may vanish if the road capacity is simultaneously strengthened. This makes Norwegian city packages well suited for analysis, as they are suggested structures for integrated land-use and transport-system development.

The city packages can be seen as policy packages involving governance networks. While the four city packages studied here have ambitions for CUR, they include other goals as well, such as improved traffic efficiency. This combining of goals poses a clear challenge for environmental targets, since the latter have tended to be at the lower end of the traditional policy-objective hierarchy (Lafferty & Hovden, 2003). In all four city packages studied, a clear ambivalence about whether to facilitate or restrict car usage has been identified. However, differences are observed between the city packages in terms of economic resources and regulative measures used to facilitate CUR. With urban governance differing in distinct contexts, the question of *why* is relevant (Pierre, 2005).

Both structure and agency related explanations to the differences are found. For example, the engagement of leading politicians in the case city of Trondheim to reduce transport emissions illustrates local-level agency. However, when compared with Bodø (article #1), the lower CUR efforts of the latter are not linked to a weaker climate commitment alone. Also important are uneven structural economic conditions between cities, which may create different demands in relation to environmental policy (cf. Muir, Phillips & Healey, 2001). Among the factors analysed in this thesis are the governmental financing of local transport-system development and urban-system differences affecting urban competition over retail customers and private capital investments. In this way, local-level decision making is influenced by the balance of pressures for and against environmental policy within and across the city (While et al., 2004).

An understanding of local authorities seeking to balance CUR policy with other experienced needs has been central to this thesis. Examples are the desire to balance goals for urban economic growth and free-flowing car traffic with goals of reducing emissions from transport. In these analyses of practical policy, contributions from several strands of research are applied. In article #1, research perspectives on policy packaging are combined with discussion of the role of national authorities in local policy. In article #2, discussions on the effectiveness and democratic aspects of network governance are combined. Here, attention is paid to how the relationships between them play out in CUR policy. In article #3, economy–environment relations are highlighted by combining the academic discussion on urban entrepreneurialism with that of CUR. As such, the thesis helps to bridge the gap between more traditional transport studies and human geography perspectives, as called for by Shaw (2000). It is thus in the combining of existing research and academic discussions that the main contribution of this thesis lies. It provides a renewed perspective on the integration of land-use and transport-system development, one that emphasises barriers and opportunities for local authorities in their approaches to CUR.

Bulkeley and Betsill (2005) have noted that in explanations of the apparent gap between goals and reality in questions of urban sustainability, many researchers have turned to processes taking place *within* cities. Emphasis here is typically on institutional lock-in effects and tensions within the local authority. Much attention has also been paid to practical implementation of sustainable urban development. While important in many regards, Whitehead (2003) notes, ‘such work has tended to reduce analysis of sustainable urban development to a technical matter of institutional restructuring, traffic management, architectural design and the development of green technologies’ (p. 1187).

Two critical insights emerge from this thesis. First, and in line with Gibbs and Jonas (2000), the analytical value of a discussion in which local environmental policymaking is not divided from the management of local economies has been highlighted. This means that to better understand local CUR policy, issues of urban competition over private and national authority investments, as well as over retail customers and inhabitants, need to be taken into account. As evident in relation to parking policy, the cases in this thesis illustrate CUR initiatives being hindered

when they are feared to negatively influence the competitiveness of a city vis-à-vis its surrounding region.

The second main contribution from the thesis is its highlighting of a spatial perspective to provide important insights into urban climate policy. Again, the relationship between municipalities within a region and notions of urban competition are relevant. The empirical enquiry gives examples of inter-municipal cooperation to reduce competition-related tensions (and thereby enhance CUR). It nevertheless also gives examples of CUR initiatives being blocked due to fear of competition in the region. With local decisions being influenced by actors and processes on various geographical scales, there is thus a need to step beyond the city itself to understand local climate policy (Bulkeley & Betsill, 2005; Marshall, 1999). With GHG emissions being a regional issue, there is also a need for strong regional governance institutions (Dierwechter & Wessels, 2013).

8.1 Outlook

With cities, and their authorities, set in central positions to reduce emissions from transport, a question arises as to whether they are equipped with necessary instruments and resources to carry out the task. This thesis suggests the need for stronger integration between local and national authorities in questions of CUR. This is in line with Aall et al. (2007), who claim that there is a mutual dependency between local and national authorities in developing effective climate policies. The cost, complexity and conflicting interests involved in developing land-use and transport systems with low emissions point to the need for cooperation across levels of government.

Outlying shopping malls pose a challenge to both city-centre retail trade and CUR ambitions. Despite a longstanding national goal of reducing car-based shopping on the outskirts of cities, the position of such malls continuously grows stronger. Ultimately, this has consequences not only for transport emissions, but also for the function of city centres as part of larger urban structures and regions. Hence, when national authorities launch diverse arrangements for local-level CUR, two fundamental questions should be asked. The first concerns the action space for a city to implement CUR policy in light of competition from outlying shopping malls. The second concerns whether local authorities are equipped with the necessary instruments and resources to regulate retail trade at the outskirts in a way that facilitates CUR. The claim is that city-centre vitality should be given a high priority in local and national strategies to reduce emissions from transport. Herein also lies an ambition for future research – to study in depth the entwining of physical, procedural and regulative factors making city centres attractive.

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Legislative resources

The Planning and Building Act, § 1-1, see:

http://lovdata.no/dokument/NL/lov/2008-06-27-71/KAPITTEL_1#KAPITTEL_1

The Planning and Building Act § 5-4, see:

http://lovdata.no/dokument/NL/lov/2008-06-27-71/KAPITTEL_2-1-3#KAPITTEL_2-1-3

The Road Act § 27, see:

http://lovdata.no/dokument/NL/lov/1963-06-21-23?q=vegloven#KAPITTEL_4

9 Article #1

Policy packages and state engagement: Comparing policy for car-use reduction in two Norwegian cities

Abstract

Policy packages are suggested structures for combining different policy measures and addressing multiple objectives. The contribution of this paper is its linking of local-level policy packaging with national authorities' environmental strategies. Applying a multilevel-governance perspective, it examines how state engagement influences the integration of car-use reduction strategies in local policy packages. Two policy packages are empirically compared, one from the larger Norwegian city of Trondheim and one from the mid-sized city of Bodø. Both include goals for car-use reduction while simultaneously aiming for traffic efficiency through road-infrastructure building. Thus, they exemplify potentially conflicting interventional goals. The stronger state engagement in the policy package of the larger city supports local authorities to allow for a higher share of resources for other purposes than road building and the use of tougher regulative measures. This illustrates that car-use reduction through policy packages is not just a question of combining measures in a good way, but also of state engagement.

1. Introduction

The need for more sustainable cities has long been on the political agenda, with the transport sector identified as crucial in the reduction of greenhouse gas (GHG) emissions. Amongst the milestones legitimising action at the city level are the 1987 *Brundtland report* (World Commission on Environment and Development, 1987) and the *Local Agenda* strategies of the 1990s. More recently, the European Union (2011) set a goal of at least 60% reduction in the sector by 2050²⁶. This represents a lofty goal, especially as transport is still a growing source of emissions. While technical improvements are important, for example in relation to fuel and engines, the application of a wider set of strategies is necessary. Among these are the integration of land-use and transport systems to reduce traffic volumes. This can potentially also address other transport-related challenges such as noise, congestion and the fragmentation of urban landscapes by road infrastructure.

Policy packages (PPs) offer a way of combining different policy measures and addressing multiple objectives (Justen, Fearnley, Givoni and Macmillen, 2014). They have therefore been suggested as a way of targeting car-use reduction (CUR). One argument for the PP approach is that a deliberate combination of mutually supportive policy measures may enhance effectiveness (compared to single isolated measures), not least through increasing the likelihood of implementation (Givoni, Macmillen, Banister and Feitelson, 2013). This paper responds to a call for more research on PP implementation (Givoni, 2014). In doing so, its main focus is not on how supportive effects between measures within the PP structure enhance implementation; rather, the contribution lies in its linking of local-level policy

²⁶ Reduction with respect to 1990 levels.

packaging with national authorities' environmental strategies. Applying a *multilevel-governance perspective* (e.g. Bulkeley and Betsill, 2005), the research question asked in this paper concerns how state engagement influences the integration of CUR policy in local-level PPs.

Two Norwegian PPs are empirically compared, one from the city of Trondheim and one from Bodø. These are termed the *Trondheim* and *Bodø Packages*²⁷. Both PPs are involved in land-use and transport-system development. Amongst their goals are CUR and traffic effectiveness; thus, they exemplify the use of diverse and potentially conflicting goals in interventions (cf. Vedung, 2006). Both PPs target CUR while building new road infrastructure. Central to the analysis is thus how the potential traffic-increasing effects of the road projects are countered through other policy measures.

The two PPs are part of the same overall institutional framework, as evident in national authorities' emphasis on the PP approach for local development of land-use and transport systems. They follow a widely observed tendency towards state rescaling, with enhanced governance roles at the local and regional levels (Gibbs and Jonas, 2000, Macleod and Goodwin, 1999). Still, as Bulkeley (2010) comments, climate change also illustrates a policy field in which the state seeks to engage. Such state involvement is nevertheless different for the two empirical cases. Both financially and institutionally, national authorities are more involved in the PP of the larger city of Trondheim compared to Bodø. This difference forms the basis for case selection.

Underpinning the paper is the understanding of a mutual dependency between local and national authorities in developing effective climate policies (Aall, Groven and Lindseth, 2007). At the outset it was hypothesised that the different state engagements in the two cases have influenced how the PPs are constructed and their likely ability to obtain long-term CUR. The stronger local–national integration in Trondheim was believed to provide stronger PP strategies for CUR compared to in Bodø.

2. The challenge of reducing GHG emissions from transport

According to Hickman, Hall and Banister (2013), a low carbon future will require the integration of urban planning with transport investments to foster the use of climate-friendly transport and more localised travel patterns. Via densification strategies, urban planning plays an important role in both reducing the length of car trips and in increasing the modal share of walking, cycling and public transport (e.g. Næss, 2006, Tennøy, 2012). *Compact-city development*, a concept with roots in Jane Jacobs' (1961) influential work, has been used to describe such approaches. Here, a high density of people, workplaces and facilities reduces the need for

²⁷ The original names are 'The Environmental Package' (the Trondheim Package) and 'City Package Bodø' (the Bodø Package).

motorised transport, as distances between residences, work and service facilities are shorter than in a more spread-out urban structure (Newman and Kenworthy, 1989, Næss, 2006). The dense city also supports public-transport services: More customers live and work close to transport routes than in a dispersed urban structure. These combined mechanisms of CUR and density were reported in a Norwegian study of travel behaviour in urban areas (Engebretsen and Christiansen, 2011), and confirmed in a literature review of 30 Nordic studies (Næss, 2012).

The improvement of road infrastructure is highly related to questions of compact-city development. Not only may these hinder a modal split towards more climate-friendly transport usage, but they may also contribute to urban sprawl. This will result from improved road facilities increasing the attractiveness of outlying areas, as travel between the city centre and the outskirts becomes easier. In this vein, Litman (2014) claims that car-oriented transport planning tends to cause sprawl by improving the accessibility of outskirt locations. Therefore, this paper particularly emphasises how road building is combined with measures intended to mitigate its effect.

The need to harmonising land-use and transport-system development has been illustrated. PPs represent one way of doing this in practical policymaking. An integrated approach is presented by Tennøy (2012), who recommends that urban strategies should 1) steer land use towards urban densification rather than sprawl, 2) impose physical and economic restrictions on road traffic, 3) improve public transport and 4) improve conditions for walking and cycling. This represents a classic approach of combining regulations – ‘stick’ measures – with ‘carrot’ measures (Bemelmans-Videc, 1998). However, in contrast to Tennøy’s (2012) suggested approach, the two PPs in this study also include the building of road infrastructure.

While urban densification and regulative measures are recognised for their potential in reducing GHG emissions, implementation is often difficult. It is common for promising transport measures to emerge but remain unimplemented due to opposition (Sørensen, Isaksson, Macmillan, Åkerman and Kressler, 2014). Implementation barriers are particularly salient for regulative measures, such as different forms of toll roads and parking regulations. According to Vedung (1998), the selection of an appropriate combination of policy instruments represents one of the most intricate and important tasks in strategic planning. In this context, PPs have emerged as a suggested solution. Implementation, however, is not only a question of designing the appropriate combination of measures, but also support by national authorities, as highlighted here.

3. Policy packaging environmental strategies

A PP can be defined as ‘the combination of individual policies and measures (...) to achieve a certain goal’ (Filipe and Macário, 2013, p. 150)²⁸. PPs represent a suggested solution when isolated policy measures have proven insufficient, or worse, produced unintended negative side effects. PP measures may conflict, with the result that the overall goals may not be reached. However, the question of effectiveness is closely related to that of implementation – the most effective measures are often most difficult to implement (Givoni, 2014, Givoni et al., 2013, Rist, 1998, van der Doelen, 1998). Below, effectiveness and implementation are discussed in relation to PPs.

3.1 Effectiveness and implementation of policy packages

Effectiveness concerns the degree to which a chosen policy instrument contributes to the attainment of a defined policy goal (van der Doelen, 1998). The effect of a measure may be weaker or even the opposite of what was anticipated. For example, a situation could arise where the effect of public-transport improvements is weakened by simultaneous improvements in road structures (making car use faster and more comfortable). This illustrates what Strand, Næss, Tennøy and Steinsland (2009) describe as a competitive relationship between the different modes of transport. To keep road building from degrading the effects of public transport improvements, toll-road payment, stronger regulation of parking or prioritising of lanes for public transport could be implemented.

Another effect of road-capacity projects is that they sometimes contradict their purpose of reducing congestion in urban areas. Some researchers therefore advocate the management of road demands through policy measures rather than through the traditional engineering approach of predict-and-provide (Hull, 2008, Strand et al., 2009, Urry, 2004). The hypothesis underlying this approach is that the cheaper the travel, in terms of money and time, the greater the demand (Goodwin and Nolan, 2003). In relation to highways, Nolan and Lem (2002) explain this by stating that any increase in capacity reduces the time cost of travel, resulting in increased volumes. With more people using private cars, levels of congestion and GHG emissions increase. In this way, the reduction of congestion through road construction can prove to have short-lived advantages. Mogridge (1997) therefore points to the need to improve the quality of public transport instead of just increasing road capacity when journey speeds in urban areas are to be improved. Similar effects can be achieved by making car usage less attractive through regulative measures. Parking schemes exemplify the latter: According to Marsden (2006), they are a way of lowering transport emissions if well designed, but can have the opposite effect if poorly designed. This highlights the relatedness of parking access and prices throughout the urban area. A strict parking regime in the city centre combined with free parking at outlying shopping malls may result in customers preferring to shop on the outskirts. Also, if the city centre has good access

²⁸ See Givoni et al. (2013) for a more extensive definition.

and low-cost parking, people may use cars instead of walking, cycling or public transport usage for daily purposes in the city centre.

Other types of regulative measures weakening the attractiveness of car usage are toll-road schemes (e.g. with higher fees during rush hours), fuel taxes and prioritising of roads for cycling, walking and public transport. This makes relevant Cairns, Hass-Klau and Goodwin's (1998) much-cited study in which car usage was found to decrease when road capacity was reduced. However, this reduction varied in different contexts. Road-capacity reductions accompanied by schemes targeting public-transport attractiveness had a positive effect, again illustrating the relevance of policy packaging.

Implementation of PPs is defined here as successfully realising a desired policy (Givoni, 2014). There are many kinds of barriers, including legislative, technical and organisational ones. However, political and public acceptance is highly important in the implementation of transport PPs. Lack of acceptance may relate to the financial cost of measures, such as when improvements to metro systems are hindered by high expenses. Barriers also stem from the distributional effects of policy, exemplified by compact-city strategies limiting landowners' ability to develop city outskirts. This causes goal conflicts, where some actors may gain and others lose from the decisions made (Flyvbjerg, 1998). In urban politics, traveller groups are also prioritised, such as when public transport is facilitated, while car driving is made less attractive through toll roads and parking schemes. The political cost and related barriers to implementation rise when such regulative measures are perceived as interfering with inhabitants' freedom of choice. One response to this is to integrate measures into PPs to balance the treatment of transport modes, geographical areas and groups of users (May and Roberts, 1995). Within the transport sector, PPs have thus been seen as a promising path for handling conflicts of interest (Tuominen, Tapio, Varho, Järvi and Banister, 2014).

Different types of toll-road payment exemplify policy which is often contested. Studying both implemented and rejected road-pricing schemes, Vonk Noordegraaf, Annema and van Wee (2014) identified political and public acceptability as success factors in implemented cases and failure factors in unimplemented ones. Furthermore, Sørensen et al. (2014) observed the combined use of popular and unpopular measures amongst the factors facilitating implementation. Central in this regard was the use of revenues from toll-road payment for public-transport services or new road infrastructure. This dynamic is confirmed by Norheim, Nilsen and Frizen (2013) finding that acceptance for Norwegian toll-road payment is influenced by what inhabitants feel they receive in return, including improvements in public transport. Thus, toll-road payment embedded in larger PPs exemplifies a means of legitimising unpopular measures by enabling the financing of more popular ones. However, the implementation of CUR policy is not just a question of synergetic relationships between measures, but also one of how the state engages in local policy.

4. Understanding cooperation between the local and national levels

Cities have long been identified as important in the governance of environmental politics (Betsill and Bulkeley, 2007). There has thus been a filtering down of international commitments to the city level. This corresponds with an overall tendency of state rescaling, with environmental responsibilities being devolved downwards. Local authorities have been set as key actors for achieving international environmental policy (Gibbs and Jonas, 2000). The intent has in many cases been to enable local administrations to develop policies which are better tailored to the economic and social conditions of their geographic areas (cf. Docherty, 2004). Hence, the local level has taken over several functions and responsibilities formerly delivered by the state. The shift has also been characterised by a transition from direct governmental interventions in municipal affairs to more indirect forms of influence and control through contracts and regulation. Here, cooperation with sub-national levels is more voluntary (Goldsmith, 2005), demonstrating what is often termed ‘new modes of governance’.

To Sassen (2009), local authorities are in a strong position to pursue sustainability goals ‘as direct or indirect providers of services, as regulators, leaders, and partners’ (p. 5). Exemplifying this is Norwegian land-use authority being delegated to the municipal level. In a European context, Norway is among the countries with most tasks devolved to municipalities (Ministry of Local Government and Modernisation, 2014). However, to understand CUR policy, we not only need to assess the formal powers of local authorities, but also whether they are equipped with the necessary instruments and resources. Tosics (2011) concludes that local authorities have been overburdened with decentralised tasks and insufficient financing. As a result, they are responsible for policy outcomes, while simultaneously being dependent on national-level financing. This was also the conclusion in the Norwegian White Paper on power and governance forms; municipalities have got tighter financial constraints in their role as implementers of governmental politics (Ministry of Labour and Administration, 2003). Recent statistics show that the long-term debt of Norwegian municipalities vis-à-vis their income is increasing along with their obligation in relation to pension services (Statistics Norway, 2014a).

As shown, large responsibilities are devolved to municipalities. However, while researchers have found a tendency of state downscaling, with enhanced roles for the local and regional levels, climate change illustrates a policy field in which the state seeks to engage. Meta-governance through PP structures in Norway exemplifies this. To Docherty, Shaw and Gather (2004), the realisation of the shortcomings of the predict-and-provide approach (see 3.1), with the resulting crisis of mobility, has been important to this state engagement.

4.1 The Norwegian context

The multilevel-governance perspective is in this paper used to analyse climate governance in light of the reconfiguration of political authority across multiple

levels (Bulkeley, 2010). The perspective captures how climate governance takes place ‘through processes and institutions operating at and between a variety of scales and involving a range of actors with different levels and forms of authority’ (Betsill and Bulkeley, 2006, p. 141). Of particular relevance to this paper is how urban actors’ responses to environmental issues are influenced by decisions made on a national scale.

Empirically, the Norwegian PPs for land use and transport exemplify both the enhanced governance roles for local authorities and the state attempting to engage in local environmental politics. Following a longstanding national emphasis on integrated land-use and transport planning (e.g. Ministry of Environment, 1993), land-use and transport PPs gained prominence during the late 2000s (e.g. Ministry of Transport, 2009). All larger urban regions in Norway are now organised through such arrangements. These PPs are characterised not only by their wide set of instruments, but also the coordination of policy actors in governance networks.

One arrangement stands out as particularly important for PP formation at the local level. Every fourth year, national authorities publish a document called the *National Transport Plan*. This is both a policy document staking out the national goals and a plan for future transport projects. Municipalities strive to be included here, as the plan allows for and in various degree finances transport investments. The 2009 plan stated that PPs for land use and transport were to be increasingly emphasised (Ministry of Transport, 2009), sending a clear message about how to organise local-level activity. Further, national authorities would be particularly receptive to those PPs showing strong efforts to reach national climate goals. Thus, an explicit connection between PP performance and disbursement of governmental funding was made.

Also relevant to Norwegian PPs is another source of financing, the so-called *Reward Programme*. Here, selected city regions, represented through PPs, are rewarded based on efforts to improve public transport and reduce private car usage. The arrangement involves only the larger cities in Norway. Trondheim is one of the largest receivers. Bodø, on the other hand, is among the largest Norwegian cities to be excluded.

A similar pattern is revealed in relation to a national city network called *Cities of Tomorrow*, which was in operation in 2008–2014. While limited in terms of economic resources, it functioned as a learning network, aiming for knowledge exchange and benchmarking between cities (e.g. through tailored statistics for comparison). As the inclusion of cities here was synchronised with that of the Reward Programme, Bodø again fell just outside due to its population size. This illustrates Gibbs and Jonas’ (2000) point that there is an uneven rescaling of environmental policy within the state. Different places are thus provided with different powers and institutional arrangements (cf. Shaw, MacKinnon and Docherty, 2009). Below, this paper will illustrate how this influences CUR policy in local-level PPs.

5. Methods

While the Trondheim Package is fully operational, implementing a range of measures and having solid financing in place, the Bodø Package represents a large-scale project which is still in progress. For this reason, and since changes in land-use and transport are long-term ones, PP outcomes are not emphasised here. Instead, the focus is the chosen strategies in light of predominant research on how to facilitate CUR in urban areas.

Trondheim and Bodø were selected due to the different shares of governmental funding in their PPs. The Trondheim Package has a higher share of financing from the National Transport Plan and is one of the largest receivers in the Reward Programme. Meanwhile, Bodø is one of the largest cities to fall outside the latter arrangement. These differences provide an opportunity to compare levels of state engagement in local PPs. Thus, in accordance with Ward's (2010) relational approach to case studies, the selection is based on the two PPs posing interesting questions to each other.

Several sources were used in the data collection. Twenty-eight face-to-face semi-structured interviews were carried out, 14 for each city²⁹. To strengthen the comparison, emphasis was placed on interviewing the same types of informants. Still, due to differences between the cities' governance structures, the two sets of informants are not totally equal.

The informants were considered capable of providing insight into the local reasoning behind land-use and transport-system development. Nevertheless, they held different positions in relation to the PPs. Central groups were municipal officers (planners, advisors and urban-development directors) and leading politicians, who represented key informants in relation to data concerning local policy strategies. To ensure a regional perspective, one county representative and one public official from a neighbouring municipality were interviewed for each case. A few youth representatives were included due to their position as outsiders. Last, representatives of business organisations and representatives of city-centre shopping malls held a middle position as actors who were partly involved in land-use and transport discussions.

Eighteen of the interviews were transcribed by the researcher word for word. In the remaining interviews, brief notes and voice recordings provided sources for analysis. The transcribed interviews constitute the core interview material. Emphasis was therefore placed on transcribing an equal number from each case, representing different informant groups. After the transcription, the 18 interviews were loaded into the NVivo software programme for qualitative analysis and coded

²⁹ Three interviews, one for Trondheim and two for Bodø were via telephone. One interview in Trondheim included two informants, upon their request.

according to a set of defined categories. This facilitated both within-case analysis and cross-case comparison, as well as going back and forth between reading research literature and performing empirical analysis.

A second data source was text analysis of various types of documents, including cooperation agreements, municipal plans and evaluation reports. Since the two PPs are in different phases, comparison of strategic documents from their implementation was emphasised. The last type of policy documents included governmental legislative and advisory documents, which provided insight into national goals and how the authorities seek to influence local land-use and transport policy.

Two methodological concerns are raised here. The first relates to the demarcation of focus. As the two PPs studied cover a range of themes, not all goals and applied strategies have been considered. With attention to CUR strategies, phasing in of low-emission vehicles is among the excluded strategies. While sharpening the focus of the paper, the demarcation may also reduce the overall assessment of environmental strategies applied in the two cases. The second methodological concern relates to the interviewing of mainly actors involved in the PPs, potentially creating a bias towards local elite representation. However, it can be argued that the municipal officers interviewed hold different positions within the municipal administration. Hence, while this informant group reflects the views of involved actors, they do not comprise only those of top leaders. Moreover, to avoid idealised presentations of local CUR efforts reducing data reliability, emphasis was placed on triangulation, including different types of informants and policy documents.

6. The Trondheim and Bodø policy packages

Trondheim is located in the middle of Norway. With 182 000 inhabitants, it is the third largest city in the country. Moreover, it is among the fastest growing Norwegian cities, experiencing 18% growth in 2004–2014 (Statistics Norway, 2014b). In terms of politics, Trondheim has lately had a coalition of social democrat and left-wing parties in power.

The Trondheim Package was established in 2008. It is organised as a governance network, with the Municipality of Trondheim, county authority and public road administration in core positions. One of the top national leaders from the Public Roads Administration is involved, illustrating a linkage between national and local authorities. In terms of financing, 65% of resources stem from toll-road income (Table 1). Other sources are national authorities (through the National Transport Plan and Reward Programme) at 26%, and contributions from the county and municipality accounting for the remaining 9%³⁰. The overall goal of the PP is to provide a better major road network and improved conditions for public transport,

³⁰ While treated here as non-governmental recourses, a large proportion of the municipal and county budgets are still based on disbursements from national authorities.

walking and cycling (Municipality of Trondheim, 2008a). A subordinate goal of reducing private car use to 50% (from 58% in 2008) by 2018 illustrates high environmental ambitions.

Table 1: Financing of the policy packages (in million €)

	Trondheim Package	Bodø Package (estimate)
Toll-road income	836	222
County and municipality	116	24
National Transport Plan	218	25
Governmental financing	123	
Reward Programme		
National rail administration (state agency)		2
Total	1293	273

Source: Municipality of Bodø, 2011 and the Trondheim Package website³¹

Bodø is located in northern Norway. With 50 000 inhabitants, it is much smaller than Trondheim. In terms of population growth, Bodø is also at the higher end in Norway, with an increase of 16% in 2004–2014 (Statistics Norway, 2014b). Politically, a coalition of social democrat and left-wing parties were in power when the Bodø Package was passed in 2011. However, after the municipal election later that year, conservative parties were put in power.

The Bodø Package was established as a cooperative effort between the municipality, county authorities, public road administration and national rail administration. In relation to the latter two, representatives from the regional divisions participate. The major source of income is slated to come from toll-roads, scheduled at 81% of the total. Ten per cent is expected to come from the state (National Transport Plan and national rail administration) and 9% from the county and municipality (Table 1).

The overall goal of the Bodø Package is to coordinate plans and processes within the transport field and create an integrated transport system with low accident risk and better ability to fulfil people's transportation needs (Municipality of Bodø, 2011). The goal structure contains no quantified CUR ambitions; more a general goal stating that 'Climate gas emissions from transport in Bodø shall be lower than today' (p. 201).

³¹ See <http://miljopakken.no/om-miljopakken/okonomi>

7. Road building and measures intended to counter traffic-increasing effects

7.1 The Trondheim Package

Fifty per cent of the resources in the Trondheim Package are to be used for building road infrastructure (Municipality of Trondheim, 2008a), particularly on major roads south of the city³². Herein lies a tension: The Trondheim Package is slated to substantially reduce GHG emissions from transport by 2018 while simultaneously building *more* road infrastructure. The rationale is that traffic-increasing effects of the road projects can be countered through other policy measures, as illustrated in the political agreement on which the PP is based:

New roads will give the road network in Trondheim significantly increased capacity. The city council wants to implement measures so that this increase in capacity does not provide a corresponding increase in car traffic and thus increased pollution. (Municipality of Trondheim, 2008a, p. 3)³³

In terms of financing, this means that the remaining 50% of the PP resources are used to facilitate climate-friendly modes of transport. Many projects have been implemented to encourage walking and cycling. Nevertheless, most 'non-road' money is used for public transport, for instance, purchasing new busses, reducing fares throughout the region and increasing route frequencies.

Turning to land-use politics, densification policy has long been emphasised in Trondheim. In the interviews, municipal officers explained that local politicians had taken such an approach after realising the high monetary cost of providing social and transport infrastructure throughout a dispersed urban structure. Policy has therefore targeted densification in central areas and around public-transport nodes. This strategy is evident in the political goal aiming for 80% of new dwellings to be built within the borders of the urban settlement (Municipality of Trondheim, 2008a). Similarly, it is sought to draw new employment consisting of many workers (e.g. office jobs) towards an urban area that is well connected with public transport. Also present in the land-use strategy is the long-term goal of moving existing land-intensive enterprises (e.g. storage businesses) out of the central urban areas. Still, despite these overall strategies, several of the municipal officers interviewed stated that the densification policy was under pressure, as illustrated by this quote: 'One can also see the politicians allowing for work places outside the [central urban areas. They] succumb for estate developers' (Municipal officer no. 1, Trondheim).

The Trondheim Package includes car-regulative measures, which are low in terms of budget but higher in political cost. The toll roads, with higher prices during rush hours, resulted in heated debate during their implementation in 2010, especially since a former toll ring had been removed only five years earlier. In the debates over transport, the municipality and leading politicians have fallen on one side and

³² For an overview of the projects, see: <http://miljopakken.no/hva-skjer#/prosjekter>

³³ Policy document extracts and informant quotations have been translated from Norwegian.

the city-centre business community on the other. Retail-trade consequences of increasing the hardship³⁴ of taking the car to the central city are at the heart of the discussions, and the disagreement is clear: ‘There is a sharp disagreement between the business community in the city centre and the municipal representatives. They have different conceptions of reality’ (Municipal officer no. 1, Trondheim).

Parking is a contested issue, with a political decisions related to keeping the number of lots in the city centre stable despite the population growth. The political agreement underpinning the Trondheim Package states: ‘The price of parking on long-term lots is to be increased until we can see a clear rejection effect [of private cars]’ (Municipality of Trondheim, 2008a, p. 7). Thus, prices are not to be increased to a predefined level, but will instead depend on the car-reducing effect obtained. This illustrates a willingness to apply politically difficult measures to support CUR. A similar willingness was seen when a new road in the north of the city was opened, while the capacity on another adjacent road was simultaneously reduced. As a municipal officer involved in the process stated, ‘The point was to make sure that we did not get new transport habits utilising available road capacity’ (Municipal officer no. 2, Trondheim).

In 2008, there was another instance of road lanes being converted, when two lanes on a major road were prioritised for public transport. A heated debate followed:

For me, the prioritising of public transport is meaningless because they [the Trondheim Package actors] did not expand the road capacity when the busses got their own lane. They reduced the capacity 365 days a year and ruined the traffic flow. (Business organisation representative no. 1, Trondheim).

This comment not only illustrates the controversy, but also the non-acceptance of strategies which increase hardship related to car usage. Conversely, it also exemplifies local politicians’ willingness to implement contested measures.

7.2 The Bodø Package

Where 50% of the resources are used for road building in Trondheim, around 70% is planned for this purpose in the Bodø Package. This involves improvements on long stretches of a major road from the outskirts of the municipality to the city centre. Lanes will be added, along with flyover crossings and a tunnel. In the policy document in which the Bodø Package is funded, it is recognised that the improvements in road standard and increased capacity will contribute to greater traffic towards central areas (Municipality of Bodø, 2011). However, like in Trondheim, other types of measures have been presented to counter the traffic-increasing effects of road building. A prevailing conception among the informants

³⁴ E.g. parking made more expensive/less available and lanes prioritised for cycling, walking and public transport.

involved in the Bodø Package was it allocated resources for walking, cycling and public transport in a way that had not happened in Bodø before. Still, as argued below, the Bodø Package is in this paper considered unlikely to substantially reduce car usage.

Turning to land-use politics, Bodø's stretched urban form poses a challenge to compact-city ideals. To change this, much emphasis has been placed on urban densification recent years. This includes attempts to steer dwellings, workplaces and institutions towards the city centre. The strategy is intended both to reduce the need for transport and to strengthen the economic position of the city centre. Still, despite this overall ambition, the municipality recognises that many zoning plans tend towards moderate instead of high utilisation of land (Municipality of Bodø, 2012). A challenge, they claim, is to obtain more integrated planning, which also explains the overall aim of the Bodø Package to better coordinate plans and processes (Municipality of Bodø, 2011).

Stronger regulation of parking represents a measure set to reduce the traffic-increasing effects of road building. As stated by a leading politician involved in the Bodø Package:

Parking will be made more difficult. We are going to have more people switching to public transport and it will be easier to cycle (...). We are simply going to turn around some ways of thinking. (Leading politician no. 1, Bodø)

National authorities display the same optimism, declaring that the Bodø Package is expected to facilitate more climate-friendly transport in future (Ministry of Transport, 2012).

With stronger regulation of parking planned to 'give an incentive for reduced car use' (Municipality of Bodø, 2011, p. 241), the cost of parking has increased in the city core. Still, city-centre regulation is not a contested issue like in Trondheim, since free parking is available just outside the main city streets. The disagreements over parking which were found did not involve regulation in the city centre as such; rather, they involved city-centre business claiming that the lack of equivalent regulation at the outskirts supports those shopping malls. This was also an issue of debate in Trondheim.

One last regulatory measure to be mentioned is prioritising of public transport in urban traffic. While the precedence of busses in the road system of Bodø was seen a prerequisite for a high public-transport share (Municipality of Bodø, 2011), the interviews and text analysis indicate that this will not come at a great expense for car-driving facilities. Informants, regardless of their position, suggested that while bus accessibility would increase with the Bodø Package, so would that of private cars:

The bus will also get significantly improved accessibility [with the added lanes]. It will not have to be in a queue, but it will not get any competitive advantage [vis-à-vis private cars]. (Municipal officer no. 1, Bodø)

This contrasts starkly with Trondheim, where the prioritising of busses on a main road came at the expense of car access. Thus, this comment illustrates one reason why the Bodø Package is considered less likely to reduce car usage in the long term. While both packages involve conflicting measures within the PP, the counter-strategies intended to mitigate the effects of road building are stronger in monetary and regulatory terms in Trondheim. This concern over conflicting measures within the Bodø Package was also shared by several of the informants involved in the PP:

[With the adding of lanes] you get a tremendous capacity in the road system (...). It is a huge overcapacity and there you have the goal conflict in the project, as I see it. We build and hope we will get more people onto public transport, but there is not much use of stick measures to make it happen. (County authority officer no. 1, Bodø)

8. Discussion

The two cases in this study exemplify PPs involving several goals and types of measures. This poses a clear challenge for environmental targets, since they have tended to be at the lower end of traditional policy–objective hierarchies (Lafferty and Hovden, 2003). In the two PPs under study, climate-friendly transport is to be strengthened while road infrastructure is improved. Such policy tensions are also found elsewhere, for example, in the congestion-charging package in Stockholm³⁵. Although widely considered a radical transport scheme, Richardson, Isaksson and Gullberg (2010) found ambivalence concerning whether to facilitate or restrict car usage. The two Norwegian PPs thus reflect local decision makers' attempts to balance different perceived transport needs.

Researchers have shown how unpopular policy measures can be legitimised via combination with more popular ones in PPs, for example, in relation to road-pricing schemes (e.g. Sørensen et al., 2014). A statement from the city-centre business organisation in Bodø contradicts this suggestion, as it raises a principal concern over toll-road income financing broader urban-development strategies (Bodø Business Federation, 2011). Still, the decision concerning toll-road payment was passed in Bodø, as it also was after a strong debate in Trondheim.

The coupling of toll-road payment with more popular measures in PPs does not fully explain its implementation. Also relevant is the gradual shift over the last three decades, with toll-road income in Norway accounting for an increasing share of the total road infrastructure budget vis-à-vis national authorities (Norheim et al., 2013).

³⁵ With congestion charging, a tougher pricing mechanism is used to reduce traffic, compared to more traditional toll-road schemes.

Thus, the local toll-road discussion is characterised by what Hajer (1995) calls *acceptability*, meaning that it is considered a necessary measure to get things done. Hence, while opposed, toll-road payment is locally accepted in both Trondheim and Bodø: ‘There is discontentment (...). Still there is recognition that if toll-road payment is not implemented, there will be no new road’ (Public Roads Administration officer no. 1, Bodø). A consequence of the state rescaling, with road building increasingly based on toll-road payment instead of state financing, is thus an acceptance of toll-roads as a legitimate path for local politicians to follow.

With important decision-making authority in Norway delegated to the local level (e.g. land use), national environmental ambitions depend on the implementation of local strategies. At the same time, as Hull (2008) showed in relation to English transport, the government’s fiscal and performance-management policies are crucial for local-level decisions and implementation. Similarly, studies in Norway find governmental funding to be both a local-level motivating factor (Aall et al. 2007) and a facilitator of stricter economic regulation of car usage (Vonk Noordegraaf et al., 2014). Hence, and in line with the multilevel-governance perspective there is a need to step beyond the local to explain why moves towards sustainability are (or are not) taking place (Bulkeley and Betsill, 2005). Hence, in the analysis of local PP strategies, emphasis has been placed on comprehending the interaction between local and national authorities.

8.1 State engagement and local policy packaging

This paper illustrates both a downscaling of responsibilities and attempts of state engagement in local-level climate policy. On the one hand, the increasing toll-road financing of roads exemplifies the tendency of state withdrawal in local transport-system development. On the other hand, the governmental advisory framework, as well as the incentive arrangements and institutional structures supporting the PPs, exemplify state engagement attempts. However, through the two empirical cases, a different character of state engagement in relation to PPs emerges. This represents important contextual conditions, affecting the local political process and the integration of CUR policy in local-level PPs.

Starting with Trondheim, the links between the local and national levels in relation to the PP have been strong. This is evident in the coalition of social democrat and left-wing parties which was in power at the local, regional and national levels for almost a decade (until the 2013 parliamentary election). Politicians and local authority officials involved in the Trondheim Package emphasised this constellation as central to both funding and the formulation of PP goals. Thus, Trondheim has served as a governmental showcase for integrated land-use and transport policy. This was not the case before the Trondheim Package was created. A municipal note of 2008 reveals both a local concern over low prospects for state funding and national authorities’ requirements for a sustainability shift in policy if National Transport Plan resources were to be granted (Municipality of Trondheim, 2008b).

The Trondheim Package must thus be seen in light of this governmental signal concerning what action to undertake locally.

Meta-governance by national authorities is also conducted through Reward Programme requirements. Thus, a mobilising factor is policymakers in Trondheim seeking to prove themselves worthy of government funding (the National Transport Plan and Reward Programme). In line with van der Doelen (1998), therefore, governmental financing is found to legitimise local-level policy. As one municipal officer stated, highlighting the strong involvement of national authorities, 'It is the state and state measures which are now developing Trondheim' (Municipal officer no. 3, Trondheim). However, according to a city-centre business actor in Trondheim, the governmental steering is too strong:

Many of the decisions made here in Trondheim are controlled by the government, through the Reward Programme grants. One must this and that, it is almost a checklist. (...) The Reward Programme grants contribute in dictating things that are not good for Trondheim. (City-centre business actor no. 1, Trondheim)

One concern is that car restrictions are implemented for the city centre but not outlying shopping malls. When shopping in the city centre is one way to reduce car use, it is a paradox that car-regulative measures are generally only found there. This supports the need to balance parking regulation between different areas of the city, as suggested by Marshall (1999). For both cities studied here, this is a difficult and unresolved issue.

The Trondheim case exemplifies local–national interaction, where the latter set requirements for local planning, but also provide grants to realise them (cf. Aall et al., 2007). Hence, leading politicians and public officials in Trondheim have a means for countering arguments against CUR measures to be included in the PP. This is not equally the case for the Bodø Package. The 26% state resources in the Trondheim Package versus 10% in the Bodø Package influence the integration of CUR in the PPs. Stronger state engagement in the Trondheim Package supports local authorities to include tougher regulative CUR measures. It also allows for a higher share of the total policy-package budget used for other purposes than road building. In contrast, the point of departure for decision makers in Bodø is to build legitimacy for a PP largely financed by car users through toll-roads and with little state funding. This has resulted in weaker strategies to reduce car usage. Although there are CUR measures in the Bodø Package, a structured approach to CUR has not been planned. Instead, relatively uncontroversial, or what Bulkeley (2010) calls 'no regret measures' have been chosen.

The integration of the Bodø Package with national authorities over CUR is also weaker with respect to established governance arenas for interaction. First, the difference in local–national linkage is seen in the top level of the public roads administration being involved in the Trondheim Package, while it is their regional

division which participates in the Bodø Package. Second, Bodø is excluded from both the Reward Programme and the national learning network Cities of Tomorrow. While grants from the Reward Programme only provide a fraction of the resources used in transport-infrastructure investments, and Cities of Tomorrow involves practically no funding, this organising gives insight into how national authorities approach CUR; it follows a logic of emphasising the largest cities. This implies that Bodø is among the largest Norwegian cities to be excluded from two strategic governmental arrangements targeting CUR. This lack of inclusion has created both frustration and bewilderment in Bodø, as illustrated by this municipal officer:

For some reason, Bodø has fallen outside both the Cities of Tomorrow programme and other support schemes [like the Reward Programme]. We really do not know why. Maybe we are to serve as a reference [to the cities involved in the governmental programmes]? (Municipal officer no. 2, Bodø)

It is a far reach for local actors in Bodø to change the structure of such governmental programmes. Therefore, the lack of access illustrates a contextual factor influencing the implementation of policy measures (cf. Rist, 1998, Sørensen et al., 2014). Put another way, the described contextual conditions helps to explain why CUR policy is integrated differently in the two PPs.

9. Conclusion

Offering a way to combine different policy measures and addressing multiple objectives, PPs are suggested structures for harmonising land-use and transport-system development. This paper has responded to a call for research on PP implementation (Givoni 2014). In line with the multilevel-governance perspective, it is emphasised how local-level CUR policy involves the influence of processes on other scales (cf. Bulkeley, 2010). While studies on practical challenges for urban sustainability have provided important insights, research cannot be reduced to presentations of wish-lists of measures to be introduced (Bulkeley and Betsill, 2005). Therefore, the aim of this paper was to elaborate on how state engagement influences the integration of CUR policy in local-level PPs.

From the outset, both PPs studied in this paper faced the challenge of avoiding contradictions between policy goals. This is evident in the inclusion of CUR goals and the simultaneous targeting of traffic efficiency through road-infrastructure building. Both also provide examples of pressure on established urban-densification strategies by development allowed on the city outskirts. As such, the two PPs illustrate local authorities seeking to balance CUR with other goals, needs and considerations in urban politics and planning.

While the two PPs reveal ambivalence about whether to facilitate or restrict car usage, the strategies intended to mitigate the effects of road building are stronger in Trondheim, both in monetary and regulatory terms. In analysing this, different levels of state engagement in relation to the two PPs were emphasised. The greater

governmental financing for Trondheim allowed for a higher share of resources for other purposes than road building and the use of tougher regulative measures. In contrast, the point of departure for decision makers in Bodø was to build legitimacy for a PP largely financed by car users through toll-road payment, with little state funding. The weaker CUR strategies in the Bodø Package reflect this.

When seeking to understand local CUR policy, it is important to grasp not only the formal powers of local authority, but also whether they are equipped with necessary resources and instruments to carry out their tasks. How national authorities engage in local-level CUR policy, both financially and institutionally, is important. The Norwegian state involvement in local CUR policy is different across cities, with prominence placed on the larger ones. Thus, national authorities have delegated the clearest responsibility to reduce car use to the larger city in this study. It is not rare for national schemes for climate-friendly transport to be more adapted to larger cities (see e.g. Shaw et al., 2009). The focus in this paper has not been on the effects of concentrating governmental resources and management efforts for CUR in the largest cities or to distribute to a wider range of cities respectively. Instead, the study showed how the state engages differently in local PPs and that CUR policy was most integrated where the strongest cooperation between the local and national levels was found.

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10 Article #2

11 Article #3

Urban entrepreneurialism and car-use reduction

Abstract

In this paper a study of relationships between car-use reduction and urban entrepreneurialism is presented. Using the Norwegian cities Drammen and Porsgrunn as empirical cases, local strategies and public–private negotiations concerning retail trade are analysed. Retail-trade regulation involves environmental concerns, as the concentration of shopping in city-centres is one way to reduce car usage. The aim of the paper is to highlight dilemmas of local decision makers seeking to balance policy for car-use reduction whilst pursuing urban economic growth. The analysis pointed to the scales of governance operating in and around cities, including both public and private actors across municipalities. Further, the article shows how urban-system differences between the two case cities influence policy for car-use reduction. Here, both the different distance of the two case cities to the capital city and their different position within the closer region were found to be important. It is concluded that spatial theorising research, involving analysis of inter-municipal competition over retail-trade, inhabitants and investments, provides important insights to urban policy and practice.

Keywords: entrepreneurialism; car-use reduction; retail trade; urban governance; urban planning

1. Introduction

This paper highlights two contemporary developments influencing urban planning and decision making. These are the attention to the growth in greenhouse gas (GHG) emissions from transport and the emergence of growth-oriented styles of urban governance. Using two mid-sized Norwegian cities as cases, Drammen and Porsgrunn, these developments are studied in conjunction.

Cities have long been identified as important arenas for environmental politics, from Local Agenda 21 in the 1990s to recent European Union initiatives (e.g. European Environment Agency, 2013). Still, changes within urban transport have proven difficult. Cities are also an arena for municipal entrepreneurialism, involving new governance forms and strategies to facilitate economic growth. The entrepreneurial shift has been studied from a variety of angles, but linkages between strategies for car-use reduction (CUR) and entrepreneurialism are understudied.

The aim of this paper is to analyse how local authorities seek to balance car-use reduction and economic demands. Given that the concentration of people, workplaces and facilities in central areas is one way to obtain CUR (e.g. Næss, 2006), city-centre policy is highly relevant to the topic of this paper. In particular

local strategies and public–private negotiations concerning retail trade are highlighted. The following concrete issues are emphasised: 1. decisions and negotiations concerning the location of retail trade, 2. parking regulations in the city centre and at outlying shopping malls, and 3. the degree to which densification strategies and urban-core regeneration are used to strengthen city centre trade. Relationships between environmental strategies and those of urban economic growth surface in a broader range of issues; nevertheless, the scope is narrowed to retail trade from its applicability in showing the spatial dimension of CUR policies.

The urban focus in sustainability issues relates to the Post-Fordist crisis of social regulation (Gibbs & Jonas, 2000), with Fordism being linked to urban sprawl and unsustainable patterns of transport. The Post-Fordist restructuring is also characterised by a rescaling of the state, with enhanced governance roles at local and regional levels (Macleod & Goodwin, 1999). This state restructuring coincides with the globalisation of the economy and investment flows. With economic activities less restricted by distance, cities are increasingly treated as commodities (McCarthy, 1998). Hence, a quest for new sources of economic development arises, with cities set as key economic units for national competitiveness (Ward, 2003a).

There is tension in the hyper-mobility of capital, communications technologies and forms of consumption on the one side, and local dependent actors on the other (Gibbs & Jonas, 2000). Capital is mobile; cities are not. However, the capacity to pin down global processes in *place*, for example to attract capital investments to a city, is influenced by a series of local social, cultural and institutional forms and supports, as emphasised in the *institutional thickness perspective* (Macleod & Goodwin, 1999). Local dependent actors include retail-shop owners, landlords and estate developers, which typically encourage local authorities to promote economic development and attract investments. As will be shown through the two empirical cases, private actors' demands may conflict with municipal CUR goals.

2. Literature review

2.1 *Car-use reduction*

CUR policy targets the reduction of GHG from transport. This represents a complex policy field, as both public and private actors' decisions influence transport patterns (e.g. state agencies, municipalities, county authorities, shopping-mall representatives and public-transport operators). Moreover, a wide set of measures must be combined. To Gross, Heptonstall, Anable and Greenacre (2009), it is a combined approach where policy targets a shift away from car usage and the development of cars with lower emissions that can bring about transport decarbonisation.

Compact-city development, a concept with clear roots in Jacobs' (1961) influential work, is emphasised as a model for CUR. Here, connections between

land use and emissions from transport are acknowledged (Banister, 2008; Hull, 2011; Næss, 2006). Car use increases with longer travel distances and public-transport scarcity. Contrary, shorter distances to the city centre result in shorter car trips and greater use of walking, cycling and public transport. Thus, locating businesses in central areas may minimise transport demands and car dependency. However, to reduce car use, land-use policy needs to be combined with wider strategies. Tennøy (2012) recommends the following:

- (1) Imposing or encouraging urban densification rather than sprawl, and locating new structures in a car-independent fashion;
- (2) Imposing physical and fiscal restrictions on motorised traffic;
- (3) Improving public transport services; and
- (4) Improving conditions for walking and bicycling.

In this paper, strategies 1 and 2 will be focused on. These involve among others urban densification and local authorities' regulation of shopping on the outskirts. It also involves parking regulation in the city centre and at outlying malls: Depending on design, parking schemes can lower transport emissions or have the opposite effect (Marsden, 2006). This highlights the relatedness of parking access and prices throughout the urban area. A strict parking regime in the city centre combined with free parking at outlying malls may result in customers preferring shopping on the outskirts. Similarly, if the city centre has good access and low-cost parking, people may use cars for daily purposes instead of walking, cycling or using public transport.

2.2 *The entrepreneurial shift in urban politics*

In 1989 David Harvey (1989) argued that a shift in urban governments had occurred, making them more innovative, risk taking and market oriented. Such entrepreneurialism implies public sectors running cities business-like (Swyngedouw, Moulaert & Rodriguez, 2002), with local authorities trying "to attract inward investment whilst attempting to maintain other areas of social service provision" (Biddulph, 2011, p.64). This orientation of policy is also referred to as *new urban politics* or *politics of growth*. With rising urban competition for resources urban policy is reformulated to achieve economic competitiveness (Dannestam, 2008). This makes relevant the notion of *inter-urban competition*, where strategies are set to promote economic competitiveness of "own city" vis-à-vis other localities (Jessop & Sum, 2000). Competition between municipalities arises over qualified labour, government financing, private investments and over retail-trade customers.

With large-scale economic processes rapidly changing, cities have tried to carve out a niche within a new division of labour, production, consumption and political transformations (Swyngedouw et al., 2002). While such policies have been a response to deindustrialisation, particularly in Western cities, they are not limited to these cities. Economic development centres on concentrations of people in real

places (Florida, 2003). Thus, place qualities (regardless of industrial background) influence the attractiveness of cities as sites for work, living and investment.

Another characteristic of municipal entrepreneurialism is the centrality of the built environment. Once a by-product of economic development, Biddulph (2011) claims, a high-quality built environment is now a prerequisite. Examples are waterfront projects, city-centre regeneration and brownfield developments for prestige office uses, dwellings, consumption and recreation. Entrepreneurialism is also characterised by the “talking up” of cities (Jessop & Sum, 2000). Examples are projections of a distinct city identity, often applied in cities with image problems (McCarty, 1998). Environmental qualities may be part of this, but as Luccarelli and Røe (2013) note, some aspects of green urbanism may be promoted (like designed parks), while less marketable attributes (like GHG emissions) are downplayed. While, Jonas and Gibbs (2004,) describe this as the “selective incorporation of ecological goals in the greening of urban governance” (p. 551), drawing attention to the dilemmas and compromises involved.

To describe urban regeneration, the multiple agents and fragmentation of responsibility must be recognised. In some cases, Swyngedouw et al. (2002) claim, this trend is linked to a shift from hierarchical relationships to a scheme where partnerships and elite networks play key roles. Ward (2003b) describes this as the emerging influence of unelected decision makers. The issue of power relations between public and private actors is therefore relevant in questions of CUR.

New urban alliances have resulted in a range of research perspectives, such as the *urban regime*, the *urban growth machine* and the *governing coalition* approaches (Macleod & Goodwin, 1999). Here focusing on the urban regime, this describes a dominant private-public constellation. It can be defined as “the informal arrangements by which public bodies and private interests function together (...) to make and carry out governing decisions” (Stone, 1989, p. 6). Hence, *regime theory* provides a way of analysing the groups involved in policymaking (Gibbs & Jonas, 2000). Although local government institutions have formal responsibilities, Stone (1989) claims, they lack resources and authority without active cooperation with significant private interests. Of Stone’s (1993) four regime types, *development regime* is the most relevant to this paper³⁶. Linking private investment to public action, these regimes are primarily concerned with changing use of land to promote economic growth.

2.3 *Car-use reduction and entrepreneurialism combined*

To Jessop (1998) cities organised around integrated transport and sustainable development represent entrepreneurial innovation. In such a perspective, local authorities’ prioritisation of development close to the city centre may give

³⁶ The others are maintenance regimes, middle-class progressive regimes and regimes devoted to lower-class opportunity expansion.

supportive effects between CUR and entrepreneurialism: GHG emissions are reduced when urban sprawl is avoided, and enterprises and customers remain in the city centre. However, beyond taller buildings and city-centre densification, estate developers may seek to move to peripheral areas with cheap, abundant land. For such reasons establishment of shopping malls at the urban fringe is attractive. With new urban politics largely premised on softening environmental regulations to attract investments (Jonas, Gibbs, & While, 2011), land-use policies may weaken and allow for development on the outskirts.

To Healey (1999) new forms of governance frequently lead to a collapse of urban planning into design and project-driven developments. Such designed-based planning, Swyngedouw et al. (2002) claim, is basically fragmented. Public–private structures of cooperation thus pose a potential threat to the integrated policy solutions required for CUR. However, local authorities may also have a leading role in entrepreneurial processes, as illustrated by the urban-regeneration process in Rotterdam (McCarthy, 1998).

Several researchers have addressed economy–environment relations specifically. To Gibbs (1997), the entrepreneurial city prioritises “inward investments, property development and job creation over environmental targets” (p. 205). Similarly, Lombardi, Porter, Barber and Rogers (2011) claim that city governments with growth agendas have failed to deliver substantial environmental benefits. In this perspective CUR policy may work when in line with wider economic considerations of cities, but is likely to suffer otherwise (Marshall, 1999).

From a *multilevel-governance perspective*, Bulkeley and Betsill (2005) emphasise the need to step beyond the local to explain whether steps are being taken towards sustainability. Here, analyses of local agency would involve influence at higher geographical levels (Hodson & Marvin, 2010). Inter-urban competition influencing parking policy illustrates this. A city with strict parking regulations may fear losing customers to neighbouring cities with weaker ones, thereby damaging urban vitality (Marsden, 2006). Hence, multilevel governance highlights not only the governance levels involved in urban policy, but also the many (public and private) actors operating across them (Betsill & Bulkeley, 2006).

There are also researchers emphasising potential positive economy–environment relations. To While et al. (2004), urban entrepreneurialism might depend on the active remaking of urban environments and ecologies. However, sustainability involves more than “light green” policy actions, they state, fearing that “quality of life projects” may neutralise wider issues like GHG emissions. More recently, these authors (Jonas et al., 2011) have described a path to change as new urban politics involving *carbon control*. This implies growing attention to carbon control in discourses, strategies and struggles around urban development and place promotion (Jonas et al., 2011). Dierwechter and Wessells (2013) see this as a switch from the broad goal of urban sustainability to the more instrumental goal of carbon control. An explanation of carbon control’s emergence might be its resonance with the logic of new urban politics, where quantitative emission estimates are applied

as an asset in urban competition (Jonas et al., 2011). However, while Bulkeley (2010) finds the carbon-control perspective intriguing, she also notes few signs of it so far having become widespread.

The literature review shows that the challenge of balancing environmental and economic concerns in urban development has been broadly addressed. Nevertheless, empirical studies of the relationships between CUR and urban entrepreneurialism are needed.

3. Methodology and context description

The paper is based on in-depth studies of urban-development processes in Drammen and Porsgrunn (Figure 1), two mid-sized Norwegian cities with an industrial background. It responds to the need for more empirical studies of entrepreneurialism in smaller (Löfgren, 2000) and Scandinavian cities (Dannestam, 2008). One would not expect to find the entrepreneurialism of large European cities for two reasons. First, in Norwegian urban systems, agglomerations and hierarchies exist on a much smaller scale (Dale, Selstad & Sjøholt, 2002). Second, the presence of a strong welfare state represents a distinct characteristic of the Scandinavian countries. However, while “local governments in Scandinavia are still involved in delivering welfare, many of them now seem to be concerned with entrepreneurial city politics as well” (Dannestam, 2008, p. 335).

As an oil-producer Norway is in a good economic position, with high prices in the world market over time. Compared to other European countries, high unemployment rates have thus not occurred in the wake of the 2008 financial crisis. Still, there are strains in municipal economy. In 2003 a White Paper on public administration found an emerging discrepancy between imposed municipal tasks and economic resources to implement them (Ministry of Labour and Administration, 2003). More recently, statistics have shown that the long-term debt of Norwegian municipalities increases in line with their income, as do their obligations in relation to pension services (Statistics Norway, 2014). These characteristics are important when talking about entrepreneurialism in a Norwegian context.



Figure 1. Location of Drammen, Porsgrunn and the capital city Oslo (*Source: The Norwegian Mapping Authority*)

The two case cities share some characteristics, but are distinct along other dimensions. They share a history of having faced environmental crisis. Drammen's main challenge related to city-centre traffic overload, while that of Porsgrunn related to industrial pollution. In both cases this resulted in a poor reputation among outsiders, which is important background knowledge to understand their present urban policy. Another shared characteristic is that both cities participate in regional governance networks targeting land-use and transport-system development. However, while sharing some historical traits and institutional characteristics, they are distinct in their spatial context. Drammen is located in the larger region of the capital city Oslo, with Porsgrunn situated more peripherally (Figure 1). Moreover, Porsgrunn is located close the city of Skien; the two exemplify conurbation cities (cities growing together; Dale et al., 2002). The municipalities near Drammen are much smaller. These differences were believed to influence local policy for retail trade and enable case comparison. Urban-system differences between Drammen and Porsgrunn thereby form the basis for case selection.

3.1 Data sources

This study follows a qualitative research design, with support from national statistics. The primary data source is 26 semi-structured interviews in large carried out in 2011 (see Appendix 1). Informants were mainly selected due to their involvement in the urban-development processes under study. They included municipal officers (planners, advisors and urban-development directors), leading politicians and public-transport actors. Similar types of informants were pursued for both cities, but the selection was not identical due to differences in governance structure. To secure a regional perspective, one county representative and one public official from a neighbouring municipality were interviewed for each city. Representatives of business organisations and representatives of city-centre shopping malls were also included. These illustrate a middle position, as actors partly involved in the policy discussions. Two youth representatives were interviewed, included due to their position as outsiders.

A second data source was text analysis. Municipal plans, hearing letters, public notes and theme reports provided insights into environmental and economic development policies, as well as local perceptions of challenges and opportunities. Valuable information was found in research and consultant reports, while policy agreements gave information on the regional partners and national authorities involved. Perspectives of national authorities were further examined through governmental legislative and advisory documents, highlighting goals and meta-governance strategies. Finally, local newspaper articles elucidated debates on urban development and transport.

3.2 The policy context

Cautious land-use planning has long been emphasised in Norway as a means to reach national climate goals. One dimension of this is policy seeking to reduce car-based shopping on the outskirts of cities. This resulted in the “shopping-centre stop” regulation from 1999 to 2004, aiming to prevent new establishments outside cities. However, car-based shopping is still steadily growing, as documented in a study showing decreasing trade shares for city centres in all larger cities in Norway (Haagensen, 2012).

Norway is among the European countries with most tasks devolved to municipalities (Ministry of Local Government and Modernisation, 2014). Among these is the responsibility for land use, implying that national environmental ambitions depend on the implementation of local strategies. Among the supplementary strategies to enhance consistency across levels, is national authorities emphasising land use-and transport-system development to be arranged through governance networks. This involves coordinating a range of policy measures and key actors in larger urban regions. Networks showing strong efforts to reach climate goals increase the likelihood of receiving governmental financing

(Ministry of Transport, 2009). Financing may come from the *National Transport Plan* (which prioritises Norwegian transport projects), or from the *Reward Programme* (which provides disbursements for networks showing CUR efforts locally).

In Drammen, the governance network started formally in 2010, with a working agreement between five municipalities, the county authority and three state agencies. The parties then also signed a Reward Programme agreement with national authorities worth 35 million Euro. In Porsgrunn, a cooperative, preparatory governance network was established in 2009 between four municipalities, the county authority and two state agencies. When the cooperation was further formalised in 2013, 26 million Euro were granted via the Reward Programme³⁷.

4. Empirical results

4.1 Drammen

With a population of 66,500, *Drammen* is located 45 km southwest of Oslo (Table 1). It is the most populated in a region of five municipalities with a total population of 160,000. In a Norwegian context, Drammen has experienced relatively high population growth over the last decade (Statistics Norway, 2013a). This relates to it being part of the larger region of Oslo and its job market. Drammen is thus a type of city attracting people and businesses because of its location close to a major city (cf. Hall, 2005). Over the last decade, unemployment has been low and relatively stable (Statistics Norway, 2013b). The geographical closeness to Oslo is also reflected in the transport infrastructure, with Drammen connected by well-developed rail and motorway systems. In terms of politics a conservative party has been in charge for the past decade.

Table 1. Demographic characteristics

	Population size 2013	Population growth 2003–13 (%)
Drammen	65,500	16
Porsgrunn	35,400	7

Source: Statistics Norway, 2013a

Cellulose and paper production characterised industry until the 1970s–1980s. After their decline, logistics businesses emerged. Together with the effects of two important national roads going through the city, the scattered storage facilities of these businesses created city-centre congestion and pollution. Finally, heavy contamination of the by-passing river, where sewage and paper-industry waste were dumped, contributed negatively to the city’s attractiveness. Drammen became a national reference town for everything ugly and depressing (Carlsson, 2001). This interfered with private actors’ willingness to invest in the city, as illustrated by this

³⁷ At this point, one municipality (Bamle) chose not to participate.

quote: “There was no will to invest. The Yuppie area never came to Drammen”. (Municipal officer no. 1, Drammen)

Several factors were important in the following urban transition, among these the willingness of national authorities’ to engage. In the mid-1980s the Ministry of Environment threatened Drammen with fines if sewage-system improvements were not made. However, they also financially supported an intervention in partnership with the municipal and county authorities. Further, a road restructuration scheme, co-financed with national authorities, redirected much of the through-traffic underground and away from the urban core. While the new road system did not reduce car use, it provided opportunities to develop the city centre. How public and private actors grabbed these opportunities highlight Drammen as an example of positive urban development in a Norwegian context.

4.2 Drammen’s city-centre policy

With dramatically reduced city-centre traffic, improved river-water quality and abundant brownfield areas available for regeneration, a range of prospects surfaced. In accordance with the entrepreneurial ethos of attracting inward investments, local authorities strongly emphasised their role as facilitators for private investments. A core component has been to upgrade and maintain public space to attract private actors (Municipality of Drammen, 2007). This was done after a call from business and estate developers for the municipality to take a lead and invest in the city centre. As explained by a municipal officer: When private investors can predict a return for their investment, they “choose to invest in Drammen rather than somewhere else” (Municipal officer no. 2, Drammen). The transition of Drammen is thus characterised by local authorities, estate developers and city-centre business representatives working together to increase the attractiveness of the urban core.

A goal for local authorities has been to develop the city centre with an integration of environmental and economic concerns:

We want to increase city-centre density and use the major bulk of resources to develop the centre and thereby contribute to its vitality. More people living and working in the city centre helps to do something with the transport patterns. (Municipal officer no. 3, Drammen)

A positive relationship between CUR and entrepreneurialism thus surfaces, with an attractive city centre seen as a first step towards CUR:

Drammen has become attractive, but not sustainable. However, being attractive is a very good point of departure for becoming sustainable. Without an attractive city centre, and an attractive area around the public transport nodes, no one will be inspired to invest. (Municipal officer, Drammen no. 1)

Dwellings, enterprise buildings, a public library and a university college have been built close to the city centre, and a densification tendency is shown in statistics (Figure 2). Other key signifiers include the rehabilitation of the city centre square, a spectacular walking and cycling bridge across the river and new recreational areas alongside it, all cementing the position of the city core in the development strategy.

In addition large branding strategies were launched wherein a public–private cooperation called *Our City Drammen* was central³⁸. City-centre festivals and arrangements, such as the cross-country world-cup arrangements in the very city centre, became important activities. Lastly, a range of place-marketing campaigns were launched, among these a promotional video distributed to people in the Oslo region, and advertisements in national newspapers and on TV.

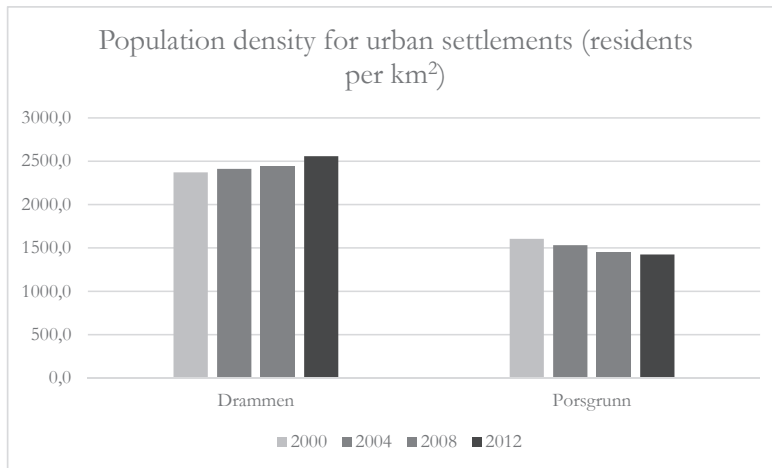


Figure 2. Inhabitants in urban settlements (Source: Statistics Norway, 2013c)

Though characterised by collective action to alleviate the negative reputation and transport burdens, the urban transition of Drammen has not been without political struggle. Initially there was strong debate between conservatives and socialists concerning resources for urban development in light of other welfare needs (e.g. schools and kindergartens). Still, politicians ended up supporting the regeneration strategy, partly because of a perceived need for “more people with larger tax capacity in the city” (Municipal officer no. 2, Drammen).

4.3 Drammen’s retail landscape

City-centre vitality is not only influenced by physical upgrading, festivals and events, but also by competition from other shopping localities. The pressure from car-based shopping malls is indicated by the declining sales in Drammen’s city centre (Figure 3).

³⁸ City-centre landlords, city-centre business actors together own 67.1% , the municipality 32.9%.

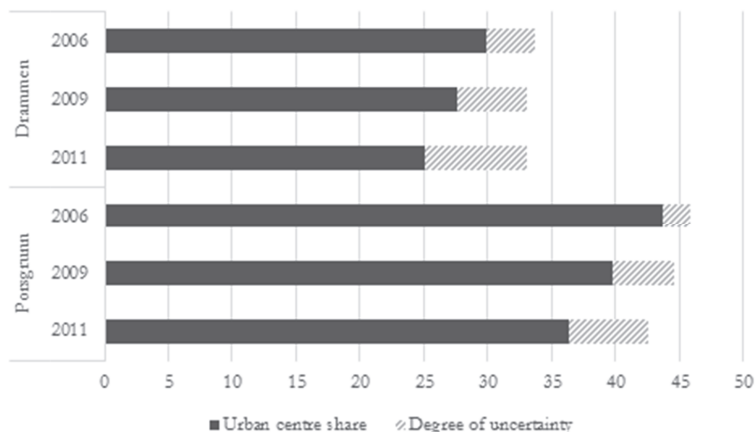


Figure 3. The urban centre share of total sales within the municipality (Source: Haagensen, 2012)³⁹

Given this situation it is politically demanding to put restrictions on parking in the city centre to reduce car usage. While Drammen has increased the cost of parking somewhat, negotiations between landlords and city-centre shop owners on one hand and local authorities on the other are constant. Our City Drammen works as a mediating channel, informing local authorities on the need for car access in the city centre and local business on the need for controlling traffic volumes. For this reason Our City Drammen is considered to be important in the urban regime in Drammen. A higher-level business organisation has also been deeply involved, stating: “We are invited to the table in all processes that may be important for the business community” (Business organisation representative no. 1, Drammen).

Drammen’s land-use regulations to steer new establishment or expansion of retail-trade locations are in the Norwegian context considered to be strong (Tennøy, Loftsgarden, Hansen, & Strand, 2010). In the mid-2000s, this resulted in the rejection of an estate-development project on the outskirts (Figure 4). The project, which included a shopping mall, was seen as a direct threat to city-centre trade. When the same developer proposed a new project for this location in 2013, the shopping mall had been considerably downscaled, with more emphasis on residential dwellings.

³⁹ The urban centre share is within the shaded area of the column. The size of this area indicates the degree of uncertainty.

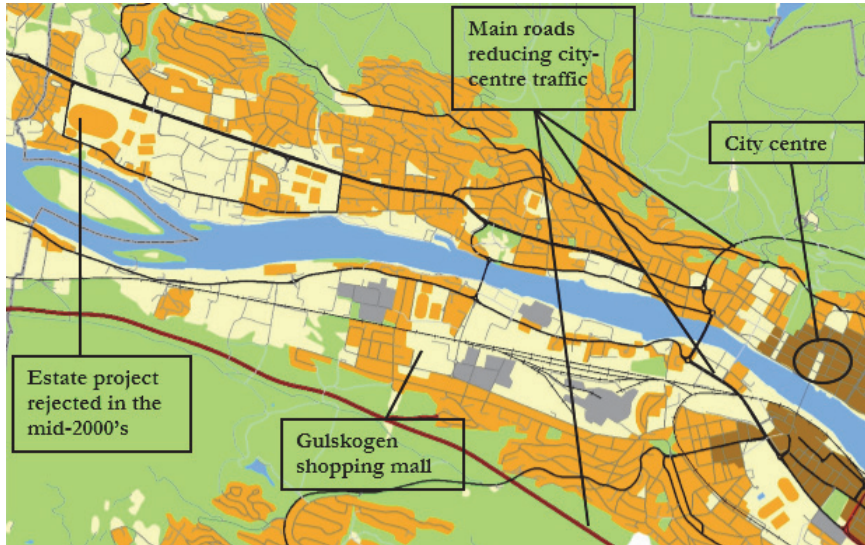


Figure 4. The Drammen area (*Source: Norwegian Mapping Authority*)

Local authorities' willingness to steer is also visible in relation to an extension of a shopping mall called Gulskogen (Figure 4). Offering abundant access to free parking on the outskirts, it is a major competitor to city-centre trade. When the extension turned out to be greater than expected, local authorities demanded changes and threatened with fines (Municipality of Drammen, 2012a). This illustrates the municipality's intent to protect the city centre from competition with car-based shopping malls. It nevertheless also illustrates the challenge in steering real-estate (and land-use) development. The case has circulated in the system for years, with different tiers of government involved; a solution is yet to be found.

There is also a regional dimension to retail trade. Despite holding the county's main city, the municipality of Drammen only has 28,3%⁴⁰ of the retail trade in the county⁴¹. Thus shopping malls in neighbouring municipalities represent a threat to the city centre of Drammen. Two outlying malls are particularly relevant, one to the east and one to the north-west; both offering extensive shopping facilities and free parking. To local authorities, they exemplify why regional coordination is necessary:

[W]e are affected by the surroundings and societal actors, who we depend on interacting with (...). It doesn't help if we in Drammen try to change land-use policies, strengthen the city centre, reject [outlying] shopping malls, bring about more densification, transformation, changed patterns of transport, if we are not in

⁴⁰ In comparison, Trondheim, a city with a more dominant position within its region, has a share of 67%.

⁴¹ Unpublished 2012 numbers, purchased from Statistics Norway.

a regional context that wants the same. Then we will simply be ousted. (Municipal officer no. 3, Drammen)

This spatial complexity, influencing both economic and environmental goals, is one reason why Drammen has entered the regional governance network working on land use and transport.

4.4 *Porsgrunn*

Porsgrunn is located 140 km south-west of Oslo and has a population of 35,400 (Table 1). With neighbouring city Skien, it is part of a larger urban system. As only 8 km separate the two city centres, they constitute a ribbon-town structure, one of few Norwegian examples of conurbation (Dale et al., 2002). With a total population of 87,000, the two cities share job and housing markets.

Porsgrunn and Skien have relatively low population growth (Statistics Norway, 2013a). The multiple and complex reasons for this include their distance to Oslo. Compared to Drammen they are therefore less part of the capital-area job market. This access is also hampered by the relatively poor railway connection between Porsgrunn and Oslo⁴².

The chemical and porcelain industries have been important in Porsgrunn. This industrial basis is reflected in the political landscape, with social democrats traditionally and presently holding a strong position. The region is vulnerable to cost demands within industry, but new employment have been created following industrial restructuring. Since 2000, the level of unemployment has been relatively stable (Statistics Norway, 2013b). However, recent years there has been worry concerning job loss through a gradually closing down at one plant.

Increasing attention to the environmental consequences of industrial production over the last decades has resulted in a negative perception of the Porsgrunn region among outsiders. Later years improvements have been made locally, with reduced environmental toxins and GHG emissions. However, local-level decision makers recognize that more efforts are needed, as some of Norway's most polluting industrial emissions to air are still found in the region (Climate Cut Grenland, 2010). The persistent tension between economic and environmental concerns poses a challenge:

[W]e used to say, "when there is smoke from Hydro [a main industrial plant], we make money" (...). Still there are many proclaiming that production has a higher priority than environmental concerns. (Business organisation representative no. 1, Porsgrunn)

⁴² In 2011, after decades of political pressure, national authorities granted financing to improve this connection.

4.5 Porsgrunn's city-centre policy

Porsgrunn has no typical mid-town, but rather a city centre stretching along the riverside (Figure 5). Recently, local authorities have targeted regeneration and increased residential housing in the urban centre (Municipality of Porsgrunn, 2008). A local estate developer emphasised their shared interest with local authorities in developing the city centre:

[I]f you are to make a city work, you need dwellings in the city centre. (...) In relation to the projects we have, we are definitely supportive towards the densification policy. (Estate developer no. 1, Porsgrunn)

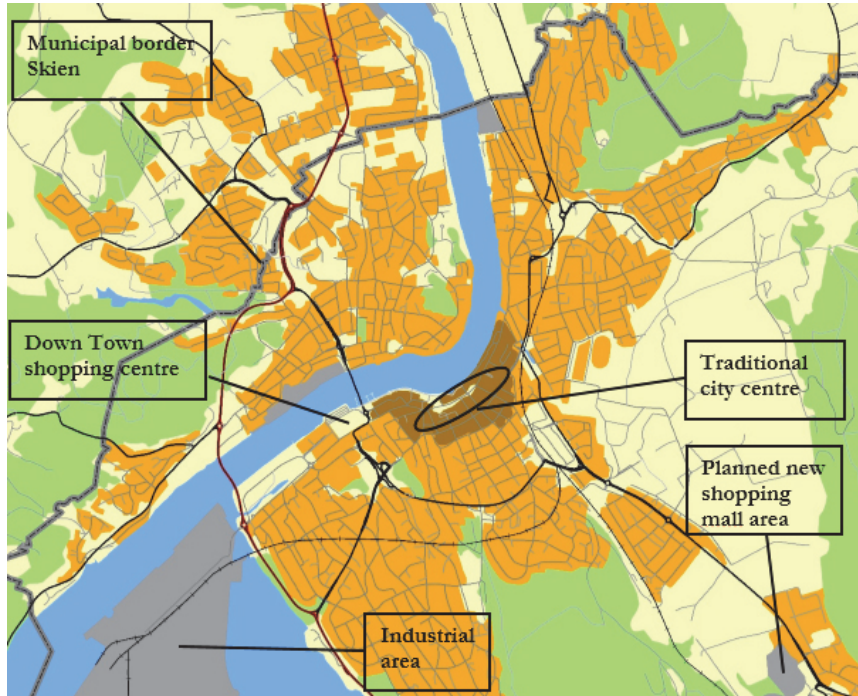


Figure 5. The Porsgrunn area (Source: Norwegian Mapping Authority)

Environmental improvements have helped to mobilise such investors. With the river being cleaned up, a large housing project in the city centre has been built, creating a new area for consumption and recreation. Nevertheless, overall statistics indicate a sprawling tendency in the municipality (Figure 2)⁴³. Naturally, there will be a time lag in translating new land-use strategies into practice, among others since building processes may be lengthy. According to local authorities, however, a gap between goals and reality also exists due to the single-unit housing on the outskirts (Bystrategi Grenland, 2013).

⁴³ If looking solely at changes in number of city-centre dwellers recent years, Porsgrunn performs well compared to other large Norwegian cities (Statistics Norway, 2013d).

4.6 *Porsgrunn's retail landscape*

At one end of Porsgrunn's city centre is a large shopping mall called Down Town (Figure 5). Its central location is one likely reason why much of the trade within the municipality takes place in the city centre. However, as for Drammen, this city-centre share is decreasing (Figure 3). On this background the city-centre organisation of Porsgrunn (representing shop owners and landlords) has called for municipal planning strategies which more strongly emphasise new trade to be located close to the city centre (My City Porsgrunn, 2013).

Down Town illustrates central-city location of retail trade. However, its dominant position in the city centre has also created some tensions: As shoppers are drawn towards it, the traditional city centre becomes less attractive. Viewing car accessibility as a key to avoid further loss of trade, small-scale retailers and landlords in the traditional city centre have fiercely resisted municipal suggestions of stricter parking regulations. Because, while the municipality can impose restrictions on lots under their control, they cannot on privately owned lots at Down Town. Balancing environmental and economic concerns therefore poses a strong challenge for local authorities. Reflecting on the difficult political task of increasing parking fees in the city centre, a municipal officer commented, "You've got to have a strong backbone (...) to pass what later may result in the death of shops" (Municipal officer no. 1, Porsgrunn).

Institutional structures for cooperation with this segment of city-centre business appear relatively weak. In comparison cooperation is stronger between the municipality and Down Town representatives. In a new project, the mall is to be extended and new dwellings and recreational areas built in its vicinity. Given the centrality of this project, this cooperation is here treated as Porsgrunn's urban regime. While in line with densification strategies, the project has been criticised by the political opposition for substantiating the spatial stretching of the city centre (Rennestraum, 2014). Thus, CUR policy has to be managed in a complex situation of a city centre "on the move", with control over parking shared between public and private actors. These dynamics are involved in keeping parking restrictions low.

In the regional perspective Porsgrunn accounts for 20.8% of the county's trade⁴⁴. One explanation for the relatively low share is that the municipal border of Skien is much closer to the city centre of Porsgrunn than that of Skien (Figure 5). Hence, just outside Porsgrunn's city centre, shopping facilities of the neighbouring municipality attract retail customers. Also a large shopping mall closer to Skien's city centre contributes in this regard. The following quote illustrates the spatial complexity hindering CUR policy:

⁴⁴ Unpublished 2012 numbers, purchased from Statistics Norway.

It is very difficult (...) when you have two close cities (...). Everyone is afraid of losing jobs and customers. No-one dares to be first [to impose stricter parking arrangements]. (Municipal officer no.2, Porsgrunn)

One initiative to overcome this deadlock is regional network cooperation, in which both Porsgrunn and Skien participate. Still, it is hard for local authorities to reject investment opportunities. Hence, despite the relatively strong municipal land-use strategies for retail trade (Tennøy et al., 2010), Porsgrunn has recently sanctioned a new large shopping area outside the city (Figure 5). Recognising the municipal efforts in winning the inter-municipal competition over the bid, one developer commented, "I praise Porsgrunn municipality for their dedication" (Nordahl, 2011). The municipality has thus played an important facilitating role, motivated amongst other things by the jobs the investment would create. However, the shopping area is intended to draw customers from a wide region (Nordahl, 2011). Hence, it is likely to increase traffic volumes and conflict with municipal CUR goals.

5. Discussion and analysis

The two cases fit well with other examples of industrial cities' strategies in Post-Fordist restructuring. Facing environmental crises from industrial production, and in one case (Drammen) city-centre traffic, urban managers have targeted living conditions and city image as key issues. In line with competitive styles of governance, both cities seek to attract inward investments and increase the economic value of urban space (While et al., 2004). Involvement of entrepreneurialism in the city-centre strategies of Drammen and Porsgrunn, is, however, distinct. In Drammen, city-centre revitalisation has been a hegemonic project and the political answer to past challenges. The negative experiences of traffic overload and stagnation in the city centre has led to careful city-centre management. In comparison, Porsgrunn's environmental crisis of the past more involves emissions from industrial production, providing a weaker linkage to present city-centre policy.

Given that the concentration of people, workplaces and commerce in central areas is one way to obtain CUR, city-centre policy is highly relevant to the topic of this paper. In Drammen physical upgrading has accompanied place-marketing strategies. In entrepreneurial fashion, this city, more than Porsgrunn, is referred to as a "product" to be sold. As stated by a municipal officer reflecting on the need for Drammen to keep improving, "Conducting place marketing without a product does not work. Everyone who has been into sales knows that" (Municipal officer no. 3, Drammen). Collective action has emerged from the desire of local dependent actors to catch up with economic rivals; a type of mobilisation which is central to the emergence of urban regimes (John & Cole, 1998). Here, the urban regime of city-centre business representatives and local authorities provides a strong city-centre focus.

The Drammen case illustrates how urban-development strategies involve cities capitalising on their main economic assets (cf. While et al., 2004). Here,

Drammen's revitalised city centre has turned into such an asset. Policymakers are therefore aware of decisions which may increase city-centre traffic or draw customers to car-based shopping at the urban fringe. The rejection of a mall on the outskirts in the mid 2000s illustrates this. However, the controversy over an existing outlying mall (Gulskogen), with larger expansion than expected, illustrates local authorities' struggle for control over estate development.

Compared to Drammen, the city centre does not have an equal hegemonic position in Porsgrunn's urban development strategies. Retail trade and housing in the city centre are unquestionably emphasised, as evident in new dwellings and shopping facilities being provided centrally. However, at the more overall level, Porsgrunn has also opened for substantial new development on the outskirt. This cannot be linked to a weaker commitment to climate action alone, as explanations of more structural character also are involved.

Uneven structural economic conditions in Drammen and Porsgrunn give rise to different regulatory commitments (cf. Dierwechter & Wessells, 2013). The attractiveness of a city as a place to work and live is one dimension of this. While the unemployment rate in the Porsgrunn region is not high, the closing down of large enterprises have received much attention (also in national media). Moreover, there are challenges relating to attracting highly qualified workers to the remaining industry, as emphasised by several informants. Municipal acceptance for new development on the city outskirt, as a way to attract inhabitants, must be viewed in this light.

Statistic on population growth reveals a marked difference between the case cities (Table 1). In Drammen, situated within the larger region of Oslo, land use and transport are framed within a context of managing strong population growth. In Porsgrunn, further away and more weakly connected to the capital in terms of transport infrastructure, policy seeks to counteract low population growth. This echoes Dierwechter's (2010) findings on metropolitan areas, tracing more enthusiasm for climate action in central cities than suburban areas. Though not directly transferrable, as Drammen and Porsgrunn are not parts of one continuous metropolitan area, their different position in relation to the capital appears relevant to CUR policy.

CUR policy is also influenced by competition over retail trade between shopping localities. While also highly relevant in Drammen, Porsgrunn, in particular illustrate strong retail-trade competition within and across the municipal border. Within the city centre, tension has been shown between small retailers and a large mall concerning where city-centre trade is to take place. Parking policy must therefore be operated in a context of multiple landlords and shop owners on one hand and large capital interests on the other, each with different interests in the location of trade.

Local environmental strategies are also confronted with economic pressures in the region. Again the management of parking illustrates the entwining of economy–environment relations in local policy. Municipal officers in both cities expressed reluctance concerning bold climate initiatives, if weaker parking

regulations in neighbouring municipalities would increase their competitiveness. Difficulties were particularly evident in Porsgrunn, as part of a ribbon-town structure, and with the municipal border of the neighbour just outside the city centre. The two empirical cases nevertheless both show emerging cooperation to handle issues of land use and transport. Hence, intra-urban competition has promoted cooperation in regional governance networks. With neither city holding a dominant retail trade position in its respective county, and with both city centres challenged by shopping localities in neighbouring municipalities, regional cooperation is in their interest. The governance networks thus illustrate how governance modes co-evolve “with the dynamics of the cities in which they are located” (Healey, 2004, p. 100). Table 2 summarises important elements in the discussion presented above.

Table 2. Retail and urban-system characteristics

	Distance to capital city	Position in the region	Retail trade in city centre	Retail trade outside city centre
Drammen	45 km	Surrounded by smaller municipalities	Malls and smaller shops located in mid-town	Extensive shopping malls within and outside the municipality
Porsgrunn	140 km	Part of two conurbation cities	Large mall at one end of a stretched centre	Extensive shopping facilities located in a neighbouring municipality, but still close to the city centre of Porsgrunn

5.1 *The rise and fall of a governmental proposal*

Effective climate policy involves mutual dependency between local and national authorities. Still, it is unclear whether we are observing the “jungle law of competition”, where places compete and bargain away regulatory control. A question is whether national economic incentives and regulatory frameworks are sufficient to facilitate local-level CUR policy.

While national authorities encourage regional governance networks to strengthen their meta-governance role, the national resources Drammen and Porsgrunn have received for CUR are limited. In this sense, the case cities have not been delegated clear CUR responsibility.

One policy initiative which do stand out as radical, also in an international context, was is when the Ministry of Transport (2012) recently proposed a change in the national parking legislation. As a means to reduce car usage, municipalities

were here mandated to enforce charges for private parking lots. The proposal implied the greatest changes for outlying malls, given that parking within city centres to a larger extent is already charged and under municipal control. Hence, the proposal responded to a need for balanced parking regulation between outskirts and inner-city areas (Marshall, 1999). Potentially depriving the outer malls of a competitive advantage vis-à-vis traditional city centres – free parking – this represented a radical policy measure.

The proposal was sent to municipalities, state agencies and a number of organisations. Porsgrunn and Skien responded positively. Porsgrunn emphasised its potential effect in reducing distortion of competition between shopping localities and to provide the municipality with a stronger tool for sustainable urban development (Municipality of Porsgrunn, 2012). It is not certain that the municipalities would actually implement such a parking regime: Often, policy is weakened between general statements in hearings and implementation. However, the response indicates increased policy cooperation with Skien. One factor behind this is the regional governance network where both participate. Such cooperation is of vital importance to avoid blockage of CUR initiatives through fear of inter-urban competition. This illustrates the need for strong regional governance institutions in climate planning (Dierwechter & Wessels, 2013).

In contrast to Porsgrunn, the response from Drammen (2012b) was negative, stating that the proposal would represent an intervention in private property rights. Further, fear of trade leakage to neighbouring municipalities was expressed, if stronger parking regulation were introduced only in Drammen. This response thereby illustrates several elements of entrepreneurialism hindering CUR policy. After a round of mixed hearing results, the Ministry rejected the proposal, also they referring to the strong interference with property rights it would represent (Grimen, 2013). Without considering all potential consequences of the proposal, or the degree of preparedness on the Ministry's part, the hearing provides insights into how environmental politics is connected to politics of economic growth.

6. Conclusions

Decision makers face a wide range of pressures in questions of urban development. One is pursuing urban economic growth while responding to demands for environmental remedies. Through a study of two Norwegian case cities, this paper highlights local strategies and public-private negotiations concerning retail trade. It is argued that there is a lack of empirical studies on the relationships between CUR and entrepreneurialism. The paper's aim is thus to show how balance between the two is sought in urban decision making. Enhancing understandings of such economy-environment relations is vital, since economic development concerns drive local and regional strategies. Three main contributions stem from the analysis.

First, the many dilemmas local authorities face in seeking to reduce traffic while pursuing economic growth are explored. As such, the paper provides an

analytical integration between CUR policy and the governance of local economies. In both cities, CUR impinges on spatial interests, mobilising urban actors for and against policy action. Retail trade exemplifies important questions of where to locate enterprises visited by many people. While retail trade in the city centre generates less car usage than shopping on the outskirts, city centres in both empirical cases are losing customers to outskirt malls. It is in this context local authorities are to implement CUR policy.

Attention to public–private cooperation in urban regimes, provides a way of analysing the groups involved in policymaking. In Drammen, the cooperation between local authorities and city-centre business representatives is strong. Building on past negative experiences, this regime emphasises densification and reduced city-centre traffic, in part to attract high-tax inhabitants, retail customers and capital investments. However, the case also illustrates local authorities’ difficulties in controlling shopping-mall development on the outskirts. In Porsgrunn, the urban regime has a slightly different character, with the central coalition considered to be between local authorities and representatives of a shopping-mall. With the strengthening economic position of this mall within city-centre trade, implementation of parking restrictions in other parts of the urban centre is difficult. While small retailers and landlords are somewhat outside the central urban regime, they are in a lobbying position to oppose municipal plans for regulation of car usage in the city centre.

The second contribution of the paper is its elucidation of the multiple scales of governance operating in and around cities. For example, stricter parking in the city centre is impeded by free parking at outlying malls. Negotiations involve several municipalities and a mix of public and private actors. Although difficult, part of the solution to CUR lies in these discussions. The planning of compact cities will be difficult if shopping malls at the outskirts continue to reduce city-centre vitality. Thus, there is a need to step beyond the local to understand environmental policymaking (Bulkeley & Betsill, 2005; Marshall, 1999), which is central to the multilevel-governance perspective. Urban actors’ responses to environmental issues are indeed influenced by processes on other scales. In contrast to many studies seeking to explain policy in relation to processes *within* the urban area, this paper supports the call for an approach acknowledging the range of actors at different levels influencing local decision making (Betsill & Bulkeley, 2006).

Third, the two cases support the suggestion that local-level decision making is influenced by the balance of pressures for and against environmental policy within and across the city (While et al., 2004). Hence, Porsgrunn’s weaker CUR policy is not linked to a lower commitment to climate action alone. Important are the uneven structural economic conditions giving rise to different policies. As Muir, Phillips and Healey (2001) claim, different economic structures create different demands on environmental policymaking. Central in this paper is the distance between the two case cities to capital city Oslo, giving Porsgrunn lower access to the capital’s job market, and its location in a ribbon-town structure. These factors influence urban competition for inhabitants, retail customers and capital

investments, thereby posing a challenge for CUR policy. With these marked urban-system differences, the paper illustrated the spatial dimension influencing the relationships between CUR and entrepreneurialism. It thereby supports the stated need for spatial theorising research in analysis of urban policy and practice (Dodson & Gleeson, 2009). The analysis of linkages between CUR strategies and entrepreneurialism in this paper has provided one such contribution.

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Appendix 1: Overview of informants

Informant type	Drammen	Porsgrunn
Municipal officer	3	4
Business representative	1	2
Politicians	1	1
Youth representatives	1	1
City-centre business actors	1	1
County authority officer	1	1
Municipal officers in neighbouring city/town	1	1
Public transport actors	1	1
Others	3	1
Total	13	13

Appendix

Appendix 1: List of informants

	Municipal officers	Business representatives	Politicians	Youth representatives	City-centre business actors	County administration representatives	Municipal officers in neighbouring city/town	Public transport actors	Others	Total
Trondheim	5	2	1	2	1	1	1	1		14
Drammen	3	1	1	1	1	1	1	1	3	13
Bodø	3	1	2	1	2	1	1		3	14
Porsgrunn	4	2	1	1	1	1	1	1	1	13
Total	15	6	5	5	5	4	4	3	7	54

A

Appendix 2: Example interview guide

As described in 7.2, the interview guides were tailored in accordance to the role of the informant. The different versions still cover similar issues. Below is a guide (in its original language, Norwegian) developed for key informants in municipal administrations.

Intervjuguide nøkkelinformanter i kommunen

Om byen

1. Hvordan vil du beskrive byen?
 - Hva er særegent?
 - Hva er positivt/negativt?
 - Beskriv jobbmarked, næringsliv, utdanningsnivå, befolkningssammensetning.
 - Hvordan vil du avgrense byen geografisk?
 - Hvordan vil du beskrive denne byens posisjon i regionen?
2. Hvordan vil du beskrive følgende i kommunen:
 - geografisk lokalisering av service og tjenestetilbud
 - geografisk lokalisering av boliger
 - transportløsninger til og fra sentrumsområdet
3. Hvordan vil du beskrive transportmønsteret i byregionen?
 - Kan du beskrive hva som er særlige utfordringer?
 - Hvorfor er det viktig å løse problemet/behovet?
 - Hva er de sannsynlige årsakene til problemet?
 - Hva ser du på som alternative løsninger?
 - Hvordan vil du beskrive transportmønsteret til og fra sentrumsområdet?
 - På hvilke måter påvirkes transportmønstre i denne byen av omkringliggende byer og tettsteder?

Byutvikling

4. Hva er viktig for kommunen i arbeidet med den overordnede byutvikling?
 - Hva ser du som særlige muligheter for den videre utviklingen av byen?
 - Hva er de største hindringene for å realisere dette?
 - I hvilken grad vil en satsing på klimavennlig transport være formålstjenelig i den videre utviklingen av byen?
 - Hvorfor/hvorfor ikke?

5. Hva utgjør de største endringene i utviklingen av byen de senere årene? (Presisering: både fysiske og ”ikke-fysiske” endringer)

Profilering av byen

6. Hvilke strategier har kommunen for profilering av byen?
- Hva vektlegges i profileringen?
 - Hvilke kanaler benyttes?
 - I hvilken grad inngår klimatiltak innen transport i profileringen?
7. Har dere noen aktiviteter/arrangement som er ment å bygge opp under profileringen av byen?
- Inngår et fokus på klimavennlig transport på noen måte i slike aktiviteter/arrangement?
 - Hvis ja; På hvilken måte?
 - Hvis ja; I hvilken grad bidrar dette positivt ift igjennomføring av tiltak for klimavennlig transport?

Transport og klimatiltak

8. Beskriv kommunens politikk på klimatiltak innen transport.
- parkeringsrestriksjoner (som blant annet omhandler tillatt tid for parkering og antall plasser)
 - parkeringsavgifter
 - fremkommelighet for andre transportformer enn bil (på bekostning av sistnevnte)
 - nybygging innenfor eksisterende tettstedsgrenser
 - ordinær bompengavgift
 - rushtidsavgift
9. Hva anser du som de viktigste klimatiltakene innen transport som er gjennomført i byregionen?
- Hva mener du er viktige årsaker til at dette har blitt gjennomført?
10. Hva anser du som de viktigste klimatiltakene innen transport som dere til nå ikke har lyktes med å gjennomføre i byregionen?
- Hva mener du er viktige årsaker til at dette ikke har blitt gjennomført?
 - Variasjon ift type tiltak?
 - Variasjon ift hvor tiltakene gjennomføres?
 - Politiske motsetninger?
 - Forskjeller i kunnskap hos sentrale aktører?
11. Hvordan vil du beskrive samarbeidet mellom politikere og administrasjonen i spørsmål knyttet til klima og transport?

Forhandling og argumentasjon

12. Peker det seg ut noen hovedbolker med argument for og mot implementering av tiltak?
13. Hvordan vil du karakterisere engasjementet ift klimatiltak innen transport:
 - blant byens innbyggere?
 - blant sentrale aktører?
14. Har du registrert noen holdningsendring knyttet til transport og miljø de senere årene?
 - Hvis ja; Har dette gjort det lettere eller vanskeligere å iverksette tiltak?

Planer og organisering

15. I hvilken grad er den overordnede kommuneplanen et godt verktøy i arbeidet for klimavennlig transport?
16. I hvilken grad har kommunen en hensiktsmessig organisering i arbeidet for klimavennlig transport?
17. I hvilken grad legges premissene for transporttiltak i regionale planer/avtaler/strategidokument?

Styringsnettverk/samarbeid

18. Hvilke styringsnettverk/samarbeid anser du som sentrale ift arbeidet med klimavennlig transport?
 - Hvem samarbeider kommunen med i disse nettverkene?
 - Hva var utgangspunktet for etableringen av dette samarbeidet?
 - Hvorfor ble det organisert som det ble?
 - Hvem er de mest sentrale av aktørene i samarbeidet?
 - Er det noen aktører som kunne vært med i samarbeidet, men som ikke er det (evt. hvorfor)?
19. Hva er etter ditt syn på målet for samarbeidet?
 - I hvilken grad opplever du at det er enighet om målet for samarbeidet (evt hvorfor/hvorfor ikke)?
 - Hvis enighet; I hvilken grad gir dette seg utslag i faktisk oppslutning om tiltak?
20. Hvordan vil du beskrive alliansene i nettverket?
 - Hvem er alliansene mellom?
 - Er alliansene sterke/svake?
 - Er alliansene kortvarige/mer permanente?

- Er det sammenfall i interesser mellom aktørene i samarbeidet – eller er det ulike interesser?
21. Hvordan fattes beslutninger i nettverket?
- I hvilken grad er nettverkene beslutningsorientert?
 - Konsensus eller flertall?
 - Er det noen aktører som er i en overordnet posisjon når beslutning skal fattes?
 - Opplever du å ha innflytelse i samarbeidet?
22. Hvordan vil du beskrive kommunens samarbeid om klimavennlig transport med:
- omkringliggende kommuner?
 - I hvilken grad påvirkes utformingen av tiltak av om dere oppnår enighet med disse?
 - private næringsaktører?
 - I hvilken grad påvirkes utformingen av tiltak av om dere oppnår enighet med disse?
23. I hvilken grad har nettverkene bidratt positivt i arbeidet med å redusere utslipp fra transport?
- Kan du peke på noen forhold har virket inn på at samarbeidet har fungert godt/middels/dårlig?
 - Står resultatene i forhold til målsettingene?

Finansiering

24. Hvilke eksterne finansieringskilder for klimatiltak innen transport er viktige for kommunen (midler utenfor ordinært kommunalt budsjett)?
25. I hvilken grad legger denne/disse finansieringskilden(e) premisser for arbeidet med å redusere utslipp fra transport?
- I hvilken grad stilles de krav for utbetaling av midler?

