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Abstract

Polycentricity has become a principle of strategic regional planning in order to concentrate land use and optimise infrastructure. This paper discusses the possibilities and challenges for a polycentric strategy in relation to Norwegian regional planning. The focus is on the spatial strategy in *The regional plan for land use and transport for Oslo and Akershus*, and its reception among local authorities, upon which the plan's implementation depends. We have studied the plan's aims and principles in relation to the interests of municipal and district councils as these are communicated in consultative statements in the planning process. The plan aims to increase competitiveness, sustainability, efficient land-use and transport in the region. Polycentric principles are favoured in order to ensure territorial cohesion based on the aims. Even though the plan is generally supported, local authorities point to the risk of intra-regional competition, unequal resource distribution, and unsustainable densification in regional centres. These are challenges that may hamper the sustainable development of the Oslo metropolitan area.

Introduction

Several European countries have embraced the region as the scale on which to balance the national urban system or as a means to control urbanisation from a perspective of growth and sustainability. To this end, polycentric planning has come onto the agenda as a means of concentrating land use and optimising infrastructure. The concept of polycentricity plays a key role in EU cohesion policy and has been adopted in the planning models of many European countries (Rauhut, 2017). Polycentric regional planning generally has the aim of sustainability through concentrated development using existing infrastructure, enhancing public transport systems, preserving rural land, and improving quality of life (Knaap et al., 2016).

In the case of Norway, polycentric regional development attracted renewed attention with the adoption of the Regional Plan for Land Use and Transport in the Norwegian capital region, Oslo and Akershus. Approved in 2015, the plan underwent extensive consultation, during which implications of its principles of polycentricity were addressed by local, regional and national authorities. The concerns of the region's municipalities are particularly relevant because municipalities are central planning authorities in Norway and the regional plan is not legally binding. The legitimacy of the plan among the municipalities is thus important for successful implementation. In this paper we discuss the possibilities and challenges of a polycentric strategy in relation to Norwegian regional planning, through studying the aims and principles of the regional plan for Oslo and Akershus and how the plan's spatial strategy has been received by local authorities. We address discrepancies and conflicting goals, and discuss how

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they might impact on polycentric development.

Polycentric development characterises functional regions with integrated economic activities between places, or city regions where sub-centres have formed as specialised nodes serving the metropolis as economic centres (Brezzi and Veneri, 2015, Giffinger and Suitner, 2015). As a normative aim informing spatial programmes in the European Union, polycentricity targets socio-spatial integration, with the political goal of promoting territorial cohesion and reducing inequality in development paths (ESPON, 2006). Polycentricity has also become a principle of strategic planning at lower scales, especially in metropolitan regions, where an existing polycentric pattern of sub-centres is enhanced, or where specialised sub-centres are developed as part of a political agenda, such as boosting competitiveness, counteracting sprawl and strengthening collaboration (Schmitt, 2013).

Whereas polycentric regional development has been studied from the perspective of informal or network governance arrangements (Spaans and Zonneveld, 2016), there is a lack of knowledge of how polycentric *regional planning as a normative tool* is adopted by local authorities. We address this lacuna in discussing the concerns of municipalities as constituents of the multi-level governance system involved in strategic regional planning. What are the principles and effects of polycentric planning they accept or challenge?

Our study is based on an analysis of documents in the regional plan and the consultative statements submitted in the plan's final consultative phase in 2014/2015. A total of 116 authorities submitted consultative statements to the regional plan, a large number in the context of Norwegian consultations.¹ Statements were submitted by the municipalities of Akershus, administrative agencies, districts councils and municipal enterprises in Oslo, municipalities and counties bordering Akershus, as well as state agencies, non-governmental organisations, political parties, and the private sector. As the main operational planning authority in Norway, municipalities are pivotal for the implementation of regional plans. The statements of most interest are consequently those of the 22 municipalities of Akershus County, all of which submitted statements to the plan, alone and/or in constellation with other municipalities. We have analysed the statements in the light of the aims and spatial strategy of the plan, identifying general concerns that reveal conflicting goals among the municipalities.

The article is divided into the following sections. In section 2, we present and discuss theoretical perspectives on polycentric planning and development. In section 3 we present the Norwegian planning system and the roles of regional planning authorities in relation to local authorities. We also review the historical and demographic context of the regional plan for Oslo and Akershus. In section 4, our focus is on the regional plan's evolution, characteristics and goals, before we discuss the main concerns of the municipalities in section 5. These findings are discussed in the light of theoretical perspectives on integrated regional planning in section 6, where we argue that the challenges of multilevel governance and different commitments to the plan constitute risks to its implementation.

Research on polycentric planning and development

There is no clear-cut definition of polycentricity. It is typically used as a multi-scalar concept referring to the integration of activities throughout different socio-spatial concentrations within local, regional, national and pan-regional entities (Rauhut, 2017). Polycentric development is defined as being both a *continuous process* and a *normative objective* that targets the reduction of spatial inequalities and regional competitiveness by territorial integration (ESPON, 2006).

As a descriptive notion, polycentricity is used both to conceptualise the poly-nucleus metropolitan region, wherein a network of settlements is connected to a core metropolis, and to define a region in which a balanced network, or cluster, of equally large and connected settlements have evolved (Green, 2007). Polycentric urban regions are more clearly defined to capture regions with more than two historically and politically separate cities of equal standing, located in proximity, with functional interconnection and complementarity (Davoudi, 2006, 2003). Examples of such regions are the Randstad and the Ruhr. On this basis, polycentric regionalism concerns the development of an integrated social and economic space of population concentrations, employment and production.

As a normative objective of spatial planning, polycentricity has importantly been promoted by the European Union (Rauhut, 2017), referring to it as a form of urban development that counteracts urban sprawl, while harmonising relations between economic growth and balanced sustainable development (European Commission, 2006). These aims have been adopted by planning authorities at different scales. Three rationales can be identified here as significant to the rise of polycentricity as an organising principle in metropolitan planning.

First, polycentric city regions are favoured because economic globalisation enhances regional interdependencies across administrative boundaries, placing metropolitan governance centre-stage in European cities (Brenner, 1999:445). Metropolitan regions have gained economic and political force (Brenner, 1998). They have evolved as a strategic platform for the knowledge-based economy (Hansen and Winther, 2010), and are restructured as a central scale for global competitiveness. Metropolitan strategies pertain to the territorialisation of economic activities because they are seen to ensure access to human resources in the long-term perspective as well as facilitating supportive functions to the urban economy (Morel, 2005). The point of strengthening the entire metropolitan area is to promote economic growth by increasing the capacities of cities by means of an inter-regional division of specialisation and diversity of economic production. From a perspective of metropolitan competitiveness, specialised sub-centres that complement each other might benefit the region as a whole (Brenner 2003). To make a metropolitan region internationally competitive, the polycentric model thus seeks to boost the development of specialised centres with different qualities and functions in global networks, that consolidate and aggregate capacities that enhance the city's performance in the global economy (Giffinger and Suitner, 2015).

Second, polycentricity is favoured as a means of countering sprawl by encouraging compact development and multi-centre patterning. Compact cities and regions are more environmentally sustainable because they reduce motorised transport and energy use per capita (Næss, 2015). Increased active mobility (walking and cycling) strengthens social sustainability (Woodcock et al., 2009). Polycentricity is thereby promoted as a more sustainable solution than low density sprawl in a metropolitan area, insofar as sprawl can result in higher infrastructure costs, greater land consumption and higher vehicle miles travelled, as well as contributing to unhealthy communities (Cf. Frumkin et al., 2004).

Third, polycentric regional development might increase the efficiency of service delivery such as public transport, energy and the conservation of green areas, even though these effects have not been found to be uniform (Brezzi and Veneri, 2015). Increased commuting, travel time and car use have also been found in polycentric urban regions, yet also in this case, there is no unequivocal evidence (Green, 2007).

As a planning ideal, polycentric regionalism has roots in former planning and development traditions, and shares commonalities with other planning perspectives such as smart growth and new urbanism. Since the early 1990s, *smart growth* has been proposed as an alternative to a conventional development philosophy. The smart growth approach seeks to identify a common ground where communities explore ways to accommodate growth based on consensus in development decisions in inclusive and participatory processes (Berke et al., 2006). This approach promotes compact, mixed-use development that encourages sustainable travel mode. Compared to smart growth, *new urbanism* is a more architecturally oriented perspective, but it shares the aim of compact development. At the regional level, proponents of new urbanism recommend the creation of landscape-scale commons and an ecological identity that encourage parks and barriers to limit the outward expansion of urban development while protecting farmland and environmentally sensitive areas. The new urbanism version of regionalism also has roots in former planning models (Wheeler, 2002, Talen, 2008).

The concept of polycentricity thus builds on a long tradition of planning approaches aimed at finding sustainable regional solutions. As a planning ideal, it also targets poly-nuclear development in the city itself. Throughout the twentieth century, urban development has been alternately characterised by monocentric and polycentric patterning, with the diffusion of places to live and work in suburban settings. Polycentric cities have thus evolved, with attempts to strengthen a spatial structure of hubs that makes commuting efficient (Lin et al., 2012). Since the 1990s, efforts at countering sprawl at the city scale have been remodelled in the frame of the compact city, favoured as the environmentally sustainable land-use model. The force of the model is that it both builds on characteristics defining cities and urbanity (density, diversity and heterogeneity), and that, as an ideal, it includes all three dimensions of sustainability – social, economic and environmental. The compact city as a model is an dense entity with clear borders, an elaborate web of public transport, and a mix of functions (housing, commerce, business, services), aimed at making urban territory efficient

(Hanssen et al., 2015). These aims are similar in polycentric planning at the regional scale, but where the model's efficiency in the latter case is affected by the level of integration across different jurisdictions.

Contemporary regional planning generally includes a combination of social and spatial targets, sustainability goals, and a balance between land-use planning and regional growth strategies as a means of encouraging institutional and strategic-territorial integration (Smas et al., 2012). Following Smas et al. (Ibid., p.11), territorial integration includes both vertical and horizontal types, first in the form of interconnections between different levels of the state apparatus, and second, through the coordination of municipal or regional authorities. Additionally, processual integration focuses on strategic and operational synchronization. In polycentric development as a spatial strategy, all these forms of integration are interesting. In this case it can be defined as strategic polycentricity, referring to the identification of political-institutional and territorial relations forming the basis of strategic urban development processes through inter-urban cooperation, strategic networking between municipalities and planning agreements (Giffinger and Suitner, 2015).

There are several critiques of the polycentricity model that raise questions about its force. Given the various roles the concept serves, and the range of empirical perspectives on spatial patterning, the role of polycentricity as a planning model and analytical device is criticised for its unclear effects on development paths. It lacks definitional consensus and hence clarity about positive outcomes and its effects on competitiveness, growth and socio-spatial cohesion (Giffinger and Suitner, 2015). Thus, as a descriptive device, polycentric development is fuzzy. Yet, as a planning ideal, polycentricity continues to inform regional planning, as is the case in the Oslo region.

Regional planning in Norway

In Norway, the current structure of county councils and administrations was established in the 1970s, based on a hierarchical approach (Mydske, 1989). In the past decade, counties have acquired new responsibilities for the region's strategic development. The county councils are required to develop a regional plan. However, municipal authorities play a key role in this process and have the right and duty to participate in the process when the plan affects their activities or their own plans and decisions. Regional plans providing guidelines on future construction must contain a specific evaluation and description of the plan's impact on environment and society. To achieve results and efficiency, a key strategy is the engagement in vertical partnerships in dialogue with municipalities and other local and regional stakeholders (Cf. Higdem, 2004).

While the county councils' regional planning role has become more important, this role is challenged because of a "hybridity of governance logics", resulting from new network approaches (Hofstad and Hanssen, 2015). The regional level rarely has the strongest political powers or legitimacy, and it lacks the proximity between service deliverers and citizens that benefits municipalities

(Hofstad and Torfing, 2015). As in the other Scandinavian countries, Norwegian municipalities hold central powers in land-use planning. Still, the county's role as coordinator does give regional governments an opportunity to develop more extensive plans than municipalities can achieve on their own. This is particularly the case when it comes to land-use and transport policies, where the Planning and Building Act plays a key role.

The Norwegian Planning and Building Act is a *process* law that can be conceived of as based on a multi-level governance system. It provides a *decision-making* model with respect to development, land-use disposition and building control. It states who has decision-making powers in different matters, how they relate to each other, and the kind of information decisions must be based on. In accordance with the Act's intentions, municipalities are obliged to set out their building policies in their plans. Most European countries have a formal system of planning enacted at different government levels. In these systems, the higher-level plans are administratively binding on the lower levels (Davies et al., 1989).

Norway also makes use of a tiered and hierarchical system of planning, but there is no strict juridical hierarchical binding between the levels. The higher level plans still are expected to inform planning at the lower levels. The lack of hierarchical bindings brings some freedom and flexibility into the Norwegian system (Harvold and Nordahl, 2012). Local councils have decision-making power in land-use matters. However, the regional level (the county councils) is expected to develop a regional plan that coordinates and integrates land use across municipalities. The state's representative at the regional level, the County Governor, is obliged to ensure that national policies are implemented.

In the preparation of a regional plan, both the county council and the municipalities are key stakeholders. The county council is responsible for drafting the plan but in consultation with the county's municipalities. The latter, however, are central to the plan's implementation within their own planning system.

Context: Oslo metropolitan region

Baldersheim and Ståhlberg (2002) point to the ambiguities inherent in Norwegian municipalities' responsibilities, since they are both providers of important welfare services and enactors of national government policies. As policy-makers they are also responsible to their electorate. These ambiguities are reflected in the Oslo metropolitan region, a pressure area in which municipal collaboration and national policies have insufficiently addressed regional cohesion. A historical pattern of intra-regional competition and strong municipal autonomy has been a bottleneck to regional integration throughout the last century (Rasmussen, 2003).

Until the 1980s, promoting cohesion between different regions was a key government priority in Norway. National urban policies were not (Rasmussen, 2003). The national government's solution to urban problems was to strengthen decentralization (Stugu, 2006). The goal of creating growth in all of Norway's regional districts implied staggering growth in Oslo, already recognized as a

difficult pressure area. Within the city, population growth was controlled through suburbanisation (Myhre, 2006).

Modernist planning ideals such as mono-functional zoning were characteristic of Oslo in the post-war period. While populations continued to grow in the city-region as a whole, jobs were created primarily in the inner city, fostering urban sprawl and a car-based mode of transport (Nielsen, 2001). This was amplified by Oslo's master plan of 1960, which reserved land in the inner city for industry and trade. The obligatory master plan was a planning tool intended to provide a total solution to municipal problems, but turned out to be unrealistic and unable to cater to the complexity of urban society (Fimreite et al., 2005).

From the early 1990s, central government became attentive to the economic role of Norwegian cities, but continued with its policy of decentralisation, as today (Meld. St. 18, 2016–2017). Between 1991 and 2000, populations in Norwegian city-regions grew at a rate of nine per cent, compared to a reduction of 0.1 per cent in the rest of the country (City of Oslo, 2002). The capital region of Oslo and Akershus grew by 11.5 per cent. In absolute numbers, the region accounted for 40 per cent of national population growth in the period (Ministry of Local Government and Regional Development, 2007). In 2016, Akershus had a population of 600,000, and was growing at an annual rate of 17 per cent between 2006 and 2016. Oslo had a population of 658,000 in 2016, and a growth of 20 per cent in the last decade. Though growth has been managed to some degree in Oslo and Akershus by densification, areas for businesses and public services have been established in a more scattered pattern. The population is expected to increase by 260,000 by 2030. With this expected growth and the need for integrated planning, the regional land use and transport plan for Oslo and Akershus will be central in steering this development.

The regional plan of Oslo and Akershus

In 2008, the Ministry of Local Government and Regional Development (Ot.prp. 10 (2008–2009)) asked Parliament to instruct the authorities of Oslo and Akershus to work together on preparing a regional plan. This was because research had revealed a lack of coordinated action to address important governance challenges, particularly with regard to land use and transport. These problems affected the efficiency of the transport system, the management of urban development, and location principles (p.19). The plan should accommodate national guidelines and legislation on sustainable, compact and coordinated development.

The Norwegian government put considerable pressure on local and regional actors, not least in the form of a new act (Ot.prp. 10, 2008-09), giving the Ministry of Local Government and Regional Development formal authority to compel local authorities to work together to draft plans. The ministry has subsequently pushed the plan forward, both to ensure a more coherent development of the region, but also to meet national targets on climate, transport, cultivated land and biodiversity (City of Oslo and Akershus County Council, 2015). Given the expected growth and need for an integrated approach to land-use and transport

planning, the counties worked to coordinate and facilitate development and mobility by a polycentric planning strategy aimed to prevent urban sprawl.

The regional plan was adopted in 2015, after a seven-year-long process involving municipalities, public administrations and Oslo's district administrations. In order to secure integration within the relevant organisations, legitimacy and participation, a complex, cross-political body was established to oversee the work on the plan's development. In table 1 below, we indicate the most important milestones in the planning process.

Table 1: The regional plan: Milestones in the process.

Document/Milestone	Comments
Report to parliament (2006-07), "A Tolerant, Secure and Creative Oslo Region".	Ministry of Environment (as planning authority at state level) stresses the need to work out common solutions at the municipal level, especially in the field of transport
Revision of the Public Management Act. Law proposition passed by Norwegian Parliament ("Ot.prp. 10, 2008-09)	The new Act gives the Ministry of Environment responsibility for planning and the authority to instruct local councils to cooperate in planning
Ministry of Environment steers and coordinates the work for common planning in the metropolitan area (Oslo and Akershus)	Common planning strategy and planning program for the metropolitan area passed by the local authorities in March/April 2012
Based on the common planning framework, a temporary planning secretariat works out a regional plan	The planning process aims to integrate both political and technical considerations
Regional plan subdued to public hearing	Hearing deadline set to March 1, 2015
Adoption of the regional plan – December 2015	Final plan passed by Oslo city council and Akershus county council
	Plan for the period until 2030 (with perspectives until 2050)

The plan's overarching goals established in the initial stage of the planning process were to (i) make the Oslo region a competitive and sustainable region in Europe; (ii) ensure efficient land-use patterns based on the principles of polycentric development and preservation of green belts; and (iii) develop an efficient, environmentally sound, accessible transport system that rationally connects hubs in the polycentric region, and further to the rest of the country and abroad, with a view to minimizing car use (City of Oslo and Akershus County Council, 2015). These strategic goals were designed to maintain the region's *existing* polycentric structure, and are aligned the main rationales of this the polycentric strategy,-

competitiveness, sustainable land-use and efficient transport systems (Green, 2007, Giffinger and Suitner, 2015). The plan is centred on strategic polycentricity, requiring cooperation and coordination among stakeholders if regional balance and consolidation of “prioritized growth areas” (p.15) are to be secured.

The plan promotes the integration of social and economic spaces, building on the idea to develop specialised sub-centres with the capacity to enhance the economic competitiveness of the metropolis (Giffinger and Suitner, 2015). In the case of the regional plan for Oslo and Akershus, strengthening sub-centres surrounding the metropolis is a means of balancing employment and population concentration in an integrated city region. Within the sub-centres, cycling and walking should be the only forms of mobility to increase, in line with national guidelines on land use and transport (Norwegian government, 2014). Illustration 1 below indicates the polycentric pattern favoured in the plan. The plan’s time span is to 2030, but with a further horizon to 2050, during which time it will be continuously adjusted and redeveloped, while serving as the basis for a common understanding of regional challenges in the domains of housing and transport (City of Oslo and Akershus County Council, 2015).

In addition to Oslo, whose functions as capital city will be strengthened, six regional centres are identified as special growth zones: Asker, Sandvika, Lillestrøm, Jessheim, Ås and Ski. They are already hubs in the existing regional structure, and centres for the region surrounding them. According to the plan, at least 90 per cent of new housing is to be built in these centres (p.25). Asker, Oslo, Lillestrøm and Ski are defined as “the urban corridor”- Although concentration is already high in this corridor, further densification is desired. The plans for low-density places, such as Hurdal and Bjørkelangen, are essentially to maintain population levels. The plan includes the development of a comprehensive transport system for the entire metropolitan region, with the railway as the backbone. The stations on the Inter City train network are defined as regional hubs, from which local and regional buses will connect with further destinations (p.35).

The plan’s focus on polycentricity both depends and draws on particular spatial and relational dimensions. The plan can be seen as based on three regional scales: micro-region, meso-region and macro-region. Municipalities are concerned with their immediate surroundings, catering to quality of life and necessities of life by ensuring accessibility. This scale can be conceived of as the micro-region. The next scale is the meso-region, that is centred on the municipalities identified as regional cities in the plan, and that constitute regional housing and labour markets in Akershus. The final scale, the target of the regional plan for Oslo and Akershus, is the macro-region, which regards the integration of the metropolis and its hinterland. The polycentric structure is reflected in the map of the macro-region in the regional plan (Illustration 1). It highlights the three respective corridors that can be defined as meso-regions, whereas micro-regions can be defined as the towns and cities and their immediate surroundings.



Figure 1: Prioritised sub-centres for regional land-use and transport structure. Source: *The Regional plan for land use and transport in Oslo and Akershus* (City of Oslo and Akershus County Council, 2015, p.7).

Goal conflicts identified in the planning process itself concern compact development and preservation of agricultural land; local growth versus regional growth distribution; enhanced quality of life, green structures and children-friendly housing versus densification and its potential impact on air quality, loss of land, green areas, aesthetic qualities in development areas; managed land use versus location preferences of developers and other businesses (Plansamarbeidet, Undated). These concerns reflect how the normative aim of polycentric regional planning yields questions about the distribution of advantages and disadvantages across the territory. We will now present the most important discrepancies between local and regional concerns evolving from polycentric planning, as evidenced by the consultative statements of municipalities and district councils in Oslo and Akershus.

Between municipal autonomy and adherence to regional cohesion

The vast majority of the 23 municipalities of Oslo and Akershus appreciate the development of the regional plan. Sustainability and intensified land use have become core dimensions of Norwegian planning and guidelines for municipalities. Formal and legal guidelines ranging from the Planning and Building Act (2008) to national planning guidelines (2014), address and exhort municipalities to conform to the sustainability agenda, making the regional plan a consensual tool. The overarching principle of polycentricity is thereby not challenged. Nevertheless, our analysis of the consultative statements reveals the emergence of discrepancies on matters such as intra-regional competition, sustainability, local autonomy and the commitment of state agencies to fund and develop the infrastructure required to implement the plan. Even though the consultative statements to the draft plan in 2015 did not result in revisions of the plan, the statements reveal challenges of polycentric regional planning as a spatial strategy.

Intraregional competition

In Akershus, municipalities worry that the plan's focus on territorial cohesion as a means to consolidate metropolitan competitiveness undermines their interests. A region might benefit from the location of specialised sub-centres (Brenner 2003). Yet, from a local perspective, specialisation of production might create inequalities in development and growth, depending on the functions given preferential treatment in different centres and sub-regions. As municipalities depend on local business taxes, they are interested in retaining and stimulating the creation of high-skilled jobs and a knowledge-based economy. Directions on land use and development from the Oslo and Akershus Counties stoke fears about unequal development paths between sub-regions and municipalities. Whereas the plan is concerned with a convergent development on the scale of the macro-region, outside the compact city of Oslo, municipal authorities worry about the impact of inter-regional competition for resources and development paths.

Municipalities that are uneasy with the idea of territorial cohesion fear unbalanced resource allocation between the meso-regions, which is particularly evident in the Northern Akershus corridor. Municipalities here are largely concerned with the balance between them and the rest of the capital region, in terms of both transport infrastructure and land use for economic activities. For example, municipalities in the North-Eastern meso-region are worried about being burdened with spatially intensive sectors (logistics, transport) acquiring extensive land use, but not necessarily yielding high returns.

The city of Oslo retains a socio-economic segregated settlement pattern that follows an east–west divide that extends outwards to the suburbs (Andersen, 2014). Municipalities in the North-Eastern meso-region of Romerike are worried in case this outward pattern includes economic functions and infrastructure.. Thus, rather than enforcing territorial division of production, municipalities argue that specialisation at the metropolitan scale could disfavour their sub-

region if land-consuming functions were relocated there, as in the municipality of Rælingen:

Rælingen municipality is concerned about a massive and one-sided relocalisation of land-extensive activities to the surrounding municipalities of Oslo. Rælingen holds that such an approach to societal development can result in a lack of varied and balanced composition of business activities that can have negative consequences for environmental, social and economic sustainable development of the municipalities of Romerike (Rælingen council 2015).

The inequalities of the current location pattern of knowledge-based industries between the Western and North-Eastern meso-regions are emphasised as a reason to adopt measures that balance economic development from the perspective of regional integration.

The plan will form a basis for the development of a transport infrastructure and hence the pooling of national resources, making the planning process an arena for strategic positioning. The argument of the municipalities in the North-Eastern meso-region is that it is the pressure area with strongest growth in the macro-region, whereas the plan is conceived to favour investment in the transport system in other meso-regions. These municipalities have developed a plan to create a competitive and sustainable district, Nedre Romerike. In a collective statement, they hold that transport investments favour projects in the Western corridor, despite the region being the fastest growing in Akershus, and, it is argued, the most able to absorb population growth in the county.

Responses to the consultation frequently mention the use of the plan as a strategy for investing in transport infrastructure in the meso-regions. The plan is also used to criticise Norwegian State Railways for their choice of locations for stations along inter-city lines. The potential population growth around train stations as hubs of compact development does not seem to be included in decisions of the Norwegian State Railways. Municipalities fear for their autonomy as planning authorities because state transport agencies do not seem to adhere to the guidelines. The municipal council of Eidsvoll (2015) warns in its statement that, “in order to ensure implementation, the regional plan must ensure a better link between land use (where the municipality is the authority) and transport and communications (where the region/state is the authority and allocates grants). This is a central and necessary condition for the plan’s legitimacy”. This municipality is particularly worried whether there will be sufficient transport funds to execute the plan and meet the needs of the various sub-regions and municipalities: “one-sided commitments by the municipalities is not acceptable” (Eidsvoll Council 2015).

Municipalities do generally not want the plan to be legally binding, but they are indignant because there is no mechanism to compel the state transport agencies to follow the plan in their decision-making. To ensure transport funding,

they see binding contracts as necessary. In their statement to the plan, they therefore called for explicit formulations to secure investment.

Strategic polycentricity and densification

Polycentric principles seem to be challenged by the region as a re-scaled territorial strategy. The plan's implicit espousal of monocentric principles favouring Oslo in consolidated urbanisation is considered by some municipal councils to threaten polycentricity. Municipalities in the Northern meso-region emphasise the need to develop transport infrastructure locally and across the region as a sustainable solution to balance the region in a polycentric pattern rather than favouring a centre-periphery structure.

In the regional plan, the principle of polycentricity implies the development of *compact centres* as the loci of growth (see Illustration 1). Two of these centres are located in the municipality of Asker to the west of Oslo, Asker centre and Heggedal. Asker council is willing, in principle, to become a growth centre, but objects to the level of compactness. For instance, the plan suggests an increase in the population of the town of Heggedal by 25,000, which the council finds excessive. Asker's development plan estimates growth in Heggedal to a mere 5–10,000. So while Asker supports the principle of population growth, it does so at a much slower rate than suggested in the plan. Similarly, the Municipal Council of Ås “does not support the goal that a minimum 90 per cent of all housing should be built in the centre of Ås and towards the border with Ski” (Ås Municipality 2015).

Like Asker, Ås acknowledges the requirement of intensification, but objects to the extensive growth called for in the regional plan. These statements reveals a discrepancy between local aims and regional guidelines that is not addressed in the adopted plan. How this discrepancy should be addressed in the implementation of the regional plan is thereby a central yet unanswered question. The institutional framing of the plan does not prescribe in what ways force should be applied to prevent deviation from the plan. There are few indications that the plan's densification scale of 90 per cent can be achieved through a zero-sum game, where some municipalities absorb population growth by building more housing while regional centres are free to refrain from following the plan.

The building of single-family homes is another concern that is not resolved in the plan, which prescribes an increase in housing supply of merely ten per cent. Municipalities want to develop a compact centre, yet they also want to build single-family homes and low-density residential areas in their peripheries. One example is the municipality of Ullensaker which holds that at least 15 to 20 per cent of new housing should be single-family homes to meet people's housing preferences. This objection to the plan's principles of densification is framed in defence of local autonomy. As expressed by Rælingen Council (2015), municipal decisions regarding construction and development should not be set aside by the regional plan; it would be “a breach of local democracy”. Municipalities therefore emphasise their interest in catering to preferences their land reserves allow them to meet. In a regional housing market, the provision of land for sin-

gle-family homes constitutes an advantage in the contest to attract new inhabitants.

An interesting difference between municipalities in Akershus and the local districts of Oslo is their view on compact development. The municipalities aim largely to conform to the principles of compact city/town development, without expressing concerns about the future quality of the residential environment. Oslo's districts, on the other hand, warn against the impact of the plan on public health and quality of life due to densification and transport systems, mainly roads. Whereas the settlements of Akershus have been characterised by rural qualities such as spacious and low-scale housing environments up until recently, Oslo's districts have been increasingly densified since the 1990s. Inside Oslo, connections between the urban environment and public health and wellbeing have been for long experienced. Public health is not mentioned in the regional plan, as district councils point out. They also warn against local pollution impacts of location and infrastructure choices.

City districts also make normative claims about the responsibility of the municipalities in the capital region, for instance in the case of parking regulations. These, they hold, should not contradict the plan's general aim to reduce car-based mobility. In the opinion of the municipalities in Akershus, however, they differ from the City of Oslo in that public transport is more infrequent, requiring greater use of cars and a need for more parking facilities. They generally emphasise the lack of local public transport initiatives in the plan.

Discussion

The regional plan for Oslo and Akershus – with its polycentric approach – has raised local concerns of unequal development paths between the meso-regions. The plan might strengthen sub-networks through horizontal and vertical forms of collaboration put in place to coordinate macro-regional planning process, but it might also enhance intra-regional competition. Support of and hence legitimacy of institutional and strategic-territorial integration seems to depend on a perception that burdens and resources are fairly distributed and shared.

Municipalities in Akershus are worried about the possible imbalance in terms of investment in transport infrastructure and location of specialised economic activities. One concern is the consequence of bearing the burden of spatially intensive sectors, like logistics and transport, requiring extensive land but not necessarily yielding high returns. Tension between local and regional goals is enforced by the regional plan's alignment to the established pattern of development, which some micro and meso-regions hold obstruct their integration in the knowledge-based economy. This concern with intra-competitive factors affects their willingness to support the polycentric principles on which the plan is based. Furthermore, the ability of spatial planning to boost economic development in terms of networks of related firms is not self-evident. These networks can be more readily acquired by other means than physical infrastructure (Bailey and Turok, 2001).

The network logics of current regional planning may affect how local authorities perceive the plan as a strategic tool in which their respective micro-level concerns and commitments can be aligned and strengthened by adherence and up-scaling to regional integration. For strategic reasons, municipalities may support the plan in principle, as it gives them a possibility of acquiring resources for the micro- or meso-region. However, in terms of concrete suggestions affecting their own “back yard”, municipalities make reservations in order to ensure their competitiveness and attractiveness. Municipalities cater to social preferences (such as low-density developments and single-family housing) or to extra-regional economic integration in global networks (for instance governance or economic production systems and markets), which means they might have more to gain in rejecting the plan’s principles and guidelines.

Regional planning can ensure environmental sustainability by better inter-connectedness (commutation), compact settlement patterns, and climate change mitigation when public transport and inter-city connections are developed. Local autonomy and quality of life could, however, face challenges from the new form of top-down macro-level planning if the higher good trumps local environmental and social qualities such as greeneries, housing qualities and public space. Dense neighbourhoods contribute to quality of life (Badland et al. 2016). Still, compact development in towns and cities requires attention to qualities of social sustainability as economic and environmental sustainability often are prevailing goals (Hofstad, 2015).

In Oslo, compact urban development has been a planning ideal since the 1990s (Næss et al., 2011). As the city-region became a pressure area, the model is up-scaled through strategic regional planning, through which compact towns and cities are favoured to counteract sprawl and car-use dependency. Due to the plan’s alignment to actual polycentric development patterns, it is a realistic tool for enforcing existing growth patterns and preventing future sprawl. These principles still depend on whether local authorities see them as legitimate and on the strategic decisions of sector authorities, since the plan is not legally binding and does not commit state bodies such as transport authorities. These characteristics testify to the ambivalence of regional planning in which local authorities can come to challenge the implementation of the regional plan.

Conclusion: The promise of the polycentric plan in the Oslo metropolitan region

The strength of the Regional Plan for Land Use and Transport for Oslo and Akershus is that its normative intentions follow a continuous process of polycentric development in the metropolitan area, and it follows up national strategies to reach sustainability goals. Its inclusive and long-term planning process further strengthens its legitimacy. When based upon a network logic to secure commitment among various stakeholders, the polycentric regional planning model targeting territorial integration is a promising means to address major and complex sustainability challenges. Climate change mitigation, economic globalisation or

public health development require both vertical and horizontal forms of collaboration.

Municipalities have all agreed to the principles of the regional plan. Consensus on such an ambitious plan might be seen as quite an achievement: The plan sets out a vision of how the capital region should develop in the next decades. However, underneath the vision there seems to be some tension between stakeholders, which poses a challenge to strategic polycentricity. Local concerns might be substantiated by municipal powers in land-use planning, but they might contradict higher goals of regional competitiveness and sustainability.

An important local concern is that the regional plan's guidelines for land use result in unequal development paths between municipalities and between the meso-regions, and that required state investments may fail to appear if state bodies are not sufficiently committed to the plan's implementation. Typically, we see that municipalities have reservations when it comes to the guidelines promoting density and restricting sprawl, depending upon local preferences. When it comes to the concrete changes in each municipality, there are local reservations to the plan.

The Norwegian planning system is based on process law and on a principle of multi-level governance. Important in the Norwegian system is the absence of a strict juridical, hierarchical, inter-level binding mechanism. However, higher level plans are expected to influence lower level plans. The municipalities therefore have to take regional plans into consideration. At the same time, the lack of hierarchical bindings brings some freedom and flexibility into the Norwegian system, and local councils do have decision-making power in land-use issues. A potential obstacle to the implementation of the regional plan is thus the autonomy of municipal planning powers, whereas regional planning powers have traditionally been weak and are currently subject to the ability of networks to imprint their particular visions.

The state can intervene in local and regional planning to ensure implementation of national policies. How national authorities commit to the regional plan will be a crucial test of its value and force. The regional plan is relatively new, and so far there are only a few indications of the position of the national government. But in one particular case, a municipality wanted to permit the building of a new housing area distant from the nearest centre (Svartskog), with poorly organised public transport. The development contradicted the regional plan, and met objections from the regional authorities. However, the Ministry of local Government and Regional Development lent its support to the local plan. This means that the building of housing can encourage more sprawl and car use, thus challenging how the regional plan will be put forward. In other words, the regional plan's polycentric principles are challenged from the local level and, at least in one case, from the state. This may raise concerns about its implementation and the future development of a balanced and integrated metropolitan region.

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Notes

¹ All consultative statements are available online: <http://plansamarbeidet.no>