

European Metropolitan Region Northern Switzerland: Driving Agents for Spatial Development and Governance Responses

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Switzerland, a country that is conceived and structured in small political and geographical units, is currently experiencing a phenomenon described in a recent publication as 'Urbanscape Switzerland' (Eisinger and Schneider, 2003). Its authors put forward the key question: 'How do areas change?' Urbanized landscapes, they argue, assume a key role in economic and societal development. The systemic structures of these areas are becoming increasingly complex and more difficult to understand. Morphological descriptions of settlement structures that change over time no longer suffice. Vertical and horizontal networks link together actor and action systems and thus form the predominant characteristic of urbanized landscapes, as found in metropolitan regions such as Northern Switzerland. Most of these functional network effects occur almost unnoticed by the public. Even Swiss spatial planning guidelines still struggle to acknowledge the existence of a functional spatial level such as the European Metropolitan Region (EMR) of Northern Switzerland – with the backbone of the agglomerations of Zürich and Basel its most potent node.

'Urbanscape Switzerland' and the knowledge economy

The knowledge-based economy gains increasing importance for economic and social development in Switzerland, still a small and open economy. For lack of

indigenous natural resources – apart from the tourism export sector – the Swiss economy grew predominantly on the basis of technological innovations and specialized producer services such as financial services. In 2001 about 22 per cent of all jobs in Switzerland were defined as knowledge based (Dümmler et al, 2004). Furthermore, due to its small size, the high share of exported goods and services is a distinct feature of the Swiss economy.

Firms in the knowledge-based sector – whether they are high-tech manufacturers or offering advanced producer services (APS) – are dependent on locations that serve as nodes to the global network of flows of knowledge, excellence, capital and talent. Thus, there is an increasingly internationalized competition between places for these scarce resources. Although size does not play a crucial role per se, at least a certain threshold of scale-related quantities and qualities of location factors comes into play in order to be able to compete in this big picture. In fact Switzerland has a series of recognized economic landmarks such as the financial place of Zürich, the international organizations such as the United Nations Organization, the World Health Organization and the World Trade Organization and the *Conseil Européen pour la Recherche Nucléaire* (CERN) research centre in Geneva or the watch and micro-technology manufacturing cluster in the Arc Jurassien. But looking from outside in, it makes no sense to try to distinguish the two locations of Basel and Zürich. Metropolitan city regions have become a functional spatial scale where at least implicitly centres of excellence,

Table 14.1 Basic data for the EMR Northern Switzerland

	Population 2002	Area km ²	Population per km ²
Zürich city	358,500	87.8	4083
Zürich FUR	1,080,700	1085.8	995
Basel city	169,300	37.0	4576
Basel FUR (Swiss part)	479,400	481.1	996
EMR Northern Switzerland (Swiss part)	3,959,900	11,794.9	336
Switzerland	7,347,800	41,284.5	178

innovative firms, efficient public infrastructure and proactive stakeholders form a coalition for change. But we must make no mistake: in order to deploy the full force of such a coalition, the first necessity is a heightened awareness of the broader public of the need to recognize themselves as an important proactive element.

Switzerland faces a growing concentration of population in functional urban areas (FURs). Three in four people live in areas that are officially defined as urban. However, this does not necessarily coincide with dense spatial concentration. Urban areas extend and grow into semi-rural areas where 'green' intermediate urbanized spaces leave people with an ambiguous notion of 'neither-nor'. This state of mind has spread all along the Central Plateau from Lake Geneva in the west to Lake Constance in the east of Switzerland.

This description sheds light on the fact that spatial trends in today's emerging knowledge economy are hard to detect, complex and controversial. Despite the excellent Swiss public transport and communication systems, there is ongoing concentration of APS in the main cities, most of all in Zürich. But even Zürich, Switzerland's largest city with about 365,000 inhabitants, is much too small for a full-scale urban system. Knowledge networks extend beyond the borders of cities and single conurbations, to encompass nearby towns and urban regions. Certain networks like the Swiss cluster in medical technology even embrace the whole of Switzerland with its neighbouring regions as the dominant spatial scale of interlinkages for innovation (Dümmeler, 2006).

Thus, Northern Switzerland is one of the smaller but relevant players in Europe's system of metropolitan regions. EMR Northern Switzerland extends over an area that can be reached within an hour from Zürich airport. With conurbations like Basel, Lucerne and St Gallen it includes about one-half of the Swiss population, on only a quarter of the Swiss surface area. It is not only the main focal area of the Swiss population, but also the central area of the Swiss economy. In 2001, gross domestic product (GDP) per capita was about 19 per cent higher in EMR Northern Switzerland than in the rest of Switzerland, with more dynamic growth (Bundesamt für Statistik, 2004).

The canton of Zürich (with about 17 per cent of the Swiss population) alone produces about 22 per cent of the total Swiss value added (Stiftung Greater Zürich Area Standortmarketing, 2003).

However, EMR Northern Switzerland encompasses numerous cantons and municipalities whose borders have hardly changed since the establishment of contemporary Switzerland in 1848. Because of the history of decentralized federalism with a positive overall performance of that institutional regime, the cantons and municipalities insist very much upon keeping their sovereignty. Thus, this 'Swiss system' is so much engraved in the administrative everyday life of Swiss policy-makers and the constituency, that the emergence of functional metropolitan systems is hard to detect, let alone to promote. Although there is a long way to go in managing metropolitan regions in policy terms, the functional interlinkages already exist today.

Advanced producer services and spatial development in European Metropolitan Region Northern Switzerland

EMR Northern Switzerland is a morphologically polycentric region, with two large centres (Zürich and Basel), three medium size centres (Lucerne, St Gallen and Winterthur) and about 20 smaller centres. Thus, there is a relatively well-balanced distribution of population in the metropolitan region (Table 14.1 and see Figure 14.1).

In contrast, the distribution of APS jobs is more uneven (Table 14.2). The top location for APS is Zürich, followed by Basel. St Gallen, Zug and Lucerne are secondary APS locations, and Winterthur is a weak APS location despite its relatively large size. Smaller centres, with the exception of Zug, are more or less weak APS locations, with Baden-Brugg and Aarau the strongest among them. About 30 per cent of all APS firms in Switzerland are located in the FURs of Zürich, Basel, Zug, St Gallen, Lucerne, Baden-Brugg, Aarau or Winterthur.

It is vital that these FURs should act as locations for APS firms which offer secure and well-paid jobs for highly

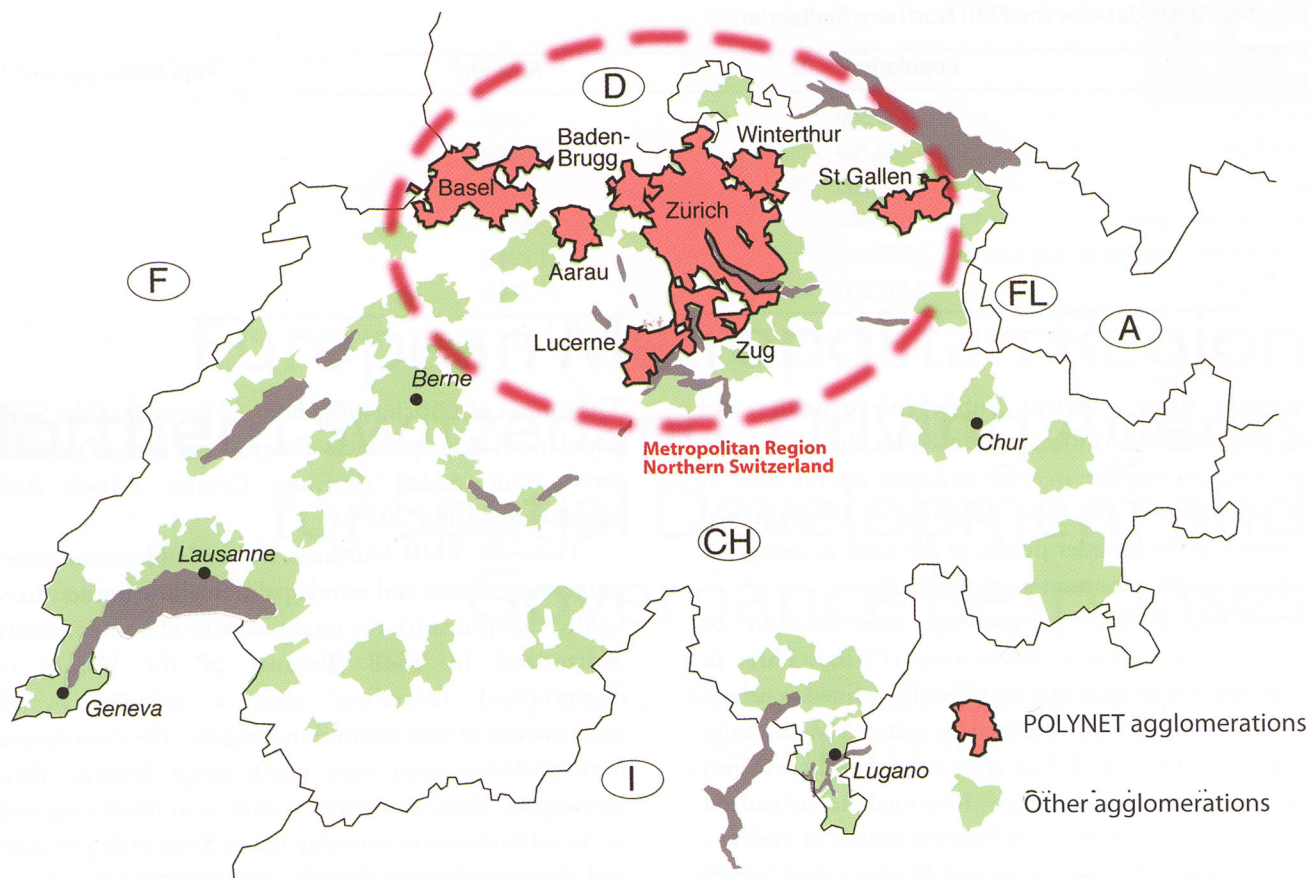


Figure 14.1 The EMR Northern Switzerland

educated people, helping public authorities to lower social costs and raise tax returns. But not all FURs offer the same attractive conditions for APS firms. One very important precondition is the facility to communicate with plants or other firms in locations anywhere in the world. Furthermore cross-border APS firms themselves serve as agents that connect smaller locations to larger economic cores and enable knowledge to flow between them. Thus, locations with well-connected cross-border APS firms are in a better position to keep or attract advanced jobs. It is thus interesting to look at the portfolio of APS firms in the centres of Northern Switzerland, and the spatial patterns of their connectivities.

An analysis of these patterns reveals a hierarchical and strongly interlinked metropolitan system of business networks (see Figure 14.2). It clearly confirms the thesis that Zürich, and to a lesser extent Basel, are global gateways for the whole of Switzerland. Zürich is an indispensable location for many global APS firms, and is thus well connected to the most important economic centres on all continents. On the other hand, Zürich and Basel are also well connected in terms of their organizational linkages, with regional centres in Switzerland. Figure 14.2 shows that all FURs in Northern Switzerland are more connected with Zürich than with any other centre. This leads to the conclusion that Zürich, in

Table 14.2 APS employment in EMR Northern Switzerland FURs

FUR	APS employees	Total employees	APS employees (%)
Zürich	139,404	676,040	20.6
Zug	12,209	65,233	18.7
St Gallen	15,431	91,203	16.8
Basel	35,084	287,560	12.2
Lucerne	11,566	107,577	10.8
Baden-Brugg	6095	58,876	10.4
Winterhur	5803	59,511	9.8
Aarau	4018	47,077	8.5

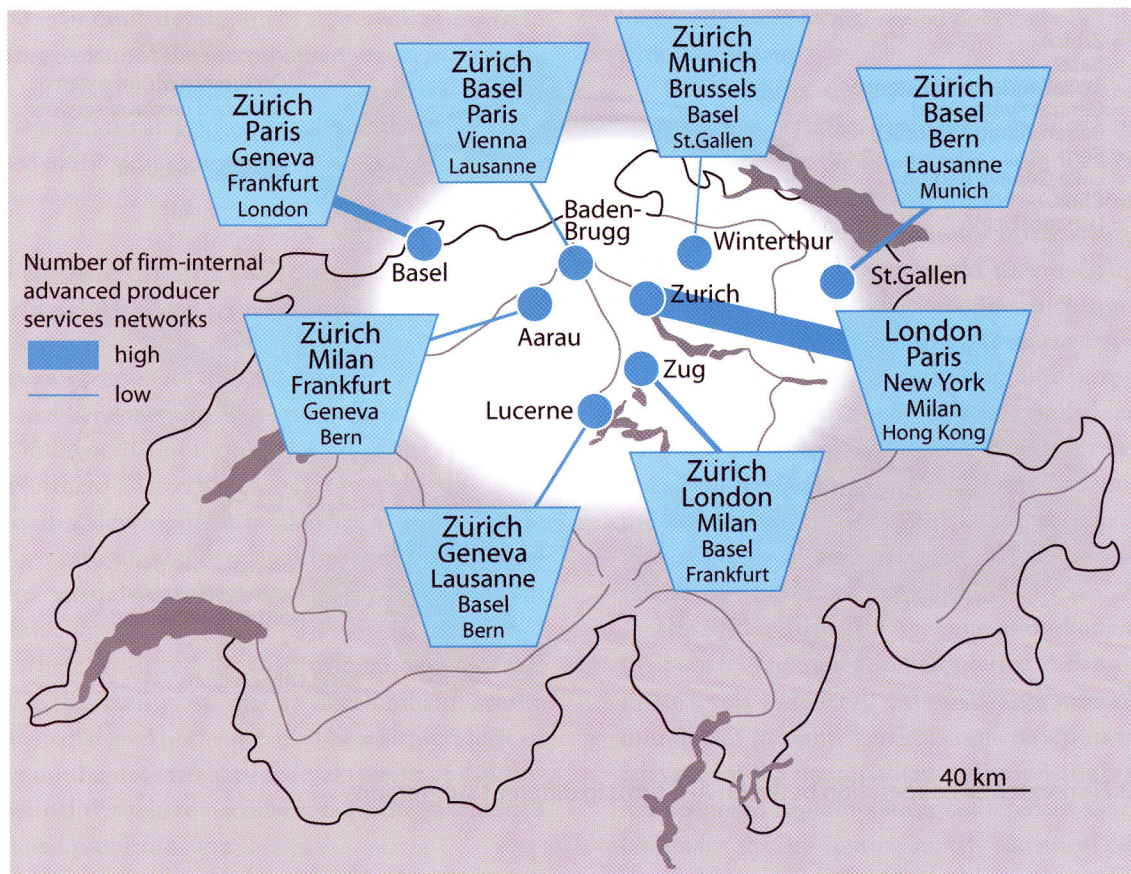


Figure 14.2 FURs in EMR Northern Switzerland and their integration in firm-internal APS branch location networks: The top five locations in each FURs network

cooperation with Basel, serves as a vital 'hinge' or 'hub' of knowledge flows between the Swiss regions and the world.

Global connectivity figures for smaller centres are, as expected, smaller than the figures of the two large centres, Zürich and Basel. For APS firms not located in Zürich or Basel, it is more difficult to establish cooperation with firms abroad. A good assumption is that, the smaller a centre is, the smaller its global connectivity is, but interestingly there are cases that diverge from the expected. One case is Zug, a small agglomeration of about 90,000 inhabitants, which is globally much more connected than expected on the basis of its size. Zug is a very specialized low-tax location, which attracts many global trade firms, and is half an hour by train from Zürich.

On the other hand, the medium size FURs of Lucerne and Winterthur are relatively weakly connected by APS firm networks. In the case of Winterthur, one explanation is the still surviving industrial past, combined with its proximity to Zürich, which almost turns Winterthur into a suburb. Lucerne is also relatively dependent on manufacturing industries and also on tourism.

Figure 14.3 shows cooperation links between APS firms located in different sub-regions of EMR Northern Switzerland. It confirms the suggestion that Zürich is the central, but not the only, hub of knowledge and

information flows in the metropolitan region. Zürich is involved in almost all the regional or national APS networks, where knowledge flows between locations. Crucially, cooperation networks between APS firms in different subcentres, leaving Zürich out, are rare.

Most APS firms operating on a global scale are located in Zürich. Basel also plays the role of a business network hub, albeit a smaller one. As both Basel and Zürich are generally too small to carry entire APS networks alone, their APS networks intermix. The result is an economic 'backbone' Zürich–Basel, with great importance for the entire Swiss economy. It is therefore possible to understand these morphologically separated nodes as a 'functional gateway' that imports APS business-relevant knowledge from the globe to Switzerland, or exports it, vice versa.

There are similar potentials for cooperation networks and knowledge flows at the national and regional level. Zürich is the most central location in national APS business networks. One reason lies in the fact that Zürich is generally chosen as a location by those companies which occupy a central role in economic networks. An important example here is the financial sector. Through their central position in a business network, these companies have corresponding radial connectivities with APS firms in the other centres of the metropolitan region as described in

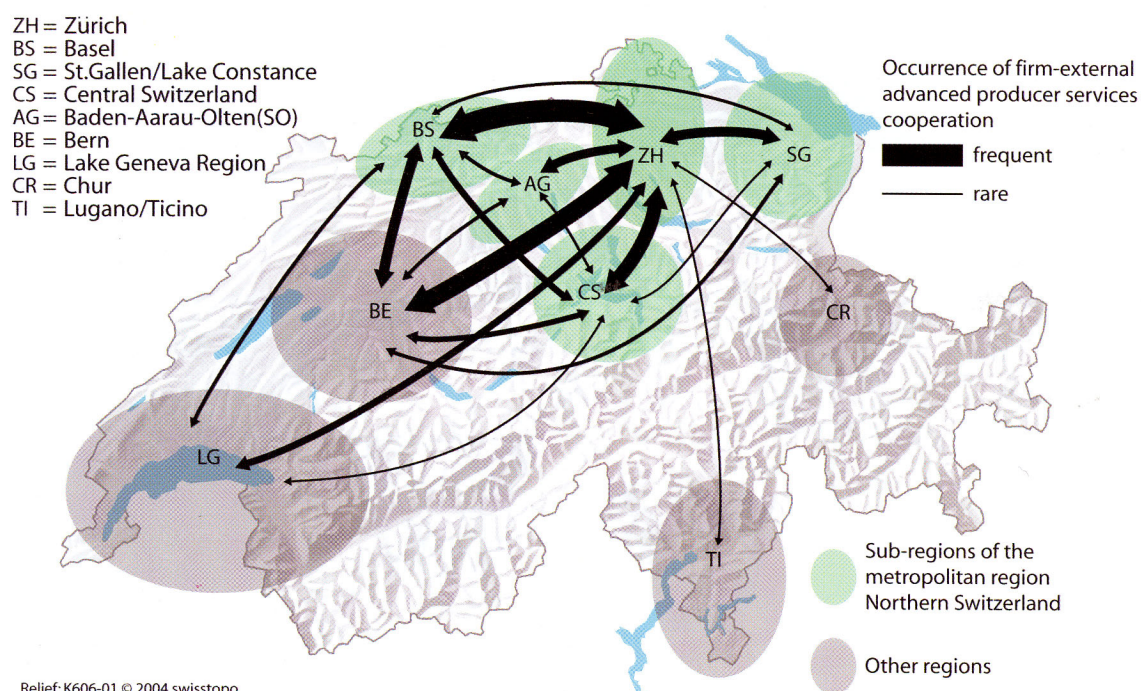


Figure 14.3 Firm-external cooperation between APS firms in different sub-regions

Chapter 3. The geographical location of companies, and the spatial pattern of their relationships, therefore depends on the centrality of their position in a functional economic network. This means that a better appreciation of the spatial pattern of functional complementarities in APS networks becomes possible when there is greater knowledge about relations and value chains within and between APS branches.

A second important link exists between Zürich and Bern, the Swiss capital, which is outside the EMR Northern Switzerland area. This strong tie is surprising as Bern shows only limited economic dynamism. But Bern as the capital of Switzerland is still an important location for formerly federal companies (e.g. telecommunications) that are integrated in cooperation networks of APS firms. Other functions that Bern has as a capital can also be surmised to be relevant here.

APS links from the German speaking EMR Northern Switzerland to the French and Italian speaking parts of Switzerland are quite rare. Language barriers play a great role here, most of all because they separate different markets. For most APS firms in EMR Northern Switzerland, markets in the Lake Geneva region or the Ticino are less important than markets in Germany or Austria.

What do these patterns tell us about polycentricity in the EMR Northern Switzerland? First of all it is clear that the region cannot easily be defined either as polycentric or as monocentric. While the morphological pattern is indeed

polycentric, the functional spatial patterns show a much higher complexity. While the large centres of Zürich and Basel have direct links to global economic centres, medium size and small centres miss the advantages of those direct links. To different degrees, they depend on functional links with one of the large centres, in most cases with Zürich, to be connected to global flows of business-relevant knowledge for their local economy.

But there is a potential for more APS activities in medium size and small centres. There is an evident trend: that APS firms recognize advantages of locations in subcentres outside Zürich, such as better availability of affordable land or better accessibility by car. However, a very close location to high-quality infrastructure (e.g. an airport and universities) is the main argument for many APS firms to locate or remain in Zürich. For highly specialized firms this will not change, but for some APS firms agglomeration costs in Zürich (e.g. growing traffic congestion) are becoming too high. Subcentres of EMR Northern Switzerland, due to the excellent transport system, the relatively high quality of life and other factors, are more and more considered as possible alternative locations. This is leading to a more polycentric distribution of APS activities in the region, though not to a functional equality of all centres, as some APS activities remain dependent on highly central locations.

As this system of functionally interlinked urban subcentres overlaps administrative borders of sovereign regional authorities, uncoordinated local strategies for

spatial and economic development represent an obstacle for the management of the metropolitan region as a whole. The lack of correspondence between political spatial planning institutions and the reality of spatial development is addressed in the next section.

Spatial development policies in Switzerland: Where to go from here?

In the previous section we discussed the empirical findings on functional networks that link actors and action systems that have influenced and formed the urbanized landscape of EMR Northern Switzerland.

The spatial development tendencies identified there point to two central, highly related issues that are critical for future spatial development policy responses in Switzerland:

First, there is a need for institutional and strategic answers to the reality of spatial development at the functional-spatial level of the region. These answers have to move beyond the decentralized federal system of cantons and municipalities where necessary, requiring a widened awareness and problem scope.

Second, there is a need to deal with the mismatch between the functional logic of the actual driving forces for spatial development on the one hand and the territorial, normative logic, which is still the foundation and mindset behind spatial planning policies.

Spheres of operation and approaches to metropolitan governance

Referring to the first issue, future effort has to focus on the transformation of territorial governance, not as a reinvention, but based on ongoing debate, approaches and experience.

For many observers from the European Union (EU), the Swiss federal system is a role model for the solution of their own development dilemmas. Nevertheless, the current Swiss situation shows the fragmentation of jurisdictions and deficiencies in governance capacity for solving inter-community, inter-canton and international problems (OECD, 2002; Thierstein et al, 2003; Blöchliger, 2005). It is important to bear in mind that the existing Swiss administrative system consists of three tiers, the confederation, 26 cantons and about 2900 municipalities, each having its own spatial planning responsibilities. The emphasis for planning is at the level of the cantons, whose task is to integrate spatial claims by means of structure plans. The communes are generally responsible for land use planning. Lastly, under the constitution, the confederation is responsible for the legislative framework, for formulating planning principles,

for coordinating formal spatial policies both internally and with the cantons.

Beyond the existing system, the discourse on territorial organization ranges from fusion of cantons and municipalities on the one hand to voluntary cooperation for specific operational tasks on the other. In the field of spatial planning, large cantons often delegate supra-municipal spatial planning tasks to so-called public law regional planning associations, in which municipalities cooperate for planning purposes. Over the last decades, an increasing number of single- or multi-purpose district bodies (special districts) have been founded on a regional level. For instance, each Zürich municipality belongs to an average of six dedicated organizations. The consequence is the jeopardizing of controllability, manageability and integral regional performance as well as the ability to find solutions to problems.

In 2001 a Tripartite Agglomerationskonferenz (TAK) (Tripartite Agglomeration Conference) consisting of the three levels – federal, cantonal and municipal – was founded to promote vertical cooperation in policy fields relevant for the metropolitan regions. A study of the TAK has proposed agglomeration conferences as institutional bodies for the, up to now, merely statistical perimeters of the agglomerations (Tripartite Agglomerations-konferenz, 2004).

A recent outcome of a political decision-making process points the way to the preparation for a reform of federalism: the reorganization of the inter-governmental financial equalization scheme and of the respective functions of the Federation and the cantons (*Neuer Finanzausgleich* – NFA) provides an opportunity to test the fundamental understanding of governance. At the core of the Federal Council's new financial equalization is the idea of shifting decision-making capacity from the federal to the canton levels for tasks of the core cities that extend over canton borders. Thus, in order to deal with specific inter-cantonal issues, the cantons are required to cooperate in order to earn and distribute federal funding. This is the case for universities, specified medical clinics, and large-scale cultural infrastructure and transportation projects in agglomerations. The Federation maintains the competencies to allocate funding if cooperation among the cantons does not take place. The second instrument of the new financial scheme, which is of consequence for urban regions, addresses the balancing of socio-demographic burdens. It shifts financial means to the core cities because the core cities of agglomerations have a greater share of socially weaker members of society, causing higher expenses and less tax revenues. The scrutinizing of respective functions of the Federation and the cantons provides an opportunity to test the fundamental understanding of governance within a federal system.

This debate represents a 'down to earth' approach, in which the institutional framework of the three-tier federal system of Switzerland remains basically unchallenged. On a more visionary basis, authors from different professional backgrounds have recently proposed approaches to metropolitan governance, the definition of new spheres of operation or visualizations of possible urban futures in Switzerland (Blöchliger, 2005; Diener et al, 2005; Eisinger and Schneider, 2003; Rellstab, 2004).

These visions and new approaches are necessary, since the existence of functional interrelations in EMR Northern Switzerland is not yet sufficiently rooted in the awareness of most policy-makers or the constituency. Despite the development trends at metropolitan levels, the areas of focus and action for institutional bodies responsible for spatial development are largely determined by awareness of problems on a local, smaller regional or, at most, canton level.

The functional and territorial logics of Swiss spatial development policies

The second issue that emerges from the reality of spatial development trends is the mismatch between functional and territorial logics.

As a normative setting for spatial development, Switzerland has adopted the strategy of polycentricity outlined in the European Spatial Development Perspective (ESDP) (European Commission, 1999). In the 1996 Swiss planning policy guidelines (*Grundzüge der Raumordnung Schweiz*), the Federal Office for Spatial Planning proposed the cooperation within a network of a connected system of cities (*vernetztes Städtensystem Schweiz*) as the response of the Swiss federal system to the challenges of competition between European city regions (Federal Office for Spatial Planning, 1996). Also, the 1996 Swiss planning policy guidelines helped to identify the significance of agglomerations in the social and economic development of Switzerland. As late as 1997, with the revision of the federal constitution, the Federation started taking more account of the concerns of the agglomerations.

The Federal Council's 2001 agglomeration policy reinforced these steps in order to emphasize the need to support cantons and agglomerations in solving their problems of settlement and transportation infrastructure development, life quality and horizontal and vertical cooperation. Its aim is to support the cantons and communities in their activities and to improve horizontal cooperation within agglomerations (Federal Council, 2001).

Another attempt was the Federal Council's approval for the Strategy for Sustainable Development in 2002, an action package elaborated by the inter-departmental commission for sustainability, as a result of the 1992

United Nations Conference on Environment and Development in Rio de Janeiro. The strategy includes 22 measures for the sectors of economy and competitiveness, financial policy, research, spatial development, mobility, to name just a few. A specific goal for regional policies and spatial planning is the stabilization of the overall use of land (footprint) at 400m² per person (Federal Council, 2002).

As the most recent document that complies with the normative direction of the previous documents, the Federal Office for Spatial Development has presented the *Report on Spatial Development* in March 2005 (Federal Office for Spatial Development, 2005) as a follow-up to the 1996 Swiss planning policy guidelines. Based on its analysis of development trends and scenarios, the 2005 Report on Spatial Development outlines a spatial development concept with the following major integrative strategies:

- maintaining and improving physical and virtual international connections (by air traffic, roads, high-speed trains);
- creating two connected networks: the first network comprises new, statistically defined (morphologically) polycentric metropolitan regions (Zürich, Geneva–Lausanne, Basel, Bern, Ticino); the second network is made up of the remaining cities and agglomerations;
- creating strategic urban networks in areas outside the metropolitan regions.

Despite the planning policies of the past decade, the Federal Office for Spatial Development has had to acknowledge that development has not moved towards the objectives of a sustainable spatial development, but has encountered extended urban sprawl, growing mobility and accessibility along with the decline of structuring open spaces (Federal Office for Spatial Development, 2005, p7).

Obviously, there is a missing link or a mismatch between the principle and strategy of sustainable polycentric development as outlined in the ESDP and adopted by Swiss planning policies on the one hand and actual spatial development tendencies on the other.

The mismatch between reaching the normative objectives of spatial planning and the driving forces of actual spatial development tendencies, that follow a functional logic, is best represented by federal policies outside the narrow scope of spatial planning policies, specifically the political debate about the new regional policy. For the past decades, regional policy has been designed to support infrastructure investment in mountain areas and enterprises in economically disfavoured areas through targeted individual support (OECD, 2002, p12).

Recently, approval of the new regional policy has been on the political agenda, with a great deal of sceptical response from rural stakeholders and other status quo beneficiaries. At the beginning of the debate, the authors of the new regional policy set out to take the territorial complementarities between rural areas and agglomerations into account. The goal was to direct the emphasis of the new regional policy towards the inclusion of agglomerations, accepting that the national economy is highly dependent on the functioning of larger cities and agglomerations. In other words the proposed legislation adopted a functional view of the Swiss territory as an interlinked value-added production system (Corpataux et al, 2002).

However, this focus on the whole country rather than rural areas would have required a difficult balancing act. From the overall regional policy budget of 70 million Swiss francs (CHF), 30 million would be allocated to wide area projects that support cooperation between rural areas and agglomerations and 40 million would be allocated to support local and regional projects in rural areas (Federal Department of Economic Affairs, 2004). Thus, in the political process, policy-makers have declined officially to link the two policy fields. They refused to connect the low level while promising agglomeration policies 'best practice models' with the new regional policies (Anon, 2005, p13). The difficulty in connecting agglomeration policy and traditional regional policy shows that there is insufficient political will to create inter-sectoral cooperation between spatial planning and economically oriented policies or between rural and urban policies. For the time being, this makes it difficult to coordinate efforts for more efficient, sustainable management of spatial planning.

It is obvious, that, in comparison with the discussion on the new regional policy, the isolated efforts of the spatial planning sector have a comparably small impact on economic development or on managing the spatial impacts of economic decisions.

Moreover, even the budget for the regional and spatial planning policies, that make up the spatial development policies, is comparatively limited. The Federal Office of Spatial Development and State Secretariat for Economic Affairs do not administer laws related to spatial development, which have substantial budgets allocations. For instance, over the period 1997–2003, federal expenditures for regional policy averaged around CHF 69 million (Federal Department of Economic Affairs, 2004, p57). The means for other sectoral policies, which have an impact on spatial development in the widest possible variety of areas (agriculture, transportation, communication, education, energy, security policy and public buildings), yet do not follow the territorial logic of spatial development

policies, are much higher in comparison.

Conclusions and recommendations

The objective behind the ESDP's concept of polycentricity is to achieve territorial cohesion between economically strong areas and the weaker, less dynamic rural areas or smaller cities. Territorial cooperation between medium and smaller size cities or agglomerations that are within certain proximity is supposed to make them stronger, more economically potent in the competition with other larger cities or regions within the EU. However, in reality cooperation does not occur on a normative basis. The prerequisite for functional networks is problem pressure and/or economic interdependencies between spatial units. These lead the autonomous institutional units to consider advantages of cooperation.

However, the reality of economic structures shows that the centres in EMR Northern Switzerland are indeed strongly linked by APS organizational networks. Smaller centres depend for their economic development on strong central cities, where APS relevant knowledge is either produced or imported for the entire region. These links shape a large metropolitan region. But as these interrelations do not correspond with visible morphological structures or administrative entities, they are mainly hidden. This means that a problem is making itself evident, but is difficult to notice or grasp.

Thus, a first priority for action is to make hidden economic links and dependencies visible and accessible to relevant policy-makers, planners, and last but not least to the public at large. Disseminating factual information to a wide public is important in Switzerland, as its direct democratic instruments like the referendum often leave the final decision to the people. There is a need for more scientific work on metropolitan regions, more research and consulting institutions to inform policy-makers and planners, and more exposure in the popular media to inform the public of the issues.

However, recognized pressing problems must not lead to uncoordinated individual measures at local or regional levels, as this would maintain the complex tangle of isolated policy institutions and cooperation concepts. It takes a coordinating authority to ensure that new governance instruments are implemented in the contexts of functional regions like EMR Northern Switzerland, and in the functional structure of the whole of Switzerland. There are strong indications that this arbitrator's job can only be done on the basis of a top-down principle. The question whether, consequently, the Swiss Federation has to assume this role, has to be answered in the near future.